

2022 Inquiry into the convictions of Kathleen Megan Folbigg

The Honourable Thomas
Bathurst AC KC

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2022 Inquiry into the convictions of Kathleen Megan Folbigg

Report

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Introduction

Introduction

1. On 21 May 2003, Kathleen Megan Folbigg (**Ms Folbigg**) was found guilty by a jury of the following offences:
 - (a) The manslaughter of Caleb Gibson Folbigg (**Caleb**) on 20 February 1989.
 - (b) The malicious infliction of grievous bodily harm upon Patrick Allan Folbigg (**Patrick**) with intent to do grievous bodily harm.
 - (c) The murder of Patrick on 13 February 1991.
 - (d) The murder of Sarah Kathleen Folbigg (**Sarah**) on 30 August 1993.
 - (e) The murder of Laura Elizabeth Folbigg (**Laura**) on 1 March 1999.
2. On 24 October 2003, Ms Folbigg was sentenced for the offences to a total term of imprisonment of 40 years with a non-parole period of 30 years: *R v Folbigg* [2003] NSWSC 895, at [101]-[107].
3. Ms Folbigg’s appeal against conviction was dismissed but an appeal against sentence was allowed and her overall sentence was reduced to a term of 30 years with a non-parole period of 25 years: *R v Folbigg* [2005] NSWCCA 23; (2005) 152 A Crim R 35 at [190].
4. On 22 August 2018, a direction was given by the Governor of New South Wales pursuant to s 77(1)(a) of the *Crimes (Appeal & Review) Act 2001* (**the CAR Act**) that an inquiry be conducted into the convictions in accordance with Part 7 of that Act. Pursuant to s 81(1)(a) of the Act, the Honourable Reginald Oliver Blanch AM KC was appointed to conduct the Inquiry (**2019 Inquiry**).
5. In July 2019, the Inquirer presented his report (**2019 Inquiry Report**). He found that there was no reasonable doubt as to the guilt of Ms Folbigg for any of the offences of which she was convicted. In relation to Caleb, he concluded, considering the medical evidence before him, there was no reasonable possibility that infection or genetic disorder was responsible for Caleb’s death. He stated that, taking into account the non-medical evidence, including the diary entries made by Ms Folbigg, and “her lies and obfuscation and the tendency and coincidence evidence” the only conclusion reasonably open was that Ms Folbigg smothered Caleb.¹
6. He reached a similar conclusion in relation to the malicious infliction of grievous bodily harm upon Patrick, finding it was reasonably possible that the acute life threatening event (**ALTE**) suffered by Patrick on 18 October 1990, the subject of the charge, was caused by a single asphyxial event – meaning an event leading to the obstruction of his airways. He concluded there was no reasonable possibility that an infection or genetic disorder was responsible for Patrick’s ALTE. Taking into account the non-medical evidence in the same fashion as he did with Caleb, he concluded he had no reasonable doubt of the guilt of Ms Folbigg on this charge.
7. In relation to the death of Patrick, the Inquirer concluded that it was possible that Patrick’s death was attributable to encephalopathy in his brain in the sense that encephalopathy caused a seizure which in turn caused death. He found it was also reasonably possible that Patrick’s death was caused by an asphyxial event – an event leading to the obstruction of his airways and which in context was some obstruction from a cause other than a seizure. He concluded there was no reasonable possibility

¹ 2019 Inquiry Report, ch 9 [69]-[70].

that an infection or genetic disorder was responsible for Patrick's death. Taking into account the non-medical evidence in a similar fashion he took it into account on the preceding charges, he concluded he had no reasonable doubt of the guilt of Ms Folbigg on this charge.

8. In relation to the death of Sarah, the Inquirer concluded that it was reasonably possible that Sarah's death was caused by an asphyxial event, namely, smothering. Taking into account the non-medical evidence in a similar fashion to the manner he did with Caleb and Patrick, and referring also to the evidence of Ms Folbigg's former husband, Mr Craig Folbigg (**Mr Folbigg**) as to Ms Folbigg's relationship with Sarah, he said he had no reasonable doubt of the guilt of Ms Folbigg on this charge.²
9. In relation to Laura, the Inquirer found there was a reasonable possibility the myocarditis found in Laura's heart at autopsy was fatal. He stated it was also reasonably possible that her death was caused by an asphyxial event, including smothering. However, taking into account the non-medical evidence in a similar fashion to the manner it was taken into account in relation to the previous children and the evidence of Mr Folbigg as to the difficulties Ms Folbigg was having with Laura, he found the only conclusion reasonably open was that Ms Folbigg murdered Laura.³
10. In his final comments, the Inquirer stated that he agreed with the Court of Criminal Appeal that the evidence was overwhelming and that Ms Folbigg's evidence and the listening device transcript which was before him only strengthened that conclusion.
11. After the evidence had closed, the Inquirer was referred to an advance copy of an article published in June 2019 ('Calmodulin mutations and life-threatening cardiac arrhythmias: insights from the International Calmodulinopathy Registry') (**the Crotti Article**)⁴ and a letter from Professor Peter Schwartz (**Professor Schwartz**) to Professor Carola Vinuesa (**Professor Vinuesa**) dated 20 June 2019.⁵ It was suggested that the identification of a novel genetic variant, CALM2-G114R, found in Ms Folbigg, Sarah and Laura provided an explanation for the sudden deaths of Sarah and Laura. The Inquirer concluded that the material did not alter the views he held.
12. An application for a judicial review of the decision of the Inquirer was dismissed: *Folbigg v Attorney General of New South Wales* [2021] NSWCA 44.
13. In November 2020, an article was published in *Europace*, the Journal of the European Society of Cardiology: 'Infanticide vs inherited cardiac arrhythmias' (**the Brohus Article**). The contributors to the article included Professor Vinuesa and Professor Matthew Cook (**Professor Cook**) both of whom gave evidence at the 2019 Inquiry and in the present Inquiry. They also included Professor Schwartz, Professor Michael Toft Overgaard (**Professor Toft Overgaard**), Professor Mette Nyegaard (**Professor Nyegaard**), Dr Todor Arsov (**Dr Arsov**) and Associate Professor Hariharan Raju (**Associate Professor Raju**), all of whom gave evidence at the present Inquiry.

² 2019 Inquiry Report, ch 9 [78]-[80].

³ 2019 Inquiry Report, ch 9 [81]-[83].

⁴ Exhibit 2-BU, Lia Crotti et al, 'Calmodulin Mutations and Life-Threatening Cardiac Arrhythmias: Insights from the International Calmodulinopathy Registry' (2019) *European Heart Journal* (advance).

⁵ Exhibit 2-BT, Letter from Professor Peter Schwartz to Professor Carola Vinuesa (20 June 2019).

14. The aims of the article were set out as follows:

In 2003, an Australian woman was convicted by a jury of smothering and killing her four children over a 10-year period. Each child died suddenly and unexpectedly during a sleep period, at ages ranging from 19 days to 18 months. In 2019 we were asked to investigate if a genetic cause could explain the children's deaths as part of an inquiry into the mother's convictions.⁶

15. The following conclusions were reached:

A novel functional calmodulin variant (G114R) predicted to cause idiopathic ventricular fibrillation, catecholaminergic polymorphic ventricular tachycardia, or mild long QT syndrome was present in two children. A fatal arrhythmic event may have been triggered by their intercurrent infections. Thus, calmodulinopathy emerges as a reasonable explanation for a natural cause of their deaths.⁷

16. The article also contained the following observations:

Our main findings are that the mother and her two female children (Child 3 and Child 4), were carriers of a novel and functional variant in the *CALM2* gene associated with sudden death in infancy and childhood, and that the variant is predicted to be arrhythmogenic. The variant found in the female children (G114R) affects the same amino acid as a variant in an otherwise identical protein encoded by *CALM3* (G114W), which was implicated in the SCD of one child and the cardiac arrest of another. The G114R and G114W variants conferred similar structural changes in CaM. Both variants compromise the ability of CaM to sense changes in Ca²⁺ concentration, and impair binding to, and regulation of, the two cardiac Ca²⁺-channels Ca_v1.2 and RyR2. These effects are also similar to those observed with CaMN98S, which has been found in 10 unrelated patients diagnosed with either LQTS, CPVT, a mixed phenotype, IVF, or suffering from SUD.⁸

...

Based on the previous studies and the functional data presented here, we predict that the G114R and G114W variants are pathogenic and that carriers are therefore prone to cardiac arrhythmias of IVF or CPVT-like phenotypes with a potential component of mild LQTS, which could cause cardiac arrest during sleep. This prediction is based on the following observations: (i) Both mutations impair RyR2 binding and regulation to a similar extent as other known CPVT associated CaM mutations⁹; (ii) Both mutations impair Ca_v1.2 CDI to an intermediary extent, consistent with a possible mild LQTS, but likely not severe LQTS¹⁰; (iii) The mutations are not among the most severe in terms of reduced Ca²⁺ sensing, likely due to the location in a linker region between Ca²⁺-binding sites; (iv) The effect of the mutations are experimentally similar to the N98S variant, which has been associated with LQTS, CPVT, IVF, or a mixed phenotype; and (v) SUD at a young age has been observed for a number of other calmodulinopathy cases,¹¹ including a carrier of an N98S mutation (SUD while asleep) which displays a similar

⁶ Exhibit 15-02, Malene Brohus et al, 'Infanticide vs inherited cardiac arrhythmias' (2020) 23 *Europace* 441-450 [red pagination 11].

⁷ Exhibit 15-02, Malene Brohus et al, 'Infanticide vs inherited cardiac arrhythmias' (2020) 23 *Europace* 441-450 [red pagination 11].

⁸ Lia Crotti et al, 'Calmodulin Mutations and Life-Threatening Cardiac Arrhythmias: Insights from the International Calmodulinopathy Registry' (2019) 40 *European Heart Journal* 2964-75.

⁹ Mads Søndergaard et al, 'Diminished inhibition and facilitated activation of RyR2-mediated Ca²⁺ release is a common defect of arrhythmogenic calmodulin mutations' (2019) 286(22) *The FEBS Journal* 4554-4578.

¹⁰ Worawan Limpitikul et al, 'Calmodulin mutations associated with long QT syndrome prevent inactivation of cardiac L-type Ca(2+) currents and promote proarrhythmic behaviour in ventricular myocytes' (2014) 74 *Journal of Molecular and Cellular Cardiology* 115-124.

¹¹ Lia Crotti et al, 'Calmodulin Mutations and Life-Threatening Cardiac Arrhythmias: Insights from the International Calmodulinopathy Registry' (2019) 40 *European Heart Journal* 2964-75.

functional impact as the G114R and G114W mutations. Of note, the girl with the G114W mutation who suffered a CA was diagnosed with IVF.¹²

...

Conclusions

The data presented here indicate that molecular autopsies including WES/WGS are warranted for SUD infanticide cases where the accused was convicted on purely circumstantial evidence. The growing understanding of inherited cardiac arrhythmias¹³ forces a reassessment of the medical foundations, never challenged, on which several mothers were found guilty of infanticide on the basis of assumption instead of evidence. The genomic revolution heralds a new era for the assessment of recurring familial sudden deaths of infants and children, an era that reasserts the presumption of innocence for tragically unlucky families.¹⁴

17. Following publication of the Brohus Article, on 2 March 2021, a petition was made to the Governor of New South Wales for the pardon of Ms Folbigg. On 18 May 2022, the Governor directed that I conduct this Inquiry. The direction was in the following terms:

Direction pursuant to section 77(1)(a) of the *Crimes (Appeal and Review) Act 2001*

WHEREAS it appears that there is a doubt or question as to part of the evidence in the proceedings leading to the conviction of Kathleen Megan Folbigg on 21 May 2003 of the following offences:

1. the manslaughter of Caleb Folbigg on 20 February 1989;
2. maliciously inflicting grievous bodily harm upon Patrick Folbigg on 18 October 1990, with intent to do grievous bodily harm;
3. the murder of Patrick Folbigg on 13 February 1991;
4. the murder of Sarah Folbigg on 30 August 1993; and
5. the murder of Laura Folbigg on 1 March 1999;

AND WHEREAS that doubt or question concerns evidence that a genetic variant (CALM2-G114R) identified in DNA samples from Sarah Folbigg and Laura Folbigg has biophysical and functional consequences that may cause cardiac arrhythmias and sudden unexpected death in young children, such consequences being the subject of research published in March 2021 following the completion in July 2019 of the previous inquiry into the said convictions directed pursuant to s 77(1)(a) of the *Crimes (Appeal and Review) Act 2001*;

PURSUANT to section 77(1)(a) of the *Crimes (Appeal and Review) Act 2001*, I direct that an inquiry be conducted into the said convictions in accordance with the provisions of Part 7 of the said Act; and

PURSUANT to section 81(1)(a) of the said Act I hereby appoint the Hon Thomas Frederick Bathurst AC QC formerly a judicial officer within the meaning of the *Judicial Officers Act 1986*, to conduct an inquiry into the said convictions, having particular regard to the consequence of the said evidence for all of the convictions referred to above, with the powers and authorities conferred on a commissioner by Division 2 of Part 2 of the *Royal Commissions Act 1923* (except for section 17).¹⁵

¹² Lia Crotti et al, 'Calmodulin Mutations and Life-Threatening Cardiac Arrhythmias: Insights from the International Calmodulinopathy Registry' (2019) 40 *European Heart Journal* 2964-75.

¹³ Peter Schwartz et al, 'Inherited cardiac arrhythmias' (2020) 6(1) *Nature Reviews Disease Primers* 58-107.

¹⁴ Exhibit 15-02, Malene Brohus et al, 'Infanticide vs inherited cardiac arrhythmias' (2020) 23 *Europace* 441-450 [red pagination 17-19].

¹⁵ Exhibit 1, Governor's Direction for the Inquiry (18 May 2022) [red pagination 1].

The principles relevant to the conduct of the Inquiry

18. Section 76 of the CAR Act provides that a petition for a review of a conviction or the exercise of the Governor's pardoning power may be made to the Governor by or on behalf of the convicted person.
19. Section 77(1)(a) provides that after consideration of a petition the Governor may direct an inquiry be conducted by a judicial officer into the conviction (a judicial officer is defined to include a former judicial officer). Section 77(2) provides that such action may only be taken if it appears there is a doubt or question as to the convicted person's guilt.
20. Section 80 provides for an inquiry to be conducted as soon as practicable after the direction has been given. Section 81 sets out the procedure for the conduct of the inquiry.
21. Section 82 relevantly provides that the judicial officer must cause a report on the results of the inquiry (incorporating a transcript of the depositions given in the course of it) to be sent to the Governor who may dispose of the matter in such manner as appears to her just: CAR Act ss 82(1), 82(4).
22. Section 82(2) provides that the judicial officer may also refer the matter (together with a copy of the report) to the Court of Criminal Appeal for consideration of the question of whether the conviction should be quashed in any case where the judicial officer is of the opinion there is a reasonable doubt as to the guilt of the convicted person. Section 84(3) of the CAR Act provides that an application for the quashing of the conviction may be made to the Court of Criminal Appeal by or on behalf of a person to whom a pardon has been granted.
23. In *Folbigg v Attorney General of New South Wales* (supra), the Court of Appeal at [97]-[98] cited with approval the following passage of the 2019 Inquiry Report dealing with the approach to be taken:

[97] There is no challenge to the articulation by the judicial officer of the proper approach to his function in carrying out an inquiry under Pt 7 of the Appeal and Review Act. In formulating the approach adopted, the judicial officer relied for each of the propositions contained in the following passage on statements in reports of earlier inquiries, and particularly on those of Wood J in an inquiry conducted in 1985.¹⁶ The relevant passages in the reasoning of the judicial officer were as follows:¹⁷

"63 Pursuant to s 77(2) of the CAR Act, a direction for an inquiry may be predicated upon the existence of a doubt or question as to the guilt of the convicted person. Consistently with the approach taken in previous inquiries of this nature, including under predecessor legislation, however, I do not consider that the Direction involves a revival of the presumption of innocence in favour of the convicted person.

64 Nor is such an inquiry a retrial on the basis of the evidence before it. It does not impose any onus on the Crown to produce evidence to remove the doubt that gave rise to the inquiry and re-establish guilt. Similarly, it does not impose any onus on the convicted person to establish that the conviction was wrongly procured.

¹⁶ Report of the Inquiry into the Convictions of Timothy Edward Anderson, Paul Shawn Alister and Ross Anthony Dunn (14 May 1985).

¹⁷ Report of the Inquiry into the Convictions of Timothy Edward Anderson, Paul Shawn Alister and Ross Anthony Dunn (14 May 1985) ch 1, pp 30-31.

65 It is the convictions which are the subject of an inquiry. Therefore, an inquiry must commence with the fact that a conviction has been recorded and that questions or doubts have been raised sufficient to justify the Governor directing a judicial officer to conduct an inquiry, and to summon and examine on oath all persons likely to give material information. As such, I do not consider my role to be akin to that of a judge and jury in a retrial.

66 An inquiry is not confined to an investigation of the questions or doubts raised in a petition, or to an investigation of new evidence. It may re-examine evidence in the trial including any matters previously dealt with on appeal. Further, an inquiry may consider any information that may throw light on the convicted person's guilt, whether that information is favourable or unfavourable to the convicted person. It is not fettered by tactical or forensic decisions at trial, or by the way the Crown or defence cases were conducted.

67 My overall task is therefore to consider the evidence at the trial and the conduct of the trial, in light of the further evidence and submissions received in the Inquiry, in order to determine whether, overall, there is a reasonable doubt as to Ms Folbigg's guilt or as to any matter that may have affected the nature or severity of her sentence.

68 It is on this basis that the Inquiry was conducted and that this report is made."

[98] What was required of the judicial officer was essentially an exercise in fact-finding. That was the exercise undertaken. The purpose and subject matter of the Report were reflected in the consideration of extensive evidence as to whether there was a real possibility that one or more of the deaths had resulted from natural causes, so as to provide a factual basis for a finding of reasonable doubt as to the applicant's guilt with respect to one or any of the charges. The application of the standard of "reasonable doubt", as found in s 82(2)(a) of the Appeal and Review Act, was to inform the process of reasoning, and to form the basis of the final conclusions. Reading the Report as a whole permits no inference that the judicial officer deviated from that function.

24. I propose to adopt the same approach except it will also be necessary for me to consider the evidence led at the 2019 Inquiry, noting that evidence was also tendered in this Inquiry.
25. Although the direction given to me focuses on the new evidence that has become available, my task is to form an opinion on the whole of the evidence as to whether I have reasonable doubt of Ms Folbigg's guilt on any of the charges. In *R v Hillier* [2007] HCA 13; (2007) 228 CLR 618, at [46], it was emphasised that a jury cannot be satisfied beyond reasonable doubt unless no explanation other than guilt is reasonably compatible with the circumstances, and that it is critical that all the circumstances established by the evidence are considered and weighed in deciding whether or not there is an inference reasonably open on the evidence consistent with innocence.
26. In *R v Baden-Clay* [2016] HCA 35; (2016) 258 CLR 308, at [46]-[47], the court emphasised that where a case rests upon circumstantial evidence, the jury cannot return a verdict of guilty unless the circumstances are such as to be inconsistent with any reasonable hypothesis other than the guilt of the accused, but that for an inference to be reasonable it must rest on more than mere conjecture. The court also emphasised that all the circumstances are to be weighed and considered in deciding whether there is an inference consistent with innocence reasonably open, and that the evidence is not to be looked at in a piecemeal fashion.
27. That is the approach I intend to take in the present case.
28. It should be noted that at the hearing of the Inquiry, counsel for Mr Folbigg

suggested a somewhat different approach. He submitted, relying on what was said in *Folbigg v Attorney General of New South Wales* (supra) at [84]-[89], that although the discovery of a plausible natural cause of death in Sarah and Laura would reduce the improbability of the four deaths occurring naturally, the causal hypotheses were not strong and different indications in each of the four children would have limited effect. He submitted that, applying that test, I could not form reasonable doubt as to the guilt of Ms Folbigg particularly having regard to the conclusions reached by the jury, the Court of Criminal Appeal on appeal and by the Court in *Folbigg v Attorney General of New South Wales*.

29. The passage relied upon in support of that submission was in the following terms:

[84] Of more importance to the outcome of the inquiry was the discussion of “Genetics evidence” in Ch 7. In so far as the evidence established a particular natural cause as a reasonable possibility in relation to the death of each child, taken separately the likelihood of such natural causes, each in itself a rare event, in four consecutive children in one family was vanishingly small. The conclusion would, of course, be quite different were there a real possibility of a common cause. The common cause might, in theory, be environmental or genetic. In practical terms the question was whether there was evidence to support a common genetic link.

...

[86] However, before dealing with the more detailed issues, some further general observations are in order. First, although the discovery of a plausible cause of death in any of the children would in theory reduce the degree of improbability of four deaths occurring naturally in one family, unless the causal hypothesis for a natural cause in one case was strong, it would have limited effect. Similarly, different indications in each of the four cases, lacking strong causal links, would have limited effect. However, the identification of a common genetic factor providing a possible explanation as to why more than one death occurred in the one family, would be, subject to the other evidence, an important step in demonstrating a reasonable doubt as to the applicant having caused those deaths.

[87] Secondly, despite extensive investigations, no common genetic element has been identified as present in all four children. What was identified, after the trial, was a variant in the CALM2 gene associated with certain cardiac conditions, the genetic variant being common to the girls (Laura and Sarah) and the applicant. As will be noted below, the causal significance of this was contestable.

...

[89] Fourthly, as to genetics, in 2013 it was reported in the medical literature that genetic perturbations in CALM1, 2 and 3 which encoded for a particular protein, calmodulin, were associated with early occurrence of life-threatening cardiac arrhythmias in infancy and early childhood, particularly in long QT syndrome (LQTS)¹⁸ phenotypes, and less frequently in catecholaminergic polymorphic ventricular tachycardia (CPVT), idiopathic ventricular fibrillation (IVF) and sudden unexplained deaths (SUD) in young individuals’ phenotypes.¹⁹ Thereafter, the authors of the report set up an international calmodulinopathy registry which collected demographic, clinical and genetic information in relation to patients suffering from LQTS and CPVT. In April 2019 a paper was published relating to 74 subjects from 51 different families.²⁰ The significance of the 2019 paper (which became available after the evidence to the inquiry was completed but before the Report was released) lay in its identification of

¹⁸ On an electroencephalogram, the QT interval is the time from the beginning of the ventricular systole to the point where the heart recharges electrically. An extended interval is potentially dangerous.

¹⁹ Exhibit 15-64, Lia Crotti et al, ‘Calmodulin Mutations Associated with Recurrent Cardiac Arrest in Infants’ (2013) 127 *Circulation* 1009-1017.

²⁰ Exhibit 2-BU, Lia Crotti et al, ‘Calmodulin Mutations and Life-Threatening Cardiac Arrhythmias: Insights from the International Calmodulinopathy Registry’ (2019) *European Heart Journal* (advance).

infant deaths associated with a variant in CALM3 which encoded the same protein as the CALM2 variant found in the applicant, Sarah and Laura. Prior to publication of the 2019 paper, the experts who gave evidence to the inquiry were generally not persuaded that this variant was likely to be pathogenic, although Professor Vinuesa stated that she “would not feel comfortable with excluding its potential for pathogenicity”.²¹ The later publication led to further medical evidence and an addendum to the Report. The significance of the material was that it provided a common genetic link associated with pathogenicity in the two female children. However, the males were not affected. There therefore remained at least three separate causes, as there was no common link between the deaths of the boys.

30. Although I will deal with the facts on which this proposition is based later in the Report, I do not think the Court of Appeal was laying down a different test for the consideration of a circumstantial case to that laid down by the High Court in cases such as *Hillier* and *Baden-Clay*. That is made clear from what was said by the Court at [97]-[98] which I have cited at [23] above.
31. Rather, I agree with the submissions of Counsel Assisting the Inquiry that the remarks of the Court of Appeal at [86]-[89] were simply pointing out that the stronger the evidence suggestive of a natural cause of death in one or more the children, the harder it will be to reach the conclusion that a hypothesis, consistent with guilt, is the only rational hypothesis.

The evidence before the Inquiry

32. A great volume of documentary evidence, 45 volumes in total, was tendered during the course of the Inquiry. It included the transcript of Ms Folbigg’s trial, all evidence tendered at the trial as well as a body of reports and other material prepared in anticipation of the trial. Included in the exhibits was an electronically recorded interview between Ms Folbigg and Detective Senior Constable Bernard Michael Ryan (**Detective Ryan**) and Detective Senior Constable Marita Engdahl (**Detective Engdahl**) conducted on 23 July 1999. Ms Folbigg did not give evidence at the trial.
33. There was also tendered the whole of the material that was before the 2019 Inquiry including the transcript of the evidence given at it. This included the evidence of Ms Folbigg who was cross-examined extensively on entries in diaries kept by her which were said to contain admissions of guilt.
34. There was also tendered before me a considerable body of medical and scientific evidence dealing with the question referred to in the direction given to me namely whether the genetic variant (CALM2-G114R) identified in Ms Folbigg, Sarah and Laura was capable of causing cardiac arrhythmias and sudden unexpected death in young children. A number of highly renowned clinicians and researchers gave evidence on this question. Evidence was also adduced from forensic pathologists as to the children’s health and their deaths. Evidence was also given by a highly qualified paediatric neurologist and a paediatric intensivist as to the causes of Patrick’s ALTE and death.
35. There was also a body of psychiatric and psychological evidence directed to the question of whether the diary entries, said to constitute admissions, were otherwise explicable having regard to Ms Folbigg’s mental state at the time.

²¹ 2019 Inquiry Report, ch 7 [105].

36. In addition, there was tendered a large number of articles referred to by the experts in their reports as relevant to the questions asked of them.

The circumstances surrounding the death of the four children

37. In this section of the report, I have drawn from the facts contained in the 2019 Inquiry Report, particularly those set out in the Summary that is attached to Counsel Assisting's closing submissions dated 4 April 2023. By and large the factual matters are uncontroversial and are supported by reference to evidence given at Ms Folbigg's trial, and the contemporaneous documents brought into existence at the time of the death of each of the children.

Caleb

38. Caleb was born on 1 February 1989.²² He was seen by a consultant paediatrician, Dr Barry Springthorpe, on 2 and 17 February 1989.²³ In a statement dated 6 December 1999, Dr Springthorpe noted he first saw Caleb when he was 14 hours old and had developed respiratory distress which required some oxygen during the night.²⁴ He stated this was quite a common occurrence in newborn children.²⁵
39. Dr Springthorpe stated that Caleb was discharged from hospital on 5 February 1989, apparently well.²⁶ He stated he reviewed Caleb on 17 February 1989 and noted there was still a "mild inspiratory stridor with a little recession which was most marked when he was upset or lying flat on his back".²⁷ In a letter to the Folbigg family's general practitioner on the same day, he stated that he felt sure it was just a simple mild laryngomalacia which should resolve with time.²⁸ He expressed the opinion that Caleb undoubtedly had congenital laryngeal stridor (almost certainly on the basis of laryngomalacia) but there was nothing abnormal in the way of laryngeal webs or cysts to be found in autopsy and the cause of his death remained a mystery.²⁹
40. Dr Springthorpe gave evidence at Ms Folbigg's trial. He stated that on discharge from hospital Caleb had slightly noisy breathing but he did not feel that this had any impact on his feeding or sleeping.³⁰ He stated that the stridor was very mild stating that he felt it was most likely due to a soft larynx so called laryngomalacia, commonly known as floppy larynx.³¹ He stated that in his opinion it had nothing to

²² Exhibit 2-H, Forensic pathology tender bundle, Neonatal record of Caleb (5 February 1989) [red pagination 3515].

²³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T265.22-28 [red pagination 2069], T266.6-8 [red pagination 2070], T269.25-28 [red pagination 2073].

²⁴ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Barry Springthorpe (6 December 1999) [4] [red pagination 3539].

²⁵ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Barry Springthorpe (6 December 1999) [4] [red pagination 3539]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T265.43-44 [red pagination 2069].

²⁶ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Barry Springthorpe (6 December 1999) [4] [red pagination 3539].

²⁷ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Barry Springthorpe (6 December 1999) [6] [red pagination 3539].

²⁸ Exhibit 2-H, Forensic pathology tender bundle, Letter from Dr Barry Springthorpe to Dr Davidson (17 February 1989) [red pagination 3542].

²⁹ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Barry Springthorpe (6 December 1999) [5] [red pagination 3540].

³⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T265.39-41 [red pagination 2069].

³¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T266.20-26 [red pagination 2070].

do with Caleb's death.³² He also stated that in his view it was certainly possible to smother a young baby without leaving marks, opining that it could be done by use of a pillow case on the face.³³

41. Caleb died on 20 February 1989 aged 19 days old.³⁴ He was found on his back with his face uncovered in his own bed, in his own room.³⁵ Mr Folbigg gave evidence at trial that he was woken by Ms Folbigg screaming. He went in and Ms Folbigg was standing at the end of the bassinet screaming.³⁶ Caleb was in the bassinet, and Mr Folbigg lifted him.³⁷ Caleb's lips were blue, his eyes were closed and his skin was warm to touch.³⁸ He was not breathing.³⁹ Mr Folbigg attempted to resuscitate him and told Ms Folbigg to call an ambulance.⁴⁰
42. In a statement to police, Ms Folbigg stated that she fed Caleb at 1:00am then put him to bed.⁴¹ She recorded in a diary entry that, at about 2:00am, Caleb was "finally asleep!".⁴² At about 2:50am, she checked him and found him cold.⁴³
43. Mr Dave Hopkins and Mr Richard Baines were the first ambulance officers to attend. Mr Hopkins stated that at 2:59am he and Mr Baines arrived at the house.⁴⁴ They either went into a room and gathered Caleb, or the woman present (Ms Folbigg) brought Caleb to them. Caleb was dressed in light clothing.⁴⁵ Mr Hopkins removed the upper clothing and established that Caleb was in a state of cardiac arrest, i.e. unconscious, was not breathing and was pulseless. He noted that Caleb was warm to touch and pale around the mouth and lips. Mr Baines also stated that Caleb was pale, not breathing and warm to touch upon examination.⁴⁶
44. Mr Hopkins recorded that Caleb's airway was obstructed, although when he gave his statement in 1999, he could not remember exactly what obstructed it.⁴⁷ He assumed there may have been saliva or fluid in the airway, which needed to be cleared, which Mr Baines did, prior to inserting a Guedel's airway (a device to keep the airway open).⁴⁸

³² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T267.50 [red pagination 2071].

³³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T268.3-5 [red pagination 2072].

³⁴ Exhibit 2-H, Forensic pathology tender bundle, Report of death to Coroner (20 February 1989) [red pagination 3518].

³⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T104.5 [red pagination 1908].

³⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T104.1-6 [red pagination 1908].

³⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T104.11-15 [red pagination 1908].

³⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T104.23-34 [red pagination 1908].

³⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T104.37 [red pagination 1908].

⁴⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T104.40-46 [red pagination 1908].

⁴¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Trial Exhibit AK, Statement of Kathleen Folbigg (undated) [red pagination 1745].

⁴² Exhibit 2-AZ, Diaries tender bundle [red pagination 6931].

⁴³ Exhibit 2-E, Exhibits tendered at 2003 trial, Trial Exhibit AK, Statement of Kathleen Folbigg (undated) [red pagination 1745].

⁴⁴ Exhibit 2-H, Forensic pathology tender bundle, Statement of David Hopkins (1 October 1999) p 2 [red pagination 3529]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Richard Baines (29 October 1999) p 2 [red pagination 3535]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T141.51-52 (Hopkins) [red pagination 1945]; T148.31-34 (Baines) [red pagination 1952].

⁴⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T142.12-20 [red pagination 1946].

⁴⁶ Exhibit 2-H, Forensic pathology tender bundle, Statement of Richard Baines (29 October 1999) p 2 [red pagination 3535]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T148.31-34 [red pagination 1952].

⁴⁷ Exhibit 2-H, Forensic pathology tender bundle, Statement of David Hopkins (1 October 1999) p 2 [red pagination 3529]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T142.31-33 [red pagination 1946].

⁴⁸ Exhibit 2-H, Forensic pathology tender bundle, Statement of David Hopkins (1 October 1999) p 2 [red pagination 3529]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T142.32-35 [red pagination 1946].

45. A short time later, two more ambulance officers, Mr Allen Reed and Mr Ron Doherty, arrived. In his statement, Mr Reed said that on arrival at 3:03am either he or Mr Doherty applied an electrocardiogram (**ECG**) monitor to Caleb which recorded asystole (meaning deceased).⁴⁹ Mr Reed stated that the external examination showed that Caleb had buccal mucosa which was a blue/purple colouring around the outside of the mouth.⁵⁰ In an ambulance report, Mr Reed recorded the skin temperature as cold to touch and the airway clear, and no breathing or circulation present.⁵¹ There was no sweating, vomiting, fitting, burns or blood loss. At trial, Mr Reed had no independent recollection of the incident (after 14 years) and relied on his statement.⁵² Nothing was said in his statement as to how long after his arrival he might have touched Caleb.
46. In the ambulance report signed by Mr Baines and Mr Hopkins, the history was recorded as being SIDS.⁵³ The report recorded that Caleb was pale, warm to touch but not breathing. His airway was recorded as obstructed, breathing absent, circulation absent, and skin temperature as normal, on a series of check boxes. His posture was recorded as supine.
47. The “Report of death to Coroner” (known as a “**P79A**”) was dated 20 February 1989 and was signed by Senior Constable K J Bryant. It recorded the time that Caleb was last seen alive as being 1:00am on 20 February 1989.⁵⁴
48. An autopsy was carried out by a pathologist, Dr Roy Cummings (**Dr Cummings**). In a provisional autopsy report dated 20 February 1989, he stated the cause of death to be Sudden Infant Death Syndrome (**SIDS**).⁵⁵
49. In his final autopsy report, he expressed the same view although he noted that Caleb’s lungs were congested and in places showed incomplete aeration. He also stated that in another section the alveoli contained extravasated red blood cells and a small amount of eosinophilic exudate.⁵⁶
50. Dr Cummings did not give evidence at the trial.
51. In November 1999, Dr Allan Cala (**Dr Cala**), then a forensic pathologist with the NSW Institute of Forensic Medicine, conducted a microscopy examination of Caleb’s tissues. The only abnormality shown on that examination was that congestive changes were present with focal areas of haemorrhage present within some alveolar spaces.⁵⁷
52. Professor Peter Berry (**Professor Berry**) prepared a report in November 2000 at the request of Detective Ryan, the police officer responsible for the investigation

⁴⁹ Exhibit 2-H, Forensic pathology tender bundle, Statement of Allen Reed (1 September 1999) [5] [red pagination 3526-3527].

⁵⁰ Exhibit 2-H, Forensic pathology tender bundle, Statement of Allen Reed (1 September 1999) [5] [red pagination 3526-3527].

⁵¹ Exhibit 2-H, Forensic pathology tender bundle, Ambulance report Q006 (20 February 1989) [red pagination 3519-3520].

⁵² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 5 May 2003 T1152.46-52 [red pagination 2956].

⁵³ Exhibit 2-H, Forensic pathology tender bundle, Ambulance report Q005 (20 February 1989) [red pagination 3532-3533].

⁵⁴ Exhibit 2-H, Forensic pathology tender bundle, Report of death to Coroner (20 February 1989) [red pagination 3518].

⁵⁵ Exhibit 2-H, Forensic Pathology Tender Bundle, Interim post-mortem report by Dr Royal Cummings (20 February 1989) [red pagination 3521].

⁵⁶ Exhibit 2-H, Forensic Pathology Tender Bundle, Autopsy report by Dr Royal Cummings (9 May 1989) [red pagination 3524].

⁵⁷ Exhibit 2-H, Forensic Pathology Tender Bundle, Microscopic examination of tissues by Dr Allan Cala (25 November 1999) [red pagination 3537].

into the death of the four children. Professor Berry was a Consultant Paediatrician Pathologist at the Bristol Royal Hospital for Sick Children and a Professor of Paediatric Pathology at the University of Bristol. Professor Berry was supplied with 14 stained microscopic slides of tissue taken from Caleb's body. He stated that sections of the lungs stained by Perls method showed moderate numbers of pale blue intra-alveolar macrophages some with haemosiderin granules.⁵⁸ Professor Berry explained the significance he attributed to this finding in his evidence at the trial (see [336] and [339] below).

Patrick

The events up to the ALTE

53. Patrick was born at 39 weeks' gestation (full term) and normal weight on 3 June 1990.⁵⁹ According to hospital notes, he was bottle fed upon discharge on 8 June 1990.⁶⁰ Notes recorded that there was to be a sleep study on 14 June 1990 and an appointment with Dr Robert Morris, a paediatrician at the Mater Hospital, at three weeks.⁶¹
54. The sleep study when Patrick was one and a half weeks old was conducted, given Caleb's death, to investigate Patrick for possible SIDS-related problems. He was admitted to hospital for the investigations.⁶² The study was carried out by Dr David Cooper (**Dr Cooper**), formerly Head Paediatrician at the Paediatric Respiratory and Sleep Service at John Hunter Hospital.
55. Dr Cooper gave evidence at trial and prepared a statement dated 6 December 1999.⁶³ At trial, Dr Cooper described the studies available in 1990 and 1992 as being "simplistic", using "primitive" equipment, and said that techniques had become much more sophisticated since.⁶⁴ For example, at the time, the doctors did not differentiate between central and obstructive apnoea: central apnoea being where the brain fails to send a message to the respiratory system to breathe and obstructive apnoea referring to some obstruction meaning the air is not able to get in.⁶⁵
56. Dr Cooper said that the results of Patrick's tests were entirely normal.⁶⁶ Dr Ian Wilkinson (**Dr Wilkinson**), a paediatric neurologist, also gave evidence at trial of investigations carried out on Patrick.⁶⁷ He also said that the results of Patrick's tests were within normal limits.⁶⁸

⁵⁸ Exhibit 2-H, Forensic Pathology Tender Bundle, Report of Peter Berry (November 2000) [red pagination 3773-3774].

⁵⁹ Exhibit 2-H, Forensic pathology tender bundle, Birth certificate of Patrick (3 June 1990) and Neonatal record (3 June 1990) [red pagination 3544-3545].

⁶⁰ Exhibit 2-H, Forensic pathology tender bundle, Neonatal record of Patrick (3 June 1990) p 1 [red pagination 3545].

⁶¹ Exhibit 2-H, Forensic pathology tender bundle, Neonatal record of Patrick (3 June 1990) p 1 [red pagination 3545].

⁶² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T512.32-46 [red pagination 2316].

⁶³ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr David Cooper (6 December 1999) p 1 [red pagination 3707]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T585.25-615.6 [red pagination 2389-2419].

⁶⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T586.6-18 [red pagination 2390].

⁶⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T586.12-32 [red pagination 2390].

⁶⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T587.39-588.3 [red pagination 2391-2392]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr David Cooper (6 December 1999) p 2 [red pagination 3708].

⁶⁷ Exhibit 2-H, Forensic pathology tender bundle, Statements of Dr Ian Wilkinson (12 March 1999 and 8 October 1999) [red pagination 3702-3703, 3575-3577].

⁶⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T512.35-55 [red pagination 2316].

57. Dr Christopher Marley (**Dr Marley**), a general practitioner, saw Patrick on several occasions during Patrick's lifetime.⁶⁹ In his statement of 9 March 1999, he stated that he saw no sign of neglect on Patrick.⁷⁰ In his evidence at trial he said that Ms Folbigg impressed him as a caring and concerned parent.⁷¹ He saw Patrick five times for routine childhood illnesses and injections, and said that:

Patrick was no different from many other children. We saw him for minor respiratory infections. He did have a major neurological problem, but that was mainly dealt with by his paediatrician and neurologist. That was the epilepsy and cortical blindness.⁷²

The ALTE

58. On 18 October 1999 Patrick suffered the ALTE.
59. Mr David Hopkins and Mr Lance Yorke were ambulance officers who attended in response to Patrick's ALTE, arriving at the Folbigg home at 4:41am.⁷³ Upon arrival they were met by Ms Folbigg at the side entrance of the house holding Patrick in her arms wrapped in a blanket. She was crying and said "my baby is having trouble breathing".⁷⁴ Patrick's clothing was moved to expose his chest and Mr Hopkins saw that he appeared to be having respiratory difficulties. Patrick was pale around the face and listless. He exhibited tracheal tug and intercostal recession, that is, he was in respiratory distress and was attempting to breathe but it was very laboured.⁷⁵
60. Mr Hopkins and Mr Yorke immediately transported Patrick to the Mater Hospital.⁷⁶ Mr Hopkins applied oxygen therapy en-route⁷⁷ and Patrick's level of consciousness rose although his respiratory effect remained impaired.⁷⁸ They arrived at the hospital at 4:52am.⁷⁹
61. Mr Hopkins and Mr Yorke recorded on the ambulance report that Ms Folbigg had told them that Patrick had had a cold for two days but was normally happy and dynamic.⁸⁰ The ambulance report recorded that Patrick's skin temperature was hot.⁸¹
62. A hospital note upon Patrick's admission recorded that he had been "snuffly" for

⁶⁹ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Christopher Marley (9 March 1999) [red pagination 3619-3620].

⁷⁰ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Christopher Marley (9 March 1999) [5] [red pagination 3620].

⁷¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 11 April 2003 T538.46-48 [red pagination 2342].

⁷² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 11 April 2003 T539.10-17 [red pagination 2343].

⁷³ Exhibit 2-H, Forensic pathology tender bundle, Statement of David Hopkins (1 October 1999) p 3 [red pagination 3530].

⁷⁴ Exhibit 2-H, Forensic pathology tender bundle, Statement of David Hopkins (1 October 1999) pp 3-4 [red pagination 3530-3531].

⁷⁵ Exhibit 2-H, Forensic pathology tender bundle, Statement of David Hopkins (1 October 1999) p 4 [red pagination 3531]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T436.14 [red pagination 2240].

⁷⁶ Exhibit 2-H, Forensic pathology tender bundle, Statement of David Hopkins (1 October 1999) p 4 [red pagination 3531].

⁷⁷ Exhibit 2-H, Forensic pathology tender bundle, Statement of David Hopkins (1 October 1999) p 4 [red pagination 3531]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T436.48-50 [red pagination 2240].

⁷⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T436.52-56 [red pagination 2240].

⁷⁹ Exhibit 2-H, Forensic pathology tender bundle, Statement of David Hopkins (1 October 1999) p 4 [red pagination 3531]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T436.58-437.1 [red pagination 2240-2241].

⁸⁰ Exhibit 2-S, Section of Patrick's medical records, p 526 [red pagination 4425]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T437.22-48, T438.19-21 [red pagination 2241, 2242].

⁸¹ Exhibit 2-S, Section of Patrick's medical records, p 526 [red pagination 4425]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T438.23-34 [red pagination 2242].

the past three days with dry coughs and some vomits post bottle feeds but had otherwise been well and behaving normally with no fevers.⁸²

63. Dr Joseph Dezordi (**Dr Dezordi**) was on duty as a paediatric resident at Newcastle Mater Hospital on the night of Patrick's ALTE. He gave evidence at the trial that Ms Folbigg informed him that she had heard Patrick coughing at about 3:00am and that she saw him at the time but he went back to sleep. Dr Dezordi said that Ms Folbigg told him that she was alerted again at 4:30am when she heard sounds to the effect of him gasping. She told Dr Dezordi that Patrick was blue around the lips that he was lifeless and floppy and he was making minimal respiratory efforts and that he also made a high pitched cry.⁸³ Dr Dezordi stated that he specifically asked Ms Folbigg whether any cardio-pulmonary resuscitation (**CPR**) was performed. She stated it had not.⁸⁴ That is to be contrasted with the evidence of Mr Folbigg.⁸⁵
64. Dr Dezordi, both in his statement and at the trial, detailed his examination and treatment of Patrick over the following days. His evidence was to the following effect:

When Patrick came in, Dr Dezordi "saw a lethargic, cyanosed infant, who was responsive only to painful stimuli."⁸⁶ In his oral evidence, he described Patrick as being hypoxic on arrival; blue, lethargic, with no fever.⁸⁷

On initial examination, Patrick had an oxygen saturation level of 88 per cent.⁸⁸ Dr Dezordi proceeded to treat him with oxygen administered by a Hudson mask, and after about 15 minutes Patrick became more alert, and remained pink, even when oxygen in high concentration was not being administered. Dr Dezordi therefore concluded that Patrick's condition was not likely to be due to a respiratory problem.⁸⁹

Dr Dezordi also gave oral evidence...that because of "fairly rapid normalisation of [Patrick's] colour and oxygen saturation level", he concluded that "I was not dealing primarily with pathology involving his lungs, chest and possibly his airways" (such as pneumonia or bronchiolitis).⁹⁰ He said that Patrick appeared to respond to oxygen treatment, although it was possible he was getting better spontaneously.⁹¹ Medical staff were able to measure the oxygen content in his blood with saturation monitors and Patrick maintained saturation levels.⁹²

Dr Dezordi conducted a detailed examination of Patrick, which he said was generally unremarkable at this stage.⁹³ Patrick was appropriately grown.⁹⁴ He was arching his back; this was non-specific although it could indicate that Patrick may have been

⁸² Exhibit 2-S, Section of Patrick's medical records, p 533 [red pagination 4432].

⁸³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T447.21-32 [red pagination 2251].

⁸⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T447.36-37 [red pagination 2251].

⁸⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T116.15-16 [red pagination 1920].

⁸⁶ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) p 2 [red pagination 3589].

⁸⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T446.46-447.13; T452.8-13 [red pagination 2250-2251; 2256].

⁸⁸ Exhibit 2-S, Section of Patrick's medical records, p 534 [red pagination 4433].

⁸⁹ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) p 2 [red pagination 3589].

⁹⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T448.2-41 [red pagination 2252].

⁹¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T448.2-3 [red pagination 2252].

⁹² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T448.15-18 [red pagination 2252].

⁹³ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) p 2 [red pagination 3589].

⁹⁴ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) p 2 [red pagination 3589]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T448.58 [red pagination 2252].

cerebrally irritated, in turn indicating inflammation of the brain, meningitis or other pathology involving the brain.⁹⁵ However, Patrick did not have sufficient signs at the time for Dr Dezordi to pursue a diagnosis of meningitis.⁹⁶

There were no signs to suggest other serious illness, or of trauma or injuries.⁹⁷ There were also no signs of upper airway obstruction or aspiration which might have accounted for the history Ms Folbigg gave Dr Dezordi, that Patrick had been gasping and that he was barely breathing.⁹⁸

By 6:00am on 18 October 1990, preliminary test results were available. The blood tests showed no abnormality.⁹⁹ However, a urine test returned a high level of glucose, which was unexpected and which Dr Dezordi said in his oral evidence before the jury tended to suggest “a fairly catastrophic event, such as an asphyxiating event, or a prolonged seizure.”¹⁰⁰ By “asphyxiating event” he meant “any event, that leads to obstruction of air into the lungs and impairment of oxygen levels in the blood and to the brain.”¹⁰¹ At the time he received the results, Dr Dezordi thought it could have possibly been caused by a seizure of some kind, or an episode of prolonged hypoxia.¹⁰²

During this early period in hospital, Patrick vomited three times but had no respiratory difficulty with the vomiting.¹⁰³

On 19 October 1990, hospital progress notes recorded Patrick as seeming “okay” and “fine in the morning”.¹⁰⁴ However, around 2:00pm he had a high temperature and was vomiting, and in the afternoon he was “not a very well boy”.¹⁰⁵

At 9:00pm that night, Patrick had a convulsion fit, with physical shaking. Overnight through to 20 October 1990, he had approximately 15 fits involving stiffening of the neck, eyes open and glazed with a fixed stare.¹⁰⁶ The longest fit was one minute and 10 seconds, the shortest was 30 seconds.¹⁰⁷ He was given Valium and an anti-fitting drug which seemed to work.¹⁰⁸

Dr Dezordi saw Patrick at 6:00am on 20 October 1990.¹⁰⁹ Dr Dezordi noted the fitting, and

⁹⁵ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) p 3 [red pagination 3590]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T482.49-483.4, T449.1-6 [red pagination 2286-2287, 2253].

⁹⁶ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) p 3 [red pagination 3590]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T450.9-16 [red pagination 2254].

⁹⁷ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (7 March 2000) p 3 [red pagination 3590]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T450.5-7 [red pagination 2254].

⁹⁸ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) pp 2-3 [red pagination 3589-3590]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T449.11-18 [red pagination 2253].

⁹⁹ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) p 3 [red pagination 3590]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T450.20-25 [red pagination 2254].

¹⁰⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T449.38-55 [red pagination 2253]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (7 March 2000) p 2 [red pagination 3589].

¹⁰¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T449.57-450.3 [red pagination 2253-2254].

¹⁰² Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) p 3 [red pagination 3590].

¹⁰³ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) p 3 [red pagination 3590]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T451.15-23 [red pagination 2255].

¹⁰⁴ Exhibit 2-S, Section of Patrick’s medical records, p 437 [red pagination 4336].

¹⁰⁵ Exhibit 2-S, Section of Patrick’s medical records, p 437 [red pagination 4336].

¹⁰⁶ Exhibit 2-S, Section of Patrick’s medical records, p 439 [red pagination 4338].

¹⁰⁷ Exhibit 2-S, Section of Patrick’s medical records, p 439 [red pagination 4338].

¹⁰⁸ Exhibit 2-S, Section of Patrick’s medical records, p 439 [red pagination 4338].

¹⁰⁹ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) p 4 [red pagination 3591].

that Patrick's eyes were deviated to the right hand side.¹¹⁰ He gave evidence of Patrick having recurrent seizures in the two days after he was admitted, and subsequently.¹¹¹

Dr Dezordi gave evidence that virological tests did not support a diagnosis of bronchiolitis (compared with an official report that a chest x-ray showed signs which could be due to bronchiolitis).¹¹² Patrick was found to be neurologically normal, although the examinations were arguably not complete because his pupils were not dilated to investigate for retinal haemorrhages.¹¹³ Meningitis, septicaemia and meningococcal were not present.¹¹⁴

By 23 October 1990, Patrick's progress was recorded as slow with occasional fitting.¹¹⁵ Dr Dezordi thought that the seizures were focal (localised), and so ordered a CT scan, which was conducted that day by Dr Man Kit Lai, a staff specialist radiologist at the Mater Hospital.¹¹⁶ Dr Lai's report indicated some brain abnormalities in the occipital lobes (at the back), and temporal lobes (at the side).¹¹⁷

...

At the time of Patrick's admission, Dr Dezordi considered that herpes encephalitis was possible, although with "strong doubts" given the CT scan and also a normal lumbar puncture.¹¹⁸ In his oral evidence at trial, Dr Dezordi explained that while a normal lumbar puncture does not exclude herpes, it is very rare; in light of normal EEG, lumbar puncture and tests for viruses, he said he was left with unknown causes of Patrick's seizures.¹¹⁹

Dr Dezordi prepared Patrick's discharge report on 29 October 1990, recording as "diagnosis", "intractable seizures, probably viral encephalitis" and also "bronchiolitis" and "brother died aged 19 days in sleep."¹²⁰

...Dr Dezordi said that the use of "probably" for viral encephalitis was to describe a "working possibility" – he had nothing else to explain Patrick's presentation medically, so it was a possibility.¹²¹ However, Dr Dezordi was never convinced that Patrick had encephalitis.¹²² The normal lumbar punctures caused him to doubt the encephalitis theory altogether.¹²³ He recorded on the discharge, "marked serial deterioration in three EEGs suggests progressive encephalopathic process", and gave evidence

¹¹⁰ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) p 4 [red pagination 3591].

¹¹¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T466.46-49 [red pagination 2270].

¹¹² Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) p 3 [red pagination 3590]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T451.37-43, 10 April 2003 T505.7-21 [red pagination 2255, 2309].

¹¹³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T450.27-451.13 [red pagination 2254-2255].

¹¹⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T449.40-45, T450.20-25 [red pagination 2253, 2254].

¹¹⁵ Exhibit 2-S, Section of Patrick's medical records, p 439 [red pagination 4338].

¹¹⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T467.2-4 [red pagination 2271]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Man Kit Lai (11 February 2000) [red pagination 3584-3585].

¹¹⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T467.52-468.6 [red pagination 2271-2272]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T497.1-19 [red pagination 2301]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) p 4 [red pagination 3591], Statement of Dr Man Kit Lai (11 February 2000) p 3 [red pagination 3586].

¹¹⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T468.21-26 [red pagination 2272]; 10 April 2003 T484.53-58 [red pagination 2288].

¹¹⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T468.51-469.38 [red pagination 2272-2273].

¹²⁰ Exhibit 2-H, Forensic pathology tender bundle, Interim discharge letter of Dr Christopher Marley (29 October 1990) [red pagination 3594]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T484.48.51 [red pagination 2288].

¹²¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T484.22-40 [red pagination 2288].

¹²² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T484.57-58 [red pagination 2288].

¹²³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T488.30-38 [red pagination 2292].

that this was a very ambiguous term, which showed the doctors did not know what was going on.¹²⁴ He said that the term was not the same as encephalitis, and he was not thinking herpes encephalitis.¹²⁵ He said the damage to Patrick's brain "definitely" could have been caused by asphyxiation.¹²⁶

65. Patrick was also treated by Dr Wilkinson. Dr Wilkinson at the time of the trial had been a consultant paediatric neurologist for 22 years. He was a member of the Executive Board of the International Child Neurology Association.¹²⁷
66. Dr Wilkinson saw Patrick between 18 and 20 October 1990. Dr Wilkinson gave evidence at trial about the investigations, including the CT scans and EEG tests.¹²⁸ In a reporting letter, he described Patrick as presenting with what initially sounded like apnoea but that subsequently in the ward he demonstrated clearly that he was having seizures.¹²⁹ On examination Dr Wilkinson could not find any neurological problem.¹³⁰ The CT scan, which he said was "[t]he most worrying thing", showed symmetrical areas of hypodensity in occipital regions posteriorly, changes which suggested the possibility of a metabolic disorder although herpes encephalitis could not be ruled out absolutely.¹³¹ While Patrick had been febrile (feverish) at various times, he had no white cells in his spinal fluid and only three red cells.¹³² Dr Wilkinson wrote, that "[w]e have chosen to treat as though he might have Herpes Simplex encephalitis, with Acyclovir, but his fits have been quite resistant to treatment".¹³³
67. Patrick was discharged from hospital on 29 October 1990. He presented again at hospital on 4 November 1990 with a seizure. Dr Dezordi organised a CT scan for 5 November 1990 which he said demonstrated the abnormalities already seen on the previous scan, which seemed to have worsened. The deterioration and damage was at the back of Patrick's brain. Dr Lai, who conducted the scan, reported that there was a generalised loss of brain substance. However, the cause of this "loss of brain substance" was not clear to Dr Dezordi or to any of the medical staff.¹³⁴ Following many further tests and consultations with colleagues, Dr Dezordi was unable to find a specific explanation for the abnormality.¹³⁵
68. The third EEG, conducted on 5 November 1990, also showed abnormalities, which

¹²⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T489.3-42, T499.23-51 [red pagination 2293, 2303]; Exhibit 2-H, Forensic pathology tender bundle, Interim discharge letter of Dr Christopher Marley (29 October 1990) [red pagination 3594].

¹²⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T487.6-15 [red pagination 2291].

¹²⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T499.57-500.19 [red pagination 2303].

¹²⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T506.21-41 [red pagination 2310].

¹²⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T507.25-508.11 [red pagination 2311-2312].

¹²⁹ Exhibit 2-H, Forensic pathology tender bundle, Letter from Dr Ian Wilkinson to Dr Robert Morris (30 October 1990) [red pagination 3547].

¹³⁰ Exhibit 2-H, Forensic pathology tender bundle, Letter from Dr Ian Wilkinson to Dr Robert Morris (30 October 1990) [red pagination 3547].

¹³¹ Exhibit 2-H, Forensic pathology tender bundle, Letter from Dr Ian Wilkinson to Dr Robert Morris (30 October 1990) [red pagination 3547].

¹³² Exhibit 2-H, Forensic pathology tender bundle, Letter from Dr Ian Wilkinson to Dr Robert Morris (30 October 1990) [red pagination 3547].

¹³³ Exhibit 2-H, Forensic pathology tender bundle, Letter from Dr Ian Wilkinson to Dr Robert Morris (30 October 1990) [red pagination 3547].

¹³⁴ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) p 4 [red pagination 3591], CT scan report of Patrick (5 November 1990) [red pagination 3587].

¹³⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T470.5-22, T470.44-49 [red pagination 2274].

Dr Dezordi said would not be necessarily pathognomonic of encephalitis – it could just be a process of epilepsy that is untreated or unresolved, but could possibly also be due to herpes encephalitis.¹³⁶ He said the report did not necessarily leave open a possibility that Patrick had encephalitis, because an encephalopathic process is much broader than herpes encephalitis itself – an encephalopathic process could be, for example, due to an ongoing infection, metabolic disease, or brain damage due to hypoxia.¹³⁷ While the third EEG report was less inconsistent with encephalitis than was the previous EEG report, by 5 November 1990 any diagnosis of herpes encephalitis would be somewhat tenuous, given normal lumbar punctures (a far more powerful test than an EEG) in the interim since Patrick’s presentation.¹³⁸

69. Dr Wilkinson gave evidence that after the first EEG, subsequent EEGs showed increasing abnormalities and progressive epileptogenic change.¹³⁹ He said he thought the CT scan showed localised changes in the occipital lobes (back part of the brain) whereas the EEGs demonstrated changes in multiple areas.¹⁴⁰
70. Dr Dezordi was asked at Ms Folbigg’s trial about whether an encephalopathic process included damage to the brain which could be caused from a hypoxic event, such as where the brain has been starved of oxygen.¹⁴¹ He agreed, and also agreed with the propositions that asphyxiation can cause a hypoxic event and that encephalopathic process would include asphyxiation.¹⁴²
71. Dr Dezordi stated that he discussed Patrick’s case with Dr Wilkinson and, at Dr Wilkinson’s request, the CT scans were sent to Professor Merl DeSilva (**Professor DeSilva**), an expert radiologist at the Children’s Hospital at Camperdown.¹⁴³ Professor DeSilva said that the changes in the CT scans were not classical of encephalitis.¹⁴⁴ Desperate to find an explanation, Dr Dezordi also looked at rare medical diseases.¹⁴⁵
72. On 14 November 1990, Patrick was admitted again to the Mater Hospital following generalised seizures, and with a virus.¹⁴⁶ By then, Patrick had lost the ability to fix on

¹³⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T460.11-31 [red pagination 2264].

¹³⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T460.33-41 [red pagination 2264]. An encephalopathic process is any diffuse disease of the brain that alters brain function or structure: National Institute of Neurological Disorders and Strokes, ‘Encephalopathy’, Encephalopathy Information Page (Web Page, 27 March 2019) <<https://www.ninds.nih.gov/Disorders/All-Disorders/Encephalopathy-Information-Page>>.

¹³⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T460.49-53, T461.1-11 [red pagination 2264, 2265].

¹³⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T507.53-56 [red pagination 2311].

¹⁴⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T508.46-51 [red pagination 2312].

¹⁴¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T499.23-500.3 [red pagination 2303-2304].

¹⁴² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T500.5-19 [red pagination 2304].

¹⁴³ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) p 4 [red pagination 3591]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T470.15-42 [red pagination 2274].

¹⁴⁴ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Joseph Dezordi (17 March 2000) p 5 [red pagination 3592].

¹⁴⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T470.44-49 [red pagination 2274]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Dezordi (17 March 2000), History, examination and progress notes dated 18 October 1990 [red pagination 3595-3598].

¹⁴⁶ Exhibit 2-S, Section of Patrick’s medical records, pp 714, 747, 772 [red pagination 4614, 4647, 4672].

a face and to follow, and seemed to only respond to bright lights.¹⁴⁷ He had further seizures in hospital before he was discharged on 22 November 1990.¹⁴⁸

73. Dr Wilkinson referred to the EEG performed on Patrick on 18 October 1990. He stated that neurologists look at EEGs to see the normality of the background rhythm for the continuous functioning of the brain and also for changes that are consistent with an epileptic process. He gave evidence that he was concerned, so he conducted a multitude of tests on Patrick to determine the cause of the brain damage not only on the basis of Patrick's own situation but because he was aware that Patrick had had a sibling who had already died.¹⁴⁹ He said that extremely exhaustive testing was carried out, doing all tests that were available in 1990. He stated that the tests revealed no inherited diseases that might have brought about neurological abnormalities and that an absolute explanation for the brain damage was not formed. He also stated the damage was consistent with Patrick having suffered a catastrophic asphyxiating event of an unknown kind.¹⁵⁰
74. Dr Wilkinson also stated that such damage can cause seizures to develop within a few days. He said it was a very typical sort of story that a child who had suffered some asphyxial damage to the brain may over the next few weeks and months develop progressive changes within the brain that produce seizures. He stated that in Patrick's case it became apparent further down the line that he had lost visual function. He said that he had seen this in a number of situations where children had suffered various asphyxial events and subsequently developed visual problems. He stated the development of Patrick's seizures and the progressive changes on the EEG and the CAT scans were all in keeping with him having suffered an asphyxial event that evolved over time.¹⁵¹

Patrick's death

75. Patrick died on 13 February 1991. Mr Folbigg gave evidence that at 10:00am that morning he received a phone call at work from Ms Folbigg, who screamed down the phone "It's happened again" and "I need you. Come home".¹⁵² He drove home quickly and upon running into the house saw Ms Newitt (his sister) and Ms Folbigg there. He raced into Patrick's room and saw he was lying in his cot. He scooped Patrick up, put him on the lounge and commenced CPR. Patrick was floppy, warm, with blue lips. The ambulance officers then took over.¹⁵³
76. Ms Kathleen Coyle (**Ms Coyle**), Mr Russell Mullins (**Mr Mullins**), and Mr Murray Hetherington (**Mr Hetherington**), ambulance officers, attended the Folbigg house at 10:10am.¹⁵⁴ Ms Coyle stated that she went through the lounge room and into another room on her left side, where she saw a man who she thought was attempting CPR on Patrick. Ms Coyle performed heart compressions, and one of the other officers

¹⁴⁷ Exhibit 2-S, Section of Patrick's medical records, p 747 [red pagination 4647].

¹⁴⁸ Exhibit 2-S, Section of Patrick's medical records, pp 714, 722, 772 [red pagination 4614, 4622, 4672].

¹⁴⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T508.8-57 [red pagination 2312].

¹⁵⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T509.4-55 [red pagination 2313].

¹⁵¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T509.57-T510.25 [red pagination 2313-2314].

¹⁵² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T115.3-17 [red pagination 1919].

¹⁵³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T116.24-27 [red pagination 1920].

¹⁵⁴ Exhibit 2-H, Forensic pathology tender bundle, Statement of Kathleen Coyle (6 September 1999) p 1 [red pagination 3562]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T439.34-56 [red pagination 2243].

performed ventilation on Patrick for a very short time.¹⁵⁵ Ms Coyle checked Patrick's vital signs and from her notes it appears that he was normal/warm to touch and slightly blue around the lips.¹⁵⁶ Ms Coyle's notes also recorded shallow breathing, however, this was contradicted by the respiration rate having been recorded as "nil".¹⁵⁷ Ms Coyle considered that she would never have recorded breathing as being present and shallow if she did not note it that day.¹⁵⁸

77. Ambulance notes, annexed to Ms Coyle's statement and signed by her and Mr Mullins, recorded that Patrick had a previous history of apnoeic episodes and epilepsy, that his skin colour was pink, he was peripherally cyanosed, his skin temperature was warm, and he had nil vital signs.¹⁵⁹
78. Mr Hetherington stated that he knelt down to examine Patrick in the house, where Mr Folbigg appeared to be performing CPR. Mr Hetherington found that Patrick had no pulse and was not breathing, and there was no question he was in cardiac arrest.¹⁶⁰ Mr Hetherington picked Patrick up and commenced CPR and took him to the Mater Hospital.¹⁶¹ Mr Hetherington said he could categorically state that Patrick was not breathing when he examined him.¹⁶²
79. Mr Mullins stated that Mr Hetherington commenced CPR on Patrick at the house, and Patrick appeared not to be responding.¹⁶³ Mr Mullins believed there was never any breathing noted when the officers arrived.¹⁶⁴
80. Dr Wilkinson saw Patrick while resuscitation attempts were being performed at the Mater Hospital in Newcastle, during which it became clear to him that Patrick had died.¹⁶⁵ At trial, Dr Wilkinson said that Patrick's body was warm, indicating the death was fairly recent.¹⁶⁶ Dr Christopher Walker was the Director of the Emergency Department at the Mater Hospital when Patrick arrived.¹⁶⁷ He pronounced Patrick's

¹⁵⁵ Exhibit 2-H, Forensic pathology tender bundle, Statement of Kathleen Coyle (6 September 1999) p 2 [red pagination 3563]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T440.7-55 [red pagination 2244].

¹⁵⁶ Exhibit 2-H, Forensic pathology tender bundle, Statement of Kathleen Coyle (6 September 1999) p 2 [red pagination 3563]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T441.1-10 [red pagination 2245].

¹⁵⁷ Exhibit 2-H, Forensic pathology tender bundle, Statement of Kathleen Coyle (6 September 1999) p 2 [red pagination 3563]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T442.23-26 [red pagination 2246].

¹⁵⁸ Exhibit 2-H, Forensic pathology tender bundle, Statement of Kathleen Coyle (6 September 1999) p 2 [red pagination 3563]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T442.28-443.1 [red pagination 2246].

¹⁵⁹ Exhibit 2-H, Forensic pathology tender bundle, Ambulance report Q037 (13 February 1991) [red pagination 3566].

¹⁶⁰ Exhibit 2-H, Forensic pathology tender bundle, Statement of Murray Hetherington (6 September 1999) p 2 [red pagination 3569].

¹⁶¹ Exhibit 2-H, Forensic pathology tender bundle, Statement of Murray Hetherington (6 September 1999) p 2 [red pagination 3569].

¹⁶² Exhibit 2-H, Forensic pathology tender bundle, Statement of Murray Hetherington (6 September 1999) p 3 [red pagination 3570].

¹⁶³ Exhibit 2-H, Forensic pathology tender bundle, Statement of Anthony Mullins (1 October 1999) p 2 [red pagination 3574].

¹⁶⁴ Exhibit 2-H, Forensic pathology tender bundle, Statement of Anthony Mullins (1 October 1999) p 2 [red pagination 3574].

¹⁶⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T510.48-55 [red pagination 2314]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Ian Wilkinson (8 October 1999) [4] [red pagination 3575].

¹⁶⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T511.17-20 [red pagination 2315].

¹⁶⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T472.1-13 [red pagination 2276]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Christopher Walker (18 January 2000) [5] [red pagination 3579].

death at 10:40am.¹⁶⁸ He gave evidence at trial that the death was following an out of hospital cardiac arrest, no cause for which was found.¹⁶⁹

81. The post-mortem of Patrick was conducted by Dr Gurpreet Singh-Khaira (**Dr Singh-Khaira**), histopathologist who had experience conducting post-mortem examinations, and Dr Jan Bishop (**Dr Bishop**), anatomical pathologist. Two autopsy reports were produced: an interim report dated 14 February 1991¹⁷⁰ and a final report dated 2 September 1991.¹⁷¹
82. The interim autopsy report dated 14 February 1991 recorded that the time and date of death was 1040 hours on 13 February 1991, and the time and date of the post-mortem was 1230 hours on 13 February 1991.¹⁷² The findings contained in the report may be summarised as follows:

The diagnoses were recorded as:

Clinical Diagnosis

1. Encephalopathic disorder leading to intractable seizures. The underlying cause of encephalopathy not determined on investigation.
2. Asystolic cardiac arrest at home leading to death.

Macroscopic Diagnosis

1. Normally formed male infant of approximately eight months of age.
2. Brain and spinal cord fixed for later dissection.
3. Hepatic congestion.
4. Congested postero-basal dependant segments – both lungs
5. Enlarged thymus.¹⁷³

The clinical history recorded in the report stated that the presenting complaint was that Patrick was brought into casualty at 1020 hours by paramedics on 13 February 1991 “after an asystolic cardiac arrest at home”.¹⁷⁴ ECG on arrival in casualty showed asystole. Subsequent resuscitation efforts were unsuccessful and Patrick was pronounced dead at 1040 hours.¹⁷⁵

Patrick’s past medical history was recorded, including details of a viral illness suffered by Ms Folbigg at 26 weeks, Patrick’s birth, the sleep studies, and the ALTE. In relation to the ALTE, the report recorded that after resuscitation, Patrick remained well until

¹⁶⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T473.45-50 [red pagination 2277]; Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Robert Ouvrier (28 October 2002) p 4 [red pagination 3806].

¹⁶⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T474.19-25 [red pagination 2278]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Christopher Walker (18 January 2000) [7] [red pagination 3580].

¹⁷⁰ Exhibit 2-H, Forensic pathology tender bundle, Interim autopsy report of Patrick (14 February 1991) [red pagination 3551-3556].

¹⁷¹ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Patrick (2 September 1991) [red pagination 3560-3561].

¹⁷² Exhibit 2-H, Forensic pathology tender bundle, Interim autopsy report of Patrick (14 February 1991) p 1 [red pagination 3551].

¹⁷³ Exhibit 2-H, Forensic pathology tender bundle, Interim autopsy report of Patrick (14 February 1991) p 1 [red pagination 3551].

¹⁷⁴ Exhibit 2-H, Forensic pathology tender bundle, Interim autopsy report of Patrick (14 February 1991) p 1 [red pagination 3551].

¹⁷⁵ Exhibit 2-H, Forensic pathology tender bundle, Interim autopsy report of Patrick (14 February 1991) p 1 [red pagination 3551].

he developed generalised and also right sided focal fits which were associated with a low grade fever. The fits were thought to be secondary to herpes encephalitis and were treated with Acyclovir and large doses of Phenobarbitone and Phenytoin. Cardiac monitoring was normal.¹⁷⁶

The report recounted investigations which were conducted into the cause of the ALTE. It summarised as follows:

CSF: Biochemical and cytology studies were normal. Herpes culture was negative.

Serum herpes IgM: Normal.

US scan of the brain and kidneys: Normal.

Cranial CT scan: Showed hypodense areas in the temporal and occipital lobes secondary to viral encephalitis ? demyelination disorder.

E.E.G.: Showed left frontal lobe epileptogenic foci.

Chest Xray: Showed features consistent with bronchiolitis.

Naso pharyngeal aspirate: Culture for viruses and viral antigens were negative.

Urine metabolic screen: Was negative for methylmalonic acid. Urinary organic amino acid profile, urinary amino acid pattern showed no abnormality. Urinary lactic acid was within normal range.

Serum lactate, ammonia, calcium, magnesium and glucose: Were all normal.

Rectal biopsy: Showed no neuronal inclusion bodies.

Leucocyte inclusions: Were normal.

Blood metabolic screen: was negative for GM1 and GM2 gangliosidoses, and MLD; Gaucher's Krabbe's and Niemann-Pick diseases; Mannosidosis, Fucosidosis, Mucopolidoses II and III, and Mucopolysaccharidosis VII.

Plasma screen for very long chain fatty acids and Phytanic acid was negative for ALD/AMN, Refsum's disease, Zellweger's and other generalized peroxisomopathies.

Mucopolysaccharide screen was negative.

Plasma carnitine values were normal.¹⁷⁷

The forensic pathologists observed in the report that the fits following Patrick's presentation on 18 October 1990 were stabilised with anticonvulsants and Patrick was discharged with a diagnosis of intractable seizures, probably viral encephalitis and bronchiolitis. They noted his history over the subsequent months:

- a. his presentation on 4 November 1990 with prolonged seizures resembling an oculogyric crisis and which resolved spontaneously after 90 minutes;
- b. that he had bilateral conjunctivitis and an upper respiratory tract infection ("URTI") on that presentation;
- c. the repeat CT scan showing further decrease in brain substance; the repeat EEG showing multifocal epileptogenic foci;

¹⁷⁶ Exhibit 2-H, Forensic pathology tender bundle, Interim autopsy report of Patrick (14 February 1991) p 2 [red pagination 3552].

¹⁷⁷ Exhibit 2-H, Forensic pathology tender bundle, Interim autopsy report of Patrick (14 February 1991) p 2 [red pagination 3552].

- d. that a further CT scan on 14 November 1990 showing “? Occipital ischaemic area with clinical visual impairment (probably cortical blindness) and developmental regression”; and
- e. a further admission on 23 December 1990 with an oculogyric crisis secondary to past encephalitic basal ganglia problem, which was provoked by a viral illness.¹⁷⁸

Key findings on external examination

The external examination showed the body to be that of a normally formed and well-nourished male child weighing 8.57 kilograms, head circumference 44cm, crown rump length 53cm, crown heel length 77cm, and foot length 10cm. There was no external abnormality.¹⁷⁹

Key findings on internal examination

Both lungs were congested in their posterior basal dependant segments.¹⁸⁰

The thymus weighed 30 grams (average was 10 grams +/- 2 grams). It was enlarged.¹⁸¹

Investigations on post-mortem tissue included questioning Dr Bale, histopathologist at the Royal Alexandra Hospital for Children, concerning investigation of a possible cardiac conduction defect. The report records that as previous ECG monitoring showed no abnormality and arrhythmias were never noted clinically, “this was thought to be very unlikely.”¹⁸² However, tissue was kept for subsequent dissection if requested.

- 83. In the final report dated 2 September 1991, the clinical diagnosis of the cause of death was unchanged from the initial report.¹⁸³
- 84. Dr Singh-Khaira gave evidence at the trial that Patrick was normally formed and well-nourished and there were no signs of trauma. He stated that some frothy mucus was found in Patrick’s airways like in the trachea and bronchi. He stated he did not find obstruction of the airways.¹⁸⁴
- 85. Dr Singh-Khaira also stated he detected no abnormality of the cardiovascular system. He found that the thymus was enlarged but otherwise there was no abnormality. He also found no abnormality in any of the other systems which he examined.¹⁸⁵
- 86. Dr Singh-Khaira stated that he was unable to find the cause of death at the macroscopic level. He said he and Dr Bishop had macroscopically noted changes in the brain and thought it prudent to seek an opinion from Dr Alex Kan (**Dr Kan**) at Camperdown Children’s Hospital in Sydney.¹⁸⁶

¹⁷⁸ Exhibit 2-H, Forensic pathology tender bundle, Interim autopsy report of Patrick (14 February 1991) p 3 [red pagination 3553].

¹⁷⁹ Exhibit 2-H, Forensic pathology tender bundle, Interim autopsy report of Patrick (14 February 1991) p 3 [red pagination 3553].

¹⁸⁰ Exhibit 2-H, Forensic pathology tender bundle, Interim autopsy report of Patrick (14 February 1991) p 5 [red pagination 3555].

¹⁸¹ Exhibit 2-H, Forensic pathology tender bundle, Interim autopsy report of Patrick (14 February 1991) p 4 [red pagination 3554].

¹⁸² Exhibit 2-H, Forensic pathology tender bundle, Interim autopsy report of Patrick (14 February 1991) p 5 [red pagination 3555].

¹⁸³ Exhibit 2-H, Forensic Pathology Tender Bundle, Final autopsy report by Dr Jan Bishop and Dr Gurpreet Singh-Khaira (2 September 1991) [red pagination 3560-3561].

¹⁸⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T556.12-52 [red pagination 2360].

¹⁸⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T557.15-58 [red pagination 2361].

¹⁸⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T558.1-12 [red pagination 2362].

87. Dr Singh-Khaira stated that in order to come to a decision as to the cause of death he had to rely upon Dr Kan's opinion. He stated that the changes in the brain appeared to have been caused by "some event which was kind of an hypoxic event in the past." He referred to old scarring in the brain which was a result of previous damage which he said was consistent with it being about four or five months old. He said he did not see any new injury or damage or deterioration of the brain and accepted that a possible cause of death was a catastrophic asphyxiating event from some unknown cause.¹⁸⁷
88. In cross-examination, Dr Singh-Khaira stated he saw nothing about the external presentation of Patrick's body which suggested there had been any trauma and that there was no evidence of any bruising or any signs of manual asphyxiation.¹⁸⁸ He accepted there was a possibility of a seizure occurring at the time of death and could not exclude a seizure leading to a catastrophic asphyxiating event. He accepted that it was possible that there was an encephalopathic disorder that could have led to a seizure at the time of death.¹⁸⁹
89. Dr Kan gave evidence that, at the time of Patrick's death, he was a senior staff specialist at the Royal Alexandra Hospital for Children at Camperdown.¹⁹⁰ He stated he received some slides which had tissue sections from Patrick's brain following post-mortem. He stated he examined the slides using a microscope and saw signs that Patrick could have suffered from epilepsy during the course of his life.¹⁹¹
90. Dr Kan said he found light lymphoid infiltrate in Patrick's leptomeninges. He explained that the leptomeninges are the membranes covering the surface of the brain. He also explained that lymphoid infiltrate means finding lymphocytes, which are white blood cells normally found in circulating blood, in tissue other than lymphoid tissue.¹⁹²
91. Dr Kan referred to his report where he noted that the light lymphoid infiltrate could be related to cortical infarcts, explaining that infarcts are areas of tissue which have died or lost vitality. He said the infarcts were older than a month, but beyond that he was unable to speculate. He accepted this was consistent with the infarcts occurring four months prior to Patrick's death. He said it was a fairly remote possibility that the light lymphoid infiltrate could have been related to treated encephalitis.¹⁹³ He stated that he did not see any sign in the slides that Patrick definitely had encephalitis.¹⁹⁴
92. Dr Kan stated that his findings did not enable him to rule out that Patrick suffered a catastrophic asphyxiating event when he was four to five months old or that he suffered such an event when he died.¹⁹⁵ In cross-examination, Dr Kan accepted that quite separately from encephalitis there could have been a seizure because of some abnormality in the brain. He agreed it was certainly possible that the ultimate cause

¹⁸⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T559.32-560.48 [red pagination 2363-2364].

¹⁸⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T561.26-49 [red pagination 2365].

¹⁸⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T562.40-563.22 [red pagination 2366-2367].

¹⁹⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T925.8-11 [red pagination 2729].

¹⁹¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 24 April 2003 T925.38-44 [red pagination 2729].

¹⁹² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 24 April 2003 T925.49-T926.4 [red pagination 2729-2730].

¹⁹³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 24 April 2003 T926.19-41 [red pagination 2730].

¹⁹⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 24 April 2003 T927.8-15 [red pagination 2731].

¹⁹⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 24 April 2003 T928.14-17 [red pagination 2732].

of death could in fact have been a seizure by itself which caused a hypoxic event.¹⁹⁶ He acknowledged that he could not exclude encephalitis on the material available to him.¹⁹⁷

93. Dr Kan reported to Doctors Bishop and Singh-Khaira on 24 June 1991. The report did assume some significance in the Inquiry and it is convenient to set it out in full:

I have found no convincing evidence of any neuronal storage disease or any leucodystrophy in these sections. The major changes in this extensively sectioned brain are old infarcts and gliosis mostly in the form of old laminar necrosis which, in keeping with the macroscopic finding, is most severe in the parieto-occipital area. The only spongy change is seen in the gliotic cortical scars and the subjacent white matter, in the old infarcts. The cerebellar cortex is unaffected. We can, therefore, rule out Canavan's disease. In the deeper parts of the cerebrum and in the cerebellar and brain stem nuclei there are neurones showing simple atrophy. They could have resulted from this baby's epileptic seizures. In the leptomeninges there appears to be a light lymphoid infiltrate which is in addition to the small amount of residual haemopoiesis normal in this age group. This could be either non-specific and related to the cortical infarcts or related to the treated encephalitis (? Assumed or proven).

I believe that the small amount of linear cortical calcification in the occipital region is just part of the laminar cortical necrosis. I can see no suggestive features of toxoplasmosis or cytomegalovirus infection, and the distribution of the lesions is unusual for herpes simplex encephalitis and they certainly appear far more likely to be the result of the episode of cardio-respiratory arrest this baby suffered at about 5 months of age.¹⁹⁸

Sarah

94. Sarah was born at 39 weeks' gestation (full term) on 14 October 1992.¹⁹⁹ She weighed 3,020 grams at birth and was discharged the same day.²⁰⁰ She was bottle feeding on discharge.²⁰¹
95. Sarah had a sleep study carried out when she was three weeks of age.²⁰² Dr Cooper, respiratory and sleep physician, supervised the study at the John Hunter Hospital, which involved a pneumogram with oximetry (oxygen saturation) performed on 5 November 1992.²⁰³ The oximetry was normal, and there were very few sleep apnoeas recorded and some periodic breathing detected; however, the results were judged to be normal.²⁰⁴ Dr Cooper opined that Sarah did not exhibit signs of a respiratory control problem.²⁰⁵
96. At trial, Dr Cooper gave evidence that the sleep study showed a very small handful

¹⁹⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 24 April 2003 T929.8-50 [red pagination 2733].

¹⁹⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 24 April 2003 T929.52-55 [red pagination 2733].

¹⁹⁸ Exhibit 2-H, Forensic pathology tender bundle, Letter from Dr Alex Kan to Dr Jan Bishop and Dr Gurpreet Singh-Khaira (24 June 1991) [red pagination 3559].

¹⁹⁹ Exhibit 2-H, Forensic pathology tender bundle, Perinatal record of Sarah (14 October 1992) [red pagination 3603].

²⁰⁰ Exhibit 2-H, Forensic pathology tender bundle, Perinatal record of Sarah (14 October 1992) [red pagination 3603].

²⁰¹ Exhibit 2-H, Forensic pathology tender bundle, Perinatal record of Sarah (14 October 1992) [red pagination 3603].

²⁰² Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr David Cooper (6 December 1999) [10] [red pagination 3709], Sleep study report of Sarah [red pagination 3713].

²⁰³ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr David Cooper (6 December 1999) [10] [red pagination 3709].

²⁰⁴ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr David Cooper (6 December 1999) [10] [red pagination 3709].

²⁰⁵ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr David Cooper (6 December 1999) [11] [red pagination 3709].

of apnoeas which were normal for infants of that age.²⁰⁶ He could not tell whether the apnoeas were central or obstructive, but in an infant of her age they were “very likely” to be central.²⁰⁷ The apnoeas that he observed in Sarah, particularly with his experience at the time of trial, “goes along with a normal study for age in a child at this age.”²⁰⁸ His conclusion was that “certainly, the sleep study conducted on Sarah was normal for her age.”²⁰⁹

97. On 16 November 1992, Dr Cooper wrote to Dr Henry, paediatrician, in relation to Sarah.²¹⁰ This was raised with Dr Cooper in cross-examination at trial, as Dr Cooper indicated in the letter that there was a modest amount of periodic breathing and only a very small number of distinct apnoeas.²¹¹ However, Dr Cooper also stated in the letter “there were some quite long hyperventilation, hypopnea event, one of them about 40 seconds”.²¹² Dr Cooper said that, at the time of the letter, “a number of us, me included were concerned”.²¹³ Research had been undertaken to determine that when milder abnormalities of respiration were identified in infants, theophylline could be used, which had an almost immediate effect.²¹⁴ In the letter, Dr Cooper wondered whether theophylline would be of help but deferred to Dr Henry on that point.²¹⁵ However, there were no follow up steps taken, and Dr Cooper said that if he had been very worried, steps would have been taken. He said that he was “really under these circumstances identifying some minor changes to a colleague and leaving them in his hands.”²¹⁶ It was a shallow breathing pattern, but in the absence of oxygen saturation changes, this was recognised as “just perfectly normal and part of sort of life’s evolution in the first year.”²¹⁷
98. Dr Marley saw Sarah four times during her life for routine reasons such as vaccinations.²¹⁸ She appeared to him to be a normal healthy infant.²¹⁹
99. Sarah died in the late night of 29 August 1993 or the early morning of 30 August 1993. Ms Folbigg and Mr Folbigg gave different accounts of the circumstances in which she was discovered. Ms Folbigg’s account, which was given to the police during the course of her electronically recorded interview of 23 July 1999, was that Sarah had not left her bed and she only noticed Sarah was not breathing when she returned from going to the toilet at 1:30am.²²⁰ She denied she was feeding Sarah or had left the bedroom prior to going to the toilet.²²¹

²⁰⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T589.6-12, T595.49-50 [red pagination 2393, 2399]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr David Cooper (6 December 1999) pp 2-3 [red pagination 3708-3709].

²⁰⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T588.49-54 [red pagination 2392].

²⁰⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T589.6-12 [red pagination 2393].

²⁰⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T589.20 [red pagination 2393].

²¹⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T595.52-597.1 [red pagination 2399-2401].

²¹¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T596.9-13 [red pagination 2400].

²¹² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T596.28-32 [red pagination 2400].

²¹³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T596.37-38 [red pagination 2400].

²¹⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T596.37-51 [red pagination 2400].

²¹⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T596.56-58 [red pagination 2400].

²¹⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T597.21-27 [red pagination 2401].

²¹⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T597.31-44 [red pagination 2401].

²¹⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 11 April 2003 T540.6-25 [red pagination 2344].

²¹⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 11 April 2003 T540.56 [red pagination 2344].

²²⁰ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q269 [red pagination 1569-1570].

²²¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q552 [red pagination 1656-1657].

100. Mr Folbigg by contrast gave evidence that he had woken at 1:10am and noticed both Sarah and Ms Folbigg were not in the bedroom where Ms Folbigg and Sarah slept and also that a light was on.²²² I have dealt with the circumstances in which Mr Folbigg came to give this evidence below (see [204]-[208] below). However, the evidence regarding the events immediately after Sarah's death were not the subject of controversy at the Inquiry and may be summarised as follows:

Ms Deborah Martin, ambulance officer, attended on 30 August 1993, arriving at the Folbigg home at about 1:30am.²²³ She met Ms Folbigg at the front door who directed her into the bedroom. When she walked into the bedroom, she saw Mr Folbigg performing CPR on Sarah.²²⁴ Ms Martin returned to the ambulance for equipment and when she came back she saw that Sarah was cyanosed (blue) around the mouth, and had mucus and vomit in her mouth.²²⁵ Sarah was not breathing.²²⁶ When she first arrived, Ms Martin was unable to determine Sarah's body temperature.²²⁷ Ms Martin gave her adrenaline and Hartmann's fluid, then additional paramedics (Ms Louise Alderson (née Bishop), Mr Robert Foxford and Mr Rodney Avery) arrived.²²⁸

At approximately 2:10am, the officers stopped the drugs and CPR because Sarah was asystolic (no mechanical or electrical activity of the heart).²²⁹

An Ambulance Service treatment report by Ms Martin recorded that Ms Folbigg told her that Sarah had not been awake since placing her in bed "this PM", and that Sarah usually wakes at midnight, that Ms Folbigg had checked her as she had not woken, and that the parents were doing CPR on Ms Martin's arrival.²³⁰ Ms Martin recorded that the airway was obstructed, breathing and circulation were absent, that skin temperature was both normal and cold, and that she had a small amount of vomiting.²³¹ Ms Martin recorded "SIDS" as the chief complaint.²³² Another ambulance report, by Ms Alderson and Mr Foxford, referred to the death as "SIDS" and noted that the death was the parents' third SIDS.²³³ They recorded that Sarah's airway was clear, that breathing was absent, circulation was absent, and that her skin temperature was cold.²³⁴ They also noted a small amount of vomiting.²³⁵

101. A report of death to the coroner (P79A form) was signed by Senior Constable Saunders and dated 30 August 1993.²³⁶ The narrative recorded on the form noted

²²² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003, T128.28-129.24 [red pagination 1932-1933]; 13 May 2003, T1332.4-19 [red pagination 3136].

²²³ Exhibit 2-H, Forensic pathology tender bundle, Statement of Deborah Martin (8 October 1999) p 2 [red pagination 3622]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 11 April 2003 T566.58-567.9 [red pagination 2370-2371].

²²⁴ Exhibit 2-H, Forensic pathology tender bundle, Statement of Deborah Martin (8 October 1999) p 2 [red pagination 3622]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 11 April 2003 T567.21-29 [red pagination 2371].

²²⁵ Exhibit 2-H, Forensic pathology tender bundle, Statement of Deborah Martin (8 October 1999) p 3 [red pagination 3623]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 11 April 2003 T567.39-43, T568.3-9 [red pagination 2371, 2372].

²²⁶ Exhibit 2-H, Forensic pathology tender bundle, Statement of Deborah Martin (8 October 1999) p 3 [red pagination 3623]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 11 April 2003 T568.11-12 [red pagination 2372].

²²⁷ Exhibit 2-H, Forensic pathology tender bundle, Statement of Deborah Martin (8 October 1999) p 6 [red pagination 3626].

²²⁸ Exhibit 2-H, Forensic pathology tender bundle, Statement of Deborah Martin (8 October 1999) p 4 [red pagination 3624]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 11 April 2003 T568.14-19 [red pagination 2372]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Louise Alderson (1 September 1999) p 2 [red pagination 3661].

²²⁹ Exhibit 2-H, Forensic pathology tender bundle, Statement of Deborah Martin (8 October 1999) p 4 [red pagination 3624]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 11 April 2003 T568.24-31 [red pagination 2372].

²³⁰ Exhibit 2-H, Forensic pathology tender bundle, Ambulance Report Q604 (30 August 1993) [red pagination 3627].

²³¹ Exhibit 2-H, Forensic pathology tender bundle, Ambulance Report Q604 (30 August 1993) [red pagination 3627].

²³² Exhibit 2-H, Forensic pathology tender bundle, Ambulance Report Q604 (30 August 1993) [red pagination 3627].

²³³ Exhibit 2-H, Forensic pathology tender bundle, Ambulance report Q001 (30 August 1993) [red pagination 3606-3607].

²³⁴ Exhibit 2-H, Forensic pathology tender bundle, Ambulance report Q001 (30 August 1993) [red pagination 3606-3607].

²³⁵ Exhibit 2-H, Forensic pathology tender bundle, Ambulance report Q001 (30 August 1993) [red pagination 3606].

²³⁶ Exhibit 2-H, Forensic pathology tender bundle, Report of death to Coroner (30 August 1993) [red pagination 3605].

that Sarah was the family's third natural child, and the previous two were both SIDS victims within the previous five years.²³⁷ It noted that she had been in good health apart from a flu or cold type virus, which had been treated by Dr Marley with a prescription of flucloxacillin 125mg/5ml, prescribed on 18 August 1993 and last taken by Sarah about 26 or 27 August 1993.

102. The P79A stated that Sarah was put to sleep in a single bed in the parents' bedroom at about 9:00pm on 29 August 1993. She was snoring when her parents went to bed at 9:30 or 10:00pm. The form also recorded the reported circumstances of Ms Folbigg getting up at 1:30am, not hearing Sarah breathing, turning on the light and seeing that she had blue colour to the skin on her face, and a discharge from the nose.²³⁸
103. The post-mortem examination of Sarah was carried out at 8:00am by Professor John Hilton (**Professor Hilton**), forensic pathologist, at the New South Wales Institute of Forensic Medicine. Professor Hilton prepared an autopsy report dated 25 November 1993.²³⁹ The contents of his report can be summarised as follows:

Professor Hilton concluded that the cause of Sarah's death was SIDS.²⁴⁰ The pathology summary recorded:

1. Focal pulmonary collapse
2. Modest pulmonary congestion and minimal oedema
3. Occasional petechiae on pleura, epicardium and on and in thymus
4. Congested ? haemorrhagic uvula lying anterior to the epiglottis
5. Aspiration of gastric content (?artificial)²⁴¹

Key findings on external examination

Professor Hilton's report recorded the body was that of a well-nourished, clean Caucasian female. There was minor abrading and drying of the lips. There were two tiny punctate abrasions present, one immediately below the lower lip on the left side, the other slightly to the left side of the midline of the chin.

A 1.5cm scratch was present on the anterolateral aspect of the right upper arm.

Key findings on internal examination

The uvula was of normal size but appeared somewhat congested/haemorrhagic on its anterior surface. When viewed at post-mortem, it was placed anterior to the epiglottis, producing an obstructive element in the airway. The epiglottis itself appeared relatively normal.

The lungs both showed focal areas of collapse of a geographic pattern. Occasional petechial haemorrhages were present and there was minor congestion and minimal oedema (fluid retention).

The heart was normal in size, shape and location. Layers of the pericardium were

²³⁷ Exhibit 2-H, Forensic pathology tender bundle, Report of death to Coroner (30 August 1993) [red pagination 3605].

²³⁸ Exhibit 2-H, Forensic pathology tender bundle, Report of death to Coroner (30 August 1993) [red pagination 3605].

²³⁹ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Sarah (25 November 1993) [red pagination 3610-3618].

²⁴⁰ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Sarah (25 November 1993) p 5 [red pagination 3614].

²⁴¹ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Sarah (25 November 1993) p 5 [red pagination 3614].

separate. No pericardial effusions (fluid around the heart) were present. There was a very occasional petechinum present on the epicardium. The atria were normal.

The thymus showed occasional petechial haemorrhages on its surface and within the substance of the gland but was normal in size shape and location.

The following histology was reported:

Source: Lung

Profuse Coliform

Profuse Streptococcus, Alpha Haemolytic

Scanty Staphylococcus Aureus

Source: Spleen

Moderate Coliforms Of 3 Colonial Types.²⁴²

In addition, it was noted that “one section of larynx shows a light mixed lymphocytic inflammatory infiltrate deep to the respiratory epithelium” and “in one section there is a light interstitial acute inflammatory infiltrate which could be seen around the occasional bronchiole”.²⁴³

104. Professor Hilton expanded on his report at the trial. His evidence at the trial may be summarised as follows:

Abrasions

The two tiny punctate abrasions below Sarah’s bottom lip, noted by Professor Hilton, were “an extremely superficial injury to the outmost layer of skin of a pinpoint size”, and were within a centimetre or two of the lower lip and were recent in origin.²⁴⁴ They were consistent with the application of “very minor” force, either by Sarah or by someone else.²⁴⁵ Professor Hilton considered these to be of little, if any, significance, even being aware of Caleb’s and Patrick’s deaths.²⁴⁶ Under cross-examination, he explained that children at 10 months do scratch themselves, and Sarah had been the subject of resuscitative measures – there were at least two explanations for the marks.²⁴⁷ He considered that a soft toy with hard bits on it would have been highly unlikely to cause the marks, and it was unlikely they were caused by a hand with a ring on it.²⁴⁸

The only other external finding was a 1.5cm scratch, which was recently made, on Sarah’s right upper arm.²⁴⁹ It was on an area of the body that Sarah could have reached with her own fingers.²⁵⁰

²⁴² Exhibit 2-H, Forensic pathology tender bundle, Microbiology reports of Sarah (13 September 1993, 21 September 1993) [red pagination 3608, 3609].

²⁴³ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Sarah (25 November 1993) p 7 [red pagination 3616].

²⁴⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T617.17-50 [red pagination 2421]; 24 April 2003 T918.14-25 [red pagination 2722]; Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Sarah (25 November 1993) p 3 [red pagination 3612].

²⁴⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T617.52-618.2 [red pagination 2421-2422].

²⁴⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T652.13-20 [red pagination 2456]; 24 April 2003 T909.3-6, T913.52-915.14, T918.6-21 [red pagination 2713, 2717-2719, 2722].

²⁴⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T652.15-20 [red pagination 2456].

²⁴⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 24 April 2003 T917.18-58 [red pagination 2721].

²⁴⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T616.34-37, T652.43-45 [red pagination 2420, 2456]; Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Sarah (25 November 1993) p 2 [red pagination 3611].

²⁵⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T652.26-31 [red pagination 2456].

Internal petechial haemorrhages

The internal examination showed an occasional petechial haemorrhage on the lungs, minor congestion and minimal oedema, and also an occasional petechial haemorrhage on the surface of the heart and on the thymus gland.²⁵¹ Professor Hilton gave evidence under cross-examination that location of petechia in three separate organs, and changes to the lungs, taken together tended to favour a SIDS diagnosis.²⁵² The little haemorrhages on the lungs indicated to him the possibility of an asphyxial mode of death, meaning by an outside party or an internal form of asphyxiation.²⁵³ He had only come across one case of reasonably conclusive deliberate suffocation that showed such haemorrhages.²⁵⁴

In evidence in chief at trial, Professor Hilton said that the findings of the internal examination were consistent with an asphyxial mode of death, which would include deliberate smothering and other things – there was nothing very specific about the little haemorrhages.²⁵⁵ It was a finding that had been recorded in cases of smothering, and in a “limited sense” was indicative; attempts to breathe were thought to cause the very smallest blood vessels to rupture and bleed, from a negative pressure from the attempts to inhale.²⁵⁶

Under cross-examination on this point, Professor Hilton said that none of the typical signs or injuries that could be found when somebody is intentionally suffocated were found on Sarah, haemorrhages on the lungs not being specific for smothering (although indicating the possibility of an asphyxial mode of death).²⁵⁷ Signs detectable upon autopsy may be the presence of petechia on locations outside the chest, on the eyelids, on the cheeks and on the surface of the eyes.²⁵⁸ He said there may also be damage to the fraenulum, a tiny membrane inside the lip, both top and bottom; if there is force applied to the lips, the fraenulum may tear.²⁵⁹ There may also be bruising on the inside of the lips from compression.²⁶⁰

Uvula

Professor Hilton identified that Sarah’s uvula was reddened (which he said in evidence was consistent with mild infection, or with snoring).²⁶¹ Its tip was lying in front of the epiglottis, which he had never previously seen in a post-mortem examination of the 2,000-plus babies he had examined.²⁶² The significance of this was questionable; Professor Hilton said in oral evidence that he had grave doubts that the uvula was in that position before Sarah died.²⁶³ He said that the presence of the inflamed uvula

²⁵¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T618.53-619.12, T620.4-17 [red pagination 2422-2423, 2424]; Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Sarah (25 November 1993) p 3 [red pagination 3612].

²⁵² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T653.36-45 [red pagination 2457].

²⁵³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T651.25-30 [red pagination 2455].

²⁵⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T651.50-53 [red pagination 2455].

²⁵⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T618.36-619.27 [red pagination 2422-2423].

²⁵⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T619.35-49 [red pagination 2412].

²⁵⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T650.46-651.30 [red pagination 2454-2455].

²⁵⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T650.53-56 [red pagination 2454].

²⁵⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T650.57-651.1 [red pagination 2454].

²⁶⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T651.1-4 [red pagination 2455].

²⁶¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T621.35-40, T623.4-10, T626.11-37 [red pagination 2425, 2427, 2430]; 7 May 2003 T1182.36-45 [red pagination 2986]; Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Sarah (25 November 1993) p 3 [red pagination 3612].

²⁶² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T621.35-46, T622.45-48, T649.37-43 [red pagination 2425, 2426, 2453].

²⁶³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T621.47-58, T623.12-20 [red pagination 2425, 2427]; 7 May 2003 T1183.6-13 [red pagination 2987].

was a “brick in the diagnostic wall” for SIDS in Sarah’s case.²⁶⁴ The final autopsy report conducted by Professor Hilton does not state that Sarah’s uvula was red, rather that it was somewhat congested/haemorrhagic in the anterior surface.²⁶⁵

Microscopic examination showed areas of inflammation consistent with mild respiratory infection, which may have helped explain the reddened uvula.²⁶⁶ There was no evidence of any viral infection, but profuse growth of streptococcus might indicate a streptococcal infection which would help explain the reddening of the uvula and perhaps the light inflammation of the larynx (voice box).²⁶⁷ Such inflammation would not normally be expected to have contributed significantly to death.²⁶⁸ Otherwise, the findings said nothing about cause of death.²⁶⁹

Laura

105. Laura was born full term on 7 August 1997, weighing 3,260 grams.²⁷⁰ She was breastfed for two weeks.²⁷¹ She was vaccinated and used a dummy.²⁷²
106. The year prior to Laura’s birth, in May 1996, Mr and Ms Folbigg were referred to Dr Christopher Seton (**Dr Seton**), a sleep physician with SIDS expertise formerly at the Royal Alexandra Hospital for Children, and at the time of trial at the Sleep Disorders Unit at the then New Children’s Hospital, Westmead.²⁷³ Mr and Ms Folbigg saw Dr Seton for advice at that stage about the potential risk of SIDS after the three previous deaths, and then returned to him after Laura was born.²⁷⁴ Dr Seton made a statement dated 23 November 1999 and gave evidence at the trial.
107. Soon after she was born on 19 August 1997, Laura was tested for various diseases, which returned normal results.²⁷⁵ A sleep study showed mild central apnoea and no obstructive apnoea, which improved on subsequent studies and, Dr Seton stated in his statement, “was totally normal by February 1998.”²⁷⁶ He said in evidence at

²⁶⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T654.14-28 [red pagination 2458].

²⁶⁵ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Sarah (25 November 1993) p 3 [red pagination 3612].

²⁶⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T625.41-626.16 [red pagination 2429]; Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Sarah (25 November 1993) p 7 [red pagination 3616].

²⁶⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T627.35-628.24 [red pagination 2431-2432].

²⁶⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T628.26-35 [red pagination 2432].

²⁶⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T627.9 [red pagination 2431].

²⁷⁰ Exhibit 2-H, Forensic pathology tender bundle, Birth certificate of Laura (7 August 1997) [red pagination 3640]; Exhibit 2-H, Forensic pathology tender bundle, NSW midwives data collection (11 August 1997) [red pagination 3641].

²⁷¹ Exhibit 2-H, Forensic pathology tender bundle, Immunisation notes of Laura (3 February 1998) [red pagination 3644]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T154.40-44 [red pagination 1958].

²⁷² Exhibit 2-H, Forensic pathology tender bundle, Immunisation notes of Laura (3 February 1998) [red pagination 3644-3645]; Exhibit 2-H, Forensic pathology tender bundle, SIDS death scene investigation checklist relating to Laura (undated) [red pagination 3642-3643]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Paul Innis (15 March 1999) p 1 [red pagination 3658]; Exhibit 2-E, ERISP of Kathleen Folbigg Q907 [red pagination 1740].

²⁷³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T690.3-42 [red pagination 2494].

²⁷⁴ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Christopher Seton (23 November 1999) p 2 [red pagination 3679]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T690.48-691.26 [red pagination 2494-2495].

²⁷⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T692.1-15 [red pagination 2496]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Christopher Seton (23 November 1999) p 2 [red pagination 3679].

²⁷⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T692.17-22, T693.51-T694.14 [red pagination 2496, 2497-2498]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Christopher Seton (23 November 1999) p 2 [red pagination 3679].

trial that central apnoea is very common in premature babies, but not in full term babies.²⁷⁷

108. Dr Seton reported on the 19 August 1997 consultation in a letter to a Dr Quentin King dated 27 August 1997.²⁷⁸ In the letter, Dr Seton stated that an overnight polysomnogram was performed and reported on the mild central apnoea with no evidence of upper airway obstruction or bradycardia. He stated this was a pleasing result, even though Laura's sleep-breathing was not entirely normal. He noted that most children grow out of it. He planned to re-study Laura in five to six weeks' time. A urine metabolic screen and baseline blood tests had been performed and were all normal. Laura's physical examination was also normal with no dysmorphic features. Her oropharyngeal diameter looked normal and there was no flattening of the mid-face or smallness of the chin.
109. On 7 October 1997, Dr Seton reported that Laura had moderate central apnoea of infancy.²⁷⁹ He stated there had been mild improvement since the previous study, with occasional mixed apnoeas and hypopnoeas, but "the obstructive component of sleep-breathing [was] not severe."²⁸⁰ There was no bradycardic (slow heart rate) response to apnoea or hypopnea.²⁸¹
110. By the time of a further report by Dr Seton on 17 February 1998, Laura's sleep breathing had normalised.²⁸² Dr Seton recommended home monitoring to continue, but that a further sleep study was not required.²⁸³ There was no evidence of upper airway obstruction in sleep, and her sleep quality was "excellent". In further correspondence dated 30 April 1998, Dr Seton recorded that her sleep breathing remained normal but nevertheless encouraged the use of monitoring until her first birthday.²⁸⁴
111. Monitoring of Laura's sleeps via a Corometrics home cardiorespiratory monitoring device showed no serious breathing problems or heart rate problems, although she was not monitored every time she was asleep.²⁸⁵ Dr Seton noted in his statement that when he saw the Folbiggs on 30 April 1998, it became clear that the monitoring was becoming tedious due to false alarms, technical difficulty, and taking a very precautionary approach in an apparently healthy baby.²⁸⁶
112. Dr John Cash (**Dr Cash**), a visiting medical officer at Singleton Hospital, examined Laura several times, including at 1:00am on 22 June 1998 when she presented with a history of a slight upper respiratory infection for several days and a croupy cough.²⁸⁷ Dr Cash diagnosed an upper respiratory tract infection and mild croup.²⁸⁸

²⁷⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T693.3-15 [red pagination 2497].

²⁷⁸ Exhibit 2-CA, Letter from Dr Christopher Seton to Dr Quentin King (27 August 1997) [red pagination 7881-7882].

²⁷⁹ Exhibit 2-H, Forensic pathology tender bundle, Sleep study report of Laura (7 October 1997) [red pagination 3682].

²⁸⁰ Exhibit 2-H, Forensic pathology tender bundle, Sleep study report of Laura (7 October 1997) [red pagination 3682].

²⁸¹ Exhibit 2-H, Forensic pathology tender bundle, Sleep study report of Laura (7 October 1997) [red pagination 3682].

²⁸² Exhibit 2-H, Forensic pathology tender bundle, Sleep study report of Laura (17 February 1998) [red pagination 3683].

²⁸³ Exhibit 2-H, Forensic pathology tender bundle, Sleep study report of Laura (17 February 1998) [red pagination 3683].

²⁸⁴ Exhibit 2-BZ, Letter from Dr Christopher Seton to Dr David Sanders (30 April 1998) [red pagination 7880].

²⁸⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T693.41-49 [red pagination 2497].

²⁸⁶ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Christopher Seton (23 November 1999) p 3 [red pagination 3680]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T696.38-47 [red pagination 2500].

²⁸⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T657.1-19 [red pagination 2461].

²⁸⁸ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr John Cash (9 March 1999) [red pagination 3656].

On his examination, he found no signs of distress or respiratory difficulties and Laura's chest was clear, but she had mucus in her throat consistent with a cold.²⁸⁹ Because of the family's history, Dr Cash admitted her for observation.²⁹⁰ She did not require antibiotics.²⁹¹ Notes showed that she attended his surgery on four occasions between February and May 1998. Dr Cash did not consider this unreasonable or unusual.²⁹²

113. Dr Paul Innis (**Dr Innis**) was Laura's treating general practitioner from 14 August 1998 until February 1999.²⁹³ Dr Innis gave evidence at trial. Over the six month period he saw Laura approximately 13 times. She appeared to be a normal, healthy child with no chronic illness.²⁹⁴
114. Leading up to 14 August 1998, Laura had flu-like symptoms for five days and presented at Dr Innis' surgery with coughing, sleep disturbance and lack of appetite but with no fever and was continuing to have wet nappies. By then she had had two previous episodes of croup.²⁹⁵ She had no allergies and her immunisations were up to date. On examination her chest was clear with no signs of respiratory distress and her throat was red. Dr Innis diagnosed a viral upper respiratory tract infection and advised treatment with Panadol and fluids.²⁹⁶
115. On 19 October 1998, Laura presented with a burn on her left forearm and palm.²⁹⁷ On 19 January 1999, she had a macular red rash on her shoulders, upper arms and down her arms and a red throat. Ms Folbigg told Dr Innis she had had the rash for five days. Laura was then 17 months old. She had no upper respiratory tract symptoms and was behaving normally. Dr Innis diagnosed an allergic rash and prescribed Phenergan to treat it. He advised Ms Folbigg to bring Laura back for review if the rash did not go away over the next few days.²⁹⁸
116. Laura presented again on 22 January 1999 for review of the rash. She had had fevers over the preceding few days. Her throat was red. Dr Innis diagnosed a viral rash but no additional treatment was prescribed.²⁹⁹ On 5 February 1999, Laura attended Dr Innis for her 18 month immunisation. At that stage she was well. On examination her throat and ears were clear.³⁰⁰
117. Dr Innis gave evidence that Laura's death was totally unexpected and there was nothing to suggest that she was other than a well-cared-for child.³⁰¹

²⁸⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T657.21-32 [red pagination 2461].

²⁹⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T657.49-52 [red pagination 2461].

²⁹¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T658.48-52 [red pagination 2462].

²⁹² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T660.1-22 [red pagination 2464].

²⁹³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T665.37-44; T668.51-53 [red pagination 2469, 2472].

²⁹⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T668.12-669.7 [red pagination 2472-2473].

²⁹⁵ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Paul Innis (15 March 1999) [red pagination 3658].

²⁹⁶ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Paul Innis (15 March 1999) [red pagination 3658].

²⁹⁷ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Paul Innis (15 March 1999) [red pagination 3658].

²⁹⁸ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Paul Innis (15 March 1999) [red pagination 3658].

²⁹⁹ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Paul Innis (15 March 1999) [red pagination 3658].

³⁰⁰ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Paul Innis (15 March 1999) [red pagination 3658].

³⁰¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T668.18-669.7 [red pagination 2472]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Paul Innis (15 March 1999) [red pagination 3658].

Laura's death

118. Ambulance officers Mr Brian Wadsworth (**Mr Wadsworth**), Mr Harold Picton (**Mr Picton**) and Mr Ted Smith (**Mr Smith**) attended the Folbigg home at 12:14pm on 1 March 1999 in response to the callout by Ms Folbigg.³⁰²
119. Mr Wadsworth saw Ms Folbigg leaning over Laura in the supine position appearing to be performing CPR on the breakfast bar. He went straight up to Laura when he arrived. She was lying on the breakfast bar, and he found she was not breathing and had no pulse.³⁰³ He looked inside her mouth, and did not see any blood, vomit or foreign object.³⁰⁴ He performed CPR for a period, then Mr Picton took over.³⁰⁵ Mr Wadsworth applied an ECG monitor at 12:17pm, which showed that Laura was in bradycardia.³⁰⁶ Mr Wadsworth administered adrenalin, then Laura was taken to hospital, arriving at 12:32pm.³⁰⁷ When he asked Ms Folbigg what happened she said “I heard her coughing in the bedroom and when I checked her five minutes later I found her not breathing.” She also indicated that Laura had been suffering from a runny nose and coughing for a couple of days.³⁰⁸
120. Mr Wadsworth stated that when he was treating Laura, he noticed that her skin was warm to touch and cyanosis was present – she had blue colouring around the lips and face.³⁰⁹ Mr Picton also stated that Laura was warm to touch.³¹⁰
121. The Ambulance Service patient report signed by the three officers who attended recorded nil vital signs, nil pulse, pupils dilated, warm to touch, cyanosis evident.³¹¹ The report records that Laura's airway was obstructed, and also that her skin temperature was “normal” and her buccal mucosa was blue.³¹²

³⁰² Exhibit 2-H, Forensic pathology tender bundle, Statement of Brian Wadsworth (15 September 1999) p 1 [red pagination 3662]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Harold Picton (15 September 1999) p 1 [red pagination 3676]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T699.53-700.14 [red pagination 2503].

³⁰³ Exhibit 2-H, Forensic pathology tender bundle, Statement of Brian Wadsworth (15 September 1999) p 2 [red pagination 3663]; Exhibit 2-F, 15 April 2003 T700.16-19, T700.50-54 [red pagination 2504].

³⁰⁴ Exhibit 2-H, Forensic pathology tender bundle, Statement of Brian Wadsworth (15 September 1999) p 2 [red pagination 3663]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T701.8-17 [red pagination 2505].

³⁰⁵ Exhibit 2-H, Forensic pathology tender bundle, Statement of Brian Wadsworth (15 September 1999) p 2 [red pagination 3663]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Harold Picton (15 September 1999) p 2 [red pagination 3676]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T701.19-21 [red pagination 2505].

³⁰⁶ Exhibit 2-H, Forensic pathology tender bundle, Statement of Brian Wadsworth (15 September 1999) p 2 [red pagination 3663]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Harold Picton (15 September 1999) p 2 [red pagination 3677]; Mr Picton stated that the ECG registered asystole: Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T701.34-41 [red pagination 2505].

³⁰⁷ Exhibit 2-H, Forensic pathology tender bundle, Statement of Brian Wadsworth (15 September 1999) p 2 [red pagination 3663]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Harold Picton (15 September 1999) [red pagination 3676].

³⁰⁸ Exhibit 2-H, Forensic pathology tender bundle, Statement of Brian Wadsworth (15 September 1999) p 2 [red pagination 3663].

³⁰⁹ Exhibit 2-H, Forensic pathology tender bundle, Statement of Brian Wadsworth (15 September 1999) p 3 [red pagination 3663]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T702.36-41 [red pagination 2506].

³¹⁰ Exhibit 2-H, Forensic pathology tender bundle, Statement of Harold Picton (15 September 1999) p 2 [red pagination 3677].

³¹¹ Exhibit 2-H, Forensic pathology tender bundle, Ambulance report V70724 (1 March 1999) [red pagination 3665].

³¹² Exhibit 2-H, Forensic pathology tender bundle, Ambulance report V70724 (1 March 1999) [red pagination 3665].

Report of death to the Coroner

122. After Laura's death, a death scene investigation checklist form was completed.
123. The completed form recorded that there had been three previous siblings who had died, and that those deaths were attributed to SIDS.³¹³ It also recorded that Laura had had a cold in the last 24 hours, and had been administered Demazin, 3.5ml, with the last dose on 27 February 1999.³¹⁴ She was last fed at 7:00am on 1 March 1999.³¹⁵ It also recorded that Laura had been put down on her side when she was put down to sleep, and was on her back when she was found. There was nothing covering her head.³¹⁶
124. The P79A also gave a narrative of the circumstances under which the death had taken place.³¹⁷ That narrative included reference to the three previous deaths, and that they had been attributed to SIDS, noting that Professor Hilton had been involved with the investigation of those deaths.³¹⁸ The report also noted the administration of Demazin. It recorded that Ms Folbigg had stated that when she went in to check on Laura, having heard her cough about five minutes before, Laura was lying on her back on the bed, her face was extremely pale and she was not breathing.³¹⁹

Autopsy reports

125. Dr Cala carried out the post-mortem examination at 9:00pm on 1 March 1999.³²⁰ Professor Hilton, as the Director of the Institute of Forensic Medicine, was involved with Dr Cala's autopsy of Laura and was present when Dr Cala conducted the autopsy.³²¹
126. At the time he conducted the autopsy of Laura, Dr Cala was aware of the death of her three siblings.³²² He was told that she had been diagnosed with central apnoea but that there was no evidence of obstructive apnoea and that she had been monitored with no significant sleep abnormalities detected, and that she had recently been unwell with cold and flu-type symptoms.³²³
127. An interim autopsy report was completed by Dr Cala, dated 1 March 1999.³²⁴

³¹³ Exhibit 2-H, Forensic pathology tender bundle, SIDS death scene investigation checklist relating to Laura (undated) [red pagination 3642].

³¹⁴ Exhibit 2-H, Forensic pathology tender bundle, SIDS death scene investigation checklist relating to Laura (undated) [red pagination 3642].

³¹⁵ Exhibit 2-H, Forensic pathology tender bundle, SIDS death scene investigation checklist relating to Laura (undated) [red pagination 3642].

³¹⁶ Exhibit 2-H, Forensic pathology tender bundle, SIDS death scene investigation checklist relating to Laura (undated) [red pagination 3642].

³¹⁷ Exhibit 2-H, Forensic pathology tender bundle, Report of death to the Coroner (1 March 1999) [red pagination 3648].

³¹⁸ Exhibit 2-H, Forensic pathology tender bundle, Report of death to the Coroner (1 March 1999) [red pagination 3648].

³¹⁹ Exhibit 2-H, Forensic pathology tender bundle, Report of death to the Coroner (1 March 1999) [red pagination 3648].

³²⁰ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 1, 5 [red pagination 3686, 3690].

³²¹ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 5 [red pagination 3690].

³²² Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) pp 2-3 [red pagination 3687-3688]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T706.37-40 [red pagination 2510].

³²³ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 3 [red pagination 3688]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T707.27-41 [red pagination 2511].

³²⁴ Exhibit 2-H, Forensic pathology tender bundle, Interim autopsy report of Laura (1 March 1999) [red pagination 3651].

In that interim report, Dr Cala recorded the direct interim cause of death as “undetermined”.³²⁵ He noted that significant injuries were not present, and specimens were retained including samples of tissue and Laura’s brain.³²⁶

128. The final autopsy report dated 13 December 1999 contained further detail. However, Dr Cala maintained his finding that the cause of death was “undetermined”.³²⁷ Dr Cala recorded that the time and date of death was sometime between approximately 11:00am and 12:45pm on 1 March 1999.³²⁸
129. Dr Cala recorded a narrative of the previous children’s births, medical histories, and deaths including the ascribed causes of deaths.³²⁹ Inter alia, he noted that Mr Folbigg had allegedly been diagnosed with Obstructive Sleep Apnoea.³³⁰ In relation to Sarah, Dr Cala referred to letters from Dr Seton, including that Sarah had apparently been well after her birth, although she “was a very loud snorer who suffered witnessed apnoea and choking episodes during sleep.”³³¹ Dr Cala commented that “[s]adly, none of this was investigated prior to her death”.³³² Also, that:

Sarah had a very long palate and uvula. It is well known clinically that soft palates and uvulas become swollen and elongated as a secondary effect of habitual snoring.³³³

130. Dr Cala set out a narrative of his findings upon post-mortem examination in his final autopsy report of Laura dated 13 December 1999, a summary of which is set out below:³³⁴

In the examination he noted lividity mainly on the left side of the face. There was also dorsal lividity present. There were no significant injuries externally apart from minor bruises to the lower limbs. There were no injuries to the face or in the oral cavity. There were no petechial haemorrhages on the face or on the eyelids, and re-examination the next day also failed to show petechial haemorrhages. The neck examination was normal. Internally, there were no significant abnormalities apart from focally haemorrhagic and collapsed lungs.³³⁵

Histological examination of tissues showed an inflammatory infiltrate in the heart, consistent with myocarditis, of probable viral origin. This accorded, Dr Cala opined, with the history of a cold/flu-like illness for several days prior to Laura’s death. He stated that there were a variety of causes for myocarditis, including some viruses, bacteria, fungi, some immune-related disorders, some drugs, and several other causative agents.

³²⁵ Exhibit 2-H, Forensic pathology tender bundle, Interim autopsy report of Laura (1 March 1999) p 1 [red pagination 3651].

³²⁶ Exhibit 2-H, Forensic pathology tender bundle, Interim autopsy report of Laura (1 March 1999) p 1 [red pagination 3686].

³²⁷ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 2 [red pagination 3687].

³²⁸ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 2 [red pagination 3687].

³²⁹ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) pp 2-3 [red pagination 3687-3688].

³³⁰ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 3 [red pagination 3688].

³³¹ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 3 [red pagination 3688].

³³² Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 3 [red pagination 3688].

³³³ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 3 [red pagination 3688].

³³⁴ Counsel Assisting’s Written Closing Submissions (4 April 2023) Annexure A [648]-[668].

³³⁵ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 4 [red pagination 3689].

Dr Cala also stated in the report that toxicological examination of tissues and fluids showed no drugs, alcohol or poisons. The absence of Demazin suggested that it had not been given for some time prior to Laura's death, possibly 12-24 hours or longer.³³⁶

Dr Cala stated:

The death of Laura Folbigg cannot be regarded as "another SIDS"... The family history of no living children following four live births is highly unusual. Laura had metabolic blood and urine tests as an infant, as part of screening for possible inherited metabolic diseases. These tests were all normal, and this would exclude a metabolic abnormality as a cause of sudden death in Laura. Obstructive Sleep Apnoea has also been excluded as a cause of death for Laura, as there was no evidence to substantiate this diagnosis despite intensive monitoring by doctors at New Children's Hospital, Westmead.

The diagnosis of SIDS should be made very sparingly after the age of 12 months. This diagnosis should only be made after a death scene investigation, post mortem examination, and various toxicological and microbiological cultures have failed to establish any other reasonable cause of death. Although there was an inflammatory infiltrate in the heart consistent with myocarditis, this may represent an incidental finding.

The possibility of multiple homicides in this family has not been excluded. If homicidal acts have been committed it is most likely these acts have been in the form of deliberate smothering. Smothering, whether deliberately or accidentally inflicted, may leave no trace. There are no specific post mortem findings for smothering. It is usually performed by one person, in the absence of any witnesses. It is relatively easy for an adult to smother an infant or small child with a hand, pillow, soft toy or other similar object.

The bodies of all the Folbigg children have been cremated.³³⁷

A range of specimens were retained for further examination, including tissue for histology, and Laura's brain.³³⁸

External examination

On the external examination, there were no petechial haemorrhages on the upper or lower lids.³³⁹

An ovoid 5x3mm brown bruise was present just medial to the left patella. An ovoid 12x10mm brown bruise was noted on the right anterior lower leg.³⁴⁰ Dr Cala came to the conclusion that the bruises were probably several days old at least.³⁴¹

Key findings on internal examination

No retinal haemorrhages were present.³⁴²

There was no evidence of congenital heart disease, and all aspects of the heart

³³⁶ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 4 [red pagination 3689].

³³⁷ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 4 [red pagination 3689].

³³⁸ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 5 [red pagination 3690].

³³⁹ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 6 [red pagination 3691].

³⁴⁰ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 7 [red pagination 3692].

³⁴¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T708.41-44 [red pagination 2512].

³⁴² Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 8 [red pagination 3693].

appeared normal, including the pericardium, the valves and atria, apart from an 8mm diameter area of haemorrhage on the posterior surface of the left atrium.³⁴³

The airways were normal. The left lung weighed 122 grams and the right lung 114 grams. Both were focally haemorrhagic and collapsed on section. The thymus weighed 28 grams and was normal apart from petechial haemorrhages on the anterior aspect of the suprasternal thymus gland. This part of the thymus measured approximately 15x10x10mm and projected superiorly beyond the suprasternal notch.³⁴⁴

The entire body was x-rayed on 2 March 1999 – no fractures were detected. The body was also re-examined that day, with no additional significant findings.³⁴⁵

Dr Cala found no injuries to Laura's face or mouth, and no petechial haemorrhages on the face or eyelids.³⁴⁶ A facial dissection was carried out on 3 March 1999. Several photographs were taken. No bruises or any other injuries were detected on facial dissection.³⁴⁷

Microscopic examination

Within the myocardium was a moderately dense infiltrate of lymphocytes which had aggregated in certain areas, particularly subendocardially and along the superficial surface of the myocardium, although further sections showed large aggregates in the central area of the left ventricle. In these areas, there were large clusters of lymphocytes surrounding degenerate myocytes. Myocytolysis (damage to cardiac muscle cells) was present. No viral inclusions were seen. The appearances were of myocarditis, which was probably viral in aetiology.³⁴⁸

Further blocks of heart tissue taken (2nd and 3rd cuts) confirmed the presence of aggregates of lymphocytes in a similar distribution to those in the first histological examination of the heart.³⁴⁹

The spleen showed many germinal centres within white pulp areas, and a markedly increased number of lymphocytes in the red pulp. The appearances were of a probable viral infection. There was no evidence of malignancy nor any histological features to suggest any specific underlying viral infection.³⁵⁰

The lungs showed an increased number of lymphocytes within the interstitium and in some alveolar spaces. There were widespread areas of haemorrhage with numerous red blood cells within alveolar spaces which also contained oedema fluid, foamy macrophages, and fibrin.³⁵¹

Focal cortical haemorrhages were present in the thymus.³⁵²

³⁴³ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 8 [red pagination 3693].

³⁴⁴ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 8 [red pagination 3693].

³⁴⁵ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 9-10 [red pagination 3694-3695].

³⁴⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T708.46-52 [red pagination 2512].

³⁴⁷ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 10 [red pagination 3695].

³⁴⁸ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 10 [red pagination 3695].

³⁴⁹ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 10 [red pagination 3695].

³⁵⁰ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 10 [red pagination 3695].

³⁵¹ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 11 [red pagination 3696].

³⁵² Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 11 [red pagination 3696].

Microscope slides of the liver, kidney, stomach, oesophagus, adrenal, salivary gland, small and large intestine, thyroid, bone-marrow, pancreas, diaphragm, skeletal muscle, and ovary were all essentially normal.³⁵³

Neuropathology report

No macroscopic abnormality was seen in the brain or in a 20cm segment of spinal cord examined.³⁵⁴

No microscopic abnormality was seen in the multiple sections taken of the brain.³⁵⁵ Development was appropriate for age.³⁵⁶

Histology report

The histology report noted the following findings:

- a. Source: Lung
- b. Profuse Post mortem contaminants.
- c. Profuse coliform.
- d. Source: Spleen.
- e. Moderate coliforms of 2 colonial types.
- f. Profuse alpha haemolytic Streptococcus of 2 colonial types. Moderate Staphylococcus aureus.³⁵⁷

³⁵³ Exhibit 2-H, Forensic pathology tender bundle, Final autopsy report of Laura (13 December 1999) p 10-11 [red pagination 3695-3696].

³⁵⁴ Exhibit 2-H, Forensic pathology tender bundle, Neuropathology report of Laura (13 December 1999) p 1-2 [red pagination 3698-3699].

³⁵⁵ Exhibit 2-H, Forensic pathology tender bundle, Neuropathology report of Laura (13 December 1999) p 2 [red pagination 3699].

³⁵⁶ Exhibit 2-H, Forensic pathology tender bundle, Neuropathology report of Laura (13 December 1999) p 2 [red pagination 3699].

³⁵⁷ Exhibit 2-H, Forensic pathology tender bundle, Microbiology report of Laura (9 March 1999) [red pagination 3654].

The Trial

The Trial

131. Ms Folbigg was charged with the murder of her four children and the malicious infliction of grievous bodily harm on Patrick following the discovery and examination of her diaries kept during the children's lifetime and her interview with Detective Ryan on 23 July 1999. There were a number of strands to the Crown case, but in summary it principally depended upon the following matters:
- (a) The coincidence of the four deaths, per the coincidence notice at Annexure 2 to this Report;
 - (b) The evidence of the relationship Ms Folbigg had with her children, the particular circumstances surrounding Sarah's death and the discovery of the diaries;
 - (c) The diaries and Ms Folbigg's statements in her electronically recorded interview concerning the deaths of the children, the discovery of the diaries and some of the diary entries; and
 - (d) The medical evidence to the effect that there was nothing to suggest the children died as a result of natural causes.
132. The Crown also relied on tendency evidence, serving a tendency notice which asserted that "the 'tendency' evidence which the Prosecution intends to adduce is that [Ms Folbigg] had a tendency to become stressed and lose her temper and control with each of her four children, and then to asphyxiate them".³⁵⁸ However, little reliance was placed on it during the trial. The Crown accepted that before the evidence could be used for tendency reasoning, the jury would need to be satisfied beyond reasonable doubt that in relation to any one of the children, Ms Folbigg had caused his or her ALTE or death.³⁵⁹

The Coincidence Evidence

133. The coincidence notice, set out in Annexure 2 to this Report, asserted that the evidence established that each of the Folbigg children died in a similar way and from the same cause and that they did not die from any other illness, disease or syndrome.
134. The Crown placed heavy reliance on the coincidence evidence. At the trial, the Crown listed ten matters in relation to the deaths, which it was said disproved the mere coincidence of the children dying of natural causes. In a note which became MFI 41, those ten matters were stated as follows:
- (1) They all occurred suddenly;
 - (2) They all occurred unexpectedly;
 - (3) They all occurred at home;
 - (4) They all occurred during the child's sleep period;
 - (5) They all occurred when the child was in a bed, cot or bassinet;
 - (6) They all occurred when the mother was the only adult at home or awake, giving her the opportunity to have done them harm (Craig was a particularly heavy sleeper);

³⁵⁸ Exhibit 2-BY, Crown notice of tendency evidence (24 October 2002) [red pagination 7877].

³⁵⁹ *Folbigg v R* [2002] NSWSC 1127 per Wood CJ at CL at [131]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 13 May 2003 T1365.16-32 [red pagination 3169].

- (7) They were all discovered dead or moribund by their mother;
- (8) They were all discovered dead or moribund by their mother during what she claimed was a normal check on the well-being of the children in the course of their sleep period (three of them on her way from the toilet);
- (9) They were all discovered dead or moribund by their mother at around or shortly after death when they were still warm to the touch (two of them still had a heart beat, so these were found by her very shortly – literally minutes – after the cessation of breathing); and
- (10) In relation to four of the five events, she failed to render any assistance at all to them after discovering them dead or moribund, to the extent that she did not even lift them up out of their beds.³⁶⁰

135. The Prosecutor said that one had to bear in mind that Patrick was blind and suffered from epilepsy, but subject to that he was quite well.³⁶¹ It may well be that reasonable minds would differ on that assessment of his state of health.

136. In his closing address to the jury, the Crown Prosecutor repeated what he said in opening concerning coincidence evidence. He went on to make the following remark:

Now, ladies and gentlemen, what that means, I am sure his Honour will tell you, what he will tell you is this: That the fact that there has never been an instance recorded does not mean that it has never ever happened. It does not mean that it could not happen. What it does mean is, it is an expression of how rare it must be that it has never been recorded. I mean it has never been recorded that the same person has been hit by lightning four times, I presume. That does not mean it has never happened. It does not mean that it could never happen. You might have some person living in the backwards of India who has been hit by lightning four times, but it is an expression of its rarity that there has never been -if this be the case that there had not been recorded that the same person has been hit by lightning four times. It is probably more common that a person has been hit by lightning four times than what has happened to this family, you might think.

Professor Berry described these four deceased children as being like four sudden lightning bolts, and that is really what it is. The only reasonable conclusion is that Kathleen Folbigg killed them.³⁶²

137. This portion of the address by the Prosecutor echoes a now discredited theory by the British paediatrician, Sir Roy Meadow, who in a book *ABC of Child Abuse* stated that in a single family “one sudden infant death is a tragedy, two is suspicious and three is murder until proved otherwise”. The theory and the statistics on which it was based were discredited by the United Kingdom Court of Appeal in *R v Sally Clark* [2003] EWCA Crim 2010 and as is apparent from the evidence before me, are contrary to accepted medical science.

138. In *R v Clark* (supra), the Court of Appeal (at 178) accepted Professor Berry’s criticism of the statistical basis of Sir Roy Meadow’s theory. The court also commented that “the graphic reference by Professor Meadow to the chances of backing long odds winners at the Grand National year after year may have had a major effect on the jury’s thinking”. The same may well be said of the remarks by the Prosecutor to which I referred above. This is not, of course, an appeal from the conviction and it is no part of my role to reach a conclusion as to the propriety or otherwise of the

³⁶⁰ Exhibit 2-AR, Summary of Crown coincidence evidence [red pagination 6756].

³⁶¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 April 2003 T45.52-55 [red pagination 1849].

³⁶² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 13 May 2003 T1364.37-58 [red pagination 3168].

Crown Prosecutor's remark. I raise the issue merely to emphasise that the evidence in this Inquiry is quite different to that at Ms Folbigg's trial. Although coincidence evidence is a matter which can be taken into account, there is absolutely no presumption arising out of the fact that the four children died from then unexplained circumstances. It is necessary for me to consider separately the death of each of the children, taking into account the coincidence evidence.

139. I note a further remark was made by the Crown Prosecutor to the following effect:

"God her going to the toilet was very dangerous for these children. Three out of her five children had incidents when she happened to go the toilet. God you'd be locking up the toilet, wouldn't you? Everyone of them was during a normal check of their wellbeing. Gosh, you will be telling her not to check on them, wouldn't you? What an amazing coincidence or is it?"³⁶³

140. I note the submission on behalf of Ms Folbigg that this proposition could not have applied to Patrick or Laura, who did not die at night nor when Ms Folbigg was otherwise going to the toilet. I further note the submission that there are obvious reasons why the habits of micturition of a new mother might be altered after and because of childbirth.³⁶⁴

141. It is not my role to comment on whether this statement was appropriate in an address to the jury by a Crown Prosecutor. However, once again, although I will take into account as part of the coincidence evidence the circumstances in which Ms Folbigg discovered each of the children, the rhetorical flourishes on the evidence made by the Crown Prosecutor in his address to the jury will not influence me.

The relationship Ms Folbigg had with her children, the particular circumstances surrounding Sarah's death and the discovery of her diaries

142. The Crown placed particular reliance on the evidence of Mr Folbigg on these issues.

143. In opening, the Prosecutor stated that the Crown case was that Ms Folbigg had a very low threshold for stress and she was deeply resentful of the impact the children had on her own life, in particular, on her ability to go to the gym and socialise. In opening, the Prosecutor stated that Ms Folbigg was resentful of her husband for not providing her with adequate help. He said the Crown case was that Ms Folbigg either intended to kill the children during a fit of anger, resentment and hatred against them or deliberately sought to smother them in an attempt to put them to sleep either so that she could get to sleep herself or that she could have some time to herself.³⁶⁵ In that regard the Crown relied on entries in Ms Folbigg's diaries (see below) and the evidence to which I now turn.

Detective Ryan

144. Detective Ryan was the officer-in-charge of the investigation into the deaths of the four children. It is helpful to deal with his evidence at this stage as it places in context some of the evidence given by Mr Folbigg. That evidence, in turn, is relevant to the circumstances surrounding the discovery of the diaries, which formed a major part of the Crown case.

³⁶³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 13 May 2003 T1363.44-51 [red pagination 3167].

³⁶⁴ Written Closing Submissions on behalf of Ms Folbigg (18 April 2023) 324 [225] - 325 [226].

³⁶⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 April 2003 T26.35-55 [red pagination 1830].

145. Detective Ryan stated that in the early afternoon of 1 March 1999 he attended Singleton Hospital and spoke to Ms Folbigg. He gave evidence of the following conversation:
- Q. Now, would you tell the Court what your conversation was with Mrs Folbigg at the Singleton Hospital?
- A. Yes, I will. I said to Mrs Folbigg, "Can you tell me what happened with Laura today?" Mrs Folbigg replied, "She woke up at 6.20am this morning. She was in a bad mood. Craig went to work and we had breakfast. We went to the gym and then we went to see Craig at work for morning tea. She went to sleep in the car on the way home, so I put her into bed when we got home. I heard her coughing and did not think much of it. I went to check on her about five minutes later and saw that she wasn't breathing. I took her to the breakfast bar and did CPR and rang 000". I said, "Why was Laura in a bad mood?", and she said, "She's had a cold for about a week now."
- I said, "What was Laura wearing this morning?" Mrs Folbigg said, "Flower bike shorts and a yellow T-shirt." I said, "What time did you leave the gym?", and she said, "10.30am." I said, "What time did you get home this morning from Craig's work?", and she said "11am." I said, "How long after you put Laura to bed did you hear her coughing?", and she said, "Half an hour." I said, "What did you see when you walked into Laura's room to check on her?", and she said, "She was laying on her back" - sorry, "She was laying on her back and her face was white."³⁶⁶
146. Detective Ryan said some two and a half months later, on 14 May 1999, he went back to the family home at 8 Millard Close, Singleton. He said he had heard information that Ms Folbigg had moved out of the home. Mr Folbigg told him of the existence of a diary although he did not give it to him at that stage.³⁶⁷
147. Five days later, on 19 May 1999, Mr Folbigg attended the Detective's office at the Singleton Police Station. He brought with him two diaries one for the period 1 February 1989 to 1 March 1989 (**the 1989 diary**) and the other for the period 4 June 1996 to 5 June 1997 (**the 1996-1997 diary**).³⁶⁸
148. Detective Ryan stated on that day he commenced to take a statement from Mr Folbigg. It was not completed on that day and it was arranged for Mr Folbigg to come back on 23 May 1999. Detective Ryan stated that, on 23 May 1999, Mr Folbigg told him he had not told the truth in regard to a number of issues. Detective Ryan said Mr Folbigg told him that he had resumed his relationship with Ms Folbigg and he supported her.³⁶⁹
149. Detective Ryan gave evidence that on 23 July 1999 he conducted an electronically recorded record of interview with Ms Folbigg. The whole of the interview was recorded on video and on audio.³⁷⁰ Although the evidence before this Inquiry only comprised portions of the video, a complete transcript was tendered.³⁷¹
150. At the conclusion of the interview Detective Ryan informed Ms Folbigg that the police were going to execute a search warrant at the flat where she had been living

³⁶⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 28 April 2003 T955.54-T956.20 [red pagination 2759-2760].

³⁶⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 28 April 2003 T960.8-49 [red pagination 2764].

³⁶⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 28 April 2003 T961.1-27 [red pagination 2765].

³⁶⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 28 April 2003 T961.33-T962.44 [red pagination 2765-2766].

³⁷⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 28 April 2003 T962.57-T963.6 [red pagination 2766-2767]; T964.17-22 [red pagination 2768].

³⁷¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg.

and also at 8 Millard Close. Detective Ryan said he told Ms Folbigg that, “We are looking for other diaries which relate to the death of your children. Do you have any more diaries?” Ms Folbigg stated, “I have just started a new diary and it is up at the house.”³⁷²

151. Detective Ryan gave evidence as to the execution of both search warrants. He stated that he said to Ms Folbigg during the execution of the warrant at 8 Millard Close, Singleton, “We’re here to look for diaries, are there any diaries here?”. Ms Folbigg replied, “Yeah, that one I bought yesterday.” Detective Ryan said the diary that she gave him was a diary for 1999.³⁷³
152. A short time later the officer who accompanied Detective Ryan, Sergeant Gralton, found another diary. Detective Ryan said he said to Ms Folbigg, “Sergeant Gralton has just found another diary in your wardrobe. Is that something you would like to make a comment in relation to that?” and she said, “I didn’t know it was here, I thought it was gone.”³⁷⁴
153. The diaries recovered on the execution of the search warrants were a diary covering the period 31 December 1991 to 3 May 1993 and a diary covering the period 6 June 1997-April 1998 (**the 1997-1998 diary**).
154. Detective Ryan was also shown a calendar page of August 1993 in relation to Sarah Folbigg. He said it was given to him by Mr Folbigg a year after he made his original statement.³⁷⁵
155. Detective Ryan gave evidence that on 19 April 2001, he and another detective went to the work address of Mr Folbigg and told him he was under arrest for the offence of hindering an investigation. He stated that on that day he interviewed Mr Folbigg, in the form of an audio and video recorded interview, and later on that day Ms Folbigg was arrested and charged.³⁷⁶
156. Detective Ryan was cross examined about changes to Mr Folbigg’s account about the morning Sarah had died. Detective Ryan stated that on the first day of taking Mr Folbigg’s statement, on 19 May 1999, they had not reached the circumstances of where Sarah was on the morning of her death. He said they got to that part of the story on the next occasion, 23 May 1999. He said Mr Folbigg was talking about where Sarah was on the morning of her death on 19 May 1999, and that his version on this day was the same as what he had said to Detective Ryan on 14 May 1999, but that this version was not recorded into his statement because they had not reached that part in the written document. He said when Mr Folbigg next attended to continue giving his statement, on 23 May 1999, his version of the night Sarah died had changed. As they had not yet reached that part of his written statement, there was no change to anything that had already been written. They simply

³⁷² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 28 April 2003 T965.7-19 [red pagination 2769].

³⁷³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 28 April 2003 T965.21-T966.18 [red pagination 2769-2770].

³⁷⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 28 April 2003 T966.20-43 [red pagination 2770].

³⁷⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2003 T1084.40-T1085.18 [red pagination 2888-2889].

³⁷⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2003 T1086.53-T1087.33 [red pagination 2890-2891].

recommenced taking his statement where they had left off, and the new version is what was recorded into the statement.³⁷⁷

157. In re-examination, Detective Ryan said that Mr Folbigg told him on 19 May 1999 that the information that he had given to him at his home on 14 May 1999 was correct. He agreed that information was to the effect that he had woken up at about 1:00am or 1:10am and noticed that his wife and daughter, Sarah, were not in the room on the first occasion he woke up.³⁷⁸ Mr Folbigg, in his record of interview, denied the conversation occurred.³⁷⁹

The evidence of Mr Craig Folbigg

158. In his evidence in chief, Mr Folbigg described the evidence leading to the death of Caleb consistently with what I have set out above. He stated that Ms Folbigg coped much better with Caleb's death than he did.³⁸⁰
159. So far as Patrick was concerned, Mr Folbigg stated that both he and Ms Folbigg were euphoric at his birth and, during the first four months of his life, Ms Folbigg's attitude to motherhood was pretty good.³⁸¹ He described the circumstances of Patrick's ALTE and his subsequent seizures in the manner I have set out above.
160. Mr Folbigg stated that Ms Folbigg did not cope very well after Patrick's ALTE. He said she would lose her temper and make a sort of growl. He said she growled daily and left Patrick with other people so she could get away.³⁸² Mr Folbigg gave evidence as to the circumstances of Patrick's death in the manner which I have set out above.
161. Mr Folbigg said that both he and Ms Folbigg were devastated by Patrick's death. He said that whilst the world stopped for him, she went back to being herself, "happy-go-lucky I suppose."³⁸³ So far as Sarah was concerned, Mr Folbigg said he did not want another baby but Ms Folbigg said if they were not going to start a family, she would leave.³⁸⁴
162. Mr Folbigg gave evidence that he and Ms Folbigg were lent a sleep apnoea blanket from what he described as the SIDS organisation about two days after Sarah was born. He said that the machine would go off regularly and Ms Folbigg would go and check on Sarah. He said Ms Folbigg hated the machine and wanted to abandon the monitor but he insisted on it being used every other day. Mr Folbigg said that when Sarah was two and a half months old, Ms Folbigg went back to work on Saturdays and Sundays because she was sick of being stuck at home. He said at that stage

³⁷⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2003 T1088.39-T1090.12 [red pagination 2892-2894].

³⁷⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2003 T1095.43-56 [red pagination 2899].

³⁷⁹ Exhibit 32-09(a), Transcript of ERISP of Craig Folbigg (19 April 2001) [red pagination 362].

³⁸⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T106.12-28 [red pagination 1910].

³⁸¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T107.34-T108.58 [red pagination 1912-1913].

³⁸² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T112.32-T113.1 [red pagination 1916-1917].

³⁸³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T117.36-37 [red pagination 1921].

³⁸⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T118.28-40 [red pagination 1922].

she became very frustrated with Sarah, would growl at her from time to time and become very domineering.³⁸⁵

163. Mr Folbigg gave evidence of events which he said occurred the day before Sarah died. He said he and Ms Folbigg took her to the beach. He said that Sarah had a cold but appeared perfectly normal and happy and played on equipment at a park in East Maitland. He said that after they returned home it went “pretty ordinary”.³⁸⁶ He explained what he meant in the following terms:

Q. When you say pretty ordinary, what do you mean?

A. I was in the lounge room watching TV and I could hear Kathy in the bedroom with Sarah. I could hear Sarah crying and grumbling, and I could hear Kathy patting Sarah to try to comfort her. And I heard Kathy growl, that growl, and I went up to the bedroom and Kathy was on the bed - she had Sarah pinned to her.

Q. When you say “pinned to her”, what do you mean?

A. In a bear hug, one arm bear hug, and with her other arm she was (witness indicated) patting her on the bum and she--

Q. The motion that you’ve described there, is it more than just a pat?

A. (Witness nodded yes).

Q. Could you describe to us in words?

A. You could hear it.

Q. Was it fairly hard?

A. (Witness indicated). About that loud.

CROWN PROSECUTOR: Might the record show that he has just demonstrated with his own hand on his thigh how hard Sarah was being patted.³⁸⁷

...

Q. You say that you heard the growling noise. You were sitting in which room?

A. The lounge room.

Q. And were Kathy and Sarah in your bedroom?

A. They were.

Q. Was the door open or closed?

A. Open.

Q. Did you go into the bedroom?

A. I walked up the hallway to the bedroom door.

Q. And would you tell the Court what happened?

A. I told Kathy to mellow out. She told me to go away.

Q. Could you tell us exactly what she said, if you can remember?

A. She told me to “Fuck off”, that everything was under control, and I said to her, “Well,

³⁸⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T119.53-T123.28 [red pagination 1923-1927].

³⁸⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T125.8-T126.15 [red pagination 1929-1930].

³⁸⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T126.9-35 [red pagination 1930].

you know, for Christ's sake, it's World War III between the two of you every time this kid's got to go to the bedroom. If she doesn't want to go to sleep, why make her go to sleep?" She told me just to get out. She'd go to sleep if she said she would.

Q. Did you then go back into the lounge room?

A. I went into the lounge room and sat on the lounge.

Q. Could you hear what was happening in the bedroom?

A. I could still hear Sarah was upset and I heard footsteps coming down the hallway and Kathy came through the archway from the hallway into the lounge room and walked to about, roughly two or three steps short of me, and threw Sarah at me.

Q. Did she literally throw Sarah at you?

A. Threw Sarah at me and said, "You fucking deal with her".

Q. Did you have to catch Sarah?

A. I caught her.³⁸⁸

164. Mr Folbigg gave the following evidence of what occurred on the night of Sarah's death:

Q. Did you put her into her own bed in your bedroom at about 10.30 or 11 o'clock that night?

A. It was around that time.

Q. And did you put a sheet and a blanket over her?

A. The - because she was a fairly tossed-and-turned type of kid, yes, I did put a blanket and a sheet over her.

Q. And did you place her on her back?

A. I put her on her back.

Q. Did you then get into your bed where Kathy was?

A. I went into bed and —

Q. And turned the light off?

A. I turned the light off and went to sleep.

Q. What was the next thing that happened?

A. I woke up.

Q. Do you know what time it was?

A. I do. I woke up. It was ten past one.

Q. How did you know that?

A. Because we had a clock in the bed.

Q. What sort of clock?

A. Digital; red digital clock.

Q. Sorry?

A. A red digital clock.

³⁸⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T127.15-56 [red pagination 1931].

Q. Did it light up?

A. It lit up.

Q. And was it an electric one?

A. Electric.

Q. And it was 1.10?

A. 1.10.

Q. And did you look around the room at all?

A. I looked around the room. I was sort of half asleep, half awake. Kathy wasn't in the bed; that was obvious. I looked down at Sarah's bed. Sarah wasn't in the bed. I looked to the doorway where the door was closed. You could see the light around the door. So I figured that Kathy must have been outside, attending to Sarah, or looking after her.

Q. Could you see the light under the door?

A. I could see the light around the door.³⁸⁹

...

Q. Was there any light in the room from outside?

A. There was - we had a venetian blind and there was a street light directly outside the house, and the light used to like flood the room, like light it up.

Q. At night-time?

A. At night.

Q. So, there was a fair amount of light in your bedroom?

A. There certainly was.

Q. From outside?

A. Yes.

Q. And you were able to see the bedroom reasonably well at night?

A. Yes.

Q. And I take it that there was nothing unusual about Kathy and Sarah not being in the bedroom at night?

A. No.

Q. You assumed, you've told us, that they were out, with Kathy feeding Sarah?

A. Yes.

Q. So did you go back to sleep?

A. I did.

Q. What was the next thing that happened?

A. I was awoken by Kathy's blood-curdling scream.

Q. Do you know what time it was?

A. Not at that stage. I sat bolt upright in bed. The light was on in the room. Kathy was standing at the door, with one hand on the door, as if she was holding the door open,

³⁸⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T128.10-T129.5 [red pagination 1932-1933].

screaming. I jumped up out of bed and Sarah was laying on her bed. I, I raced over to Sarah. I grabbed her off the bed, and she was all floppy and I-I turned around and put her on my bed and Kathy was sitting in the hallway just outside the door at that stage by then, screaming and crying, with her knees up under her chin, just crying and--

Q. When you were woken up by this scream, where was Sarah?

A. Laying on her bed.

Q. Did she have any covers on her?

A. No covers on her.

Q. Was she on her back or her front or her side?

A. She was laying on her back. Her little legs were straight and her little arms were alongside of her.

Q. When you lifted her up and placed her on the floor, were you able to say whether or not she was warm to the touch?

A. She was warm.

Q. And was she breathing?

A. No.

Q. How could you tell?

A. I put my ear to her mouth and listened as hard as I could.

Q. What did you do then?

A. I screamed at Kathy to ring an ambulance and started to do CPR.

Q. Did you again breathe into her mouth and nose?

A. I was breathing in her mouth and her nose, and I was depressing her chest. I was trying to do all that.³⁹⁰

165. Mr Folbigg said he had a conversation a couple of days later when he asked Ms Folbigg what happened. She said, "I got up and went to the toilet, came back, turned on the light and found her."³⁹¹
166. Mr Folbigg stated that when he saw Sarah, she was lying in a different position to what he expected. He said he had never seen her lying in that position before.³⁹²
167. Mr Folbigg said in 1996 that Ms Folbigg stated she wanted another child.³⁹³
168. After Laura was born, he said they were lent a Corometrics monitor by the hospital and told how to use it and how to put it on the baby. He said they were instructed Laura was to have it plugged on to her whenever she was asleep.³⁹⁴
169. He said that after two or three months the results from the monitor showed that Ms

³⁹⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T131-T132.17 [red pagination 1935-1936].

³⁹¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T135.15-23 [red pagination 1939].

³⁹² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T150.23-30 [red pagination 1954].

³⁹³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T151.15-23 [red pagination 1955].

³⁹⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T155.11-47 [red pagination 1959].

Folbigg was not using it every day. He said he got cranky about it but Ms Folbigg said, "I keep my eye on her and she'll be fine."³⁹⁵

170. Mr Folbigg said that by March 1998 when Laura was about six months old, he could not talk to Ms Folbigg about the monitor, "She would go off her head, tell me it wasn't me who had to put up with it." He said he was very worried about it so he wrote to Dr Seton and asked him if he would speak to Ms Folbigg.³⁹⁶ He said that by December 1998, when Laura was about 16 months old, the hospital told them they wanted the monitor back.³⁹⁷
171. In fact, Mr Folbigg wrote to a nurse at the hospital, Nurse Margaret Tanner, expressing his concern about Ms Folbigg's failure to use the monitor and asking whether it was necessary that Laura should be monitored through her daytime sleeping stating that he was sure that Ms Folbigg does not do this.³⁹⁸
172. Mr Folbigg said Ms Folbigg would get cranky and frustrated with Laura every day. He said it got worse when Laura started to walk. He also said his relationship with Ms Folbigg "had fairly much packed it in". He said towards the end of Laura's life Ms Folbigg was going out once a week and going to the gym daily and whatever nights she could.³⁹⁹
173. Mr Folbigg gave evidence of what occurred on the day before Laura died. He said some friends and their three children came over at lunchtime. He said he videoed what was going on. He said Laura was running around, swimming in the pool, laughing and screaming and playing with the other children.⁴⁰⁰
174. Mr Folbigg said the relationship between Laura and Ms Folbigg seemed strange and he brought it up with her. He gave the following evidence:

Q. Later that day, after Dean and Tanya had left your home, did you speak to Kathy about that?

A. I did, I brought it up. I asked Kathy what was going on.

Q. Yes?

A. I said to her -she said, "What do you mean?" I said, "What's going on between you and Laura? You know, you haven't been near her all day. The kid's kept away from you. Every time you have gone to go near her she's just come running to me." Kathy said, "Oh, she's got the shits with me." I said, "How does a baby have the shits with its mother?" Kathy said, "It's probably over what I did to her last night." I said, "Well, what did you do to her?" Kathy said, "I lost it with her." I said, "What do you mean you lost it with her?" Kathy said that Laura was following her around the house, behind her "Mum, Mum, Mum", whinging and moaning. Kathy said, "What?" She spun around to tell her to piss off or something and Laura was fairly close up behind her and when she spun around she knocked Laura over and she said, "I screamed at her" and then I looked down and saw Laura laying on the ground in like an emotional wreck. So Kathy said that she had

³⁹⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T156.27-58 [red pagination 1960].

³⁹⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T158.37-46 [red pagination 1962].

³⁹⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T161.4-8 [red pagination 1965].

³⁹⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T158.53-T160.30 [red pagination 1962-1964].

³⁹⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T162.4-T163.1 [red pagination 1966-1967].

⁴⁰⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T170.15-50 [red pagination 1974]; referring to Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit K, Original footage depicting Laura Folbigg in a swimming pool on 28 February 1999.

sat down with Laura because at that stage Kathy was upset that she had upset Laura and she said, "I settled her down and put her to bed. Then you came home, and I went to bed as well." And I just said to her, "Good on you." I couldn't believe it. Anyway--⁴⁰¹

175. Mr Folbigg said that on the day of Laura's death he heard her wake up about 6:20am. He then gave the following evidence of what occurred:

Q. What sort of mood was Laura in that morning?

A. Laura was very clingy, very subdued, whinging, when I started to go about my normal daily things, which obviously to Laura - it seemed obvious to me that Laura picked up that I was going to get ready for work, and such.

Q. That you were what?

A. Going to get ready for work. Laura got really agitated and upset. She came into my room and she was jumping up and down on the bed and I got her off the bed and she ran up the hallway crying. I went out. Kathy was losing patience with her. I heard--

Q. With Laura?

A. With Laura. I had heard Kathy growl. I didn't know what they were doing at the time. I wasn't in the room. I heard Kathy growl.

Q. In the same way you described yesterday?

A. Yes. I walked down the hallway to see what was happening because that alarmed me. I went down and Kathy had Laura in the highchair and she had both of Laura's pinned under her hand on the deck of the highchair and she was trying to feed her cereal.

Q. Was she force-feeding her?

A. Force-feeding her. Laura was twisting her head everywhere and whinging. I said to Kathy, "For Christ's sake, she's a bloody baby. If she doesn't want to have breakfast, don't bother trying to make her."

Q. Was Laura still in the highchair?

A. She was still in the highchair. I just started sort of into the dining room. Kathy told me to "Fuck off". Laura would have breakfast if she said she would. I said, "You're just unreal." I actually swore. I said, "You're fucking unreal Kathy. I just can't figure this out."

Q. Was there anything that Kathy said about the effect that you have on Laura?

A. "She's only like this when you're around. You do this to her. You mollycoddle her and sook her up too much." I said to Kathy - I recall saying to Kathy, "It's better than having her cry." Kathy grabbed Laura and just pulled her out of the highchair and plonked her on the ground and said, "Go to your fucking father." Laura started to come towards me and - at that time Laura was crossing the floor towards me and I heard this guttural growl and Kathy scream.

Q. Can you tell us what it sounded like?

A. Oh, "grrh", and Kathy screamed, "I can't handle her when she's like this" and she had both her arms in the air and Laura fell to the ground and Laura was crying and I just scooped Laura up and tore off down to the bedroom.

Q. How was Laura crying?

A. She was hysterical, shaking and sobbing. I took her down to the bedroom and sat on the bed with her in my lap. I was rocking her and trying to settle her down. "Mummies and daddies argue. It doesn't mean they don't love you" and all that stuff. Kathy came to the door and said "Give me that baby." And I said, "Just fuck off." She said, "You give

⁴⁰¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T171.10-39 [red pagination 1975].

me that baby and get ready for work. Get out. You do this. This is your fault” and she grabbed Laura by the arm. I had Laura in my lap. I said, “Kath, just let her go. Just leave her. Piss off. You look like you’re going to punch somebody.” She said, “If I’m going to punch anybody I’d punch you. Just give me that bloody baby.” So I let Laura go, followed her down the hallway.

She told me to bugger off and get ready for work. So I went in - I had a shower. I got dressed for work. I was listening intensely down the house. I walked down the house to see how everybody was. Kathy met me at the breakfast bar, which was just short of the family room. You could see from the breakfast bar through the door into the family room. She said, “Look, she’s fine now. She is just watching TV.”

She had Laura sitting on Laura’s little banana lounge. She was eating dry cereal, just watching “Tele Tubby”. Kath said, “She’s fine. She’s only like this when you’re around. Blah, blah, blah. Just go to work”. So I did.⁴⁰²

176. Mr Folbigg said that after he went to work, Ms Folbigg rang him and said she wanted to apologise for having lost her temper that morning. She said Laura was fine, they were about to go to the gym. He said he asked Ms Folbigg if she would bring Laura for morning tea. He said that Laura and Ms Folbigg came for morning tea, stayed for a time and Laura seemed fine and happy.⁴⁰³
177. Later Mr Folbigg said he was informed that something was wrong with Laura and he went to Singleton Hospital. When Mr Folbigg arrived downstairs at the hospital, he went to a waiting room and Ms Folbigg was being comforted by a nurse. He asked where Laura was and Ms Folbigg pointed to the door. Mr Folbigg said that the ambulance officers and doctor were packing up, while Laura was laying on the bed. Mr Folbigg said that he screamed at them “You can’t stop. What are you doing? You can’t stop.” But the doctor informed him that Laura was dead.⁴⁰⁴
178. Mr Folbigg asked Ms Folbigg what happened and she said, “Oh, I just went in, she was just lying there.” Mr Folbigg said a little while later whilst they were driving home, she told him that Laura was asleep while she was driving home (from having morning tea with Mr Folbigg) and when she got home, she just grabbed Laura out of the car, walked up the hallway, took her shoes off and lay Laura down on her bed. He said Ms Folbigg said she then went out to play with the dog, clean up the veranda and hang the washing out. Ms Folbigg said she had the listening monitor with her and she heard Laura cough and splutter but didn’t check on her straightaway. He said she told him it wasn’t until she had finished doing what she was doing that she went in to check on her and found Laura and then raced to the kitchen, started to perform CPR on her and ring him and the ambulance. Mr Folbigg stated that when he got home it struck him as odd that the hand piece for the monitor, which was the part you could carry around, was still in the family room plugged into the wall.⁴⁰⁵
179. Mr Folbigg said that after the death of Laura Ms Folbigg resumed her normal life, she went back to work within weeks and resumed going back to the gym the following Monday.⁴⁰⁶

⁴⁰² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T172.12-T173.39 [red pagination 1976-1977].

⁴⁰³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T174.13-T175.40 [red pagination 1978-1979].

⁴⁰⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T176.15-41 [red pagination 1980].

⁴⁰⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T176.47-T178.3 [red pagination 1980-1982].

⁴⁰⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T178.55-T179.11 [red pagination 1982-1983].

180. Mr Folbigg said that about six weeks after Laura's death Ms Folbigg moved into a flat in Andrew Street in Singleton. He said some weeks after she left, he set about tidying up and found personal items of hers such as her diaries. He said Ms Folbigg told him she didn't want any of the stuff he found and he could throw it in the bin.⁴⁰⁷
181. Mr Folbigg said he found her diary in one of the bedside tables. He said he had seen her writing in it years before. He said when he found it, he read some of it and stated, "It made me want to vomit." He said he didn't know what to do with the diary, stating it frightened him and worried him so he rang Detective Ryan. He said he first met Detective Ryan on 13 May 1999, and on 19 May 1999 he went to Singleton Police Station to make a statement. He said he took the diary with him.⁴⁰⁸
182. Mr Folbigg said on 19 May 1999 he made a statement to Detective Ryan which included reference to the circumstances of Sarah's death. He said he told the truth in that statement.⁴⁰⁹
183. Mr Folbigg said on the Saturday night following the interview with Detective Ryan, he told Ms Folbigg that he had been to the police and taken the diary with him.⁴¹⁰
184. He said the next time he saw her was the Sunday night and she was friendlier to him and about a month later she moved back home.⁴¹¹
185. Mr Folbigg identified the diary he gave to Detective Ryan. He said that he and Ms Folbigg finally separated in June 2000 and after she left the matrimonial home for the final time, he found other (unspecified) things he gave to Detective Ryan.⁴¹²
186. Mr Folbigg said that the statement he made to Detective Ryan on 19 May 1999 was only part of the statement and he went to finish it on 23 May 1999.⁴¹³
187. Mr Folbigg was then shown a number of documents. The first of those was the 1989 diary in which he identified Ms Folbigg's writing. He stated it was a diary in which Ms Folbigg wrote up a feeding and sleeping schedule for Caleb. Mr Folbigg also identified a diary containing an entry of 3 June 1990. He identified the writing on that page as Ms Folbigg's writing and that the entry was made on the day Patrick was born.⁴¹⁴
188. Mr Folbigg also identified a page from a 1993 calendar which contained Ms Folbigg's writing. He said he found it in June 2001, observed an entry on 30 August 1993 being the day Sarah had died. He said he took it to the police. The entry referred to stated, "Sarah left us. 1am".⁴¹⁵

⁴⁰⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T179.36-T180.6 [red pagination 1983-1984].

⁴⁰⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T180.19-T181.55 [red pagination 1984-1985].

⁴⁰⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T181.2-11 [red pagination 1986].

⁴¹⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T182.53-55 [red pagination 1986].

⁴¹¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T182.57-T183.7 [red pagination 1986-1987].

⁴¹² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T184.4-17 [red pagination 1988].

⁴¹³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T184.19-34 [red pagination 1988].

⁴¹⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T198.8-T199.28 [red pagination 2002-2003].

⁴¹⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T200.12-T201.9 [red pagination 2004-2005].

189. Mr Folbigg also identified the 1996-1997 and 1997-1998 diaries.⁴¹⁶
190. In cross-examination, Mr Folbigg agreed that he made a number of statements to the police. He agreed that there was nothing in any of the statements to suggest he had any concern about anything Ms Folbigg had done during the time that Caleb was alive. He was referred to his statement to the police that after Caleb's birth Ms Folbigg appeared calm and comfortable with her new situation and apart from grumpiness, he did not notice a major change in Ms Folbigg's mood or general character. He agreed that was the truth. He agreed that Ms Folbigg embraced being a mother.⁴¹⁷
191. He was referred to the statement made by him to Detective Ryan during the course of 19 and 23 May 1999.⁴¹⁸ In that statement he said, "I kissed Caleb on the forehead as did Kathy." He said he was telling lies about his wife kissing Caleb because she asked him to. He said that remark was added to his statement on 23 May 1999.⁴¹⁹
192. He said that on 23 May 1999 he went back to the police station and at his request the police officer "dialled back through [the] police computer, and ... changed certain aspects" of what he told the police on 19 May 1999.⁴²⁰
193. Mr Folbigg stated that he did mind lying in his statement on 23 May 1999, but there "wasn't really much" he could do about it and that he lied because he was in love with Ms Folbigg.⁴²¹ Mr Folbigg was referred to a listening device recording of a conversation between him and Ms Folbigg on 23 July 1999 in which he made the following remarks:

"I said, "I went there because I was so full of hate and spite and anxiety and grief and anguish over the fact that not only lost my daughter, I'd lost my wife. You know, I'd lost the two most precious things to me - not possessions, but people who ... a person who I had built my whole existence on.

I'm sorry to say that, that's the truth. I couldn't see that I would function with anybody else. I didn't want to meet someone and ... for them. I stood in a church in front of a man of God and swore my whole life to you until I die because I loved you and I've never ... it waivered, yeah, it's changed, you know, and -but it's never failed, never disappeared.

I wanted to stay with you because we've both been through the same things. We'd both shared these losses, so therefore we should share life with these losses"⁴²²

...

"I wanted to stay with you because years and years ago when I met you, I never wanted to not be with you. It didn't appear to me ... I didn't know how to voice that in what I felt was a romantic way that would sway you or anything like that. I was so frustrated, I was hurting, so I thought, fine, I'll fucking fix this."⁴²³

⁴¹⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 3 April 2003 T201.28-36 [red pagination 2005].

⁴¹⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T222.52-T225.20 [red pagination 2026-2029].

⁴¹⁸ Exhibit 32-09(a), Transcript of ERISP of Craig Folbigg (19 April 2001) [red pagination 355-410]; Exhibit 32-09(b), Statement of Craig Folbigg (23 May 1999) [red pagination 411-444].

⁴¹⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T238.5-22 [red pagination 2042].

⁴²⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T238.58-T239.3 [red pagination 2042-2043].

⁴²¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T240.10-T240.29 [red pagination 2043].

⁴²² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T243.44-T244.6 [red pagination 2047-2048].

⁴²³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T244.10-16 [red pagination 2048].

...

"I'll fuck your life, you fucked mine, I'll fuck yours. I'll go and tell some fucking horrible things about you that the police think you did it anyway and I couldn't do it. Went there to do it, started to do it, couldn't do it, cause all that, but when I told ... that that was the case, I mean, he said, well, you know, I think ..."⁴²⁴

194. It was put to him that that was his state of mind when he went to the police.⁴²⁵

195. He was also referred to a further statement made by him which was recorded on a listening device dated 26 July 1999, as set out below:

"Well, I don't want him going after you for something you didn't do. That you and I know. I knew you didn't do it like you know I didn't do it. But get this sick pack of pricks that, you know, maybe what we're doing right now is what he wants us to do, sit there and have factional fights instead of joint, cohesive support.

I really wanted to pose all that to you to show you're not a wicked person either, but I can be a wicked person, I can be the deviate person, how I sell motor cars. I use whatever I can to my advantage to sell a motor car, whether it's my children's lives or my children's deaths.

When Laura was alive, I used the fact that she was alive and part of my life as an advantage to sell a motor car."⁴²⁶

196. He stated he did not recall saying this.⁴²⁷

197. Mr Folbigg was also referred to a number of other inconsistencies between his statement and the evidence he gave at the trial. They included, in particular, the amount of time that Ms Folbigg grieved over the loss of the baby,⁴²⁸ and his evidence that Ms Folbigg never told him whether she was looking forward to the arrival of the new baby (Patrick) compared to his statement to the police that she and he were happy again and looking forward to the imminent arrival of their new baby.⁴²⁹ He was referred to his evidence that a few months after Caleb's death, Ms Folbigg commenced to go to nightclubs with friends. He agreed that it was infrequently. It was put to him that it was on no more than two or three occasions and he said he could not remember the exact number.⁴³⁰

198. He was referred to his evidence where he had said that when Patrick was born, he and his wife were "euphoric". He asked that the meaning of euphoric be explained to him, and then denied that Ms Folbigg was "overcome with happiness". He was referred to his statement which said that he and Kathy were "overcome with happiness"; he stated he did not think overcome with happiness means euphoric. He then said he wouldn't say that she was overcome with happiness, and that he thought he was lying in this part of his statement.⁴³¹

⁴²⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T244.22-30 [red pagination 2048].

⁴²⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T244.35-37 [red pagination 2048].

⁴²⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T245.51-T246.10 [red pagination 2049-2050].

⁴²⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T244.32-33 [red pagination 2048].

⁴²⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T246.56-T248.13 [red pagination 2050-2052].

⁴²⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T249.16-T250.13 [red pagination 2053-2054].

⁴³⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T250.23-T251.9 [red pagination 2054-2055].

⁴³¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T252.10-T254.24 [red pagination 2056-2058].

199. Mr Folbigg agreed that the night of Patrick's ALTE seemed a normal night, there were no stresses and no arguments.⁴³² He agreed that following Patrick's ALTE, Ms Folbigg appeared to be doing the best she could in her day-to-day care of the child.⁴³³
200. Mr Folbigg was referred to his evidence that when he left the home on the morning of Patrick's death. He said, "Kathy was the same as usual but I really don't know whether I really took a huge amount of notice."⁴³⁴ He was referred to his statement to the police where he said Ms Folbigg appeared to be her normal self and nothing out of the ordinary had occurred in the morning of the previous days. He said that was the truth.⁴³⁵
201. Mr Folbigg agreed in cross-examination between the time of Patrick's death and Sarah's birth, apart from a staff Christmas party, Ms Folbigg did not go anywhere on her own or socialise on her own. He agreed she did not go to the gym or go dancing.⁴³⁶
202. Mr Folbigg was further questioned about the circumstance in which he made his statement of 19 and 23 May 1999. He said he could not recall how much of the first portion he completed on 19 May 1999. He said there were two occasions when he was with the police to complete the statement and that, on the second occasion, he told Detective Ryan that he should rewind right back to the start and he would go through and change some things. He was asked whether he changed the things because he had lied previously or he was changing it to a lie. He said he changed it to soften the blow of what he said the first time and that when he changed it, he lied.⁴³⁷
203. So far as Sarah was concerned, Mr Folbigg agreed the arguments between him and Ms Folbigg were about the need for Sarah to be kept to a routine of sleeping. He said Ms Folbigg was very rigorous in her setting of regimented action, that he didn't feel that 8:30pm was a necessary time for the child to go to sleep if she didn't want to if she was playing or whatever. He said that if the baby wasn't tired why make her go to sleep.⁴³⁸
204. Mr Folbigg was referred to his statement to the police concerning what occurred the night Sarah died. He agreed there was nothing in it about Ms Folbigg smacking Sarah on the bum. He stated that what he said in his statement was the truth, but that "[s]ome things come back to your memory... down the track".⁴³⁹
205. It was suggested to Mr Folbigg that Ms Folbigg did not throw Sarah but he said

⁴³² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T255.54-T256.20 [red pagination 2059-2060].

⁴³³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T258.38-T259.1 [red pagination 2062-2063].

⁴³⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T273.29-T274.7 [red pagination 2077-2078].

⁴³⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T274.30-T275.48 [red pagination 2078-2079].

⁴³⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T279.8-23 [red pagination 2083].

⁴³⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T281.10-T282.1 [red pagination 2085-2086].

⁴³⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T291.39-T292.5 [red pagination 2095-2096].

⁴³⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T294.10-T295.11 [red pagination 2098-2099].

that she did. He was referred to his statement of 23 May 1999 where he said Ms Folbigg “moved her arms forward and let go of Sarah, causing Sarah to fall into my lap and I had to catch her”. It was put to him he did not use the words “threw” and he stated that that was one of the things he changed.⁴⁴⁰ He acknowledged he had a conversation with a solicitor and told him that he overexaggerated that she threw the baby and it was not true. He said he was sitting next to Ms Folbigg at that time and he was trapped.⁴⁴¹

206. Mr Folbigg was referred to a record of interview he made on 19 April 2001 after he had been arrested.⁴⁴² He said during that interview Detective Ryan was explaining that mothers do kill their children and that he (Mr Folbigg) really needed to open his eyes. He also recalled Detective Ryan saying to him “it was awfully sad to see not only that I had lost Laura but she cleared out and cleaned me out and I was sitting in an empty house all on my own.”⁴⁴³
207. Mr Folbigg also said that when he told his family and friends about his wife grieving for Laura, they were lies.⁴⁴⁴
208. Mr Folbigg was cross-examined about the discrepancy between his and Ms Folbigg’s evidence of what occurred on the night Sarah died. It was suggested to him that he was incorrect in saying that Sarah was not in her bed at one o’clock. He was referred to his statement to the police in which he said, “I awoke in bed which was unlike me. I looked at the clock on the bedhead and it displayed approximately 1am”. It was pointed out to him that it was not 1:10am as stated in his evidence. He was then referred to his statement, “I saw that Kathy was not in bed and I am sure that Sarah was in her bed” and “I remember seeing Sarah lying in the bed.” He stated that was a lie saying that it was certainly less damning than “Sarah wasn’t in the bed and Kathy wasn’t in the bed.” He said, in the original version of the statement, that Sarah was not in the bed but he decided to change the words that he told Detective Ryan. He said that all times he was certain that Sarah was not in her bed but on 23 May 1999 he went back and had Detective Ryan remove these words and put the words in the statement in their place.⁴⁴⁵ He was then referred to the statement he made on 19 April 2001 following his arrest. He was referred to these questions and answers:

“Q. Okay. Do you agree that you told -you are now saying that when you woke at 1am, the morning of Sarah’s death, that Kathy was in bed, that -that Kathy was up, sorry, and that Sarah was still in bed?

A. Yes.

Q. Okay. Do you agree -do you agree that answer--

A. Oh, when I woke?

Q. Yeah.

A. And the light was coming through the doorway?

⁴⁴⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 April 2003 T302.6-56 [red pagination 2106].

⁴⁴¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 April 2003 T303.34-T304.7 [red pagination 2107-2108].

⁴⁴² Exhibit 32-09(c), Statement of Craig Folbigg (19 April 2001) [red pagination 445].

⁴⁴³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 April 2003 T305.52-T306.8 [red pagination 2109-2110].

⁴⁴⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 April 2003 T312.10-12 [red pagination 2116].

⁴⁴⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 April 2003 T341.26 [red pagination 2098].

Q. Yeah. That Sarah was in bed?

A. I can't be sure that Sarah was in bed."⁴⁴⁶

209. Mr Folbigg agreed that in the two years between May 1999 and April 2001 he let the 23 May 1999 statement stand. He agreed when he made the April 2001 statement, he was told that he was under arrest and possibly facing charges. He said that gave him a sense of relief. He said he was prepared at that time "to pay the piper".⁴⁴⁷ He agreed, however, that Ms Folbigg never told him to do anything but go and tell the truth.⁴⁴⁸
210. He was referred to a further statement in his interview of April 2001 where he said that he was fairly sure that when he woke up that morning Sarah was not in her bed. He said he meant he was certain it was just the word he used.⁴⁴⁹ He agreed that he did not tell anybody about this between August 1993 and May 1999 and accepted that was the first time he raised with the police that Sarah was out of the room at one o'clock. However, he claimed his memory had never faulted on the fact that Sarah was not in her bed that night at 1:10am. He said it never crossed his mind to bring up that information to anybody because he never had any suspicions as to Ms Folbigg's involvement in anything until after Laura died.⁴⁵⁰
211. In relation to Sarah's death, he accepted that in his statement to the police he said that Ms Folbigg appeared devastated after the death of Sarah. He said, however, that she didn't continue to be devastated.⁴⁵¹
212. Mr Folbigg was referred to the evidence he gave concerning various incidents which occurred on the weekend of Laura's death. He agreed that he made a statement on those matters on 30 December 2002 and that was the first time he raised them. It was suggested that Ms Folbigg did not go out on the Friday night as he said, that he exaggerated the tone of the conversations that occurred, and that he was attempting to paint a negative picture of Ms Folbigg. It was suggested to him that Ms Folbigg did not say, "I lost it with her." He agreed that she told him that she had inadvertently knocked over the child and the child had become upset as a result.⁴⁵²
213. It was also suggested to him that he had added to and fabricated his evidence relating to the incidents which occurred on the morning of Laura's death. He was referred to his evidence on this issue which I have set out at [175] and to his most recent statement in which he described the incident in the following fashion:

"Kathy got up about 7am and Laura was in a very clinging whingey mood. I was walking around nursing her to keep her settled as every time I put her down she would cling. We were feeding the gold fish and the lid on the tank fell down and bumped Laura on the right shoulder, on the right side of her head. This made her cry and Kathy became angry with me and told me to put her down."⁴⁵³

⁴⁴⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 April 2003 T345.23-39 [red pagination 2149].

⁴⁴⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 April 2003 T350.10-32 [red pagination 2154].

⁴⁴⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 April 2003 T356.9-57 [red pagination 2160].

⁴⁴⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 April 2003 T357.27-44 [red pagination 2162].

⁴⁵⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 April 2003 T375.33-T376.31 [red pagination 2179-2180].

⁴⁵¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 April 2003 T380.39-T382.4 [red pagination 2184-2186].

⁴⁵² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T405.23-T407.12 [red pagination 2209-2211].

⁴⁵³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T408.33-41 [red pagination 2212].

214. It was pointed out to him in his evidence there was no mention of the goldfish, the lid of the tank falling down and that was the reason she was crying. He suggested the discrepancy was because he was giving evidence of different moments on the same morning.⁴⁵⁴
215. He was also referred to his evidence that Ms Folbigg had Laura in the highchair and that she had both Laura's hands pinned under her hands on the deck of the highchair and she was trying to feed her cereal (see [175] above). In that context he was referred to his statement of 23 May 1999 in which he described the incident in the following terms:
- “I was in the shower and Laura came into the bathroom talking to me. Laura became upset because she knew that I was going to work so Kathy came and got her to give her breakfast. Laura became upset and started to cry and chuck a tantrum. You walked out and said to Kathy, ‘If she doesn’t want breakfast why the hell make her have it?’”⁴⁵⁵
216. Mr Folbigg was also referred to paragraph 82 of his statement of 23 May 1999 which was to the following effect:
- “Time just rolled on and my wife hasn’t come back to me. I have seen her out in Singleton and she appears to be enjoying herself. I’m deeply hurt and I want her back. I believe, because of this, I contacted Detective Ryan and told him some things that were not true. I told him that, on the night Sarah died, Kathy and Sarah were not in the room when I woke up at 1am.
- I also said that after Laura died I heard Kathy talking to herself using a different accent. I must admit that I was hurt at the time I said these things to Detective Ryan and also I was naturally suspicious about the deaths of my children. I love my wife and still do. I would never seriously think she has hurt my children, but of course everybody...”⁴⁵⁶
- ...
- “I suppose I told Detective Ryan those things out of spite and because I was hurt that Kathy would not come back to me. Even so, everything that is recorded in this statement is the truth, honest to God.”⁴⁵⁷
217. He also agreed that his May 1999 statement did not say that Ms Folbigg was force-feeding the child and did not mention anything about pinning Laura down.⁴⁵⁸

Ms Folbigg’s diaries and her record of interview

218. Significant reliance was placed by the Crown on what was said to be admissions of guilt in Ms Folbigg’s diaries. I have set out the circumstances in which the diaries came into possession of the police. They were said to contain a considerable number of admissions of guilt. Both the Court of Criminal Appeal and the Inquirer were of the view that the diaries contained such admissions. That must be weighed up against the psychiatric and psychological evidence tendered at this Inquiry, which was not in evidence either at the trial or at the 2019 Inquiry.
219. Ms Folbigg gave evidence at the 2019 Inquiry and was cross-examined on the diaries. For convenience, Annexure 3 to this Report sets out the entries on which

⁴⁵⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T408.54-T409.53 [red pagination 2212-2213].

⁴⁵⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T410.22-29 [red pagination 2214].

⁴⁵⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T411.19-36 [red pagination 2215].

⁴⁵⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T411.44-48 [red pagination 2215].

⁴⁵⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T421.28-57 [red pagination 2225].

Ms Folbigg was cross-examined, including those considered to be admissions. I will refer to the entries specifically relied on as admissions subsequently in this Report.

220. The visual and audio tapes containing the record of interview were tendered at the trial. It is convenient to summarise the important portions of that interview which extended over a period of eight hours. As noted above, the evidence before this Inquiry only comprised portions of the video, but a complete transcript was tendered.⁴⁵⁹
221. Ms Folbigg gave a narrative statement in her interview of what occurred on the day of Caleb's death. She said she could not tell the interviewer (Detective Ryan) that anything that was "out of the ordinary". Ms Folbigg said that Caleb had gone to bed like usual and she had a bit of difficulty feeding him before he went to bed. She said he had his own bedroom. Ms Folbigg said all she remembers is "walking in, doing a check, just like I used to". She said she could not say what time it was but it was dark so she assumed it was early in the morning. Ms Folbigg said she put her hand on him and he didn't seem to be moving, didn't stir, didn't do anything. She said she flicked on a light and noticed that he wasn't breathing and then it was just panic from there.⁴⁶⁰
222. Ms Folbigg said that on the evening of Caleb's death, she put him to bed and he didn't seem to have any problems feeding. She said there wasn't anything she was distressed or worried about. It was the usual sort of feed.⁴⁶¹
223. Ms Folbigg said that on the evening in question she gave Caleb his early morning feed. She said that she was most definite that she actually picked Caleb up and carried him to the lounge room where he had a bottle and fell asleep. She said she placed him in the bassinet.⁴⁶² Ms Folbigg was asked if Mr Folbigg ever got up to tend to Caleb and said she could let a bomb off under Mr Folbigg and he would stay asleep.⁴⁶³
224. Ms Folbigg said that after she put Caleb back in the bassinet, she must have drifted off to sleep. She said she was just sort of restless and she stirred to wake up and didn't hear him. She said she didn't think it was a time for a feed or anything but "I have gotten up as you do I s'pose to go and check everything is alright."⁴⁶⁴ She said she sort of walked in there and had been able to sort of semi-see. She said she placed her hand on his chest and didn't feel it rise and that's when she turned the light on. She said she called out to Mr Folbigg about three times and scooped Caleb up and gone running into the bedroom.⁴⁶⁵ She said unfortunately neither she nor Mr Folbigg knew anything about CPR so he just rang the ambulance. She said she noticed that Caleb was blue around the lips and pale.⁴⁶⁶
225. Subsequently in the interview she repeated neither she nor Mr Folbigg knew about CPR. She said Mr Folbigg had a sort of vague idea but "I can't remember and

⁴⁵⁹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg.

⁴⁶⁰ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q37 [red pagination 1507-1508].

⁴⁶¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q76 [red pagination 1514].

⁴⁶² Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q84-95 [red pagination 1515-1517].

⁴⁶³ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q100 [red pagination 1518].

⁴⁶⁴ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q101-103 [red pagination 1518-1519].

⁴⁶⁵ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q104 [red pagination 1519-1520].

⁴⁶⁶ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q106 [red pagination 1521].

couldn't tell you" whether he attempted it or not. She said she knew that he did with Patrick, Sarah and Laura but she couldn't say if he did with Caleb.⁴⁶⁷

226. Ms Folbigg reiterated that she went back to sleep after the early morning feed and said she wasn't woken by any cries or noises from Caleb. She said she did not know why she got up and could not remember if she went to the toilet.⁴⁶⁸
227. Ms Folbigg was then asked a number of questions concerning Patrick. She said Patrick was actually a mistake, that they weren't planning on having another baby straight away. She said, however, that she and Mr Folbigg were both extremely happy and thought we've got another chance, this is good. She said Patrick fed well, he was "one of the noisiest so you certainly knew when he was hungry". She said Mr Folbigg was a bit more involved with Patrick, he learnt how to bath him. Ms Folbigg said that Patrick started off waking up about three or four times a night the same as Caleb. She said by the time he reached close to three months he was only probably waking up once. She said he had no problem with his breathing, no problems with his health in general. She said he was great.⁴⁶⁹
228. Ms Folbigg was then asked about Patrick's ALTE.
229. Ms Folbigg said she thought when Patrick was about the three months of age mark he was actually sleeping in a different room. She said he was close to only waking up sort of once a night so he used to feed around the 12:00-1:00am mark. Ms Folbigg said she did that feed and everything went well and they both went back to bed. She said it was again a case of her finding herself awake for some reason or other and she had woken up and thought "well I need to go to the toilet I will go now and check on him on the way past". Ms Folbigg said she stopped at the door to check on him and listened for his breathing and noticed that it was laboured. He was trying very hard to draw a breath so she just immediately flung on a light and "we've gone into action from there". She stated Patrick was lethargic, not really responsive, just his eyes were shut and he was just merely trying to take a breath. Ms Folbigg said again that she called for Craig. She could not remember whether it was Mr Folbigg or her who called the ambulance. Ms Folbigg said the ambulance officers put the oxygen straight on him and as soon as they did that his eyes shot open, he was still having difficulty in breathing but at least his eyes were open. She said when they were at the Mater Hospital, he still wasn't responsive, he was still very sort of lethargic and not responding to anybody or anything.⁴⁷⁰
230. She stated that on the second or third day in hospital, Patrick started to have what "we now know" as a fit in Mr Folbigg's arms. She said the doctor diagnosed him as having a form of epilepsy. She said from October through to Christmas time "we were sort of in and out of hospital with him trying to control his fits and trying to teach him to keep up with normal development".⁴⁷¹
231. Ms Folbigg said that in November when they were at hospital getting ready to come home, the doctors came and told them that he was actually blind. She said they saw a specialist, and following tests, Patrick was diagnosed as cortically visually

⁴⁶⁷ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q110 [red pagination 1522].

⁴⁶⁸ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q118 [red pagination 1523-1524].

⁴⁶⁹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q142 [red pagination 1529-1531].

⁴⁷⁰ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q149 [red pagination 1533-1534].

⁴⁷¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q149 [red pagination 1535-1536].

impaired. She said that she and Mr Folbigg were being optimistic and “started to think about future special schools”.⁴⁷²

232. Ms Folbigg said that after the ALTE they moved Patrick into the main bedroom and he was in and out of hospital and really “crook” and then he would spend some time in the other bedroom when he was “being particularly healthy I suppose would be the words”. But she said invariably he always ended up back in Ms and Mr Folbigg’s room.⁴⁷³
233. Ms Folbigg further stated that in the early morning on the day of Patrick’s ALTE she got up to feed him and went back to bed. She was asked if she went to sleep and said that “this was probably the start of her sleeping problems so probably not straight away”. Ms Folbigg said that she probably laid there for about 15 minutes listening and making sure everything was alright.⁴⁷⁴
234. Ms Folbigg said she woke up again and thought that as she had woken up, she may as well go to the toilet. She said she walked past the door and Patrick didn’t sound as if he was breathing properly. She said the breath was “very drawn in and a reluctant out” saying it was like a gasp.⁴⁷⁵
235. Ms Folbigg said she put the light on to see if there was anything obstructing his breathing. She said it was obvious he had been having trouble for a while because he was slightly blue around the lips but not anywhere as dark as Caleb. She said “I just took one quick look at him again and I’ve sort of grabbed and scooped him out of the bed as I was callin’ Craig”. As he was breathing, Ms Folbigg explained that both Mr Folbigg and she knew that they could not attempt CPR while Patrick was still attempting to breathe in some way. She said Mr Folbigg was trying really hard to get him to respond and to get him to open his eyes. Ms Folbigg said that she just remembered the ambulance officers coming and taking him to hospital.⁴⁷⁶
236. Ms Folbigg was then asked about what happened on the day Patrick died. She said she felt by that time Patrick was in Caleb’s old room at the front of the house. She said she put him down for a morning sleep, but she could not remember what time. Ms Folbigg said Patrick used to have a morning nap, usually half an hour if she was lucky, or an hour if he was really tired. She remembered walking into the room stating she could not recall whether it was to see if he was alright or just walking into the room to put the washing away or some other reason. She said he was flat on his back which made her look twice because he always lay on his side. Ms Folbigg explained he was pale again and she did not think that it was a fit, because he was not breathing. She said the ambulance came and rushed Patrick to hospital. She said she assumed that because they rushed him back to hospital, they must have found some sort of life sign. She said at that stage she was still hopeful that they had managed to “catch them again” and “it wasn’t a Caleb thing happening again”. She said he was pronounced dead at hospital and they tried everything.⁴⁷⁷
237. She agreed she was alone at home with the Patrick on the day of his death.

⁴⁷² Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q149 [red pagination 1535], Q156 [red pagination 1538-1539].

⁴⁷³ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q156 [red pagination 1540].

⁴⁷⁴ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q177 [red pagination 1543], Q187-188 [red pagination 1546].

⁴⁷⁵ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q190 [red pagination 1547].

⁴⁷⁶ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q191 [red pagination 1547-1548].

⁴⁷⁷ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q223 [red pagination 1555].

238. Ms Folbigg was then asked about Sarah. She said Sarah was a fairly good kid. She got nicknamed “the cat napper” because she would not sleep for any longer than 15-20 minutes at a time. Ms Folbigg said she was a shocker. Ms Folbigg said that with Sarah, “Craig helped out a lot more especially when we both realised that she wasn’t a baby who was going to sleep peacefully.” Ms Folbigg said, “She would sleep quite happily if she was in bed with us...so nine times out of 10, she slept with Craig and I slept in the spare room.”⁴⁷⁸
239. Ms Folbigg said the day before Sarah died, the family had a really good day. She said she and Mr Folbigg went to Maitland Park and Sarah had a ball. She said they came home late that afternoon.⁴⁷⁹
240. Ms Folbigg said that Sarah went to bed that night. She said, “That night we wanted to try and put her in a single bed because by then we figured maybe if she didn’t want to sleep more than half an hour in the cot, we were only trying to keep her in the cot to contain her.” She said they were still paranoid to the point that they actually put the single bed in their bedroom.⁴⁸⁰
241. Ms Folbigg said at some stage that night she went to bed by herself and left Mr Folbigg to “have a bit more of a party out in the loungeroom” with Sarah because at that stage “I got a bit tired”.⁴⁸¹ She said she went to bed and slept for a while and he must have put her back into her bed. She said the only thing she could remember from there was actually finding her. She then gave this description of finding Sarah:

I got up to go to the toilet. I went to the toilet. Because she was in the room with us I sort of just glanced over and saw the little lump in the bed so I sort of, O.K., and I got up and go to the toilet. When I’ve walked back in I’ve took another look at her, she hadn’t moved. Probably the only thing that caught my attention was that she was flat on her back and one of her arms just seemed to be hangin’ out, sort of thing. So I sort of went over just to make sure she wasn’t cold or anything, I s’pose, and cover her back up again, ‘cause she kicks all the covers off while she’s asleep, she was a bit of a restless sleeper. That’s when I noticed, again, that I wasn’t hearin’ any breath sounds. So the lights, I remember this one ‘cause the light switch was back over near the doorway and her bed was in the corner and I didn’t even bother with it this time. I just sort of woke Craig up straight away and he flicked on a light, I think, that was at the side of the bed, I can’t remember now, but there was, just seemed to be light in the room, so. I cannot remember if I had her or if Craig had her. I remember going, ending up in the loungeroom. I only remember ringing the ambulance for that one. I remember Craig attempting CPR. And then all I remember is one ambulance arriving, and at that stage they had changed the rules, it was one driver to one ambulance, instead of having two in an ambulance. So then I remember him straight away asking for back-up and another, I had two ambulances out the front then with two, yeah. And the only reason I remember that is that the second, I think the second ambulance officer was only a young woman who hadn’t long started and she was quite shocked, I think. She sort of has walked into her first major situation, so. She was, she, then, yeah, was taken, I cannot remember if she was pronounced at the house or at the hospital. I know we ended up at Maitland Hospital so I think she was, yeah, I think she was pronounced at the house, but I’m not sure. The time after that is just pretty much a blur, I don’t really remember anything specific after that. I do remember being interviewed by police for that one. They came to the house.⁴⁸²

⁴⁷⁸ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q261 [red pagination 1565].

⁴⁷⁹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q265 [red pagination 1566].

⁴⁸⁰ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q265 [red pagination 1567-1568].

⁴⁸¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q268 [red pagination 1569].

⁴⁸² Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q269 [red pagination 1569-1570].

242. Ms Folbigg said Sarah had a cold or flu at that time. She was asked whether she gave Sarah any medication. She responded, “No, it was just merely like the sniffles with a runny nose and I was keeping a watch on it.” She said she had probably had it for three or four days by then. Ms Folbigg had no idea of whether it made a difference to her sleeping. She said Mr Folbigg played with Sarah after dinner and he revved her up. She then said she could not recall what time she put her to bed but she was sure that she did so.⁴⁸³
243. Ms Folbigg subsequently agreed that on this night Sarah stayed up and she went to bed. She was asked how she felt about Mr Folbigg running around playing with the baby at that time of night. She said, “It used to annoy me a little. I used to think she should be sleeping or I think to myself she is probably going to be one grouchy little bugger the next day.” She said she tended to not let it worry her too much.⁴⁸⁴
244. She was asked a further question about what happened on the night in question and gave the following answer:
- All I remember is waking up and wanting to go to the toilet. So I’ve gotten out of bed, I’ve walked to the doorway and looked back at her and saw she was still in the bed. So I’ve gone out to the toilet, pulled the door behind me ‘cause I didn’t want the noise of the toilet door to sort of disturb her. I never flushed because it was too loud, but, yeah, it was, I don’t know, I shut the door when you go to the toilet, it’s just, yeah. I come back in, stopped to look at her again. I don’t know if she was flat on her back when I went to the toilet but all I remember seein’ was her arm was out so she was flat on her back when I’d actually walked over to check on her. And then, yeah, then I’ve just woken Craig up and it’s gone from there. She wasn’t, she wasn’t as pale as the other two so that’s why Craig started CPR and that on her I think ‘cause she was still, you know, there was no signs. She wasn’t blue, she wasn’t going, like, she wasn’t pale, pale when I found her or anything, she just wasn’t breathing. So we, you know, our first thought was, was maybe we’ve managed to catch her before she’s, you know, not been breathing for too long. So Craig went ahead and did the, the CPR, what he thought was CPR. Again, we were stupid and didn’t go and do CPR sort of courses after the first two, we should have. We weren’t actually shown and taken through a CPR course until Laura was born, so, but he did what he thought was CPR. The ambulance fella said he didn’t too bad, that he was, that the basic idea was right. So, yeah, but it was, see I honestly, I can’t say whether she was breathing or not when I’ve left the room the first time to go to the toilet. All I know is that I’ve glanced at her and she was still in the bed, ‘cause I’m in a semi-sleep state. I’ve gone to the toilet and come back in. By the time I’ve gone to the toilet and I’ve come back I’m a bit more awake. So I think that’s why I stopped to, to listen and noticed her arms out and whether it was out the first time I have no idea. I had sort of just gotten out of bed, pulled the door quietly behind me to go to the toilet, come back in and ‘cause I was a bit more awake I’ve stopped to, actually noticed her arm was out, and to check on her. That’s a day I’ll probably recriminate for the rest of my life, that I wasn’t sort of awake properly when I got out of the bed, so.⁴⁸⁵
245. She was then asked some questions about the fact she noticed Sarah’s arm was out when she came back from the toilet. It was suggested to her that Sarah had obviously moved. She said she didn’t know. She said when she went to the toilet, she may not have even noticed her arm was out so she could have already been in that position.⁴⁸⁶
246. Ms Folbigg said that when she noticed Sarah wasn’t breathing, she went straight

⁴⁸³ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q270 [red pagination 1571], Q280-284 [red pagination 1573-1574].

⁴⁸⁴ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q286-287 [red pagination 1573].

⁴⁸⁵ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q308 [red pagination 1581-1583].

⁴⁸⁶ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q312 [red pagination 1583].

over to the bed and touched her arm to see whether she would respond. She said she did not respond, and that she was cool like the other two children. Ms Folbigg said she pulled back the covers waiting for her to take a breath. She said she then woke Mr Folbigg up and she was pretty sure that Mr Folbigg told her to ring the ambulance.⁴⁸⁷

247. Ms Folbigg said that Sarah was a normal, happy, vibrant sort of kid and the only thing she had was an inability to comfortably sleep. She said they had managed to get an apnoea sleep mat, but by the time they decided to put Sarah in a single bed they couldn't figure out how to have the mat on the bed as it wouldn't cover the whole bed. She said that was one of the major reasons why they decided to put the bed in their room was that it was the only way they could think of monitoring her. Ms Folbigg said the apnoea mat that Sarah was on was a movement mat, not for monitoring actual breathing, so it would go off if she was actually asleep and she would have to go in and turn the alarm off so she described it as "probably more of a pain than it was worth but we persisted with it in the cot as long as we could". The night Sarah died was the first night that she had not been on the mat, and Ms Folbigg described it as another cross to bear.⁴⁸⁸
248. Ms Folbigg said there was no genuine alarms with the mat. They said they had it longer than what was recommended. Ms Folbigg said that the hospital wanted them to use it for about six months, but they still had it when she died, so it was about 10 months.⁴⁸⁹
249. Ms Folbigg was then asked questions concerning Laura.
250. Ms Folbigg said it was a big decision to have Laura and she and Mr Folbigg saw Dr Seton before she was pregnant to inform him they were thinking about it. She said they saw Dr Seton once after but did not think they saw him again until after she was born when they took her to the Children's Hospital where she underwent sleep studies.⁴⁹⁰
251. Ms Folbigg said Mr Folbigg had a lot more to do with Laura than with the other three.⁴⁹¹
252. Ms Folbigg said that Laura had five days in hospital and then she and Mr Folbigg had a few days home with her, took her to Westmead which was an overnight stay. She said she stayed in the room with her at Westmead and Laura was placed on a breathing monitor. Ms Folbigg said Laura was a good sound sleeper in between her feeds. She said they were given a breathing apnoea monitor when they left the hospital. She said it required placing electrodes on Laura to measure her breath and heartbeat. Ms Folbigg said it was on every time she slept, even if it was only for 15 minutes. She said the alarm was quite sensitive. Ms Folbigg said Laura stayed in their room for about three months and after that they decided to move her into another room, with the monitor and everything going as well.⁴⁹²
253. Ms Folbigg said that even from birth Laura would only wake up every three or four

⁴⁸⁷ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q317-319 [red pagination 1585-1587].

⁴⁸⁸ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q321 [red pagination 1587-1588].

⁴⁸⁹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q324-327 [red pagination 1589].

⁴⁹⁰ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q333 [red pagination 1590-1591].

⁴⁹¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q333 [red pagination 1591].

⁴⁹² Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q333 [red pagination 1591-1594].

hours, so she was not a “cat napper”. She stated she did not think they started to lessen the use of the monitor until Nurse Margaret Tanner and Dr Seton said that they could and that was around probably the six months age mark. She said, “they sort of said you don’t necessarily need it anymore but we said no we’re hanging onto it”. Ms Folbigg said that, after talking it over with Mr Folbigg, Laura did not necessarily use it because it was around the time she was almost six months of age and got into having a really nice, decent sleep during the day and only waking up once during the night. She said it was more her decision than Mr Folbigg’s because she was always jumping up to the alarms. She said that once they were given permission to actually lessen the use of it, she discussed it with Mr Folbigg and asked could we compromise, “I’ll have it on during the night quite happily but can I sort of lessen it during the day a bit.” Ms Folbigg said that by the time she turned one, Laura was in her own room, there had been no problems during the first 12 months, other than when she had her first cold. Ms Folbigg said that after 12 months, Margaret Tanner suggested to them it was about time they gave the monitor back because they thought they had overstretched their use of it. She said, “reluctantly we took her off the monitor for probably a month and when that first month went by after she was 12 months old and there was still no problems, we were still reluctant to part with it in case she came down with flu or had a cold”. Ms Folbigg said Laura did come down with flu or a bad cold once and they put her back on the monitor that night. She said then they packed it up again and did not have it back after that.⁴⁹³

254. Ms Folbigg said she supposed the bonding between Laura and her was far better than with the other three probably because “I was determined this time”. She said the days she spent with Laura were fairly normal and she was going back to the gym.⁴⁹⁴
255. Ms Folbigg said on the day of Laura’s death, she did not have coffee after the gym because it had got to the point where she wasn’t really able to have a coffee, as she was chasing Laura too much. She said she took Laura home after the gym class which always finished around 10:30am. She said that Laura always either used to fall asleep in the car on the way home from the gym or have a bit of cuddle when she got home and go to sleep, so by 11am she was asleep. She said Laura was asleep when she got home from the gym at 11am. Ms Folbigg said she normally hung out the washing and almost out of habit used to check on her probably every 20 minutes or so. Ms Folbigg said on the day in question, she was flat on her back and she went to roll Laura over and put her back on her side and “you could say I died standin’ on the spot because there was just nothin’. There was no reaction, no grumbles, no groans ‘caused I touched her and rolled her over.” Ms Folbigg said she just grabbed her and ran to the kitchen, placed her on the breakfast bar and started CPR. She said she dialled the ambulance straightaway while doing it. She continued with CPR until the ambulance arrived. She said the ambulance officers started with everything, “fribulators”, oxygen and all the rest of it. She said she rang Mr Folbigg.⁴⁹⁵
256. Ms Folbigg also said that on the particular morning that Laura died, she had actually gone outside to check on the dogs. She said she did not think she had the monitor piece with her, and that she may have left it in the kitchen because sometimes having it on her was annoying, so she put it on the bench. She said after she checked on the

⁴⁹³ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q333 [red pagination 1595-1598].

⁴⁹⁴ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q333 [red pagination 1598-1599].

⁴⁹⁵ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q333 [red pagination 1600-1602].

dogs she had gone back inside, walked up the hallway and thought she would check on Laura. She said it all just went from there.⁴⁹⁶

257. Ms Folbigg said that when she observed Laura at that time, she was a little pale but not as she had seen the others. She said Laura did not have “blue lips or anything like that”.⁴⁹⁷
258. Ms Folbigg estimated that she was checking on the dogs for about 10 minutes.⁴⁹⁸
259. Ms Folbigg was then asked further questions concerning the death of Caleb. She was referred to a statement made by her to police officers on the day Caleb died, describing that she saw Caleb in the bed and he had blood and froth around the mouth. She said she did not remember saying anything about this.⁴⁹⁹ Ms Folbigg was informed that Mr Folbigg had told police that she screamed “my baby, something’s wrong with my baby”. She said she did not recall saying those words.⁵⁰⁰
260. Ms Folbigg was also informed that Mr Folbigg had told Detective Ryan that after Caleb died, she appeared to get over it much easier than he did. She responded that after going to counselling and therapy sessions she became aware that she tended maybe not to deal with it but to put it away and chose to move on and try to go forward.⁵⁰¹
261. She was then told that Mr Folbigg said that “he picked up Caleb and you [Ms Folbigg] was standing there with your hands to your head and you didn’t pick up Caleb”. She responded that he could be right, but she said she thought she picked him up but you know presented to me like that, that could be the case.⁵⁰²
262. Ms Folbigg was then referred to her 1989 diary, specifically the entry dated 19 February 1989. She was asked about the entries on that day. She described them as a routine of basic care. She said it was suggested to her to try to put the times down of when they were asleep and when they were awake, and how often they were fed.⁵⁰³
263. Ms Folbigg’s attention was directed to the entry of 19 February 1989 (Annexure 3, p 5). She agreed she wrote, “Finally asleep.” She said she wrote it because he might have been a bit restless and might have had a bit of trouble.⁵⁰⁴
264. She was referred to the statement she made to the police that she fed Caleb at 1:00am and put him back to bed. She said she did not remember telling them that but if she did and they have it written down in the statement, then that was the time she thought he probably went to sleep. She was referred to the fact that the diary entry in question had entries at 1:00am, 1:30am and 2:00am. She was referred to the entry at 1:00am, “Put back to sleep?” She said it must have taken her longer to put him to sleep. She stated she did not recall him being a troubled sleeper and

⁴⁹⁶ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q365 [red pagination 1610].

⁴⁹⁷ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q366 [red pagination 1611].

⁴⁹⁸ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q376 [red pagination 1614].

⁴⁹⁹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q393 [red pagination 1617].

⁵⁰⁰ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q399 [red pagination 1618].

⁵⁰¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q402 [red pagination 1618].

⁵⁰² Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q404 [red pagination 1619].

⁵⁰³ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q405-407 [red pagination 1619-1620].

⁵⁰⁴ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q408-411 [red pagination 1620].

so because this was not the norm, she made the entry. She was also asked about the question mark after the words “put back to sleep”. She said that was probably because she was not sure if he was asleep.⁵⁰⁵

265. She was then asked to comment about the exclamation marks after the words “2:00am finally asleep”. She said the only significance for it would be that she was probably pleased that he was asleep and that it meant that she could go to bed.⁵⁰⁶
266. Ms Folbigg was then asked further questions concerning the circumstances surrounding Patrick’s ALTE. She was referred to the fact that Mr Folbigg stated that he went and picked up Patrick from the cot and she responded that she recalled that she thought she picked him up.⁵⁰⁷
267. Ms Folbigg was referred to the fact that Mr Folbigg had told the police that shortly after Patrick was diagnosed as being blind, he came across a handwritten diary that she had kept. She said she used to write in diaries as some sort of vent or release. She recalled that Mr Folbigg had actually read one of her diaries and it struck her as an invasion of her space. She said that she had written a few diaries and on Mother’s Day in 1999 she decided not to write in them anymore “cos I had written in a few and on Mother’s Day this year I sort of pulled one out to have a look and I flicked back at what I had written and pretty much decided that life is pretty crappy and I shouldn’t be writin’ it down and reminding myself of all these things, I’ll have just got rid of them all, so I haven’t written one since.” She said they were thrown away in the bin, “probably dumped by now as far as she knew”. She said it was a bin in Andrew Street. She was asked how many were there and said she had three but she didn’t know what happened to the others. She said with all the moves that she and Mr Folbigg had made, she probably lost them along the way.⁵⁰⁸
268. Detective Ryan told Ms Folbigg that Mr Folbigg had said there was an entry in the diary about her considering leaving both Patrick and Mr Folbigg. Ms Folbigg said at the time she started thinking to herself maybe it would be good if she just left Patrick with Mr Folbigg and he “might be cared for just as well or whatever”. Ms Folbigg said she “sort of worked it through and thought, no, I can’t do that I’ve got to stay and look after him”.⁵⁰⁹
269. Detective Ryan told her that Mr Folbigg thought that when she was caring for Patrick she was suffering from depression. She said, “Can’t really tell you anything. I recall getting a down sort of mood, but I don’t know if I’d class that as depression”.⁵¹⁰
270. She was asked if there were times when she got angry and frustrated and she said she would be lying if she said no. She said that she did not think you could have a mother walk in the room that would say that they don’t get frustrated every now and then, stating “[i]t’s just part of parenting I think, it’s a general rule”.⁵¹¹
271. Ms Folbigg agreed she probably became a little more stressed with Sarah because Sarah was such a light sleeper. She said she was more stressed with Sarah than

⁵⁰⁵ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q414-423 [red pagination 1621-1623].

⁵⁰⁶ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q435-436 [red pagination 1626].

⁵⁰⁷ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q445 [red pagination 1628].

⁵⁰⁸ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q457-463 [red pagination 1631-1633].

⁵⁰⁹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q466 [red pagination 1633-1634].

⁵¹⁰ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q468 [red pagination 1635].

⁵¹¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q481 [red pagination 1638].

she was with Patrick as, with Patrick, there were reasons why he needed constant care, while Sarah just wanted to play all the time. She stated it was not a problem that she did not think she could overcome, but that just every now and then it would stress her out a little, and Mr Folbigg would take Sarah off her hands and Ms Folbigg would relax a bit, or go to bed early.⁵¹²

272. She was told that Mr Folbigg had told the police that on the night before Sarah died, they had “words about Sarah”. She said she did not recall it. Ms Folbigg was told that Mr Folbigg had said she was trying to put Sarah to bed that night and was having trouble doing so as she did not want to be put down. On being asked to comment about that she said, “the usual”. She said, “Craig described it as a battle of wills between Sarah and I, who would go to bed and who wouldn’t and 90% of the time Sarah won and I’d go to bed.” She said she used to get a bit stressed and a bit on the snappy side and sort of give up and think “well I’ll go to bed and she can stay up and do what she wants”. She said it used to be a regular thing. She said she became frustrated at Sarah, but never angry at her because she would not go to sleep. She was told that Mr Folbigg said she made an angry growling noise and she said she probably did. She said Mr Folbigg would pick up on the signs and say “look, I’ll take her”.⁵¹³
273. She was then referred to Mr Folbigg’s version to the police of what occurred that night. She was told that he said, “How about mellowing out? She’s only a bloody baby. If she doesn’t want to go sleep just leave her be.” She was told Mr Folbigg claimed that she replied, “Just go away. She’ll go to sleep if I say.” Ms Folbigg said she did not recall the conversation. She said, “Craig always had the inane [sic] ability to walk in and find out what was going on just when she was on the verge of going to sleep.” She said if she snapped at him, it would have been because I probably had her close to going to sleep and he has come in the doorway and snapped at Ms Folbigg saying “what’s your problem”.⁵¹⁴
274. Ms Folbigg was told that Mr Folbigg had said that he went back into the lounge room and a short time later she came stomping down the hallway and actually threw Sarah onto his lap. She stated she never threw the child anywhere but the stomping she agreed with. She recalled giving Sarah to him and saying, “Well I’m going to bed, you can put her to sleep.”⁵¹⁵
275. It was suggested to her that her statement was inconsistent and that she had previously said that Sarah actually went to bed for some time and then awoke and started playing with Mr Folbigg. Whereas, she was now saying that Sarah didn’t go to sleep and she had just given Sarah to Mr Folbigg. She said she could not explain the inconsistency.⁵¹⁶
276. She was then asked about the events on the evening of Sarah’s death. She was told that Mr Folbigg had told Detective Ryan that at 1:00am the morning Sarah died, he woke up in bed and he saw that neither she nor Sarah were in bed. She was told he said, “The bedroom was closed and there was a light on somewhere else in the house.” Ms Folbigg stated it was incorrect. She said Sarah never left the bedroom and that she was in the bedroom the whole time. She said she did shut the door but

⁵¹² Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q521 [red pagination 1646-1647].

⁵¹³ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q523-527 [red pagination 1647-1649].

⁵¹⁴ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q533 [red pagination 1651].

⁵¹⁵ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q534-535 [red pagination 1651-1652].

⁵¹⁶ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q537 [red pagination 1652].

she didn't have any lights on. She was told that Mr Folbigg had said that he went back to sleep and he was woken by her screams and that she was standing at the door to the bedroom and the light was on in the room. She responded that she did not recall going to turn the light on. She just recalled there was a light on when I found her there. She said she did not remember it being near the door. She said she remembered it being closer to the bed. Ms Folbigg said if Mr Folbigg had looked up it might have looked like she was in the doorway.⁵¹⁷

277. Ms Folbigg was asked whether she appreciated the significance of the statement Mr Folbigg made to Detective Ryan at her family home in May 1999, referring to the statement mentioned above at [148], [156]-[157] and [162]-[166]. She said she did but that's not how it was. Ms Folbigg stated Sarah never left the bed, she was in the bed, she did shut the door but she did not turn any lights on. She said she just remembered that when she finally went over to the bed to uncover her and find her and she yelled at Mr Folbigg, the lights were on. She said she did not remember turning them on herself.⁵¹⁸
278. She was then told that Mr Folbigg had retracted his statement and said she was out of the room when he woke up but Sarah was in bed. Ms Folbigg stated he had obviously woken up when she had gone to the toilet but she did not recall putting a light on.⁵¹⁹
279. She was also told that Mr Folbigg had said that it was normal practice for her to wake up with Sarah if she was stirring during the night take her into another part of the house and shut the door to the bedroom. She said that's correct. She was then asked directly whether she took Sarah out of the room in the early hours of the morning and she said, "no, she was in bed, she stayed in bed".⁵²⁰
280. She was told that Mr Folbigg had said that he jumped out of the bed and he picked up Sarah and that she was warm to touch. She stated that she thought Sarah was rather coolish when she touched her arm and she did not recall him picking her up.⁵²¹
281. Ms Folbigg was then asked about her 1996-1997 diary, which was given to the police by Mr Folbigg on 14 May 1999. She was asked about a conversation she had with Mr Folbigg about him producing the diary to the police. Ms Folbigg said she wasn't happy about it, but he told her there was a few passages in it that he didn't understand himself so he asked some questions about them, that Ms Folbigg answered them, and he did not bring it up again.⁵²²
282. She was asked about the diary entry of 22 June 1996 (Annexure 3, p 67). She agreed it related to the period when she was thinking about having Laura. She was asked what she meant by "I'm ready this time." She said she meant she had more confidence, she would get herself in the right frame of mind and learn to accept all the help that people were going to offer and maybe handle it a bit better.⁵²³

⁵¹⁷ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q543-545 [red pagination 1654-1655].

⁵¹⁸ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q546 [red pagination 1655].

⁵¹⁹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q547 [red pagination 1655-1656].

⁵²⁰ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q549-552 [red pagination 1656-1657].

⁵²¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q557-558 [red pagination 1657-1658].

⁵²² Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q587 [red pagination 1664].

⁵²³ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q596 [red pagination 1666].

283. She was asked what she meant by “lose control like last time” and stated it referred to the frustration she felt with Sarah every now and again and the frustration that she felt with Patrick. She said the frustration was usually addressed to her or Mr Folbigg.⁵²⁴
284. Ms Folbigg was asked what she meant by her “state of mind” and she said she meant adjusting her state of mind to the fact that “there are people out there that could have helped, that are going to help through this and taking advantage of them”. When she wrote “I have learnt my lesson this time” she said she was referring to not letting the frustration get the better of her and learning to actually talk and communicate more.⁵²⁵
285. She was then asked about the entry on 21 July 1996 (Annexure 3, p 69). She was asked what she meant by “if anything does happen”. She said she was referring to “if fate was cruel and it happened again”. She was asked, “why should you have to try your hardest this time” and she stated she had the opinion that she obviously hadn’t tried hard enough the last few times. She said she felt she needed to just pay more attention and not miss anything.⁵²⁶
286. She was then referred to the entry of 26 August 1996 (Annexure 3, p 75). She was asked whether she believed in clairvoyance and she said, “not really”. She was asked whether she believed that her children are somewhere else now and she responded she would like to think they are. She was then asked what she meant by “even though I’m responsible, it’s alright”. She replied she was still carrying around the thought that she could have done more or should have done more. She said the words, “she accepts it and is happy there” was referring to Sarah. She said she did not ask the clairvoyant anything about Caleb or Patrick.⁵²⁷
287. Ms Folbigg was also asked “What does Sarah accept?”. She said she probably used the word “accepts” because the clairvoyant probably said to her, she “accepts” and “happy”. She said she could not actually clarify the word “accepts”.⁵²⁸
288. She was next asked about the entry of 8 September 1996 (Annexure 3, p 83).
289. Ms Folbigg was asked what she meant by “not lose it like before” and she said “as in my frustration levels”. She said, “The bit where ‘I have enough friends now’ sort of meant I was learning to if I have a frustration I have to learn to go and actually talk to someone about it instead of hanging on to it.” She said she had learnt that “actually voicing your frustration when you have it pretty much within the first 24 hours of having it helps you sort of calm down and deal with things”.⁵²⁹
290. She was then asked about the entry of 14 October 1996 (Annexure 3, p 91). She was asked why she thought nature, fate and the man upstairs had decided she should not get a fourth chance. She said she didn’t know, “maybe I just thought three was supposed to be our limit”. She said she was still thinking to herself that not trying enough or being responsible had something to do with it. She said by being responsible she meant just the thoughts of was “I diligent enough? Was I watching?

⁵²⁴ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q597 [red pagination 1666-1667].

⁵²⁵ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q598 [red pagination 1667].

⁵²⁶ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q603 [red pagination 1668].

⁵²⁷ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q605-613 [red pagination 1668-1670].

⁵²⁸ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q627 [red pagination 1672].

⁵²⁹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q633 [red pagination 1674].

Was I listening? Should I have walked in two minutes earlier or should I have been somewhere else or done something else?” She said it was just a never-ending sort of thing.⁵³⁰

291. Ms Folbigg was asked what her mistakes and terrible thinking were and she said, “Just the frustration I might have felt with Pat and the occasional battles of will that I would have had with Sarah.” She said, “Looking back at the time, I thought that was a terrible way of thinking.” She denied that she ever hated her children. She said, “How can you hate a child. They’re so, they’re just there, they’re beings and there yet to be developed and older.”⁵³¹
292. She was then asked about the entry of 30 October 1996 (Annexure 3, p 97). She was asked what she meant by the statement, “Worry, that my next child will suffer my psychological mood swings.” She stated that by the time she wrote the diary entry she wondered whether or not it was a depression, be it a mild form, so instead of using the word “depression” she used the words “mood swings”. She said by the time she wrote the entry she just decided it “shouldn’t happen”, she should have just mellowed. She was also asked what she meant by “suffer” and responded “Probably along the lines of well, if you’ve got a frustration with your child, they do sort of suffer, they pick up that you’re not happy with them, it makes them even more upset”. She said with Laura she was totally different. She said she changed her tact by the time she had her. Ms Folbigg thought, “alright, instead of getting frustrated I will try and figure out what it is you actually want instead of just assuming that I know”. She stated she did not mean suffer as in physical suffering of any kind.⁵³²
293. Ms Folbigg was then asked about the entry of 4 December 1996 (Annexure 3, p 101). She said that when she referred to being “ready this time”, she was referring to “trying to get her mind into the right set for parenting”. She said she decided that “if she is clingy, so be it. If she don’t sleep, so be it.” She was referred to her statement “if I get any feelings of jealousy and anger” and said she meant the sort of thing where Sarah used to be very much a “daddy’s girl” and she was sure she used to cop the odd pang of jealousy that Sarah would quite happily do something for him and not necessarily for her. She said in relation to her statement of getting feelings of jealousy or anger, instead of her answer being “as before” she would leave Craig and the baby, that she meant “instead of putting Craig through all the heartache and stressing the kid out and myself out even further, that I would have just left him to it.”⁵³³
294. Ms Folbigg stated that when she referred to keeping herself in a decent mood, she was referring to the fact that if she was “in a nice decent mood, Craig’s in a nice decent mood and life will go on nice and smoothly sort of thing”. She was referred to her statement “I know now that battling wills and sleep deprivation was the cause of last time.” She referred to her battling with Sarah. She stated one thing she always wondered but never got any answers either way was whether trying to get Sarah to go to bed and trying to have some sort of normal thing and battling wills with her every now and then was responsible for tiring her out to the point where Sarah decided not to bother to wake up one morning. She said when she referred to

⁵³⁰ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q639-641 [red pagination 1676-1677].

⁵³¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q642-643 [red pagination 1677].

⁵³² Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q661-662 [red pagination 1681-1683].

⁵³³ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q672-675 [red pagination 1685-1687].

the causes, she meant the battle of wills and probably a little lack of sleep used to cause the frustration levels and higher stress sort of levels.⁵³⁴

295. Ms Folbigg was asked whether she really believed that her attempt to get Sarah into some sort of routine caused her death. She said she did for a while because she started to doubt everything that she had done. She was asked if she had thoughts along those lines about Patrick and Caleb and said “Of course I do now”. She said especially with Patrick having a “near miss”, she thought she should not have “moved him and stuck him in the other room”, rather “he should have been in the room with us”. She said you just “incriminate yourself, it’s just a thing that you do”.⁵³⁵
296. Ms Folbigg was then referred to an entry of 1 January 1997 (Annexure 3, p 123). She was asked what she meant by “major personal sacrifice”. She said that having another baby was going to require a sacrifice for both Craig and her in the diligence that they spent on monitors and her “as in learning to ask people and reachin’ out to people”. She said it was a sacrifice to collapse part of herself and let herself do that sort of thing. She also said, “we would have to sort of sacrifice along the way other things so could make her a priority, as in we’re goin’ out for drinks and havin’ barbeques and all the family.” She said her reference to terrible things was the just the stress and frustration and the odd growling, anything of that nature. She said her statement that stress made her do terrible things referred to angry thoughts. She said, taking Sarah for an example, when she would not go to sleep the battle of wills would kick in, the frustration would kick in and she would have an angry thought but it was never to harm her. She said that that particular angry thought or the frustration or stress in general was actually what caused their death and she did not want to get to a stress level where she would have an angry thought. She said that “obviously my frustrations and the odd angry thought exasperated [sic] my situations and made them worse than what they probably could have been if I had mellowed out and just let them do pretty much what they wanted to do”. She had the thought in the back of her head that maybe they wouldn’t have died. She was asked whether she really believed that and said, “not with Laura, no, with the other three possibly”.⁵³⁶
297. Ms Folbigg was asked about her diary entry of 4 February 1997 (Annexure 3, p 133). She was referred to her statement “my guilt of how responsible I feel for them haunts me”. She said she referred to her responsibility as “did I try enough, did I do enough, was I where I was supposed to be”. She was asked if she seriously thought that she was responsible for her children’s death. Ms Folbigg said she regarded it, and still sometimes does now, as a failure of hers somewhere along the lines if she could not keep her children alive with her. She was asked how she failed. She said she didn’t do something, didn’t walk in the room two minutes earlier; didn’t check two seconds earlier; didn’t do something that would have meant when she walked into the room, they were alive and well. She said what haunts her is death. She said she wrote the entry that she was a terrible mother because the children were not there with her, and no other reason. She said she looked at mothers who can have five, six, seven, eight children having more stress and trouble than she had seen in a lifetime but those children were all still there.⁵³⁷
298. Ms Folbigg was asked why she was scared of being alone with the baby and stated

⁵³⁴ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q683-685 [red pagination 1690-1691].

⁵³⁵ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q695-696 [red pagination 1693].

⁵³⁶ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q700-709 [red pagination 1694-1697].

⁵³⁷ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q719-724 [red pagination 1700-1701].

that she “had pretty much decided that since these terrible things kept happening when I was by myself, I didn’t want to be by myself”.⁵³⁸

299. Ms Folbigg was then asked about her entry of 17 February 1997 (Annexure 3, p 145). She was asked what she meant by “this one’s not going in the same fashion”. She said she was being optimistic and hoping she wouldn’t walk in one day and find Laura the way she found the other three. She was asked what she meant by “this time I’m prepared and know what signals to watch out for in myself”. She stated she was referring to the frustration levels and stress levels.⁵³⁹
300. Ms Folbigg was finally asked about the entry of 16 May 1997 (Annexure 3, p 153). She was asked what she was thinking about when she wrote that entry and said probably along the line of things with the past three seemed to happen in the early hours of the morning and so she regarded it as the worst time for her. She stated that the part where she said, “With Sarah, I really needed him to wake up that morning and take over from me. Probably because I have so much trouble waking him up sometimes.” She agreed the entry related to Sarah.⁵⁴⁰
301. Ms Folbigg was then asked some questions about the death of Laura. She was informed that Mr Folbigg had told Detective Ryan in February 1999 that they were going through a rough patch in their marriage. She agreed that was the case. She said that “handling the stress of monitoring Laura and all the rest of it went quite well when it concerned Laura but his [Mr Folbigg’s] attention was all focused on Laura and my attention was all focused on Laura and the part of the couple seemed to go by the wayside”. She agreed that only about two weeks before Laura died she was considering leaving the home. She said she did not intend to take Laura with her on the premise that it was her home and she had developed by that stage and had made friends with other kids and she did not want to be dragging her all over the place.⁵⁴¹
302. It was put to her that on the morning of Laura’s death there was an argument between her and Mr Folbigg in the family home.⁵⁴² She gave the following answer:
- A. Yeah, that was, you mentioned breakfast with her that mornin’ before, I didn’t even think of that. She was havin’ her breakfast but he was talkin’ to her and playing with her sort of thing at the same time, so she wasn’t really eatin’ her breakfast and I got a bit snappy at him and told him ‘cause normally he was in the shower or doing something else while she was eating breakfast, she’d eat her breakfast quite happily. But this particular day he was sort of there and I sort of snapped at him and told him, you know, leave her be so I can do her breakfast and whatever. I didn’t think it was a major sort of argument of any kind. To me it was an altercation but--
303. She was then asked the following questions and gave the following answers:
- Q. Well Craig has given me some conversation that he claims that occurred that morning. Can I read that to you?
- A. Yeah.
- Q. You can comment if you wish. Craig said that, as you said, that Laura wasn’t eating her breakfast. Craig said that he said to you, If she doesn’t want her breakfast why the

⁵³⁸ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q726 [red pagination 1702].

⁵³⁹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q734-743 [red pagination 1703-1705].

⁵⁴⁰ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q753-761 [red pagination 1707-1709].

⁵⁴¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q788-795 [red pagination 1715-1717].

⁵⁴² Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q797 [red pagination 1717-1718].

hell make her have it? He said you said, Just go and get ready for work and leave her be, she only carries on like this when you are around.

A. Yeah, he didn't, I wouldn't say it was bringin' out the worst in her but when he was, see, it was, I was the mum that did all the caring and the occasional playing and the security side of thing. And he was the dad that did the occasional feedin' her and more of the play side of things and the games out the back yard, mowin' and all that sort of thing. So, yeah, when he was around she used to think it was play mode, sort of thing, and just wasn't payin' attention when she should be eatin' her breakfast more than anythin' else. That's when I told him to go and have your shower and nick off so that she can finish eatin' her breakfast.

Q. Craig, I'll read the entire conversation and you can make a comment. Craig said that he said then to you, said to you, What's that supposed to mean? He said you said, She knows that she can get away with anything with you. You sook her up too much. He, Craig said, he said, It beats having her crying. And Craig said that you took her off the high chair and said to Laura, Well go to your bloody father then. What do you wish to say about that?

A. I was more angry at him.

Q. Did you say those words?

A. I did but it was a case of being more angry at him not being angry at her. The bit where he says it's better than her crying I'm assumin' that meant that mornin'. She was cryin' 'cause I wouldn't let her out of the chair and I wouldn't let her, I really wanted him to go and have his shower so she could have her breakfast. Breakfast was important as far as I was concerned because she spent so long between breakfast and an occasional snack at the gym. Between that and 11.00 o'clock is a long time for a kid so I used to like her to have her breakfast. It wasn't forced down her throat, I didn't force feed her or any of that sort of business. But with him present she would, she would just wriggle in the chair and she wanted to keep gettin' out of the chair and she started to cry and the comment about him sookin' her up was he pretty much carried her everywhere 90% of the time and she was quite capable of walkin' and she used to enjoy walkin' around with me, it was never a problem. When Craig was present it was, Dad, carry me around. It wasn't, I never really worried about it and it wasn't a sore point but that argument, like, the altercation or argument that mornin', if someone comes at me with an acid tongue I'll come back, it's a natural, a natural thing. It's not a, you know, I don't stop to think what comes out of my mouth when I back answer, it's just, if he said to me why are you feedin' her bloody breakfast, blah, blah, don't I have her, and I've just, he's attacked me and so I have attacked back. It's just how we argue, we still do it now, so.

Q. Did Laura start having a tantrum, start screaming and crying?

A. No, I wouldn't say she was screamin', cryin', yes, but she wasn't that upset so, yeah, I let her out of the chair and just said, Well go to your bloody father, then, and took off up the hallway.

Q. Did you say to her, Stop bloody crying?

A. I don't remember, I could have.

Q. Did you say, I can't bloody handle it when she's like this. It's only when you're around. When you're not here she's well behaved. Did you say that to Craig?

A. I don't remember. I think I said that I can't handle it when she's crying all the time but the crying all the time rarely lasted long, that I had to handle it for very long. It wasn't a, a thing she did often, and yes, it's correct, that she only ever cried and carried on when dad was around, but, yeah, I don't remember any other part of it.

Q. Craig said that you were in the hallway and he walked up to you and you actually raised your hands up to your face and you screamed out those words, I can't bloody handle it when she's like this, it's only when you're around. When you're not here she's well behaved. He reckons that you screamed those words out?

A. I don't remember screaming, but.

Q. Craig said that he then said to you, It just looks like you are about to punch someone in the face. Did he say that?

A. Again, did who say that?

Q. Did Craig say that?

A. I remember him sayin' somethin' about punchin' but, again, that's, I'm gunna keep sayin' it. It goes back to Craig and I havin' an argument, it's got nothin' to do with Laura. She might have been cryin' and she definitely would have been cryin'. She always used to cry more if I got upset and both of us were havin' bad vibes or whatever between the two of us. But I don't recall that argument as her being any major fault for the argument. He's walked out that first thing and instead of doin' his usual routine and goin' in the shower and lettin' me feed her breakfast and have the day start in a nice calm manner which it usually did he decided to have a talk and a play with her and he interrupted breakfast and she decided, O.K., it must be playtime, dad's not goin' nowhere today. And it all just started from there. I don't remember screamin' at him, I don't, you know.

Q. Did you say, Right now if I wanted to punch anyone it would be you, don't you dare insinuate that I would hurt my daughter. If you think that I would ever do that you can go and get fucked. Did you say that to him?

A. Yeah. I don't remember what he said before that.⁵⁴³

304. Ms Folbigg was also told that Mr Folbigg said that Laura was visibly scared to go near her and she said that was probably the case because she was a bit more vocal than usual. Ms Folbigg said if she had screamed, which she did not remember doing, it would have been the first time Laura ever heard her doing that. Ms Folbigg said she assumed Laura may have been scared because she raised her voice.⁵⁴⁴
305. Ms Folbigg agreed thereafter Mr Folbigg went to work and she said she and Laura headed off to the gym and the day just went as it usually did. Ms Folbigg said she could not remember whether she actually said to him she would see him later in the morning.⁵⁴⁵
306. It was then suggested to her that the version she gave to Detective Ryan at the hospital on the day Laura died was different to what she said in the interview. It was suggested to her that in the interview she did not say she visited Mr Folbigg at his work and she said it must have slipped her mind. She said she could not really recall going there.⁵⁴⁶
307. She was asked also if it was really the case that she took the Laura to the gym all the time. Detective Ryan informed her that he had spoken to Mr Folbigg and some of her neighbours, who said that when Laura was a young baby, she actually gave her to a number of neighbours to look after. She said that "Mel" who lived across the road every now and then would look after her if she decided to go to a step class in the evening, and it was only until Mr Folbigg got home which was usually a 15 minute time span. She said Laura was with her 99% of the time she went to the gym. She said she commenced taking her when she was 3 or 4 months old but before that had stayed home with her.⁵⁴⁷

⁵⁴³ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q798-Q808 [red pagination 1718-1722].

⁵⁴⁴ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q813 [red pagination 1723].

⁵⁴⁵ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q819 [red pagination 1724].

⁵⁴⁶ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q821-824 [red pagination 1724-1725].

⁵⁴⁷ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q828-833 [red pagination 1725-1726].

308. It was suggested to her that when she spoke to Detective Ryan on the morning of Laura's death she did not tell him that she had to feed the dogs and hang the washing out between the time that Laura was asleep and the time she went and checked on her. Ms Folbigg said she remembered mentioning that she went out to check the dogs but it had probably slipped her mind that she had put the washing on. She said he had asked her what she did of a morning and her general response was that it would have been housework and then she remembered that she went out to find her dog. Detective Ryan reminded her that she had also told him that Laura had a cold, that she went to the gym, she saw Mr Folbigg at work and then Laura fell asleep in the car. She said she forgot that Laura was coughing and had a cold. Ms Folbigg was asked whether it was the fact that Laura was coughing, or it was in fact that what she told Detective Ryan on the day of Laura's death was untrue. She said the fact that Laura had coughed while standing on the back verandah with the door open, and that was the reason she went back in.⁵⁴⁸

309. She was then asked these questions and gave the following answers:

Q. You said that you had heard her coughing about half an hour after she went to bed?

A. I don't remember.

Q. And that you went in about 5 minutes later and found her to be in the state that you told us before. Is that right?

A. I don't know, I don't remember the conversation that I've had with you.

Q. O.K. The problem that I have with that is if that was the case that would be approximately 11.35am in the morning that you found Laura and the call that you made to the ambulance, the 000 call was made at 12.05pm. Can you tell me the difference between that half an hour, where that was?

A. No. Again, this goes back to I don't pay attention to clocks and times. All I know is the gym class finished at half past 10.00. I pretty much headed on my way home. She fell asleep in the back of the car. I, assuming that it's around 11.00 when I've got, she was in bed and I had made sure she was asleep. I have done whatever I was doin' around the house, gone around and checked the dog. I don't know how long that took.

Q. Do you remember talking to Craig about, about what happened at the hospital that morning when Laura died?

A. No, no.

Q. Craig said that you said to him, Laura fell asleep on the way home. I put her into bed. I went to feed the dog, I had a play with the dog. I heard Laura coughing on the monitor but I didn't check on her straight away. About 10 minutes later I checked on her and found her. Is that what you said to Craig?

A. I don't remember. No, I don't remember a conversation with him.⁵⁴⁹

310. Ms Folbigg was asked whether she destroyed or threw the diaries away after Mr Folbigg had told her he had given the police her diary. She denied this, saying Mr Folbigg told her he had given the police her diary and that he saw one on her nightstand and she responded, "I haven't got it anymore, I got rid of it on that day."⁵⁵⁰

311. Ms Folbigg was finally asked did she know what sort of person would kill four

⁵⁴⁸ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q834-837 [red pagination 1726-1727].

⁵⁴⁹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q838-Q842 [red pagination 1727-1729].

⁵⁵⁰ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q862 [red pagination 1732].

children and she said she had no comprehension and did not even want to think about it. She then denied she was responsible for the death of each of the children and for Patrick's near miss episode.⁵⁵¹

312. It should be noted that as I indicated earlier, at the conclusion of the interview, Detective Ryan informed Ms Folbigg that the police were going to execute a search warrant at her flat and also at the previous family home. According to Detective Ryan Ms Folbigg stated, "I have just started a new diary and it is up at the house." (see [150] above).

Other evidence concerning Ms Folbigg's relationship with her children

313. Ms Lea Bown, Ms Folbigg's foster sister, gave evidence at the trial. She said after each of the children's death she had contact with Ms Folbigg in an attempt to help console her and give her support. Ms Bown said she had more contact with Laura than the other children and she became very attached to her. She described an incident when Mr and Ms Folbigg and Laura came to stay at her home in Melbourne. Laura at the time was about 17 months old. She said she noticed that sometimes the relationship between Ms Folbigg and Laura was good and sometimes Ms Folbigg was not in a very good mood. She referred to an incident when Ms Folbigg lost her temper with Laura when she was trying to feed her in the highchair. She said, "Laura didn't want to eat her meal and Kathy got angry with her and put the food down on the dining room table and yanked Laura out of the highchair." She described another incident on Christmas Eve when Ms Folbigg got angry because Laura would not go to sleep. Ms Bown stated she did not think it was necessary to get angry with Laura.⁵⁵²
314. Ms Bown also gave evidence of what Ms Folbigg told her about the circumstances of Sarah's death. She said Ms Folbigg had told her that Sarah had woken. She had been put into a single bed by that time. She said Ms Folbigg told her that she had got up that night, went to the toilet and either put the hall light on or the toilet light and she saw there was something wrong with Sarah. She said Ms Folbigg told her that Sarah looked a greyish colour and sang out to Craig. She said Craig didn't answer so she sang out again and she screamed a third time and Craig woke up, found Sarah and tried to do what he could with CPR. Ms Bown said she told Ms Folbigg what she had told the police and Ms Folbigg was very angry saying, "that was not how Sarah died and anyway there's no light on".⁵⁵³
315. Ms Bown also gave evidence of what Ms Folbigg had told her concerning the death of Laura. Her evidence was to the following effect:

A. Kathy had told me that she got up that day to go to the gym and that Laura had not been very well, she had a slight cold, the sniffles from the day before as well, and that she wanted to go to the gym but because Laura wasn't feeling very well she decided not to go. And they had had some breakfast and that and then she seen that, like she said that Laura had picked up a little bit and she asked Laura if she wanted to go to the gym to play with her friends and that. Laura went into her bedroom to pick up a little bag that she used to take with her and off they went, and they went to the gym and Laura used to go into the creche there and play with her friends in there while Kathy did her gym work. And then they came out and they went to have morning tea with Craig.

⁵⁵¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q885 [red pagination 1737].

⁵⁵² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2023 T768.15-770.55 [red pagination 2572-2574].

⁵⁵³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2023 T771.14-.773.28 [red pagination 2575-2577].

Q. At his work?

A. At his works, yes, because Laura used to love to do that. And then it started to rain and Kathy decided to go home and it started to rain and Laura ran out into the rain and Kathy got her back to put her into the car and by the time she got home Laura was asleep in her car seat. So she took her out of the car seat, put her into her bed in her bedroom and then went to go and get the washing in off the line and she said she heard Laura make like a little gurgley, little “he he” noise, like little kids do when they are going off to sleep and she thought oh, I will go back in and check on her. No I'll go and get the washing off the line. She went and got the washing off the line, brought it back in, I am not 100% sure whether she folded it up or whether she put it in the laundry, then she went in to check on Laura and found Laura not breathing.

Q. Did she then tell you that--

A. She said she picked Laura up, took her into the kitchen, they had a bench in the kitchen, put her on to the bench and tried to do CPR while she rang Craig to get help.

Q. Did she tell you anything about what happened when the ambulance arrived?

A. Just that the ambulance tried to do - they worked for a little while on Laura and they had asked her how long had it been that Laura had not been - that she had been from the time she had done to get the washing to when she had come in and found Laura and she said 5 to 10 minutes, no more than five minutes.⁵⁵⁴

316. Ms Bown also stated that Ms Folbigg was very upset at Laura's funeral but on the return from the funeral, in Ms Bown's daughter's car, she was a totally different person, happy, laughing and enjoying the wake at the house. She recalled Ms Folbigg saying in the car, “Phew, that's such a weight off my shoulders.” She said from that time she was a different person.⁵⁵⁵ Ms Bown agreed that Ms Folbigg appeared devastated by Caleb's death and that she was very pleased and happy to have Patrick. She said she appeared thrilled to have Sarah and was devastated by her death. She stated that Ms Folbigg was very happy about the arrival of Laura but not overjoyed. She agreed, however, that she described Ms Folbigg's reaction to Laura's birth to the police as beaming and that Laura's birth was the happiest she had known Ms Folbigg to be for a long time. She agreed she had dealings with Ms Folbigg at the time after Laura died and it appeared to her that Ms Folbigg was taking it very hard.⁵⁵⁶
317. Ms Bown also agreed there were two incidents which she described in her evidence were the only occasions she saw Ms Folbigg lose her temper with either Laura or Sarah. She denied she exaggerated the incidents. She agreed there was nothing in her statement which referred to Ms Folbigg yanking or pulling Laura out of the highchair, saying she didn't say that because she thought it was a witch hunt.⁵⁵⁷
318. Ms Bown agreed she did not tell the police about Ms Folbigg's unusual behaviour at the wake when she first spoke to them. She said she purposely held it back. She agreed that she painted a picture to the police that in the period she stayed with

⁵⁵⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2023 T775.44-T776.33 [red pagination 2579-2580].

⁵⁵⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2023 T782.33-783.5 [red pagination 2586-2587].

⁵⁵⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2023 T783.36-788.50 [red pagination 2587-2592].

⁵⁵⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2023 T790.9-792.18 [red pagination 2592-2596].

Ms Folbigg following the death of Laura she was grieving. She stated that was an inaccurate picture but she was protecting her sister.⁵⁵⁸

319. Carol Anne Newitt, Mr Folbigg's sister, gave evidence that she observed Ms Folbigg's struggles to meet the demands of Patrick's care, describing times when she would visit and say "you look after him. He is good for you and I can't get him to shut up".⁵⁵⁹ During cross-examination, she gave evidence that it appeared to her Ms Folbigg handled the burden of Patrick's care quite well "most of the time" although "it got her down like it would anybody else".⁵⁶⁰ She stated she recalled Ms Folbigg crying the day Caleb died and when Patrick died, she described Ms Folbigg's crying as the most lonely cry she had ever heard. She stated that it appeared to her that both Mr and Ms Folbigg were dedicated parents.⁵⁶¹
320. Evidence was also given by Ms Deborah Ann Grace who was a neighbour of Mr and Ms Folbigg in the period that included 1999. She said on the day after Laura's death she visited Mr and Ms Folbigg at their home. She said Mr Folbigg was devastated and he was crying uncontrollably, while she described Ms Folbigg as straight faced, saying there were no tears in her eyes, there was no emotion whatsoever. She said she asked Ms Folbigg how it could have happened and her response was, "Just like the rest of them."⁵⁶²
321. She agreed in cross-examination that Ms Folbigg might have been in shock when she saw her. She had observed that Ms Folbigg appeared to be a good mother.⁵⁶³
322. Ms Barbara Patricia Unicomb, another neighbour of the Folbigg's at Singleton, also gave evidence. She said she was aware that Ms Folbigg used to leave Laura with her neighbour, Melissa Smith, from time to time. It first occurred when Laura was almost three months old. She said she observed that when Laura was asleep, there wasn't an apnoea blanket attached to her or any sort of monitoring device.⁵⁶⁴
323. In cross-examination, she said on the day after Laura's death she went to the Folbigg's house. She said Mr Folbigg was devastated and Ms Folbigg was upset. She agreed that Ms Folbigg was a good mother.⁵⁶⁵
324. Ms Melissa Smith gave evidence. She said Ms Folbigg brought Laura over to her house to look after her when she was six weeks old. She said Ms Folbigg did not give her a sleep apnoea blanket. She said she next looked after Laura when she was six months old when Ms Folbigg was going to the gym. She said there was one other occasion she looked after her when Laura was 11 months old. Ms Smith agreed she appeared a happy and healthy child and was apparently well cared for.⁵⁶⁶
325. Ms Smith said she saw Ms Folbigg the day after Laura died and she was sitting in

⁵⁵⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2023 T800.1032 [red pagination 2604].

⁵⁵⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 23 April 2003 T893.27-35 [red pagination 2697].

⁵⁶⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 23 April 2003 T899.35-38 [red pagination 2703].

⁵⁶¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 23 April 2003 T898.20-56 [red pagination 2702].

⁵⁶² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2023 T805.9-12 [red pagination 2609].

⁵⁶³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2023 T805.29.31 [red pagination 2609].

⁵⁶⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2023 T809.4-34 [red pagination 2613].

⁵⁶⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2023 T809.52-810.14 [red pagination 2613-2614].

⁵⁶⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2023 T811-52-813.53 [red pagination 2615-2617].

a chair crying hysterically, shaking and her grief was such that it distressed her to look at her. She agreed she was devastated.⁵⁶⁷

326. Ms Tanner was a clinical nurse consultant in SIDS and sleep apnoea at the Royal Alexandria Hospital for Children,⁵⁶⁸ who worked in the Neonatal Intensive Care Unit and consulted with Mr and Ms Folbigg regarding Laura. She gave evidence that during her consultations she observed that Ms Folbigg “seemed detached, as if she didn’t want to get close to Laura”, that she “wasn’t overprotective” and “wasn’t always watching her”.⁵⁶⁹ During cross-examination, she confirmed that she only briefly observed Ms Folbigg’s interactions with Laura.⁵⁷⁰
327. Ms Kerrie Anderson, a childcare worker at the gym Ms Folbigg attended, gave evidence. She stated she was at the gym the day of Laura’s death, when Laura played with other children. She said just before the gym class finished, Laura seemed a little bit tired but other than that she seemed fine. She said Ms Folbigg had told her she had lost previous children and asked her to keep a close eye on Laura. She said that both Mr and Ms Folbigg appeared to be loving parents.⁵⁷¹
328. Ms Jan Bull, a gym instructor, gave evidence. She said she observed Ms Folbigg and Laura at the gym and she thought Ms Folbigg was a good mother and a caring mother. She said she and Laura seemed to have a really good bond. She said on the day Laura died, she went to the gym with Ms Folbigg. Laura didn’t seem bright and bubbly as normal. She said Ms Folbigg did not stay for morning tea as normal because she said that Laura didn’t seem well so she was going to take her home for a nap. She said she called on Ms Folbigg the day after Laura had died and said she was as upset as any mother would have been. She was asked whether she noticed anything unusual about Ms Folbigg at the wake and said Ms Folbigg was just trying to get through the day as best she could.⁵⁷²
329. Ms Judith Patterson, a friend of Ms Folbigg at the gym, gave evidence. She said Ms Folbigg and Laura had a good relationship. They got on fine. She said she never saw Ms Folbigg show any unusual anger towards her daughter.⁵⁷³
330. Ms Patterson said that when Ms Folbigg went back to work, she babysat Laura. She stated Laura was well over 12 months old. She said she saw Ms Folbigg at her house on the day after Laura’s death and stated Ms Folbigg was hysterical. She said she saw her every day leading up to the funeral, and she was crying every day. She said she looked at the funeral as if she had been sedated.⁵⁷⁴ Evidence to a similar effect was given by Ms Debbie Goodchild.⁵⁷⁵

⁵⁶⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2023 T816.1-17 [red pagination 2620].

⁵⁶⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T671.20-27 [red pagination 2475].

⁵⁶⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T676.12-30 [red pagination 2480].

⁵⁷⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 15 April 2003 T687.16-24 [red pagination 2491].

⁵⁷¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 23 April 2023 T919.55-920.43 [red pagination 2723-2724].

⁵⁷² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 23 April 2023 T1185.12-1187.27 [red pagination 2989-2991].

⁵⁷³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 23 April 2023 T1288.33-44 [red pagination 3092].

⁵⁷⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 May 2023 T1290.1-1291.25 [red pagination 3094-3095].

⁵⁷⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 May 2023 T1281 [red pagination 3085].

The medical evidence at the trial and at the time of trial

331. The medical evidence at the trial of Ms Folbigg and other reports obtained at that time were given before the possibility of a particular genetic variant being the cause of death of at least Sarah and Laura was available. Further, some of the medical practitioners who gave evidence at the trial did seem to be influenced by the theories propounded by Sir Roy Meadow which had not been discredited by that time (see [128]-[130], [344], [357] and [436]). Nonetheless, the evidence needs to be considered to test its strength against the subsequent developments in medical and genetic science which is available to this Inquiry.
332. I have already referred to the evidence of those doctors or forensic pathologists who were responsible for the treatment of the children prior to their death and the immediate investigation of the death after its occurrence. In particular, I have set out in detail the finding in the autopsy reports of Caleb, Patrick, Sarah and Laura in the section of the report concerning the circumstances surrounding the death of the four children and the investigations undertaken at the time of the cause of their deaths. This section should be read in conjunction with what I have written in the section above entitled 'The circumstances surrounding the death of the four children'.
333. A number of the experts who gave evidence focused particularly on one or the other of the deaths of the four children whilst others gave evidence in a more generalised form. For this reason, I will summarise the evidence by reference to the particular speciality of each of the experts.

The evidence given by forensic pathologists

334. The forensic pathologist who undertook the post-mortem on Caleb, Dr Cummings, was not called at the trial. I have set out his findings at [48]-[49] above. I have also set out the findings recorded by Dr Cala as a result of his examination of Caleb's tissues (see [51] above). I will deal further with his evidence below.
335. The only other forensic pathologist to have actually examined Caleb's tissues was Professor Berry. I have set out the circumstances in which he came to be involved at [52] above. Professor Berry provided two reports, the first in November 2000 and the second, a supplementary report, dated 29 April 2003.
336. In his November 2000 report, Professor Berry described in detail the circumstances surrounding Patrick's ALTE and the deaths of all four children. He also described the early investigation into their deaths.⁵⁷⁶ As I indicated, he examined 14 stained micro slides of tissue taken from the body of Caleb. I have set out his conclusion as to sections of the lung stained by Perls method at [52]. Professor Berry was also supplied with 21 slides prepared from tissue taken from Patrick's body. He stated that the brain showed extensive old laminar cortical necrosis with lots of grey matter at the depths of sulci, cysts, gliosis, gitter cells and focal mineralisation. He said the slides show that the cerebellum showed probably artefactual separation of the cortex and reduced white matter.⁵⁷⁷
337. Professor Berry also stated he was supplied with 41 slides prepared from tissues taken from Sarah's body. He stated that he observed that in the lung there was

⁵⁷⁶ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Peter Berry (November 2000) [red pagination 3751].

⁵⁷⁷ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Peter Berry (November 2000) [red pagination 3771].

a mild focal intra-alveolar haemorrhage and oedema. He also noted vascular congestion of the uvula larynx and epiglottis.⁵⁷⁸

338. Professor Berry stated he was also supplied with 53 microscopic slides prepared from tissue taken from Laura's body. He stated the heart muscle showed a patchy but widespread interstitial mononuclear infiltrate in the right and left ventricles but there was no definite myocyte necrosis.⁵⁷⁹
339. In his first report, Professor Berry considered the deaths in isolation and then together.⁵⁸⁰ In relation to Caleb, he described a floppy larynx as a generally benign and self-limiting condition. He stated it is not a recognised cause of infant death and there is nothing to suggest the condition was responsible for the death. He noted there were no marks of violence. He stated that the mother's observation of blood stained froth around the nose and mouth is a common finding in sudden infant deaths and accidental or deliberate suffocation. Professor Berry stated that the presence of haemosiderin as shown by the Perl stain is a very unusual finding in infant deaths. He stated it is so unusual it excludes the deaths from the SIDS category. He said the mother's diary entry "Asleep at last!" is, on the face of it, extremely worrying. Professor Berry stated with a similar case today he would not give the cause of death as SIDS because of the finding of haemosiderin in the lungs. He said that the diary entry would lead him to suspect suffocation.⁵⁸¹
340. In relation to Patrick, he stated his initial collapse was never explained. He stated that such "near miss" events resulting in brain damage is a cause for concern because the window of opportunity to find a child in extremis and effect resuscitation is very short, probably only a matter of a few minutes. He stated that raised the question that the person who finds the baby may have been present when the collapse occurred and may have been its cause. He stated such acute life threatening events are not part of the usual natural history of SIDS.⁵⁸²
341. Professor Berry stated that taken in isolation he would have given the cause of death as "not ascertained ascribing it to brain damage following an unexplained collapse".⁵⁸³
342. In relation to Sarah, Professor Berry stated that the death resembled many ascribed to SIDS. He said the post-mortem findings were consistent with that diagnosis but at 10 months of age she was older than most SIDS, the majority having occurred by six months of age. He stated that alone is reason for closely scrutinising the circumstances. He stated it was of concern that Mr Folbigg's account indicated considerable tension in Ms Folbigg on the evening Sarah died. He stated that, nevertheless, he would probably give the cause of death in isolation as SIDS but with misgivings.⁵⁸⁴
343. In relation to Laura, Professor Berry stated that inflammation of the heart may cause

⁵⁷⁸ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Peter Berry (November 2000) [red pagination 3772].

⁵⁷⁹ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Peter Berry (November 2000) [red pagination 3772].

⁵⁸⁰ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Peter Berry (November 2000) [red pagination 3773-3778].

⁵⁸¹ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Peter Berry (November 2000) [red pagination 3773-3774].

⁵⁸² Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Peter Berry (November 2000) [red pagination 3775].

⁵⁸³ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Peter Berry (November 2000) [red pagination 3775].

⁵⁸⁴ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Peter Berry (November 2000) [red pagination 3775-3776].

sudden death in two ways. He stated extensive damage to the muscle of the heart can result in failure of the heart muscle as a pump. That is shown at post-mortem by dilation of the heart and accumulation of fluid in the lungs and elsewhere. He said this was not found in Laura. He said, secondly, it was generally agreed that even quite mild inflammation can result in abnormal heart rhythms and sudden deaths. He stated in Laura's case the infiltrate in the heart was quite extensive and most pathologists would have accepted it as the cause of death. He noted, however, that inflammatory infiltrate in the heart muscle is also quite commonly found in those who have died from other causes. He said it had been described as an incidental finding in suffocation. However, he stated taken in isolation he would have described Laura's death as due to myocarditis, recognising that although the infiltrate was quite extensive, he could not see any actual damage to the heart muscle.⁵⁸⁵

344. In dealing with the four deaths together, Professor Berry stated that four infants in the same family who were previously well dying due to unknown natural disease was unprecedented in his experience and he knew of no substantiated examples in the literature. He stated there were many theories of SIDS but he knew of no substantiated cause of sudden unexpected death of previously well infants that is applicable to those cases. He said if death was not natural it may have been accidental but he could identify no recognised hazards. He noted there were no definite pathologic features of deliberate injury. He stated that suffocation in young children is often unaccompanied by any external signs such as pressure marks or facial petechial haemorrhages and there are no diagnostic internal findings. He said the deaths of Caleb, Patrick and Sarah were entirely compatible with suffocation as a cause. He concluded that he was unable to rule out that Caleb, Patrick, Sarah and possibly Laura, were suffocated by the person who found them lifeless and that he believed that it was probable that that was the case.⁵⁸⁶
345. In his evidence at the trial, Professor Berry stated it was very difficult at post-mortem to differentiate between SIDS and suffocation. He stated it is often said it could not be done but in a minority of cases of suffocation, there would be marks, pinpoint, haemorrhages, fresh blood coming from the nose and mouth. In dealing with the significance of the haemosiderin, he stated that if it is found in the airspaces what he described as the scavenger cells are the ones associated in some people with a previous episode of suffocation. He emphasised it was not specific for suffocation.⁵⁸⁷
346. Professor Berry was asked if he was able to tell the court what sort of period would be required to suffocate a child to death and he stated that, although clearly he had no personal direct experience, the normally held belief was perhaps three or four minutes. He stated that videos have shown children or babies of a very young age would struggle during that period.⁵⁸⁸
347. Professor Berry was asked his opinion on the proposition that Patrick's brain damage could have been caused by a first epileptic attack. He stated he thought it was most unlikely the first epileptic seizure coming out of the blue in an otherwise fit child would lead to this very severe brain damage. He stated that he thought that

⁵⁸⁵ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Peter Berry (November 2000) [red pagination 3776].

⁵⁸⁶ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Peter Berry (November 2000) [red pagination 3776-3778].

⁵⁸⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2023 T1055.39-1058.21 [red pagination 2859-2862].

⁵⁸⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2023 T1060.34-39 [red pagination 2864].

medically no cause was ever found for Patrick's ALTE and it was a case where one had to consider the possibility that even taking the case in isolation it was some kind of asphyxial episode that caused it.⁵⁸⁹

348. In relation to Sarah, Professor Berry expressed the view that the displacement of the uvula was due to dissection of the throat. He stated he did not think any reliance could be placed upon it. He said that it could be a post-mortem change or because someone introduced something to the throat perhaps during the course of resuscitation, perhaps just knocked the uvula or something like that.⁵⁹⁰
349. In relation to Laura, Professor Berry said it was extremely difficult to determine the significance of the myocarditis. He said he entirely agreed that the slides were consistent with myocarditis consequent on the relatively mild viral infection that Laura had the day before her death. He said it does present an explanation for her death although not a certain explanation because it could be an incidental finding. He stated he thought it was highly possible, indeed probable, that if a child with myocarditis was subject to a severe stress such as an asphyxial episode that might precipitate an abnormal beat of the heart leading to sudden death.⁵⁹¹
350. In cross-examination, Professor Berry agreed that the significance of the haemosiderin is that it took Caleb out of the SIDS group by contemporary standards. He stated it was not diagnosed as suffocation and should not be used as proof of it but it is a finding that is consistent with it.⁵⁹² He agreed that the cause of death of Patrick may have been consequent upon a seizure and may have been the ultimate cause of death.⁵⁹³
351. In cross-examination, Professor Berry described Laura's myocarditis as moderate myocarditis.⁵⁹⁴
352. In re-examination, he reiterated what he said in his report, namely, he had never encountered a family where there had been three or more deaths from different diseases, nor was he aware of any such occurrence in the literature.⁵⁹⁵
353. Professor Peter Herdson (**Professor Herdson**), a consultant forensic pathologist, expressed the opinion that the post-mortem examination performed by Dr Cummings on Caleb and the assessment of the subsequent histopathology and toxicologic analysis provided by Professor Berry and Dr Janice Ophoven (**Dr Ophoven**) had found the cause of Caleb's death undetermined and apparently consistent with SIDS.⁵⁹⁶
354. In relation to Patrick, he stated that the history of a life threatening episode with

⁵⁸⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2023 T1061.20-44 [red pagination 2865].

⁵⁹⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2023 T1062.8-56 [red pagination 2866].

⁵⁹¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2023 T1064.56-1065.33 [red pagination 2868-2869].

⁵⁹² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2023 T1068.17-1070.23 [red pagination 2872-2874].

⁵⁹³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2023 T1072.3-1073-54 [red pagination 2876-2877].

⁵⁹⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2023 T1074.33-38 [red pagination 2878].

⁵⁹⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2023 T1077.20-40 [red pagination 2881].

⁵⁹⁶ Exhibit 2-H, Forensic pathology tender bundle, Statement of Professor Peter Herdson (17 January 2002) [red pagination 3794].

subsequent abnormalities would be most unusual for a death due to so-called SIDS and the cause of the death should be described more accurately as undetermined.⁵⁹⁷

355. In relation to Sarah, he stated he concurred with the detailed clinical summaries of the post-mortem examination performed by Professor Hilton stating the findings taken in isolation could be diagnosed as SIDS.⁵⁹⁸
356. In relation to Laura, Professor Herdson agreed that the histopathology of the heart revealed myocarditis which was most probably of viral origin and agreed with Dr Cala that the finding of myocarditis is consistent with Laura's recent illness and probably incidental.⁵⁹⁹
357. Dealing with the four infant deaths together, he drew attention to the comments of other pathologists that the first unexplained death of an infant in the family may be attributed to SIDS, the second should be labelled undetermined and the third should be considered homicide until proven otherwise. He stated he was unaware there have ever been three or more thoroughly investigated infant deaths in one family from SIDS. This, of course, was the wholesale adoption of Meadow's law.⁶⁰⁰
358. In his evidence at the trial, Professor Herdson said in his own experience he had never known of a child that has died from laryngomalacia and had never been told of such an incidence by any of his colleagues. He stated looking at Caleb in isolation, he was 19 days old and that was slightly worrying him in otherwise coming to the quite reasonable conclusion of SIDS. He said in his experience it was virtually impossible to distinguish between SIDS and actual or deliberate suffocation at post-mortem. He stated you could not distinguish between SIDS and suffocation based on the petechiae.⁶⁰¹
359. In relation to Patrick, Professor Herdson stated that his ALTE was consistent with him having been deliberately or accidentally smothered. In relation to his death, he said he would not have come to a conclusion of death from SIDS in any child that had a catastrophic medical history.⁶⁰²
360. Professor Herdson agreed that Sarah was in the correct age group for SIDS.⁶⁰³
361. Professor Herdson drew the distinction between death from SIDS being a diagnosis of death from some unknown natural cause as distinct from death from undetermined causes which implies a death from some unknown natural or unnatural cause.⁶⁰⁴

⁵⁹⁷ Exhibit 2-H, Forensic pathology tender bundle, Statement of Professor Peter Herdson (17 January 2002) [red pagination 3794].

⁵⁹⁸ Exhibit 2-H, Forensic pathology tender bundle, Statement of Professor Peter Herdson (17 January 2002) [red pagination 3794].

⁵⁹⁹ Exhibit 2-H, Forensic pathology tender bundle, Statement of Professor Peter Herdson (17 January 2002) [red pagination 3795].

⁶⁰⁰ Exhibit 2-H, Forensic pathology tender bundle, Statement of Professor Peter Herdson (17 January 2002) [red pagination 3795].

⁶⁰¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2003 T1033.52-1035.14 [red pagination 2837-2839].

⁶⁰² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2003 T1035.35-56 [red pagination 2839].

⁶⁰³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2003 T1036.53-55 [red pagination 2840].

⁶⁰⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2003 T1037.21-52 [red pagination 2841].

362. Professor Herdson stated he doubted that Sarah's uvula had any significance and that Professor Hilton was correct in concluding it was an incidental finding.⁶⁰⁵
363. He stated that the findings in relation to the post-mortem of Sarah were consistent with suffocation.⁶⁰⁶
364. In relation to Laura, he stated that pathologists were well aware that viral myocarditis can be lethal and also that many children with viral myocarditis do not die, are not particularly ill and recover completely from it. He said he favoured the view that it was an incidental finding because it was fairly diffuse and there was little cell necrosis.⁶⁰⁷
365. In cross-examination, Professor Herdson accepted that death of SIDS at Caleb's age was not unheard of.⁶⁰⁸ He also agreed that death from myocarditis could occur absent any prior indication of ill health.⁶⁰⁹
366. Professor Roger Byard (**Professor Byard**) was called on behalf of the defence. In a report prepared prior to the trial he acknowledged that sequential deaths of four young children in the same family are extremely rare, are of great concern and must always raise the possibility of homicide or an inherited abnormality. He stated that the most likely causes of multiple infant deaths in a family with no abnormalities clinically or at autopsy are inflicted suffocation or rare inherited metabolic disorders. He referred to cases where no abnormalities are detected whereas, in the present case, Patrick had chronic brain damage and epilepsy that was difficult to control and Laura had established myocarditis. He said that both those conditions were well recognised and accepted causes of death in children. He stated that there was also clinical evidence of an organic disorder that may be related to airway compromise and respiratory arrest in Caleb and autopsy evidence of airway narrowing in Sarah.⁶¹⁰
367. In his report, he stated that if those children presented as individual isolated deaths in separate families, in the absence of a formal death scene examination for Caleb he would not be able to exclude the possibility of a sleeping accident and so would not be able to make a diagnosis of SIDS. He stated that another point of issue is the fact that Caleb had been diagnosed with a floppy larynx. He stated he would not diagnose SIDS in any infant who had a history of airway narrowing with breathing difficulties.⁶¹¹
368. In relation to Patrick, he said the typical case of an unexpected death encountered in paediatric autopsy practice is an epileptic child often with mental retardation who is found dead in bed with minimum external or internal findings. He stated the association of sudden death with sleep is noteworthy and most likely relates to a reduction in seizure threshold with an increase in epileptic discharges. He referred to the CT scan from Newcastle Mater Hospital dated 23 October 1990 stating the image was compatible with encephalitis and a follow up scan dated 5 November 1990 noted generalised loss of brain substance. He stated with such an abnormal

⁶⁰⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2003 T1038.22-34 [red pagination 2842].

⁶⁰⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2003 T1038.46-47 [red pagination 2842].

⁶⁰⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2003 T1039.21-56 [red pagination 2843].

⁶⁰⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2003 T1042.22-24 [red pagination 2846].

⁶⁰⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 1 May 2003 T1046.12-27 [red pagination 2850].

⁶¹⁰ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Roger Byard (18 September 2002) [red pagination 3798].

⁶¹¹ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Roger Byard (18 September 2002) [red pagination 3798-3799].

brain history he would have attributed death to epilepsy against a background of possible encephalitis.⁶¹²

369. In relation to Sarah, he noted Professor Hilton's comment on an unusually congested uvula which produced an obstructive element in the airway. He stated that it could not be discounted and that sudden unexpected death is well recognised in infants with narrowing of the upper airways due to a variety of cyst tumours and malformations. He said in those circumstances he would label the cause of death as undetermined.⁶¹³
370. In relation to Laura, Professor Byard stated that myocarditis is a well-known cause of sudden and unexpected death in infants and given the finding of extensive myocardial inflammation with no other abnormalities present, he would have attributed the death to myocarditis.⁶¹⁴
371. In conclusion, Professor Byard stated that he was certainly concerned there may have been inflicted suffocation but could not state unequivocally that this had occurred and could not agree the autopsy failed to identify any other known disease or disease processes that could explain the sudden death. He stated that the unusual background of the family with many issues of concern does not negate the fact that potentially significant organic illness was present in those children.⁶¹⁵
372. In his evidence at the trial, Professor Byard stated that he defined SIDS as the sudden death of an infant under one year of age. He said it was unexpected and no cause of death is found after a thorough case investigation and the case investigation includes not only a complete autopsy but examining the death scene and reviewing the clinical history. He said whilst he may have done it in the past, he would not diagnose SIDS when an examination of the death scene had not been carried out.⁶¹⁶
373. Professor Byard gave evidence similar to that contained in his statement as to the reason he would have described Caleb's death as undetermined.⁶¹⁷ He said he would be concerned if stridor was ignored. He said there was evidence that Caleb, two days before he died, had some obstruction, he was making a wheezing noise and his muscles between his ribs were actually coming in so he had some respiratory difficulties. He pointed out the larynx was not looked at under the microscope. He also stated the other important matter was that with this type of floppy voice box there had been cases that had been written up in the literature where children had just stopped breathing because of it and there has been actually no structural abnormality. He stated he would not be able to exclude the floppy larynx as a possible factor in his death.⁶¹⁸

⁶¹² Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Roger Byard (18 September 2002) [red pagination 3799-3800].

⁶¹³ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Roger Byard (18 September 2002) [red pagination 3801].

⁶¹⁴ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Roger Byard (18 September 2002) [red pagination 3801-3802].

⁶¹⁵ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Roger Byard (18 September 2002) [red pagination 3802].

⁶¹⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 May 2003 T1201.35-48 [red pagination 3005].

⁶¹⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 May 2003 T1202.17-26 [red pagination 3006].

⁶¹⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 May 2003 T1203.13-1205.39 [red pagination 3007-3009].

374. Professor Byard stated that he carried out a study where he found haemosiderin in something like 20% of SIDS babies' lungs. He said the finding of haemosiderin was something that should increase awareness that there may have been an ALTE, suffocating or nose bleed which means the case should be investigated carefully but it is not an absolute finding. He stated that looking at the finding of all the pathologists in isolation in relation to Caleb he did not find any symptoms which would amount to proof of suffocation.⁶¹⁹
375. In dealing with Patrick's ALTE, Professor Byard said it was very hard on the pathology to actually say what may have happened. He said there may have been an epilepsy or he just had a problem with his breathing noting that that happens in some babies. He said it was possible he could have been suffocated accidentally or deliberately to produce a similar result. He was referred to the evidence of Dr Kan which I have set out at [89]-[93]. He stated that all the pathology showed was a brain that had been very badly damaged through not enough oxygen over some time. He noted that Dr Kan mentioned there may have been encephalitis but said the pathology findings do not really help in sorting out what happened three months before.⁶²⁰
376. Professor Byard said it was possible that the ALTE might have been the first manifested sign of epilepsy or seizure disorder. He said based on the pathology he could not exclude it. He said there was nothing in the neuropathology which was inconsistent with that. He stated looking at the ALTE there were no findings looked at in isolation which could amount to proof the ALTE was caused by suffocation.⁶²¹
377. In his evidence in chief, Professor Byard expressed the same views in relation to the death of Sarah as he set out in his report (see [369] above). He stated looking at the findings of the pathology of Sarah in isolation there was no finding or symptom that could amount to proof of suffocation.⁶²²
378. So far as the death of Laura was concerned, Professor Byard said death from myocarditis can occur from inflammation from just about anywhere. He said what happens is "the heart gets irritated and has this rhythm disturbance and people die". He stated he observed necrosis and that to make a diagnosis of myocarditis you need to have inflammatory cells and you need to have evidence that the heart cells are dying. He stated that myocarditis appeared in eight samples on seven slides. He said it meant it was not just minor myocarditis but quite well established and well spread. He agreed that myocarditis in the conductivity system could be fatal. He stated he would put the cause of death as undetermined because he could not exclude myocarditis. He said that if he looked at Laura's case in isolation, he would without anything else have said myocarditis but the fact that there were other deaths in the family made him less certain. However, he repeated, "In isolation looking at the slides, I have no doubt the cause of death was myocarditis."⁶²³
379. In cross-examination, he agreed it was often impossible to distinguish between

⁶¹⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 May 2003 T1208.5-35 [red pagination 3012].

⁶²⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 May 2003 T1209.32-1210.3 [red pagination 3013-3014].

⁶²¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 May 2003 T1212.35-1215.30 [red pagination 3016-3019].

⁶²² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 May 2003 T1217.41-45 [red pagination 3021].

⁶²³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 May 2003 T1218.7-1221.54 [red pagination 3022-3025].

SIDS and suffocation and that suffocation, including deliberate suffocation, by an adult of a child often leaves no trace behind.⁶²⁴

380. He agreed that in the case of the four Folbigg children he could not exclude deliberate suffocation by an adult as a cause of death for any of them. He said that in his practice he has never had a situation where three or more children in the one family have all died or had an ALTE suddenly unexpectedly during a sleep period at home. Nor was he aware of any such situation being referred to in the literature.⁶²⁵
381. In relation to Caleb, Professor Byard was referred to the evidence of Dr Springthorpe to the effect that stridor was very mild and that floppy larynx had nothing to do with Caleb's death (see [40] above). It was put to him that Dr Springthorpe was in a much better position to diagnose the severity of the floppy larynx. He agreed Dr Springthorpe was in a better position to diagnose the severity but not the outcome. Ultimately, he agreed that it was highly unlikely that a floppy larynx had anything to do with the death of the child and if the child had in fact died from a floppy larynx it would be the first time such an event had ever been reported. In relation to the finding of haemosiderin, he agreed that signified the presence of bleeding from within the lungs and that one of the most common causes of bleeding within the lungs is an asphyxiating event of some sort. It was then put to him that the presence of haemosiderin in Caleb tended to indicate there was a previous episode of asphyxiation or attempted asphyxiation. He stated he thought that would be one possibility.⁶²⁶
382. In relation to Patrick, he agreed that normally you would not expect a first epilepsy to cause the kind of brain damage that Patrick suffered. However, he repeated that in isolation he would have attributed the death to epilepsy. He agreed that there was nothing in the neuropathology report to indicate whether or not Patrick died from epilepsy.⁶²⁷
383. In relation to Sarah, Professor Byard agreed in cross-examination that he could not say whether her displaced uvula had anything to do with her death. He agreed that the kind of uvula that Sarah had, to his knowledge, had never been reported as being a cause of death anywhere in the world.⁶²⁸
384. In relation to Laura, Professor Byard disagreed with Dr Cala's view that myocarditis was an incidental finding and not the cause of death. He agreed there was no evidence of malfunction or dysfunction of Laura's heart. He accepted that Laura's myocarditis could be incidental to her death but disagreed with Dr Cala that it was probably unrelated to it. He agreed that if Laura had been deliberately smothered without leaving any signs many pathologists would wrongly conclude that Laura had died from myocarditis. He was asked if he regarded it as a distinct possibility and he said it was a possibility. He also agreed there is a much larger percentage

⁶²⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 May 2003 T1222.7-15 [red pagination 3026].

⁶²⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 May 2003 T1222.17-1223.19 [red pagination 3026-3027].

⁶²⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 May 2003 T1231.5-1235.19 [red pagination 3035-3039].

⁶²⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 May 2003 T1237.20-1240.19 [red pagination 3041-3044].

⁶²⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 May 2003 T1240.43-1241.34 [red pagination 3044-3045].

of children who had myocarditis who died of other things and accepted statistically there was a greater chance that she died of some other cause than myocarditis.⁶²⁹

385. In dealing with the four children collectively, he agreed it was not a reasonable conclusion that they all died from the same natural cause.⁶³⁰
386. As I pointed out Dr Cala carried out the post-mortem on Laura. He prepared statements prior to the trial and gave evidence at the trial and also gave evidence at the 2019 Inquiry and this Inquiry. He was represented at this Inquiry.
387. I have summarised the details of Dr Cala's autopsy report at [125]-[130] above. Between the date of the autopsy and the trial, he continued to express concerns as to the circumstances surrounding the deaths of the four children. Thus, on 29 June 1999 he wrote to Detective Ryan stating that in his opinion the possibility of multiple homicides in the family had not been reasonably entertained, investigated and excluded. He stated that many causes of death such as overt physical violence and many natural diseases can be reasonably excluded in causing their deaths. He stated there remained an extremely remote possibility, so remote as to be almost impossible, of some underlying and undiagnosed genetic or metabolic disease which has not so far been detected.⁶³¹
388. He stated that in his opinion the deaths of the Folbigg children should be investigated as a single unit. He said he was greatly concerned by the deaths of these children and believed very vigorous efforts of enquiry should be made to exclude homicide in any or all of them.⁶³²
389. Dr Cala wrote to Detective Ryan again on 19 June 2001 answering certain questions relating to the post-mortem he performed on Laura. He stated that staining for haemosiderin-laden macrophages was performed with a negative result. He stated its presence or absence did not negate or exclude a diagnosis of deliberate smothering. He stated in his opinion it was dangerous to conclude that a child had been deliberately smothered by the presence of iron in the lung.⁶³³
390. He also stated in that letter that his opinion that inflammatory infiltrate in the heart represents an incidental finding was based on consideration of the history provided of Laura's very sudden and most unexpected death, the post-mortem findings of Laura and the histological assessment of the heart together with his own knowledge of myocarditis. In that context he stated that in other cases that he has seen where the death of a child or adult has been due to myocarditis the inflammatory infiltrate has been much heavier in number and more diffused in distribution throughout the heart although the amount of inflammation is variable from case to case. He stated that if he had examined the body of Laura in isolation without knowledge he had of the previous infant deaths, he might have given the cause of death as myocarditis. He stated that was theoretical and does not represent reality for the family.⁶³⁴

⁶²⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 May 2003 T1241.44-1248.8 [red pagination 3045-3052].

⁶³⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 May 2003 T1249.23-26 [red pagination 3053].

⁶³¹ Exhibit 2-H, Forensic pathology tender bundle, Letter from Dr Allan Cala to DSC Bernard Ryan (29 June 1999) [red pagination 3704-3705].

⁶³² Exhibit 2-H, Forensic pathology tender bundle, Letter from Dr Allan Cala to DSC Bernard Ryan (29 June 1999) [red pagination 3706].

⁶³³ Exhibit 2-H, Forensic pathology tender bundle, Letter from Dr Allan Cala to DSC Bernard Ryan (19 June 2001) [red pagination 3730].

⁶³⁴ Exhibit 2-H, Forensic pathology tender bundle, Letter from Dr Allan Cala to DSC Bernard Ryan (19 June 2001) [red pagination 3731-3732].

391. He stated that he remained very suspicious that the four Folbigg children may have died as a result of deliberate smothering. He stated the medical evidence, however, did not allow him to take this any higher than a suspicion of deliberate smothering.⁶³⁵
392. Dr Cala stated that at the time of giving evidence he was Head of Pathology at the Forensic Science Service of South Australia. He stated that at the time he carried out the post-mortem on Laura he was employed as a pathologist in the New South Wales Institute of Forensic Medicine.⁶³⁶
393. Dr Cala stated that at the time he carried out the post-mortem on Laura he was only given very basic information as to the circumstances in which her siblings died. He gave evidence of his findings on the post-mortem which I have set out above.⁶³⁷
394. Dr Cala stated it was very difficult to distinguish between SIDS and deliberate smothering. He stated that it was his opinion that if a child was smothered it would not inevitably leave some trace or sign around the head or mouth or anywhere else.⁶³⁸ He was asked how long it would take to smother a child of 19 months of age and stated that he could not exactly recall but believed it would take at least 20-30 seconds or possibly even longer.⁶³⁹
395. Dr Cala stated he believed that the finding on Laura's heart of inflammatory infiltrate was consistent with the after effects of cold or flu. He stated he did not believe it played any role in causing her death. He stated that the inflammation was quite patchy and rather mild in the sense that although it existed it was of a rather low amount. He stated that where the inflammation is much heavier, it could cause death and where it causes death, it is a condition known as myocarditis.⁶⁴⁰
396. Dr Cala was shown a video of Laura playing on the day before she died.⁶⁴¹ He stated that Laura appeared to be of quite normal health on the video which was filmed about 23 hours before she died and that, in those circumstances, it was quite unlikely she died as a result of the effects of myocarditis. He stated he did not believe it was a reasonable possibility she died from myocarditis.⁶⁴²
397. Dr Cala stated he did not believe Laura's death could be regarded as just another SIDS case. He stated to classify a death as SIDS it generally falls within the age of 3-6 months of age and that would categorically exclude the diagnosis irrespective of any other family history.⁶⁴³
398. Dr Cala was then asked questions about the deaths of the other children. As far as Caleb was concerned, he stated he had never experienced a child dying of a floppy larynx.⁶⁴⁴ He stated that, in his view, the findings of Caleb's post-mortem examination were consistent with him having been deliberately smothered. He said

⁶³⁵ Exhibit 2-H, Forensic pathology tender bundle, Letter from Dr Allan Cala to DSC Bernard Ryan (19 June 2001) [red pagination 3732].

⁶³⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T705.5-12 [red pagination 2509].

⁶³⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T706.42-48 [red pagination 2510].

⁶³⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T709.55-710.18 [red pagination 251].

⁶³⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T713.18-24 [red pagination 2517].

⁶⁴⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T713.56-714.37 [red pagination 2517-2518].

⁶⁴¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit K, Original footage depicting Laura Folbigg in a swimming pool on 28 February 1999.

⁶⁴² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T719.15-37 [red pagination 2523].

⁶⁴³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T721.50-722.8 [red pagination 2525-2526].

⁶⁴⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T728.29-32 [red pagination 2532].

it was likely that Caleb died from a catastrophic asphyxiating event of unknown causes.⁶⁴⁵

399. Dr Cala was asked whether Patrick's ALTE was consistent with him having been deliberately smothered. He stated it was a possibility. He also stated it was a possibility that Patrick's death was caused by deliberate smothering.⁶⁴⁶
400. In relation to Sarah, Dr Cala said that the findings of Professor Hilton on the post-mortem examination were consistent with her being deliberately smothered. He stated that he did not believe that Professor Hilton in his post-mortem examination of Sarah excluded deliberate or accidental trauma.⁶⁴⁷
401. Dr Cala said it was not appropriate to find Sarah's cause of death as SIDS.⁶⁴⁸
402. Dr Cala agreed that putting the four individual children together, they all died from what, in his view, should have been diagnosed as undetermined causes and that they all died in circumstances consistent with deliberate smothering. He stated there were no natural causes of death that could account for all those four deaths and the ALTE.⁶⁴⁹
403. In cross-examination, Dr Cala agreed that he found no injuries to Laura's face or mouth which was a particular area of specific investigation. He agreed he was looking for some evidence of manual asphyxiation and was thorough in his search for that evidence. He agreed he found none. He agreed that because of the age of the child it was more likely she would give some resistance and because of Laura's age any evidence of bruising would have been a very significant process of enquiry. He agreed he was looking for the most minor of bruising or injury that is in fact below the skin surface and he found nothing. However, he stated that the fact that nothing was found did not exclude suffocation.⁶⁵⁰
404. Dr Cala agreed with the proposition that as a general principle it is recognised in paediatrics and paediatric forensic pathology that children with myocarditis might die suddenly and unexpectedly with no symptoms or signs. He stated that they were a minority of cases. He also agreed with the general proposition that patients with myocarditis may present with highly variable clinical pictures ranging from no clinical manifestations to overt clinical congestive heart failure or sudden death.⁶⁵¹
405. Dr Cala was referred to his evidence that he would have expected to have seen certain features on the macroscopic observation of the heart if the child died from myocarditis. He agreed the first of those, flabbiness of the heart, particularly in the left ventricle, was a non-specific finding but stated that generally people who die of myocarditis will have an abnormal looking heart when you examine it with the naked eye. He agreed, however, its absence did not exclude death from myocarditis. He

⁶⁴⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T746.43-53 [red pagination 2550].

⁶⁴⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T729.17-24 [red pagination 2533]; T747.1-31 [red pagination 2551].

⁶⁴⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T747.33-57 [red pagination 2551].

⁶⁴⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T748.6-9 [red pagination 2552].

⁶⁴⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T749.21-37 [red pagination 2553].

⁶⁵⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, T750.34-752.55 [red pagination 2554-2556].

⁶⁵¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2003 T754.42-T756.12 [red pagination 2558-2560].

also agreed that the absence of the other features he would have expected to see, did not exclude myocarditis.⁶⁵²

406. Dr Cala also agreed that if the myocarditis was in the conductive system of the heart that would be a significant feature.⁶⁵³
407. Dr Cala agreed that within the myocardium there was a moderately dense infiltration of lymphocytes. He also agreed there were large clusters of lymphocytes surrounding degenerative myocytes. He agreed that was a significant finding as myocytolysis, which shows destruction and death of muscle cells, was present.⁶⁵⁴
408. He agreed that looking at it in isolation he could not exclude myocarditis as a cause of death.⁶⁵⁵
409. Professor Hilton was the pathologist who carried out the autopsy on Sarah. He was also present when Dr Cala carried out the autopsy on Laura. I have summarised the contents of his autopsy report at [103] above.
410. Professor Hilton gave evidence concerning his post-mortem examination of Sarah at the trial. He stated that he noted there was some lividity present on her body but it was of no significance in working out the cause of death. He also noticed what appeared to be a recent scratch on Sarah's right upper arm but stated he did not take a photograph of it. Professor Hilton stated at the time he did not consider the death to be a suspicious one.⁶⁵⁶
411. He was also referred to his finding of two tiny punctate abrasions below Sarah's lower lip on the left side and one slightly to the left side of the mid-line of the chin. He described them as pinpoint and agreed they were recent. He stated they could be consistent with a very minor application of force either by the child or another party.⁶⁵⁷
412. Professor Hilton agreed that on examination both lungs showed focal areas of collapse of a geographic pattern. He explained that the lung consists of lobes made up of globules and there are small further groups of air sacs within those globules. He said that a geographic area of collapse was where there were areas where groups of globules had collapsed and looked dark or darker and more solid than the rest of the lung.⁶⁵⁸
413. He also agreed he found occasional petechial haemorrhage of the lungs, agreeing that they are little bleeds from the small blood vessels in the lungs. He also agreed that he found minor congestion and minimal oedema (the build-up of fluid).⁶⁵⁹

⁶⁵² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2003 T756.40-T757.30 [red pagination 2560-2561].

⁶⁵³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2003 T758.55-57 [red pagination 2562].

⁶⁵⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2003 T759.44-T761.5 [red pagination 263-2565].

⁶⁵⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2003 T761.17-20 [red pagination 2565].

⁶⁵⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T616.12-T617.15 [red pagination 2420-2421].

⁶⁵⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T617.17-T618.2 [red pagination 2421-2422].

⁶⁵⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T618.36-51 [red pagination 2422].

⁶⁵⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T618.53-T619.12 [red pagination 2422-2423].

414. Professor Hilton agreed that those findings were consistent with an asphyxial mode of death which included deliberate suffocation. However, he said the petechial haemorrhages were not a specific finding for smothering. He said it is a finding which has been recorded in smothering but in his experience, he could only recall one case of deliberate inflicted suffocation which showed those little blood spots on the surface of the lung.⁶⁶⁰
415. Professor Hilton stated that the heart was structurally normal but there was an occasional little haemorrhage on the surface of the heart. He agreed it was something one could find in asphyxiation. He also agreed that the petechial haemorrhage he found in the thymus was something you would also expect to find in the case of asphyxiation.⁶⁶¹
416. Professor Hilton agreed he conducted a further examination of the throat area and found the uvula was quite abnormal. He said that although it was not disproportionately large it was reddened and the tip of it was lying in front of the epiglottis. He said he did not want to place too much emphasis on it because it was seen during the course of the dissection. He stated the baby had, as he understood it, been subject to resuscitation and there was at least the potential for the disturbance of anatomical relationships in the course of dissection. He stated it was of significance and said that he saw it and commented on it but he had grave doubts that it was there before the child died and before he started his dissection.⁶⁶²
417. As far as his diagnosis of the cause of Sarah's death as SIDS was concerned, Professor Hilton clarified that the commonest age of death from SIDS was between two to four months, although in New South Wales it was tending to move a little bit younger. However, he said to confine it to one year maximum is nonsense because infants do die unexpectedly and suddenly at ages older than one year. However, he agreed that the vast bulk of SIDS cases are less than one year old.⁶⁶³
418. Professor Hilton was asked if he was aware at the time he conducted the post-mortem examination that there had been two previous deaths of siblings of Sarah in the family. He said he was not sure as to whether he knew there was an unexplained ALTE for one of the two children. He stated he was aware that the second child had died with a brain condition which would indicate a propensity for convulsions.⁶⁶⁴
419. Professor Hilton was ultimately asked the following questions in relation to the death of Sarah.

Q. Professor Hilton, would you tell us whether or not you agree with this proposition, that there are certain circumstances which should indicate to a pathologist conducting a post-mortem the possibility of intentional suffocation and that they include the following: The previous unexpected or unexplained death of one or more sibling, that is, a brother or sister, of the deceased. What do you say to that?

A. Yes.

Q. And another factor that should indicate the possibility of intentional suffocation for

⁶⁶⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T619.14-40 [red pagination 2423].

⁶⁶¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T620.13-29 [red pagination 2424].

⁶⁶² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T621.30-T623.20 [red pagination 2425-2427].

⁶⁶³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T630.47-T631.7 [red pagination 2434-2435].

⁶⁶⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T633.46-T634.8 [red pagination 2437-2438].

a pathologist conducting a post-mortem is an ALTE, that is, an acute life threatening event of a sibling while in the care of the same person who cared for the deceased?

A. Yes.⁶⁶⁵

420. In cross-examination, Professor Hilton agreed that when a child is intentionally suffocated it may leave some signs detectable on autopsy. He stated, however, he did not find any of the typical signs in relation to Sarah although he looked for them. He stated the little haemorrhages he saw in the lungs were not a specific finding for smothering but indicated to him the possibility of an asphyxial mode of death, common both to asphyxiation by an outside party or an internal form of asphyxiation. He agreed that the two little scratches beneath the lower lip were not really indicative of anything.⁶⁶⁶
421. Professor Hilton stated that he gave consideration to the fact that there was a previous unexplained death in the family when reaching his conclusion on the autopsy and, if he had seen any indication which informed him as a pathologist that intentional suffocation was a real possibility, he would not have attributed the death to SIDS.⁶⁶⁷
422. In relation the uvula, Professor Hilton said that if it were not a post-mortem artefact it created the potential for obstruction to the airways which could have had some role in the child's death.⁶⁶⁸
423. In re-examination, he agreed with the proposition that if a ten month old child was deliberately smothered with a pillow you would not necessarily expect to find bruising on the inside of the lips or cuts or abrasions.⁶⁶⁹
424. Professor Hilton also gave evidence concerning the autopsy carried out by Dr Cala on Laura. In cross-examination by counsel for Ms Folbigg, Professor Hilton stated it was a very thorough autopsy. He stated that he examined slides taken from the heart which he said showed fairly extensive inflammation of the heart muscle. He described the severity of the inflammation on a scale of one to ten to be probably around five to six, somewhere like that. He said it was more than just moderate intensity.⁶⁷⁰
425. Professor Hilton said at the time of Laura's death she was suffering from myocarditis or the physical manifestations of myocarditis. He said it was of an intensity, a severity and a distribution that could have caused the child's death. He stated that the only "pathological lesion" that was present that could account for the child's death was myocarditis.⁶⁷¹
426. Professor Hilton agreed that myocarditis is something which usually has observable symptoms prior to the death of the person who suffers it. However, he stated it is

⁶⁶⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T648.17-33 [red pagination 2452].

⁶⁶⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T650.53-T652.41 [red pagination 2454-2456].

⁶⁶⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T653.47-49 [red pagination 2457].

⁶⁶⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T654.30-38 [red pagination 2458].

⁶⁶⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 14 April 2003 T656.20-36 [red pagination 2460].

⁶⁷⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 24 April 2003 T906.23-T907.20 [red pagination 2710-2711].

⁶⁷¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 24 April 2003 T907.32-T908.13 [red pagination 2711-2712].

well recognised that it can be entirely silent until it results in a totally unexpected death.⁶⁷²

427. In further examination by the prosecutor, Professor Hilton agreed that the finding of myocarditis did not exclude deliberate suffocation as a possible cause of death.⁶⁷³ In relation to Sarah, he adhered to his evidence that the two punctate abrasions under her lip did not particularly suggest deliberate smothering to him, he regarded them at the time and regarded them now as trivial. However, he accepted it was possible they could have been caused as a result of deliberate smothering. However, he stated that he thought it was unlikely.⁶⁷⁴
428. Subsequent to giving that evidence, Professor Hilton discovered some photographs of the displaced uvula of Sarah and he gave further evidence in relation to those photographs. He said that viewing the photographs did not cause him to change the views he had previously expressed. He said whilst the photographs did not show the anterior surface of the uvula, in all other respects the photographs supported his description. He stated it was his considered opinion that in view of everything else and in view of all the other investigations, the displaced uvula was not the most likely cause of death.⁶⁷⁵

The paediatric neurologists and cardiologists

429. As I pointed out above, Dr Wilkinson treated Patrick from the time of his ALTE up until the time of his death. I have set out details of the treatment and the opinions he formed at [65]-[74] above. Dr Wilkinson made a statement to the police on 12 March 1999. In that statement he expressed the view that he had no explanation for why the children had died and it was extraordinarily unlikely that it could all be blamed on “cot death”.⁶⁷⁶
430. At the trial, Dr Wilkinson stated that Patrick’s appearance at the time of his death appeared consistent with him suffering a catastrophic asphyxiating event from an unknown cause. He was asked whether, in the absence of knowing what caused Patrick’s asphyxiation, did he form theories as to what could have caused it. He said he did and it was quite possible that he had an epileptic seizure. He stated with that knowledge he thought an epileptic fit could have resulted in cardiac arrest and cerebral anoxia, in other words, lack of oxygen to the brain. He stated that was the theory at the time of his death and in advance of the knowledge of the post-mortem. He was then asked whether after considering the hospital records and the post-mortem report and the histopathological report by Dr Kan, he was still of the view that the direct cause of Patrick’s death was a catastrophic asphyxiating event from an unknown cause. He said he believed it could have been. He stated that Patrick’s presentation at the time of his death was in keeping with that and that they found absolutely no other cause at post-mortem.⁶⁷⁷

⁶⁷² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 24 April 2003 T908.15-27 [red pagination 2712].

⁶⁷³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 24 April 2003 T913.11-15 [red pagination 2717].

⁶⁷⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 24 April 2003 T915.6-T916.19 [red pagination 2719-2720].

⁶⁷⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 May 2003 T1181.19-T1183.13 [red pagination 2985-2987].

⁶⁷⁶ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Ian Wilkinson (12 March 1999) [red pagination 3702-3703].

⁶⁷⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T511.22-T514.49 [red pagination 2315-2318].

431. Dr Wilkinson expressed the view that with his experience he was able to say that smothering could have caused asphyxiation and Patrick's death. He was referred to Dr Kan's opinion which I have set out at [89]-[93] and said that strengthened his view that Patrick died from a catastrophic asphyxiating event and also more so that the original event was a catastrophic asphyxiating event.⁶⁷⁸
432. Dr Wilkinson said that in a child of Patrick's age smothering could have occurred without any external visible signs. He said having considered the hospital records and post-mortem report and Dr Kan's histopathological report he was no longer of the view that epileptic fits led to the asphyxiation which caused Patrick's death. He said he was also able to absolutely exclude that Patrick had encephalitis. He stated the EEG report taken on 18 October 1990 was inconsistent with what one would see if a patient had suffered from herpes simplex encephalitis as were the post-mortem findings of Patrick's brain.⁶⁷⁹
433. Dr Wilkinson agreed in cross-examination that at the time of diagnosis he was prepared to entertain herpes encephalitis as a possibility but the tests performed on Patrick after his admission excluded viral encephalitis. He referred, in particular, to lumbar punctures which had absolutely no inflammatory cells whatsoever stating that the hallmark of encephalitis or meningitis is a fact that they have inflammatory cells within the spinal cord. He said Patrick had zero white cells, zero inflammatory cells. He was asked whether the tests excluded non-viral forms of encephalitis and stated he thought it highly unlikely that any form of encephalitis, virus or otherwise, would produce no white cells, no inflammatory cells.⁶⁸⁰ He was referred to a letter written by him to Mr and Ms Folbigg on 19 September 1991 and agreed from the nature of the letter it remained his view that encephalitis was a possible explanation for Patrick's death. He agreed he would not have written such a letter stating what it did unless he had all the relevant information. However, he said at the present time it was not his opinion that encephalitis was a possible cause of death and he was not quite sure what led him to make that statement in the letter.⁶⁸¹
434. In re-examination, he was asked whether the absence of seizures when Patrick first came into the hospital and the fact that it was not a focal seizure was consistent with asphyxiation. He agreed it was. He stated it was quite common in asphyxiation to find that there is effectively a honeymoon period when the child is brought in and there is a period of hours or days when there seems to be recovery and no major neurological problem and sometimes, they develop particularly seizures and also blindness. He stated Patrick's loss of visual function was something which he associated much more with asphyxiation rather than herpes simplex because herpes simplex involves the front part of the brain whereas the visual part of the brain is at the very back.⁶⁸²
435. In addition to Dr Wilkinson, two other paediatricians were called. I have referred to the evidence of Dr Dezordi above (see [63]-[64]). The other paediatrician called was Dr Susan Mitchell Beal (**Dr Beal**). She provided a statement of 8 December 1999.

⁶⁷⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T516.21-44 [red pagination 2320].

⁶⁷⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T516.51-T518.23 [red pagination 2320-2322].

⁶⁸⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 23 April 2003 T861.45-T862.40 [red pagination 2665-2666].

⁶⁸¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 23 April 2003 T867.34-T871.30 [red pagination 2671-2675].

⁶⁸² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 23 April 2003 T874.33-T875.15 [red pagination 2678-2679].

She stated at that time she was employed as a paediatrician at the Women and Children's Hospital in Adelaide where she had been for the last 35 years and that she had studied SIDS for over 30 years and published widely in that area.⁶⁸³

436. Dr Beal stated there were two more common causes of recurrent sudden unexpected infant death. First, which she said had been largely eliminated was leaving young infants unobserved in prone positions. The second is filicide. She stated this was not only recurrent in the next child but it is likely to continue into a third or even a fourth or more children. In her statement she expressly adopted Meadow's Law and that she had no hesitation in saying she believed all four children were murdered by their mother.⁶⁸⁴ I have read her evidence which largely involved drawing inferences from other reports. I do not regard it as helpful to the Inquiry.
437. The Crown also called Dr Brian Bailey (**Dr Bailey**) who at the time of the trial was a consultant cardiologist at the Royal Prince Alfred Hospital who had practised as an electrophysiologist with a special interest in the subject of arrhythmias.⁶⁸⁵
438. Dr Bailey examined the cardiac rhythm tracing taken by ambulance personnel on Laura prior to commencing resuscitation. In a statement made on 26 March 2003, he stated that the rhythm tracing showed an agonal cardiac rhythm which he described as a slow cardiac rhythm with a broad electrical complex unaccompanied by evidence of cardiac muscle function which may be observed late in the course of a cardiac arrest. He stated it would be consistent with, but not diagnostic of, injury due to lack of oxygen from any cause.⁶⁸⁶
439. He stated that the single ECG tracing taken at the sleep study carried out on Laura shortly after her birth (see [107] above) was inadequate to accurately diagnose or exclude Long QT Syndrome (**LQTS**). He also stated that the autopsy findings reported local areas of myocarditis which, in his opinion, was probably related to a viral infection the child had at the time but of insufficient extent to be a likely cause of cardiac death.⁶⁸⁷
440. In his evidence at the trial, Dr Bailey elaborated on his statement adding that the heart rhythm tracing showed an extremely low heart rhythm for a child of Laura's age. He said it was described as bradycardia. He stated that the rate was about 30 beats per minute and the electrical complexes on it were a lot wider than the complexes that are seen in a normal healthy heart. He stated, taken in context, he would call it agonal cardiac rhythm which is the last activity you see in the heart before the heart dies.⁶⁸⁸
441. Dr Bailey said that sort of agonal heartbeat was not specific to injury due to lack of oxygen but certainly would be consistent with it. He stated that it was more likely the breathing stopped before the heart stopped given this tracing but you could not be certain of it if it was recorded some considerable time after the event occurred.⁶⁸⁹
442. So far as myocarditis was concerned, he expressed the view that clinical myocarditis

⁶⁸³ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Susan Beal (8 December 1999) [red pagination 3735].

⁶⁸⁴ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Susan Beal (8 December 1999) [red pagination 3738].

⁶⁸⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 5 May 2003 T1098.25-55 [red pagination 2902].

⁶⁸⁶ Exhibit 2-AC, Genetics tender bundle, Statement of Dr Brian Bailey (26 March 2003) [red pagination 5362-5363].

⁶⁸⁷ Exhibit 2-AC, Genetics tender bundle, Statement of Dr Brian Bailey (26 March 2003) [red pagination 5363].

⁶⁸⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 5 May 2003 T1099.32-57 [red pagination 2903].

⁶⁸⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 5 May 2003 T1100.1-11 [red pagination 2904].

was rare but pathological myocarditis was common. He stated that what he meant by that was that it is estimated that some five, perhaps even up to 10% of people with common viral infections may have inflammatory cells found in their heart but do not have any symptoms of involvement in the heart. He stated a small proportion of people with very common illnesses may have underlying myocarditis even though a doctor would not diagnosis it without some ancillary aid.⁶⁹⁰

443. Dr Bailey expressed the view that, in his opinion, Laura's myocarditis was probably related to a viral infection she had at the time and was unlikely to have accounted for her dying.⁶⁹¹
444. In cross-examination, he stated that he was not sure that it was critical whether you would describe Laura's myocarditis as mild or moderate because the opinions he expressed would apply to either. He stated that if myocarditis had involved the whole heart and if there were obvious abnormalities at the time that it was looked at without the microscope, then it would be more feasible that an arrhythmia could occur but he would not be swayed by the use of the terms "mild" or "moderate".⁶⁹²
445. Dr Bailey was asked whether if, out of the eight of the slides, myocarditis was observed in all of them, that would be significant. He stated it would depend on the extent of the inflammation because a small number of inflammatory cells might be regarded as myocarditis but might not be significant. He said it would depend on whether there was a very heavy infiltration in any of the slides and whether the slides were taken at random and not from particular areas.⁶⁹³
446. Dr Bailey was asked if he was aware whether observations had been made that there was in fact necrosis. He stated that that would be consistent with any degree of myocarditis except a very mild degree and that the more necrosis there was the greater the disturbance to the heart. He also agreed that even if there was only mild myocarditis, if it were, for example, in the conductive system that could be fatal. He agreed he could not rule out the possibility that myocarditis was in fact in the conductive system. He stated that could have been fatal but it would have to have occurred in a very tiny area of the heart where the conductive system is small or else affected a very large part of the conductive system in the lower part of the heart where it spreads out like a fan so it would have had to affected it all to really have led to that problem.⁶⁹⁴
447. He agreed that there may in fact be no clinical manifestation prior to death from myocarditis but stated it was not common.⁶⁹⁵
448. The defence called Dr Owen Jones (**Dr Jones**), a consultant paediatric cardiologist. In his report, he stated there was no credible evidence for an inherited disease of cardiac rhythm such as LQTS in the family. He also stated there was no evidence of an intrinsic congenital or acquired cardiac abnormality causing or contributing to the deaths of Caleb, Patrick and Sarah. However, he stated there was good evidence that Laura had myocarditis at the time of her death. He described myocarditis as

⁶⁹⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 5 May 2003 T1100.17-37 [red pagination 2904].

⁶⁹¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 5 May 2003 T1100.39-46 [red pagination 2904].

⁶⁹² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 5 May 2003 T1102.28-37 [red pagination 2902].

⁶⁹³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 5 May 2003 T1102.49-T1103.1 [red pagination 2906-2907].

⁶⁹⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 5 May 2003 T1103.12-52 [red pagination 2907].

⁶⁹⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 5 May 2003 T1104.56-T1105.1 [red pagination 2908-2909].

an inflammatory condition to the heart muscle for which there are many causes. He stated viral infection is a frequent cause and there may be features in affected individuals and recent viral illnesses. He stated myocarditis is a well-recognised cause of unexpected sudden death in children of all ages. In relation to Laura, he stated the crux of the matter was whether the myocarditis was causal, contributory or incidental to the death of Laura. He stated to his knowledge of myocarditis there is no evidence that there is a threshold of severity of histopathological features below which appropriately attributed sudden unexpected death cannot occur. He stated the absence of clinical features of heart failure cannot be used to argue that myocarditis has not caused a sudden death of an affected individual. He stated that considering the death of Laura in isolation from the standpoint of a paediatric cardiologist, he had no difficulty in attributing her death to myocarditis.⁶⁹⁶

449. Dr Jones stated in cross-examination that overall less than a quarter of the patients that he had seen with myocarditis had died. He agreed that the patients he saw with myocarditis are ones who had symptoms. He agreed that there would be people in the community who had myocarditis but who are symptom free.⁶⁹⁷
450. Dr Jones stated that he had read Dr Cala's evidence in the trial. He agreed that as he had not seen the histological slides he would defer to Dr Cala's judgment in relation to the histological findings.⁶⁹⁸
451. Dr Jones agreed that mild myocarditis almost never leads to death and that even with moderate myocarditis there are very few instances where sudden death occurs. He also agreed that myocarditis, which is severe, can present with a number of symptoms including fatigue, congestive heart failure, myalgia, chest pain, palpitations, respiratory distress and cyanosis.⁶⁹⁹
452. He also agreed that the finding of myocarditis in Laura could possibly be an incidental finding.⁷⁰⁰
453. Dr Jones was also asked whether he felt qualified to comment on whether or not Laura's myocarditis was a cause of death. He responded that he was prepared to state that it is a possible cause of death but that he was not in a position to state that it is the cause of death. He was asked if he would defer on issues like this to the better judgment of pathologists and stated he would defer to the extent there may be other issues that in their consideration make the consideration of myocarditis as being incidental in her case.⁷⁰¹
454. Dr Jones was asked further questions about the agonal heart rhythm detected by ambulance officers. He was asked whether the fact that there was agonal rhythm 24 minutes after the cessation of breathing helped him agree with the proposition that breathing stopped before the heart stopped. He stated he did not think it helped him although he agreed it could be consistent with it.⁷⁰²

⁶⁹⁶ Exhibit 2-H, Forensic pathology tender bundle, Report of Dr Owen Jones (15 April 2003) [red pagination 3860-3863].

⁶⁹⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 May 2003 T1266.30-43 [red pagination 3070].

⁶⁹⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 May 2003 T1268.5-15 [red pagination 3072].

⁶⁹⁹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 May 2003 T1269.7-T1270.51 [red pagination 3073-3074].

⁷⁰⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 May 2003 T1271.11-14 [red pagination 3075].

⁷⁰¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 May 2003 T1275.5-21 [red pagination 3079].

⁷⁰² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 May 2003 T1275.28-T1276.55 [red pagination 3079-3080].

455. He agreed with the evidence of Dr Bailey that the agonal heartbeat was consistent with injury due to lack of oxygen.⁷⁰³
456. Dr Jones was also asked whether he would expect to find agonal rhythm if a person had died of myocarditis and responded that agonal rhythm is the final electrical activity that is seen from a wide variety of mechanisms so he would not be surprised.⁷⁰⁴
457. In re-examination, Dr Jones agreed that the post-mortem report carried out by Dr Cala stated that in the myocardium there was a moderately dense infiltrate of lymphocytes which had aggregated in certain areas including subendocardially and along the superficial surface of the myocardium. He also agreed the post-mortem report showed large aggregates in the central area of the left ventricle and that in those areas there were large clusters of lymphocytes surrounded by degenerate myocytes. He also agreed that it showed that myocytolysis was present. Dr Jones described these as significant findings stating that the examination was consistent with the diagnosis of myocarditis in Laura and as an explanation for her death.⁷⁰⁵

The genetic evidence at the trial

458. The only genetic evidence at the trial was given by Dr Bridget Wilcken who, at the time, was a certified clinical geneticist employed by the New Children's Hospital at Westmead as a Senior Staff Physician. She stated she was the Chair of the New South Wales Health Department's Genetic Service Advisory Committee.⁷⁰⁶
459. In a statement made prior to the trial, she stated that in December 1999 she and her staff conducted tests of the newborn screening blood samples for all four of the Folbigg children. She said that the results were entirely normal.⁷⁰⁷
460. She stated that the tests excluded certain disorders of amnio acid metabolism and a large number of organic acidurias and fatty acid oxidation defects. She stated whilst those negative results of tests performed on cards stored for a varying number of years do not definitively exclude the disorders mentioned, there is no positive evidence indicating an inherited metabolic disorder affecting amnio acid, organic acid or fatty acid oxidation pathways.⁷⁰⁸
461. She stated that the tests performed by tandem mass spectrometry cannot be regarded as definitive because of the age of the samples and because the sensitivity of "this new type of test" is not yet fully known.⁷⁰⁹
462. In her evidence at the trial, Dr Wilcken referred to the fact that in December 1991 she conducted some tests on a urine sample taken from Patrick on 20 October 1990. She said she was unable to detect any genetic or metabolic disorders from the urine tests.⁷¹⁰

⁷⁰³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 May 2003 T1277.18-22 [red pagination 3081].

⁷⁰⁴ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 May 2003 T1277.52-56 [red pagination 3081].

⁷⁰⁵ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 May 2003 T1278.17-53 [red pagination 3082].

⁷⁰⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2003 T817.30-56 [red pagination 2621].

⁷⁰⁷ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Bridget Wilcken (14 January 2000) [red pagination 3714-3715].

⁷⁰⁸ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Bridget Wilcken (14 January 2000) [red pagination 3715].

⁷⁰⁹ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Bridget Wilcken (14 January 2000) [red pagination 3716].

⁷¹⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2003 T819.8-12 [red pagination 2623].

463. She was also asked about the tests from the blood samples taken from each of the children which she examined in December 1999 (see above at [459]). She said the results were entirely normal.⁷¹¹
464. She stated the tests undertaken were for at least 30 disorders and probably there were something like a total of 50 for which tests were carried out.⁷¹²
465. In cross-examination, Dr Wilcken agreed the tests were not definite in excluding large number of disorders.⁷¹³

Medical witnesses who did not give evidence at the trial

466. A number of medical experts supplied statements to the prosecution but were not called at the trial. As their statements were tendered before me it is convenient to make brief reference to them.
467. Dr Ophoven, a paediatric forensic pathologist, practising in the United States of America, supplied three reports to the prosecution. In the first report dated 6 October 2000, she expressed the view that the four children were all victims of homicidal assaults that resulted in their suffocation. She expressed the view that in small infants, that typically did not result in any external signs or physical evidence.⁷¹⁴
468. The reasons for her opinion were broadly those facts relied on by the Crown at the trial as coincidence evidence, coupled with the statement in “The Forensic Standards of Practice”, which would not allow for consideration of a second diagnosis of SIDS after a second sudden death and by the time a third child has died, the death must be investigated as homicide. She stated that the cause of death of Caleb should be stated as undetermined and the cause of death of the other children as suffocation, the manner of death being homicide.⁷¹⁵
469. In her second report dated 1 December 2001, Dr Ophoven essentially repeated her earlier views for the same reasons.⁷¹⁶ Her third opinion dated 27 March 2003, expressed the view that a gene IL-10 was not linked to SIDS events.⁷¹⁷ This proposition was not in dispute at the Inquiry.
470. Professor Robert Ouvrier (**Professor Ouvrier**) supplied a report dated 28 October 2002 in relation to Patrick’s death.⁷¹⁸ Professor Ouvrier was at the time the Foundation Professor of Paediatric Neurology at the Westmead Children’s Hospital. He stated from an examination of the material supplied to him that Patrick appeared to be normal at birth and to be well up to the time of his admission to hospital on 18 October 1990. He stated that the clinical findings on admission on that occasion

⁷¹¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2003 T820.12-14 [red pagination 2624].

⁷¹² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2003 T820.48-T821.3 [red pagination 2624-2625].

⁷¹³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2003 T821.36-54 [red pagination 2625].

⁷¹⁴ Exhibit 2-H, Forensic pathology tender bundle, Report of Dr Janice Ophoven (6 October 2000) [red pagination 3748].

⁷¹⁵ Exhibit 2-H, Forensic pathology tender bundle, Report of Dr Janice Ophoven (6 October 2000) [red pagination 3749].

⁷¹⁶ Exhibit 2-H, Forensic pathology tender bundle, Report of Dr Janice Ophoven (1 December 2001) [red pagination 3779-3792].

⁷¹⁷ Exhibit 2-H, Forensic pathology tender bundle, Report of Dr Janice Ophoven (27 March 2003) [red pagination 3848-3851].

⁷¹⁸ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Robert Ouvrier (28 October 2002) [red pagination 3803-3807].

coupled with the early onset of seizures, which became intractable, would be in keeping with encephalopathy due most likely, in his opinion, to an asphyxial episode. He stated that the pattern of delayed seizures was common in his experience in ALTEs of whatever cause. He stated the first CT scan description appeared to be more in keeping with such an asphyxial result rather than a shaking or striking injury to the head since there was no evidence of intracranial haemorrhage. He stated the subsequent evolution of the case with episodic tonic up gaze seizures and decrease in visual attention would have been consistent with brain damage suffered during the event leading to the admission to hospital.⁷¹⁹

471. Professor Ouvrier stated that the most plausible explanation was that there was an acute asphyxial event on the morning of 18 November 1990. He said it could have been a near miss SIDS or could have been due to deliberate suffocation of the infant. A series of such events in four children with exclusion of other underlying pathological states would be more likely due to deliberate suffocation than from any other cause. In that context, he enclosed a paper from Sir Roy Meadow propounding his theory.⁷²⁰
472. Professor Ouvrier also enclosed a paper published by Constantinou et al, 'Hypoxic-ischemic encephalopathy after near miss sudden death syndrome' (1989) 64 *Archives of Disease in Childhood* 703-708 (**Constantinou Article**).⁷²¹ This was an article relied upon by Associate Professor Michael Fahey (**Associate Professor Fahey**) in his evidence in the 2019 Inquiry (see [679] and [686] below). It is appropriate to deal with the article when I come to deal with Associate Professor Fahey's evidence.
473. Dr Richard Hawker (**Dr Hawker**), Consultant Paediatric Cardiologist, at the Children's Hospital Westmead, prepared a statement dated 6 March 2003.⁷²² He stated he examined a two page photocopy of a nine lead single channel electrocardiograph recording of Caleb. He stated that although it was not a complete standard electrocardiograph it showed no abnormality. He stated that the corrected QT interval in the recording was normal.⁷²³
474. He also stated that a one page photocopy of a recording of nine electrocardiograph leads relating to Patrick Folbigg recorded probably on 18 October 1990, although not a complete standard electrocardiograph, nevertheless showed no abnormality.⁷²⁴
475. Dr Hawker also referred to a single page printout of a single channel electrocardiograph recorded during a sleep study of Laura which identified a normal heart rhythm. He stated that the QT interval could not be measured accurately but was in the order of 420 milliseconds and showed no abnormality.⁷²⁵
476. Dr Hawker stated that on the evidence presented to him he was of the opinion

⁷¹⁹ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Robert Ouvrier (28 October 2002) [red pagination 3804-3807].

⁷²⁰ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Robert Ouvrier (28 October 2002) [red pagination 3807].

⁷²¹ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Robert Ouvrier (28 October 2002) [red pagination 3808-3820]; Exhibit 15-267, J E C Constantinou et al, 'Hypoxic-ischaemic encephalopathy after near miss sudden infant death syndrome' (1989) *Archives of Disease in Childhood* 703-708.

⁷²² Exhibit 2-H, Forensic pathology tender bundle, Statement of Richard Hawker (6 March 2003) [red pagination 3845-3847].

⁷²³ Exhibit 2-H, Forensic pathology tender bundle, Statement of Richard Hawker (6 March 2003) [red pagination 3846].

⁷²⁴ Exhibit 2-H, Forensic pathology tender bundle, Statement of Richard Hawker (6 March 2003) [red pagination 3846].

⁷²⁵ Exhibit 2-H, Forensic pathology tender bundle, Statement of Richard Hawker (6 March 2003) [red pagination 3846-3847].

that there was not an indication of prolonged QT interval in the electrocardiograph recordings that are available relating to the children Patrick and Laura Folbigg. He was unable to comment on the deaths of Caleb and Sarah as he noted that he did not have appropriate electrocardiograph records to examine in regards to those children.⁷²⁶

477. Associate Professor John Christodoulou provided a report to the Crown Prosecutor on 18 February 2003. This related to certain genetic variants which have been found to have no relevance.⁷²⁷
478. Professor Anthony Busuttil (**Professor Busuttil**), a Professor of Forensic Medicine at the University of Edinburgh, provided a report dated 6 November 2002 at the request of those then representing Ms Folbigg.⁷²⁸ In that report, he stated that from the very outset it was extremely unusual and unprecedented to have four deaths of siblings in the same family occurring in succession over a period of eight years. He stated he had never seen or heard of this occurrence before in over 30 years of practice in pathology. He stated that attempts of suffocation by some form of air impervious cover would likely lead to internal bleeding within the substance of the lung. He said if the child had died immediately that would have been seen at autopsy but if the child survives for a period the presence of the blood haemoglobin pigment later becomes broken down and remains for a lengthy period thereafter in the lungs as the derived breakdown pigment known as haemosiderin.⁷²⁹ I have already referred to Professor Berry's evidence on this issue (see [336] and [339] above).
479. Professor Busuttil also stated that in SIDS deaths, although no signs of disease are found, one would expect to find a small number of internal pinpoint size areas of haemorrhage in soft unsupported tissue known as petechiae that may be found over the lining of thymus gland, the pleural lining of the lungs and the pericardium of the heart.⁷³⁰
480. Professor Busuttil concluded in relation to Caleb that his death should not have been attributed to SIDS and that there was a congenital clinically diagnosed but not pathologically confirmed condition which could have led to upper airways obstruction. In that context, Professor Busuttil was referring to Caleb's laryngomalacia.⁷³¹
481. Professor Busuttil said that the presence of some haemosiderin in the lungs raised the possibility of imposed airway obstruction and that cannot be completely excluded.⁷³²
482. In relation to Patrick, Professor Busuttil expressed the view the death should not

⁷²⁶ Exhibit 2-H, Forensic pathology tender bundle, Statement of Richard Hawker (6 March 2003) [red pagination 3847].

⁷²⁷ Exhibit 2-H, Forensic pathology tender bundle, Report of Dr John Christodoulou (18 February 2003) [red pagination 3843-3844].

⁷²⁸ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Anthony Busuttil (6 November 2002) [red pagination 3821-3835].

⁷²⁹ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Anthony Busuttil (6 November 2002) [red pagination 3825-3827].

⁷³⁰ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Anthony Busuttil (6 November 2002) [red pagination 3827].

⁷³¹ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Anthony Busuttil (6 November 2002) [red pagination 3828].

⁷³² Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Anthony Busuttil (6 November 2002) [red pagination 3828-3829].

have been attributed to SIDS or asphyxia in the absence of typical asphyxia signs at autopsy. He stated there was a brain condition which could have given rise to serious life threatening convulsions and death could have occurred during the course of those convulsions.⁷³³

483. So far as Sarah was concerned, he stated the death approximates most of the four deaths as a typical death from SIDS.⁷³⁴ In relation to Laura, he stated that the death should not have been classified as SIDS. He said there was myocarditis which although may be completely incidental could have caused serious heart problems and even death unexpectedly. He stated that condition could not have been induced by imposed airways obstruction of this child either recently prior to death or previously.⁷³⁵
484. In conclusion, Professor Busuttil stated that it could not be said beyond reasonable doubt that the deaths were “irrefutably due” to imposed or induced airways obstruction.⁷³⁶

⁷³³ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Anthony Busuttil (6 November 2002) [red pagination 3831].

⁷³⁴ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Anthony Busuttil (6 November 2002) [red pagination 3833].

⁷³⁵ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Anthony Busuttil (6 November 2002) [red pagination 3834].

⁷³⁶ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Anthony Busuttil (6 November 2002) [red pagination 3835].

The Sentencing Proceedings and the Appeal

The Sentencing Proceedings and the Appeal

485. As stated at the outset of this Report, on 24 October 2003, Ms Folbigg was sentenced for the offences to a total term of imprisonment of 40 years with a non-parole period of 30 years: *R v Folbigg* [2003] NSWSC 895, at [101]-[107].
486. Ms Folbigg's appeal against conviction was dismissed but an appeal against sentence was allowed and her overall sentence was reduced to a term of 30 years with a non-parole period of 25 years: *R v Folbigg* [2005] NSWCCA 23; (2005) 152 A Crim R 35, at [190].
487. With respect to the submissions of Mr Folbigg,⁷³⁷ I do not place any weight on the remarks made by Barr J in sentencing Ms Folbigg. This is not to make any criticism of these remarks but simply to note they were made in an entirely different context to that with which I am dealing. I will deal subsequently in this Report with the psychiatric evidence which was before Barr J on the sentencing proceedings.
488. The Court of Criminal Appeal dismissed Ms Folbigg's appeal against her conviction: *R v Folbigg* [2005] NSWCCA 23; (2005) 152 A Crim R 35, at [191]. One of the grounds of appeal was that the verdicts of guilty were unreasonable and could not be supported having regard to the evidence.
489. Sully J, with whom Dunford and Hidden JJ agreed, after referring to some of the evidence of Dr Springthorpe and Professor Byard in relation to Caleb stated at [123]:
- In my opinion it was clearly open to the jury to accept the evidence of the Crown witnesses, and to prefer that evidence to the contrary evidence of Professor Byard. In that event it was clearly open to the jury to accept that the evidence did not leave open as a reasonable possibility that Caleb had died from an identified natural cause.
490. In relation to Patrick's ALTE, Sully J at [124] again reviewed the medical evidence concerning this event, particularly the evidence of Dr Dezordi and Dr Wilkinson. He also referred to the evidence of Dr Marley, Associate Professor Cooper, Professor Byard, Professor Herdson, Professor Berry and Dr Beal. He reached the following conclusion at [125]:
- "In my opinion it was reasonably open to the jury to find that the overwhelming preponderance of the relevant medical evidence did not leave it open as a reasonable possibility that Patrick's ALTE had been caused by an identified natural cause."
491. In relation to Patrick's death, Sully J at [126] stated he could not see why the jurors who saw and heard the relevant witnesses could not reasonably have found that the preponderance of that evidence did not leave it open as a reasonable possibility that Patrick's death, like his previous ALTE, had not been caused by some identified natural causes.
492. In relation to Sarah, he stated it was open to a reasonable jury to accept that the evidence excluded Sarah's uvula as an identified natural cause of death and excluded any other identified natural cause of death.
493. In relation to Laura, Sully J referred in detail to the evidence of Dr Cala both in chief and cross-examination and to the evidence of Dr Bailey that the myocarditis was unlikely to have accounted for her dying. He stated that he did not see why it was not open to a reasonable jury to find that the preponderance of that evidence closed off

⁷³⁷ Written Closing Submissions on behalf of Mr Folbigg (19 April 2023) 5 [15].

any reasonable possibility that the cause of Laura's death was either myocarditis or some other identified natural cause. His Honour then made the following comment at [128]:

The whole of the foregoing analysis of the medical evidence establishes, in my opinion, that it was amply open to the jury, which saw and heard the witnesses, to reject the defence hypothesis that each of the five relevant events could be explained away as having derived from identified natural causes; and so to be satisfied beyond reasonable doubt that the Crown had demonstrated that the five events could not be so explained away. I am myself, and as a matter of independent assessment of the evidence, of the same opinion.

494. His Honour then stated at [129] that the conclusion entails the next step in considering the ground of appeal focuses upon the only real hypothesis remaining in the practical sense open on the evidence namely, first, death or ALTE caused by unidentified natural causes or, second, death or ALTE caused by unnatural causes. In that context he referred to the evidence of Professor Byard that he had never had a case or heard of a case where three or more children in one family had all died or suffered an ALTE during a sleep period at home.

495. His Honour stated at [131] that there should be added to that material evidence of the contents of Ms Folbigg's diaries. Having given what he described as a representative sample of the diaries, he made the following comments, at [132]:

These entries make chilling reading in the light of the known history of Caleb, Patrick, Sarah and Laura. The entries were clearly admissible in the Crown case. Assuming that they were authentic, which was not disputed; and that they were serious diary reflections, which was not disputed; then the probative value of the material was, in my opinion, damning. The picture painted by the diaries was one which gave terrible credibility and persuasion to the inference, suggested by the overwhelming weight of the medical evidence, that the five incidents had been anything but extraordinary coincidences unrelated to acts done by the appellant.

496. His Honour distinguished the decision of the Court of Appeal in England and Wales in *R v Cannings* [2004] 1 WLR 2607 which held, at [13], that where there were one, two or even three infant deaths in the same family, the exclusion of currently known natural causes of infant death did not leave to the inexorable conclusion that the death or deaths resulted from the deliberate infliction of harm. Significantly, one of the grounds on which his Honour distinguished that case was that the Court of Appeal in *Cannings* received at the hearing of the appeal a body of fresh scientific evidence described in the judgment as "a substantial body of research not before the jury and received by us in evidence". Sully J commented at [139] that, "There was no such fresh post-trial evidence before this Court." That is quite different to what has emerged in this Inquiry.

497. His Honour's conclusions on this ground were expressed in the following terms, at [142]:

The differences between the appellant's case and that of Mrs Cannings entail that it does not follow that the reasoning which led to the quashing of Mrs Cannings' convictions must lead more or less as a matter of course to the quashing of the appellant's convictions.

The 2019 Inquiry

The 2019 Inquiry

498. As I indicated (see [4] above), on 22 August 2018 a direction was given by the Governor pursuant to s 77(1)(a) of the CAR Act that an inquiry be conducted into Ms Folbigg's convictions. The direction stated that the doubt or question concerned evidence as to the incidence of reported deaths of three or more infants in the same family attributed to unidentified natural causes.⁷³⁸
499. The 2019 Inquiry received a considerable body of scientific and medical evidence, all of which was tendered before me. That evidence can be conveniently divided into five tranches:
- (a) Evidence concerning risk factors associated with the incidence of SIDS and the application of those risk factors to the Folbigg children. That evidence was given by Professor Rosemary Horne (**Professor Horne**) and Professor Dawn Elder (**Professor Elder**). They each provided a report and were examined concurrently at the 2019 Inquiry.
 - (b) Evidence from forensic pathologists concerning the causes of death of each child. Evidence on this issue was given by Professor Hilton and Dr Cala, who had both given evidence at the trial. Evidence was also given by Professor Stephen Cordner (**Professor Cordner**) and Professor Johan Duflou (**Professor Duflou**). Each of these pathologists provided reports and were examined concurrently.
 - (c) Evidence from experts in immunology and microbiology. Reports were provided by Professor Cecilia Blackwell (**Professor Blackwell**) and Professor Robert Clancy AM (**Professor Clancy**). Professors Blackwell and Clancy gave evidence concurrently.
 - (d) Evidence from paediatric neurologists concerning Patrick's ALTE and his subsequent death. This evidence was given by Dr Monique Ryan (**Dr Ryan**) and Associate Professor Fahey, each of whom provided a report and were examined concurrently.
 - (e) Evidence relating to possible genetic causes of death of the children was given by the "Sydney team" – comprising Dr Alison Colley (**Dr Colley**), Dr Michael Buckley (**Dr Buckley**) and Professor Edwin Kirk (**Professor Kirk**)⁷³⁹ – and, the "Canberra team" – comprising Professors Vinuesa, Cook and (then) Dr Arsov.⁷⁴⁰ Further, Professor Jonathan Skinner (**Professor Skinner**) provided two reports to the Inquiry⁷⁴¹ and reviewed the Supplementary report provided by Professor Kirk and Dr Buckley dated 5 July 2019.⁷⁴² Professors Schwartz, Cook and Michael Toft Overgaard also reviewed, contributed to and endorsed the Supplementary report prepared by

⁷³⁸ Exhibit 1, Governor's Direction for the Inquiry (18 May 2022) [red pagination 1].

⁷³⁹ Exhibit 2-Z, Joint report of Sydney genetics team (29 March 2019); Exhibit 2-AX, Written response from Professor Kirk and Dr Buckley to joint expert report of Professor Vinuesa and Professor Cook (9 April 2019).

⁷⁴⁰ Exhibit 2-AF, Joint report of Canberra genetics team (29 March 2019); Exhibit 2-AY, Written response from Professor Vinuesa and Professor Cook to response from Professor Kirk and Dr Buckley (12 April 2019).

⁷⁴¹ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019); Exhibit 2-BJ, Supplementary report of Professor Jonathan Skinner (24 April 2019).

⁷⁴² Exhibit 2-BV, Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (5 July 2019).

Professor Vinuesa and Dr Arsov dated 11 July 2019.⁷⁴³ The “Sydney team” and the “Canberra team” were examined concurrently at the 2019 Inquiry, with the exception of Professors Cook, who did not give oral evidence.

Evidence as to SIDS

500. This evidence was given by Professors Horne and Elder. Professor Horne was the Senior Principal Research Fellow at Monash University and had headed an extensive research program investigating the physiological mechanisms involved in SIDS and other sleep disorders in children. She was awarded a Doctorate of Science by Monash University in 2017 in recognition of the work which she carried out in relation to the mechanisms of SIDS.⁷⁴⁴
501. In her report dated 10 February 2019, she stated the current definition of SIDS referred to in the Guidelines (**SIDS Guidelines**) to be “the sudden unexpected death of an infant < 1 year of age, with onset of the fatal episode apparently occurring during sleep, that remains unexplained after a thorough investigation, including performance of a complete autopsy and review of the circumstances of death and the clinical history”.⁷⁴⁵ Professor Horne stated that SIDS occurs during sleep with 90% of deaths occurring during the first six months of life with a peak at two to four months and fewer babies dying within the first month.⁷⁴⁶
502. Professor Horne stated that in recent years there had been significant advances in identifying genetics and neuropathology which are associated with SIDS. She said these advances had established an increasing number of inherited or sporadic gene mutations which can cause either sudden unexpected death (for example, cardiac arrhythmias) or polymorphisms which likely contribute to death but require additional factors. She stated that genetic studies indicate that up to 35% of SIDS cases might be explained by familial or genetic diseases such as cardiomyopathies, ion channelopathies or metabolic disorders that remained undetected during conventional forensic autopsy procedures. She stated there was convincing evidence that a slight infection and an activated immune system are involved in SIDS stating that almost half of SIDS infants had a mild respiratory infection in the last days prior to death.⁷⁴⁷
503. Professor Horne indicated that research had established that ALTEs were not associated with SIDS. She stated it was likely that the ALTE experienced by Patrick, which preceded his death, led to his epilepsy and this may have contributed to his death. She stated there was little evidence that an ALTE without long term sequelae precedes SIDS but, in the case of Patrick, the outcome of the ALTE was severe.⁷⁴⁸
504. Professor Horne stated that it had been estimated that the risk of SIDS was between 5-10 times greater for infants where a sibling had already been a SIDS victim because many of the genetic and environmental factors would be the same.

⁷⁴³ Exhibit 2-BW, Response from Professor Carola Vinuesa, Professor Matthew Cook, Professor Peter Schwartz, Professor Michael Toft Overgaard and Dr Todor Arsov to supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (11 July 2019).

⁷⁴⁴ Exhibit 2-J, Report of Professor Rosemary Horne (10 February 2019) [red pagination 3868].

⁷⁴⁵ The SIDS Guidelines were recommended by Henry F Krous et al in an article entitled, “Sudden Infant Death Syndrome and unclassified sudden infant death a definitional and diagnostic approach” (2004), 114(1) *Paediatrics* 2004; 114:234-238: Exhibit 15-18(j) [red pagination 417-421].

⁷⁴⁶ Exhibit 2-J, Report of Professor Rosemary Horne (10 February 2019) [red pagination 3868-3869].

⁷⁴⁷ Exhibit 2-J, Report of Professor Rosemary Horne (10 February 2019) [red pagination 3870-3871].

⁷⁴⁸ Exhibit 2-J, Report of Professor Rosemary Horne (10 February 2019) [red pagination 3873].

She referred to a chapter written by her in Jhodie Duncan and Roger Byard's *SIDS – Sudden Early Childhood Death: The Past, the Present and the Future* which reported nine families which had three infant deaths, eight of the nine being natural deaths and one a triple homicide. She stated there had been a report of five consecutive sibling deaths in one family.⁷⁴⁹

505. In summary, Professor Horne noted that none of the Folbigg children were found prone, born pre-term or low birth weight or exposed to maternal smoking during pregnancy before or after birth, which are the major risk factors for SIDS. She stated they were all sleeping in a separate room (with the exception of Sarah) rather than the parental bedroom and were not breastfed, factors which are protective. She stated there was no evidence of bedding covering their face so there was no evidence of accidental suffocation. Thus, according to Professor Horne, the most common risk factors for SIDS were not present.⁷⁵⁰
506. Professor Horne noted that LQTS seemed to have been discounted in all the infants. She stated, however, recent advances in genetic testing and pathological analysis had now identified possible underlying factors which could potentially combine with environmental factors to result in SIDS and could possibly explain the multiple deaths in one family.⁷⁵¹
507. Professor Elder was a Consultant Paediatrician at the Wellington Hospital and Professor and Head of the Department of Paediatrics and Child Health at the University of Otago in Wellington. Her PhD thesis was entitled, "Respiratory Variability in Infants and Children". She stated she was specialist trained in both Neonatal Medicine and Paediatric Sleep Medicine.⁷⁵²
508. Professor Elder was asked to identify and explain any new research or advances since May 2003 within her areas of expertise that she considered relevant or possibly relevant to the deaths of any of the children or the cause of the ALTE in respect of Patrick.⁷⁵³ Professor Elder gave a limited response. In the context of the present Inquiry, it is not of particular significance.
509. In her evidence, Professor Horne was referred to the subcategories contained in the SIDS Guidelines.
510. The SIDS Guidelines contain sub-categorisations, with Category 1A SIDS including unexplained infant deaths where the classic features of SIDS are present and completely documented. Clinical requirements are that the child is aged between 21 days and nine months with normal growth and development and no similar deaths in siblings. It also requires a complete investigation of the circumstances surrounding the death to take place. Category 1B SIDS is described as a death which falls within Category 1A SIDS except for an incomplete examination of the causes of death, whilst Category 2 SIDS for relevant purposes refers to an unexplained death of a child less than 21 days old or aged between 9-12 months.⁷⁵⁴

⁷⁴⁹ Exhibit 2-J, Report of Professor Rosemary Horne (10 February 2019) [red pagination 3873].

⁷⁵⁰ Exhibit 2-J, Report of Professor Rosemary Horne (10 February 2019) [red pagination 3874].

⁷⁵¹ Exhibit 2-J, Report of Professor Rosemary Horne (10 February 2019) [red pagination 3874].

⁷⁵² Exhibit 2-K, Report of Professor Dawn Elder (15 February 2019) [red pagination 3962].

⁷⁵³ Exhibit 2-K, Report of Professor Dawn Elder (15 February 2019) [red pagination 3963].

⁷⁵⁴ Exhibit 15-18(j), Henry F Krous et al, 'Sudden Infant Death Syndrome and Unclassified Sudden Infant Deaths: A Definitional and Diagnostic Approach' (2004) 114(1) Pediatrics 234-238 [red pagination 418-419].

511. Professor Horne stated that older than 21 days was prescribed in the definition of Category 1A SIDS to exclude deaths which occurred in a very young infant which could have been attributed to things that happened in utero and following birth. She stated the definitions refer to children under 12 months of age but 90% of babies die within the first six months of life and there is a unique peak in incidence between two to four months and so in the definition the majority of babies will be dying under nine months of age.⁷⁵⁵
512. Professor Horne agreed that in relation to Category 1B SIDS, referred to in the SIDS Guidelines, the deaths have the classic feature of SIDS with an incomplete investigation. She stated SIDS was a diagnosis of exclusion and it is necessary to exclude all possible causes.⁷⁵⁶
513. Professor Elder gave evidence that purpose of the subcategories of SIDS was “just to account for the fact particularly that you don’t always have all the information you would like to make a firm diagnosis”.⁷⁵⁷ She stated that if you had more than one death in a family you have to consider whether the risk factors and the circumstances are the same or whether there is some other influence and particularly you have to think about undiagnosed congenital disorders or inborn errors of metabolism that might present in this way.⁷⁵⁸
514. Professor Horne stated that she believed SIDS was multi-factorial and an infant will only die if there are concurrently three factors. First, a vulnerable infant, one who has been born pre-term or exposed to external smoking. Second, the infant is exposed to an exogenous stressor, for example, being placed prone to sleep or sleeping in bed with a parent and, third, the baby is in a critical development period. She stated that in the first year of life cardiorespiratory control is developing very rapidly and is quite unstable.⁷⁵⁹
515. Professor Elder agreed they were risk factors but not in themselves causes.⁷⁶⁰
516. Professor Horne in her evidence repeated her comment in her report that Caleb did not have the major risk factors for SIDS.⁷⁶¹ Professor Elder stated she would agree there are no classic SIDS risk factors and stated “against that Caleb was apparently thriving at the time of death and if there had been a significant influence from his medical problems, he probably would not have been thriving because when you are very little, the main thing you do is eating and growing and if you have significant health issues that can affect eating, feeding and growing”.⁷⁶² She noted the clinical diagnosis of laryngomalacia and said that is “just a little question mark around how that might have affected him, even though he appeared to be thriving”.⁷⁶³
517. In dealing with Patrick, Professor Horne repeated her view that he was low risk for having an ALTE and that such events are not linked to SIDS.⁷⁶⁴ Professors Horne

⁷⁵⁵ Exhibit 4, Transcript of the 2019 Inquiry, 18 March 2019 T22.15-35 [red pagination 23].

⁷⁵⁶ Exhibit 4, Transcript of the 2019 Inquiry, 18 March 2019 T23.45-48 [red pagination 24].

⁷⁵⁷ Exhibit 4, Transcript of the 2019 Inquiry, 18 March 2019 T24.49-50 [red pagination 25].

⁷⁵⁸ Exhibit 4, Transcript of the 2019 Inquiry, 18 March 2019 T25.16-20 [red pagination 25].

⁷⁵⁹ Exhibit 4, Transcript of the 2019 Inquiry, 18 March 2019 T26.8-21 [red pagination 27].

⁷⁶⁰ Exhibit 4, Transcript of the 2019 Inquiry, 18 March 2019 T26.42-43 [red pagination 27].

⁷⁶¹ Exhibit 4, Transcript of the 2019 Inquiry, 18 March 2019 T34.42-43 [red pagination 35].

⁷⁶² Exhibit 4, Transcript of the 2019 Inquiry, 18 March 2019 T35.15-22 [red pagination 36].

⁷⁶³ Exhibit 4, Transcript of the 2019 Inquiry, 18 March 2019 T35.23-26 [red pagination 36].

⁷⁶⁴ Exhibit 4, Transcript of the 2019 Inquiry, 18 March 2019 T36.9-17 [red pagination 37].

and Elder both agreed that at the time of his death, Patrick was a quite different boy from the time of his ALTE pointing out that he had recurrent seizures and he was in and out of hospital more than you would expect of a healthy boy.⁷⁶⁵

518. In relation to Sarah, Professor Horne, with the agreement of Professor Elder, stated that Sarah was older than the usual SIDS victim. Professors Horne and Elder considered that Sarah would have been at low risk for SIDS.⁷⁶⁶
519. In relation to Laura, Professor Elder stated that the common risk factors for SIDS were not present and the death occurred at an age range that was not usual for SIDS. However, Professor Elder stated she had certainly seen children of an older age range die in circumstances where they have been unable to exactly understand why. She pointed to the fact that there had been a history of recent infection which has been seen in children who have died suddenly and unexpectedly. Professor Horne agreed but added that sudden unexpected death in childhood is actually rarer than SIDS.⁷⁶⁷

The Pathology Evidence

(i) Professor Cordner

520. Professor Cordner was at the time of the 2019 Inquiry the Professor of Forensic Pathology International at Monash University and Head of International Programmes at the Victorian Institute of Forensic Medicine.⁷⁶⁸
521. Though undated, Professor Cordner's report was prepared in 2015. For the purposes of his report he reviewed, among other things, the pathology reports available at the time of trial and the transcripts of evidence of each of the pathologists and other medical experts who gave evidence at the trial.⁷⁶⁹
522. In Chapter I of his report, Professor Cordner criticised the approach taken to the forensic pathology evidence at the trial. He stated that "asphyxia" was not a helpful word in forensic pathology, as it is not understood in a uniform way, is not a diagnosis, and is not diagnosable.⁷⁷⁰ He also criticised the approach taken at trial stating "[w]hen it is all pared back, the medical evidence at the trial consists of four unexplained deaths (and an acute life threatening event) in one family which in the view of the doctors were, with no actual medical evidence, likely to be four murders (and a very serious assault) by smothering".⁷⁷¹ He stated that actually there were two unexplained deaths, not four, and an unexplained ALTE. He said it was his view that, taken in isolation, Laura's death is an uncontroversial case of death due to myocarditis. Professor Cordner stated that Dr Cala's view, that Laura died with myocarditis, rather than from it, "do[es] not hold water".⁷⁷² He stated that Patrick had brain pathology and seizures which, taken in isolation, are sufficient to account for a sudden death, accepting his ALTE remained unexplained. For Caleb and Sarah, Professor Cordner flagged the possibility of further developments in

⁷⁶⁵ Exhibit 4, Transcript of the 2019 Inquiry, 18 March 2019 T37.25-36 [red pagination 38].

⁷⁶⁶ Exhibit 4, Transcript of the 2019 Inquiry, 18 March 2019 T38.13-29 [red pagination 39].

⁷⁶⁷ Exhibit 4, Transcript of the 2019 Inquiry, 18 March 2019 T40.28-43 [red pagination 41].

⁷⁶⁸ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T65.5-7 [red pagination 67].

⁷⁶⁹ Exhibit 2-Q, Report of Professor Stephen Cordner (undated).

⁷⁷⁰ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4176].

⁷⁷¹ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4177].

⁷⁷² Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4177].

the understanding of cardiac arrhythmias and genetics which could help explain their deaths. However, he stated that, at the very worst, one is actually left with an uncertain number (in his view, two) of infant and childhood deaths of undetermined cause, compatible with SIDS and also compatible with natural causes including cardiac arrhythmias and an ALTE in one family. He also stated that it was wrong to rely on the forensic pathology evidence to support the conclusion that one or more of the Folbigg children were the victim of a homicide. Professor Cordner stated there was no merit in forcing certainty where uncertainty exists. He accepted the findings could not rule out smothering in one or more of the cases but, especially in the case of Laura, he stated not only was there an acceptable natural cause of death, but microscopically it was important that no signs of compression of the face were present.⁷⁷³

523. In Chapter VI of his report, Professor Cordner reviewed the forensic pathology evidence provided at the trial. He criticised Dr Cala describing asphyxia as death from a failure to breathe. Professor Cordner said that was based on a misconception that expert forensic pathology can tell whether a person has died because they stopped breathing as opposed to having died because their heart stopped, or died from more complicated mechanisms. He said forensic pathology cannot distinguish between or identify or diagnose any of them. He said the answer to the question asked of Dr Cala purported to be a forensic pathology answer but was not an expert pathology answer based on autopsy findings rather it was found in an assessment of the circumstances that the four unexplained deaths occurred in the one family. Professor Cordner described the assessment of the circumstances as superficial.⁷⁷⁴ In summary, he criticised the use of the word “asphyxia” for the following reasons. First, the term is not a useful term in forensic medicine. It is only useful when it is further particularised and when this is done there is no contribution from the word “asphyxia”. Second, if it is thought it might loosely correspond with mechanical means of interfering with respiration, it is still of little or no technical use as there are many ways this can occur. Third, asphyxia is not a diagnosis, mechanical asphyxia is not a diagnosis and neither is diagnosable. Fourth, asphyxia is a non-specific term for a number of entities of different kind historically collected together.⁷⁷⁵
524. In dealing with what he described as “mechanical asphyxia”, Professor Cordner pointed to the absence of signs of smothering in the Folbigg deaths. He referred to the signs identified by Vanezis,⁷⁷⁶ namely facial and conjunctival petechiae, stating he would also add petechiae in the inner aspects of the lips, the mouth and the epiglottis. Professor Cordner pointed out in none of the four deaths was there any suggestion of the presence of any of those signs. He stated that resuscitation was a reasonable explanation for the abrasions on Sarah’s face, if in fact they occurred around the time of death and not on some other occasion.⁷⁷⁷
525. Professor Cordner referred to the evidence at the trial that fatal smothering may leave no signs. He said whilst that is true, the converse is also true, which is that smothering can result in general and specific signs in infants and adults. He pointed out neither general nor specific signs were seen in any of the four cases where death, on the homicide hypothesis, was due to smothering. Nor on a fifth occasion,

⁷⁷³ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4177-4178].

⁷⁷⁴ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4210-4211].

⁷⁷⁵ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4217].

⁷⁷⁶ P Vanezis, *Pathology of Neck Injury* (Butterworths, 1989) p 44.

⁷⁷⁷ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4219-4220].

Patrick's ALTE, where it was alleged that an attempted homicidal smothering occurred. Professor Cordner stated their absence played on the other side of the balance (against smothering), especially as they allegedly represent four cases of smothering. He pointed out that, in addition, Laura was no longer an infant and the chance of facial petechiae occurring in her age group with smothering was probably somewhat greater.⁷⁷⁸

526. Professor Cordner referred to statistics on death from smothering or compression of the mouth and nose contained on the National Coronial Information System (**NCIS**) for NSW and Victoria since 2000. He pointed out the results showed smothering or compression of the mouth and nose had been rarely concluded as the cause of death in children of less than or equal to two years of age in Victoria and NSW and demonstrated that smothering does leave signs in some infant and childhood cases with two out of five cases having both general and some specific signs of smothering.⁷⁷⁹
527. Evaluating the Folbigg children's deaths against that background, Professor Cordner stated that, in those circumstances, firstly there was no forensic pathology evidence to suggest the Folbigg children were deliberately smothered or killed; secondly, the lack of facial injuries is evidence against the conclusion of smothering; and, thirdly, the lack of injuries inside the mouth is a particularly significant factor against the conclusion of smothering in Laura's case.⁷⁸⁰
528. Professor Cordner stated that another important aspect of the case was implicit, not explicit. This aspect is related to the mistaken thought that all four deaths are either murder on the one hand, or an unknown natural cause on the other. He noted that because the deaths were not explained, non-accidental injury became the default explanation. He observed that "the point was made in evidence that no one has heard of a family with (three or) four such deaths; therefore, so the default corollary appears to be, these must be homicides".⁷⁸¹ Further, he pointed out that nowhere in the transcript did he see the rejoinder "how often have you seen four homicides of infants, toddlers all in one family, let alone four homicides, masquerading as SIDS or SIDS-like deaths".⁷⁸² I have already noted that, implicit in some of the expert evidence given or available at the time of the trial, reliance was placed on the hypothesis criticised by Professor Cordner, being effectively based on Meadow's Law. As will also be seen from my conclusion, I also agree that in considering whether or not to rely on the coincidence evidence, the converse – namely, the likelihood of four deaths in one family occurring over a period of ten years were caused by smothering without any trace and masqueraded as SIDS – is a relevant consideration.
529. Professor Cordner noted that his conclusion was supported by Justice Goudge in his Inquiry into Paediatric Forensic Pathology in Ontario.

In the Goudge Inquiry Report, Justice Goudge is critical of the approach which can be summarized as follows, (and which could be at the heart of the pathology evidence in R

⁷⁷⁸ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4221].

⁷⁷⁹ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4222].

⁷⁸⁰ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4222-4223].

⁷⁸¹ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4229].

⁷⁸² Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4229].

530. In dealing with the death of Patrick, Professor Cordner noted that the main evidence regarding his death was provided by Dr Wilkinson. He noted that at the time of Patrick's death, Dr Wilkinson was of the view that Patrick's death was due to his epilepsy which in turn was a consequence of the brain damage from the ALTE.⁷⁸⁴
531. Professor Cordner stated that the particularly important part of the autopsy discussed in the evidence at trial was the neuro histopathology report of Dr Kan which I have set out at [93].⁷⁸⁵ He described Dr Wilkinson's evidence, insofar as it refers to the understanding of the cause of Patrick's ALTE and death, as confusing and potentially misleading.⁷⁸⁶ Professor Cordner identified the following problems. First, once it is understood that "asphyxia" is not a meaningful concept and cannot be diagnosed, much of the examination-in-chief and parts of the cross-examination becomes clearer and seen to be non-contributory to understanding these deaths. Second, that Dr Wilkinson, at one point, said the post-mortem was of no help in understanding Patrick's death and then repeatedly used the histopathology report to support a view that the death was asphyxial in nature. Professor Cordner stated it was possible that Dr Wilkinson's whole emphasis was to ensure that everybody understood the ALTE was not due to herpes simplex encephalitis. Third, Professor Cordner noted that Dr Wilkinson sets much store on Dr Kan's report as establishing that Patrick suffered an asphyxial episode. He noted that Dr Wilkinson referred to laminar necrosis of the occipital cortex as evidence in support of this proposition. Professor Cordner stated it was just as likely, if not more so, that the laminar necrosis had occurred because of hypotension (low blood pressure) resulting from a primary cardiac event as it is from a primary respiratory obstruction event. Professor Cordner pointed out that no reference was made during the evidence of any significance attaching to the serious seizures resulting in Patrick's admissions to hospital on 4 and 14 November 1990. Professor Cordner said that the admissions demonstrated the serious nature of Patrick's illness stating that even in the context of the murder charges it was not alleged that these events were other than the natural consequences of Patrick's underlying encephalopathy. He stated this would appear to be strong internal evidence of the fatal potential of the seizure disorder associated with his encephalopathy.⁷⁸⁷
532. In Chapter X of his report, Professor Cordner stated that essentially, when stripped of its trappings, the forensic pathologists' and other doctors' conclusion at trial that supported the homicide hypothesis is based on the coincidence of four deaths, an apparent lack of identifiable causes of death and an ALTE in one family. He stated, in his view, any conclusion that the Folbigg children had been killed should be reached in the knowledge that such a conclusion had no forensic pathology basis or support. He stated that, in his view, there is forensic pathology evidence against such a conclusion.⁷⁸⁸
533. In dealing specifically with the death of Laura, Professor Cordner referred to the

⁷⁸³ Ontario Ministry of the Attorney General, *Inquiry into Paediatric Forensic Pathology in Ontario* (Report of The Honourable Stephen Goudge, 2008, vol 3 p 415); Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4229].

⁷⁸⁴ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4230].

⁷⁸⁵ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4231].

⁷⁸⁶ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4236].

⁷⁸⁷ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4236-4237].

⁷⁸⁸ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4238].

investigation carried out by Dr Colleen D'Arcy, using the NCIS, regarding deaths from myocarditis in children under two years of age, in New South Wales and Victoria since 2000. Using the NCIS, the study found that there were a total of 39 cases where the cause of death of a child was myocarditis – 19 cases from New South Wales and 20 cases from Victoria. Of those 39 cases, Professor Cordner stated that seven had either no post-mortem report, the circumstances of death were not available for review or the child did not die of isolated myocarditis. He noted that five cases were still open and under investigation and were not assessable. Of the remaining 27 cases, Professor Cordner stated that 14 were from New South Wales and 13 were from Victoria; 15 were male and 12 were female. He noted the age of death ranged from seven days to two years.⁷⁸⁹ Professor Cordner referred to Dr Cala's opinion that, in Laura's case, myocarditis was patchy and mild compared to other cases where the inflammation was more marked. Professor Cordner stated he did not think the myocarditis was patchy and mild. He stated it was better described as widespread and at least moderate in degree. He stated he circulated photomicrographs of the myocardium to ten consultant forensic pathology colleagues at the Victorian Institute of Forensic Medicine. Professor Cordner noted that each of the pathologists essentially agreed with his view.⁷⁹⁰

534. In relation to Professor Berry's comment at the trial that he could see no abnormality of the heart muscle, Professor Cordner stated that in 13 of the 27 cases, the hearts were normal; in 12 of the 27 cases, the hearts were regarded as having an abnormal naked eye appearance; and, in two of the cases there was no information available.⁷⁹¹
535. Professor Cordner also referred to the report by Webber et al in 2008 regarding a series of 1516 paediatric autopsies over a ten year period.⁷⁹² He noted that histologically proven myocarditis was diagnosed in 28 cases, and in 11 of those cases there was no macroscopic evidence of abnormality in the heart.
536. Professor Cordner also concluded that the Webber et al report disclosed that sudden and unexpected death is not all that unusual in a population of infants and toddlers dying from myocarditis, occurring in about half the cases referred to in his study. He noted that of the 27 cases, 12 arrived dead at hospital, of which ten were found in a cot or bed.⁷⁹³
537. In those circumstances, Professor Cordner stated, consistent with his view, most forensic pathologists would be comfortable ascribing the death, in similar circumstances as Laura's, as being due to myocarditis.⁷⁹⁴

⁷⁸⁹ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4238-4239].

⁷⁹⁰ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4246-4248].

⁷⁹¹ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4246-4248].

⁷⁹² M A Weber et al, 'Clinicopathological features of paediatric deaths due to myocarditis: an autopsy series' (2008) 93(7) Archives of Disease in Childhood 594-598; Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4248].

⁷⁹³ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4249].

⁷⁹⁴ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4250].

538. In relation to Patrick, Professor Cordner noted that the cause of death, concluded by the pathologist responsible for his autopsy, was recorded as follows:
- (1) (a) asphyxia due to airways obstruction;
 - (b) epileptic fits;
 - (c) encephalopathic disorder (underlying cause not determined on investigation).⁷⁹⁵
539. Professor Cordner pointed out that Patrick's death had been considered by all participants at the trial as an event quite independent of the ALTE. He stated that once Patrick had suffered the ALTE, his death was perfectly understandable as being from the delayed effects of the ALTE. He described that as a "noncontroversial, ordinary thought".⁷⁹⁶
540. Professor Cordner stated that, considered alone, Sarah's death was properly diagnosed as Category 2 SIDS. He noted that if the same situation was to present itself at the time of his report there would be thorough cardio-genetic investigations of possible inherited arrhythmias.⁷⁹⁷
541. As to Caleb's death, Professor Cordner stated that, by contemporary standards, it would have been properly diagnosed as Category 1B SIDS.⁷⁹⁸
542. Professor Cordner then collectively considered the deaths of Caleb and Sarah, together with Patrick's ALTE. He stated that he excluded the deaths of Laura and Patrick because, considered alone, those deaths were explicable, if not explained.⁷⁹⁹
543. In dealing with those events, Professor Cordner pointed out that genetic factors have been found to play a role in some patients with SIDS and that, at the time of his report, no fewer than 13 cardiac channelopathy susceptibility genes had been implicated in the pathogenesis of SIDS.⁸⁰⁰ His comments in this aspect of his report anticipate the fresh evidence that was brought in the present Inquiry; relevantly dealt with below.
544. Professor Cordner reached the following conclusions:
- (1) there was nothing from a forensic pathology viewpoint to suggest that any of the children had been killed;
 - (2) it was surprising that in five smothering events, there were no signs of smothering;
 - (3) in Laura's case, there were good grounds for concluding that she was not smothered; and
 - (4) from a medical viewpoint, he identified natural causes of death for two of the children and natural causes, whether inherited or not, whether known

⁷⁹⁵ It is noted that this wording differs from what is stated in the Autopsy Report and Death Certificate: 2-H, Forensic pathology tender bundle, Autopsy report by Dr Jan Bishop and Dr Gurpreet Singh-Khaira [red pagination 3551]; 2-H, Forensic pathology tender bundle, Death Certificate [red pagination 3550]

⁷⁹⁶ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4252].

⁷⁹⁷ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4253].

⁷⁹⁸ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4253].

⁷⁹⁹ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4253].

⁸⁰⁰ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4254].

or yet to be discovered, was a plausible explanation for the other two deaths and the ALTE.⁸⁰¹

545. Professor Cordner stated that if Ms Folbigg's convictions are to stand, they must do so without the support of forensic pathology, and in Laura's case at least, against the forensic pathology view.⁸⁰²
546. Professor Cordner gave evidence at the 2019 Inquiry concurrently with Professor Duflou, Dr Cala and Professor Hilton.
547. In his evidence, Professor Cordner stated his view that he could not frame a definition of asphyxia in any sort of sensible forensic pathology usable way.⁸⁰³ Each of the other pathologists who gave evidence concurrently agreed with Professor Cordner that an 'acute catastrophic asphyxiating event' is a seriously aggravated version of asphyxiation.⁸⁰⁴
548. Professor Cordner, along with the other pathologists who gave concurrent evidence, accepted the proposition that smothering can leave signs but it does not have to.⁸⁰⁵
549. Professor Cordner stated that whilst smothering can be indistinguishable from SIDS, it can be distinguishable if there are injuries relating to the smothering and/or some of the general signs such as petechiae in the eyes or under the eyelids which, he stated would, for most people, remove the death from the SIDS category into the uncertain, unascertained group.⁸⁰⁶
550. In relation to Caleb, Professor Cordner, along with the other pathologists, was asked about the significance of the blood and froth observed by the ambulance officers who attended on the day of Caleb's death (see [45]). Professor Cordner stated in he did not think that blood and froth or bloodstained froth is particularly exceptional in a case that ends up being categorised as a form of SIDS. He said the weakness in categorising Caleb's death as Category 2 SIDS probably relates more to the examination of the scene.⁸⁰⁷
551. In relation to Patrick, Professor Cordner gave evidence that he thought the cause of Patrick's ALTE was unknown. He expressed the view that the clinicians were uncertain. He stated there was a bit of confusion in his mind about the clinical course in the day or so after the ALTE because there is a reference to Patrick being almost back to normal at one point, but at other points it seems as though there was a continual deterioration and the development of seizures and fits. Professor Cordner agreed that smothering could not be excluded as a cause of Patrick's ALTE.⁸⁰⁸
552. In relation to Patrick's death, Professor Cordner repeated his view that the cause of death was the consequence of epileptic seizures due to encephalopathic disorder, the underlying cause of which had not been determined on investigation. He agreed he could not exclude smothering in any of the Folbigg children but he said there

⁸⁰¹ Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4261].

⁸⁰² Exhibit 2-Q, Report of Professor Stephen Cordner (undated) [red pagination 4261].

⁸⁰³ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T101.16-28 [red pagination 103].

⁸⁰⁴ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T102.1-27 [red pagination 104].

⁸⁰⁵ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T105.21-43 [red pagination 107].

⁸⁰⁶ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T111.44-112.5 [red pagination 113-114].

⁸⁰⁷ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T130.22-33 [red pagination 132].

⁸⁰⁸ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T146.2-33 [red pagination 149].

were very good grounds for concluding that both Patrick and Laura were not smothered, as their deaths could be attributed to a determined natural cause.⁸⁰⁹

553. In relation to Sarah, Professor Cordner was asked his view of the significance of what Professor Hilton had described in his report as the “congested uvula”. Professor Cordner described it as an interesting finding that perhaps like some other findings put Sarah into a “slightly more risky category of infant” and was “a bit more vulnerable to SIDS”. He stated the other findings to which he was referring were all the histology factors, some small signs of infection around some small airways, some very small signs of possible inflammation in the lymph nodes draining the lungs, some small signs of inflammation in the salivary glands and interesting changes in the muscle fibres of the diaphragm. He said it did not add anything close to what he would regard as the cause of death but it showed that at some sort of level there was an abnormality.⁸¹⁰ He noted the cause of death was given as SIDS and stated that seemed reasonable to him.⁸¹¹
554. Professor Cordner along with the other pathologists agreed that Laura had myocarditis the night she died and that there may or may not be observable symptoms of myocarditis in a child before death, although Professor Cordner pointed out that it was his understanding that Laura had a bit of “sniffly viral sort of cold”.⁸¹²
555. Professor Cordner said that it remained his view that most forensic pathologists would be comfortable describing Laura’s death as due to myocarditis. He stated that he disagreed with Dr Cala’s basic reasons that death was not due to myocarditis although he accepted that the cause could be described as undetermined.⁸¹³
556. Professor Cordner was criticised at the hearing for showing selective slides to other pathologists at the Victorian Institute of Forensic Medicine and not providing them with additional material such as the autopsy report. It was suggested to him that the 2019 Inquiry should have no regard to the views of the other consultants, as set out in his report, given the circumstances surrounding the manner in which their views were obtained. Professor Cordner did not agree with that but he did not rely on it as “high science”. It was noted, however, that he qualified his report by saying that the comments could not be used to support his view that the myocarditis was more than patchy and mild as the pathologists only saw what he sent them and did not view the entirety of the seven slides.⁸¹⁴
557. Professor Cordner was asked by counsel for Ms Folbigg of the significance of the finding of haemosiderin in Caleb’s lungs. He stated that some people thought it might be a marker of imposed upper airways obstruction but as the research unfolded it was found to be present in cases of undoubted natural causes in SIDS, so the view as at the time he gave evidence, was that it was not a positive indicator of superimposed upper airways obstruction. Professor Hilton and Dr Cala agreed.⁸¹⁵
558. Professor Cordner, along with other pathologists with whom he gave concurrent

⁸⁰⁹ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T161.48-T162.16 [red pagination 164-165].

⁸¹⁰ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T177.23-T178.7 [red pagination 180-181].

⁸¹¹ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T179.25-26 [red pagination 182].

⁸¹² Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T205.13-32 [red pagination 208].

⁸¹³ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T207.4-32 [red pagination 210].

⁸¹⁴ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T214.20-T218.3 [red pagination 217-221].

⁸¹⁵ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T232.22-39 [red pagination 235].

evidence, agreed that Patrick had an encephalopathic disorder at the time of his death.⁸¹⁶

559. In relation to Laura, Professor Cordner agreed that the requirement for there to be necrosis for the diagnosis of myocarditis had been adopted in the post-mortem field. He said, however, that it would be true to say there would be pathologists who would conclude that myocarditis is the cause of death in particular cases even if they did not find actual necrosis. There did not seem to be any issue that there was necrotic tissue shown in the slides of Laura's heart.⁸¹⁷
560. Professor Cordner was referred to the Webber et al report to which he referred in his report (see [535]-[537] above). It was pointed out to him the conclusion reached in that article was that myocarditis was a rare cause of death in infancy and childhood. Professor Cordner stated he relied on the report to demonstrate that the fact that the heart looked normal was not something that is absolute evidence of myocarditis being incidental, and that there are a large number of cases where a person or a child dies of myocarditis and the heart is normal but the death is sudden and unexpected. He accepted myocarditis was an uncommon cause of death in infancy but repeated his view that Laura had acute myocarditis.⁸¹⁸

(ii) Professor Duflou

561. Professor Duflou provided a report to the Inquiry dated 13 February 2019. He was a highly qualified pathologist and, at the time of his report, he was Clinical Professor at the Sydney Medical School, University of Sydney, and Adjunct Associate Professor at the National Drug & Alcohol Research Centre, University of New South Wales. His research interests included sudden cardiac death in young persons.⁸¹⁹
562. Professor Duflou was provided with a substantial body of material for the purpose of his report including reports obtained for the purposes of the trial and the 2019 Inquiry, including the reports of Professor Cordner and Dr Cala.
563. In relation to Caleb, Professor Duflou pointed to the fact that haemosiderin in alveolar spaces was identified on special staining of the lung slides but concurred with Professor Byard that the presence of stainable iron is not indicative of a cause of death in infants.⁸²⁰
564. Professor Duflou noted that, on the material available to him, it appeared very likely that Caleb died some short time after he was checked by Ms Folbigg at 22:00 hours and likely not around the time he was next checked by Ms Folbigg at 02:45 hours.⁸²¹ This is contrary to the evidence given by Ms Folbigg and the entries in her diary. I am inclined to prefer that evidence over the conclusions as to Caleb's time of death reached by Professor Duflou. However, it does not loom as a significant matter in this Inquiry.
565. Professor Duflou expressed the view that the cause of death of Caleb can be reasonably attributed to Category 2 SIDS – subclassifying it as Category 2 on the

⁸¹⁶ Exhibit 4, Transcript of the 2019 Inquiry, 21 March 2019 T267.45-T268.11 [red pagination 271-272].

⁸¹⁷ Exhibit 4, Transcript of the 2019 Inquiry, 21 March 2019 T276.37-45 [red pagination 280].

⁸¹⁸ Exhibit 4, Transcript of the 2019 Inquiry, 21 March 2019 T289.10-T291.32 [red pagination 293-295].

⁸¹⁹ Exhibit 2-L, Report of Professor Johan Duflou (13 February 2019) [red pagination 4019].

⁸²⁰ Exhibit 2-L, Report of Professor Johan Duflou (13 February 2019) [red pagination 4044].

⁸²¹ Exhibit 2-L, Report of Professor Johan Duflou (13 February 2019) [red pagination 4047].

basis that the age of death, below 21 days, and a history of a neonatal condition in the form of congenital laryngeal stridor which was considered to almost certainly be due to laryngomalacia. Professor Duflou noted that, contrary to the evidence adduced during the trial, severe laryngomalacia was a known cause of sudden death in infancy, with death having been attributed to either upper airway obstruction or heart failure in reported cases.⁸²²

566. In relation to Patrick's ALTE, Professor Duflou reproduced a table giving a list of possible causes of ALTE. He was, however, unable to ascribe any cause for it. As far as Patrick's death was concerned, he expressed the view that the cause of the death can be reasonably given as the consequences of hypoxic-ischaemic encephalopathy brought on by an acute life threatening event of an unascertained cause.⁸²³
567. In relation to Sarah's death, as with Caleb, Professor Duflou expressed the view that Sarah died earlier than the view expressed by other witnesses. He stated that, taking into account the temperature of her body and stomach contents, Sarah died closer to the time she was put to bed by Mr Folbigg at around 21:00 hours rather than when found by Ms Folbigg at around 01:30 hours.⁸²⁴ Once again, no significance was attached to this at the 2019 Inquiry.
568. Professor Duflou stated that Sarah's cause of death could be reasonably attributed to Category 2 SIDS. He stated that it could be subclassified as Category 2 SIDS on the basis that her age at death was greater than nine months and an autopsy diagnosed an abnormality of the upper airway which had the potential to obstruct the flow of air (the unusually located uvula). In addition, he stated that Category 2 SIDS can be given as the cause of death where siblings die while in the custody of the same caregiver. He expressed the view that the two punctate abrasions below the mouth are entirely non-specific and not in any way indicative of external obstruction of respiration. He stated that, for example, it would be totally normal for ten month old infants to cause minor injuries to their face during normal day-to-day activities.⁸²⁵
569. In relation to Laura, Professor Duflou expressed the view that there was without doubt myocarditis of a severity which can readily cause sudden and unexpected death. He stated that as indicated by multiple pathologists, myocarditis can either cause death through the gradual development of congestive cardiac failure or can result in the sudden onset of lethal cardiac arrhythmia without evidence of prior illness in the patient. Professor Duflou stated that no competing cause of death had been identified at autopsy, therefore, based purely on the autopsy findings the cause of death would be given as myocarditis. He stated that, acknowledging there are no other obvious causes of death in Laura, he considered it not unreasonable to give the cause of death as undetermined. Professor Duflou's reasoning for this was based on the knowledge that myocarditis can be incidental to death, and the fact that three siblings died left one to consider causes of death not simply due to myocarditis but that the myocarditis may have been a contributor or incidental to death.⁸²⁶

⁸²² Exhibit 2-L, Report of Professor Johan Duflou (13 February 2019) [red pagination 4047-4048].

⁸²³ Exhibit 2-L, Report of Professor Johan Duflou (13 February 2019) [red pagination 4049-4050].

⁸²⁴ Exhibit 2-L, Report of Professor Johan Duflou (13 February 2019) [red pagination 4051].

⁸²⁵ Exhibit 2-L, Report of Professor Johan Duflou (13 February 2019) [red pagination 4051]; Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T179.38-39 [red pagination 182].

⁸²⁶ Exhibit 2-L, Report of Professor Johan Duflou (13 February 2019) [red pagination 4052-4053].

570. Professor Duflou commented on the advance of genetic testing since the early 2000s and stated that overall it appears likely that a genetic defect, capable of causing death in infancy, is present in about 10% of cases where the conventional autopsy diagnosis is SIDS.⁸²⁷
571. In dealing with the possibility that the Folbigg children were smothered, Professor Duflou expressed the view that a diagnosis of death due to smothering can only be made in the setting of a negative autopsy in the presence of a positive history of it having taken place, or where there is autopsy evidence of external obstruction of the airway, such as the presence of facial or conjunctival petechiae, injuries to the lips, the frenula, bruising to the mouth and face, injuries to the nose and injuries to the chin of a type which would be expected from compressive force applied to that part of the body. He emphasised that no such injuries of that type were seen in any of the children.⁸²⁸
572. Professor Duflou stated that in general terms he was in agreement with the observations and conclusions of Professor Cordner. He stated he had some minor differences of opinion in relation to the wording of the cause of the death of Patrick but said such differences can be attributed mainly to stylistic preferences and not to any material difference in opinion.⁸²⁹
573. Professor Duflou was asked his opinion that if genome sequencing in relation to the children revealed no genetic abnormality did that exclude the possibility there may still be genetic abnormality involved in the deaths. His answer to that question was no, stating that a likely pathogenic abnormality would be identified in only about a quarter of cases. He stated that is not surprising given the current understanding of genetic cardiac disease, the inherent difficulties with interpreting genetic Variants of Uncertain Significance (**VUS**) and the potential role of epigenetic influences of gene expression.⁸³⁰
574. Professor Duflou stated that he did not believe that an unequivocal cause of death can be given in any of the cases. He said in none of them there is a cause of death which can be stated without a doubt, but he stated that was not uncommon.⁸³¹
575. Professor Duflou said he did not have access to Ms Folbigg's diaries when he was preparing his report. However, he noted that he had since seen some extracts of the diaries and commentary on those.⁸³²
576. Professor Duflou stated there was no argument that some unexpected deaths in infancy, which on the face of it appear to have been SIDS have a genetic basis. He gave as examples LQTS or cardiac arrhythmia due to LQTS as a cause of death.⁸³³
577. Professor Duflou agreed that smothering can leave signs but does not have to do so. He agreed that in respect of external signs of smothering there may be marks around the mouth and nose and there may also be internal signs such as petechial

⁸²⁷ Exhibit 2-L, Report of Professor Johan Duflou (13 February 2019) [red pagination 4054].

⁸²⁸ Exhibit 2-L, Report of Professor Johan Duflou (13 February 2019) [red pagination 4056].

⁸²⁹ Exhibit 2-L, Report of Professor Johan Duflou (13 February 2019) [red pagination 4059].

⁸³⁰ Exhibit 2-L, Report of Professor Johan Duflou (13 February 2019) [red pagination 4062].

⁸³¹ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T85.38-44 [red pagination 87].

⁸³² Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T90.14-20 [red pagination 92].

⁸³³ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T99.16-20 [red pagination 101].

haemorrhages, although they were relatively uncommon in infants.⁸³⁴ Professor Duflou said he would not draw any conclusions from the blood and froth said to be around Caleb's mouth. He said that if there is a small amount of blood on a nostril and there is no cause for it, it does not negate SIDS as an entirely reasonable cause of death. In the case of Caleb, Professor Duflou stated that because he died at 19 days old, it would fall under Category 2 SIDS, accepting that when Caleb died the subcategorisation did not exist.⁸³⁵

578. Professor Duflou was asked whether, having knowledge that the other three children had died, he would still classify Caleb's death as Category 2 SIDS. He said it becomes a matter of how you consider the other cases or whether you look at each case on its own merits. He said if you look at the other cases, Laura did not die of SIDS and was well outside the age range. He said, "She has, as a minimum, a medical condition which can reasonably explain death. So I think she could be reasonably be excluded from the discussion".⁸³⁶ In terms of Patrick, Professor Duflou expressed the view that his death was not in the category of a Sudden Unexpected Death in Infancy (**SUDI**), and it was a different type of case again. He said, insofar as Sarah and Caleb were concerned, where two infants die suddenly and unexpectedly, he would certainly have no difficulty in attributing SIDS as the cause of death of both those infants under appropriate circumstances.⁸³⁷
579. In relation to Patrick, Professor Duflou agreed that no definitive cause of the ALTE was found.⁸³⁸
580. Professor Duflou in his evidence repeated his opinion that the cause of Patrick's death could be described as the consequences of a hypoxic-ischaemic encephalopathy brought on by an acute life threatening event or an ALTE of unascertained cause. He said that Caleb and Patrick's deaths could be readily explained.⁸³⁹
581. Professor Duflou was asked about the two tiny punctate abrasions observed by Professor Hilton during his post-mortem of Sarah (see [103] above). He agreed with Dr Cala that any manipulation around an alveolar or a child's nose and mouth, such as what happens when resuscitation is attempted with the insertion of tubes, can cause injuries. Professor Duflou added that in a ten month old baby it was entirely possible the baby in some way used fingernails to cause injury to any part of the body.⁸⁴⁰
582. Professor Duflou stated Sarah's death was best described as a Category 2 SIDS. He stated that it was Category 2 SIDS because of Sarah's age and uvula. He stated he would still reach this conclusion even taking into account the deaths of Patrick and Caleb. He said there was nothing going against the diagnosis of SIDS on the basis of autopsy or the circumstances surrounding the death as provided to him. He stated he would worry about the other two deaths and hope there was a detailed investigation associated with Sarah's autopsy. He agreed he could not exclude smothering but stated he could not include it either because there was no evidence of it. He said in four cases of smothering there was a greater likelihood there would

⁸³⁴ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T105.36-T106.32 [red pagination 107-108].

⁸³⁵ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T129.45-T130.10 [red pagination 131-132].

⁸³⁶ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T140.26-28 [red pagination 142].

⁸³⁷ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T140.23-33 [red pagination 142].

⁸³⁸ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T146.47-50 [red pagination 149].

⁸³⁹ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T162.29-T163.39 [red pagination 165-166].

⁸⁴⁰ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T172.40-T173.8 [red pagination 176].

be signs on one or more of them. He explained that he was saying there were no signs of smothering in any of the three and, from the study conducted by Professor Cordner, signs are observed in about half of the cases. He accepted his evidence was not related to three cases within the one family but more broadly based.⁸⁴¹

583. In dealing with Laura, Professor Duflou agreed that it would not be unreasonable to state Laura's death as undetermined but at the same time he would be comfortable to ascribe it to myocarditis. He was referred to his report where he said that myocarditis can be incidental and he also took into account that three siblings had died. He explained that was a background consideration, but they appeared to have died of unrelated causes. He said that, consistent with Professor Cordner, he thought that it was possible that a person could have been involved in causing the death. He stated he could not exclude that.⁸⁴²
584. In answer to questions from counsel for Ms Folbigg, Professor Duflou said he had not seen any confirmed cases of laryngomalacia himself but he was aware that there was research which indicates that in 90% of patients it presented as a benign self-limiting condition which disappears by the age of two to five years and the remainder, if untreated, can prove fatal.⁸⁴³
585. In answer to further questions from counsel for Ms Folbigg, Professor Duflou said he did not see why Patrick's first ALTE could not have been caused by an epileptic fit. He explained that the absence of a specific indicator for epilepsy on examination of the brain does not in any way exclude the possibility of epilepsy at any time. Further, Professor Duflou stated it was known that Patrick had multiple epileptic fits, yet nowhere in the brain description is there any indication of a specific reason for epilepsy, which he noted was "absolutely standard" in the majority of epilepsy related deaths. He said that it was fair to say that in about 25% of cases, the cause of an ALTE is never identified.⁸⁴⁴
586. Professor Duflou acknowledged that it was possible that each of the four children succumbed to different health complications.⁸⁴⁵

(iii) Professor Hilton

587. Professor Hilton carried out the post-mortem examination of Sarah (see [103] above) and gave evidence at the trial. I have summarised his evidence at the trial at [410]-[428] above. Professor Hilton supplied a report to the 2019 Inquiry dated 22 January 2019. In that report, he expressed substantial agreement with the comments, views and opinions expressed by Professor Cordner. In relation to Patrick, Professor Hilton stated that the neuropathological features demonstrated by the post-mortem examination of Patrick's brain would suggest lack of oxygen sustained in an episodic fashion at a time or times prior to his death. He said to ascribe responsibility for his brain damage to "epilepsy" must remain a moot point.⁸⁴⁶
588. In relation to Laura, Professor Hilton opined that it was highly probable that she died

⁸⁴¹ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T180.14-T185.15 [red pagination 183-188].

⁸⁴² Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T207.47-T208.15 [red pagination 210-211].

⁸⁴³ Exhibit 4, Transcript of the 2019 Inquiry, 21 March 2019 T245.27-31 [red pagination 249].

⁸⁴⁴ Exhibit 4, Transcript of the 2019 Inquiry, 21 March 2019 T270.41-T279.43 [red pagination 274-283].

⁸⁴⁵ Exhibit 4, Transcript of the 2019 Inquiry, 21 March 2019 T280.34-39 [red pagination 284].

⁸⁴⁶ Exhibit 2-O, Report of Professor John Hilton (22 January 2019) [red pagination 4146-4147].

with and because of florid myocarditis. He stated there was no medical evidence demonstrated in the post-mortem report to support another cause for her death.⁸⁴⁷

589. In addition to his report, Professor Hilton swore an affidavit on 13 November 2018 for the purpose of the 2019 Inquiry. He stated that Dr Cala performed the autopsy on Laura and concluded that the death should be described as “undetermined”. Professor Hilton said if he had been responsible for writing the autopsy report, he would have written the cause of death as myocarditis and added as a notation that it was the fourth child death in the same family and that two of these deaths were diagnosed as SIDS after autopsy, and one child dying because of “Encephalopathic Disorder leading to seizures...”.⁸⁴⁸
590. In his evidence at the 2019 Inquiry, Professor Hilton said that like other pathologists he had not seen the diaries, although he had seen various excerpts published in various journals.⁸⁴⁹ Professor Hilton agreed with Professor Byard that there would appear to be some slight risk for a subsequent child to die of SIDS if one child in the family had already died of SIDS.⁸⁵⁰
591. In relation to smothering, Professor Hilton said, in his experience of plastic bag asphyxia, it left absolutely no trace whatsoever. However, he said he could imagine circumstances where something such as a fabric with a coarse weave or definite pattern when applied with sufficient force to somebody’s nose and mouth, may well leave the pattern of the weave and if it were applied with even greater force, there might be some evidence of bruising where that force was applied.⁸⁵¹
592. In relation to Patrick, Professor Hilton expressed the view that Patrick died as part of an epileptic type illness, stating that pathology shown at autopsy in his brain explains why he was brain damaged and why he was likely to have been having epileptiform fits during his life. Professor Hilton said they may have been at least initiated by his ALTE, whatever may have caused that ALTE, so there is a logical but not necessarily correct progression from ALTE to epilepsy to death, and epilepsy is a well-known cause of death. Professor Hilton said that when a baby dies of epilepsy you would not necessarily see signs in the mouth or around the mouth indicating that a seizure had preceded the death. He said that physical signs are sometimes seen and sometimes not.⁸⁵²
593. In relation to Sarah, Professor Hilton’s attention was directed to the tiny punctate abrasions present on Sarah’s lower lip on the left side and slightly to the left side of the middle of the chin which he referred to in his autopsy report (see [103] above). He stated those pinpoint marks are not entirely uncommon in children. He also said there had been fairly vigorous attempts at resuscitation both domestically and professionally, which had failed. Professor Hilton stated that such vigorous resuscitation not infrequently leaves marks on the skin of the lips. Those factors had to be considered in considering the aetiology of these smaller and relatively insignificant features.⁸⁵³

⁸⁴⁷ Exhibit 2-O, Report of Professor John Hilton (22 January 2019) [red pagination 4146].

⁸⁴⁸ Exhibit 2-P, Affidavit of Professor John Hilton (13 November 2018) [red pagination 4169-4170].

⁸⁴⁹ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T90-26-30 [red pagination 92].

⁸⁵⁰ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T99.35-44 [red pagination 101].

⁸⁵¹ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T106.47-T107.4 [red pagination 108-109].

⁸⁵² Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T164.13-49 [red pagination 167].

⁸⁵³ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T169.48-T171.5 [red pagination 172-174].

594. Professor Hilton said it was a very important point that there were no petechiae observed in the neck, the cheeks or the inside or outside of the eyes. He stated that in Sarah's case the uvula looked a bit congested and, more importantly, when he saw her at autopsy, the uvula overlapped the epiglottis. Professor Hilton said that he could not be certain this was not a post-mortem artefact that had happened because of the removal of the neck organs from the body. He said he had never seen it described in the literature before, and at the time of trial he was not prepared to add any greater significance to it. Professor Hilton noted that he had recently discovered a paper which was mildly supportive that this may not have been a post-mortem artefact. He stated the alternative was that part of the respiratory tract was much more crowded. He also referred to the fact that there was a description of Sarah snoring just the night before she died. He said it was possible "and I put it no more than that...that the snoring was because this uvula was bouncing off the epiglottis or bouncing off the larynx in the region of the same epiglottis".⁸⁵⁴
595. In relation to Laura, Professor Hilton did not go so far to say that he was in complete agreement with Professor Cordner, but his own view was that Laura might have died with or because of myocarditis, which was consistent with the view expressed by Professor Cordner. However, he stated that he did not regard Dr Cala's conclusion that the cause of death was undetermined as unreasonable.⁸⁵⁵
596. In answer to questions from counsel for Ms Folbigg, Professor Hilton, along with the other pathologists, agreed that the froth and blood around Caleb's mouth was non-specific in identifying the cause of death.⁸⁵⁶
597. In relation to Sarah, Professor Hilton was asked that if the uvula was to get stuck behind the epiglottis whether it would be a serious obstruction to the respiration and trigger an unexpected death. He repeated that it was a very real possibility that the position of the uvula on autopsy was an artefact from the forensic process.⁸⁵⁷
598. In relation to Caleb, Professor Hilton pointed out that Caleb died at a very young age which meant that if in fact laryngomalacia was present, he really did not have time to grow out of it.⁸⁵⁸
599. In relation to Patrick, Professor Hilton said there was no indication in the clinical records available to him that Patrick showed any convincing evidence of a degenerative neurological condition prior to his ALTE. He stated there was no convincing evidence that indicated there was any such degenerative neurological disease apart from the hypoxic brain damage suffered on one or more occasions prior to his death.⁸⁵⁹
600. In dealing with the deaths of four children as a whole, Professor Hilton expressed the view that there were two cases which would be "quite acceptable ... to most people as examples of SIDS, and there are two other cases of death where a very plausible major disease process was demonstrated", and to "lump them all together as SIDS is an utter furphy".⁸⁶⁰

⁸⁵⁴ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T174.10-T176.11 [red pagination 177-179].

⁸⁵⁵ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T208.34-T210.6 [red pagination 211-213].

⁸⁵⁶ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T232.8-35 [red pagination 235].

⁸⁵⁷ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T234.34-41 [red pagination 237].

⁸⁵⁸ Exhibit 4, Transcript of the 2019 Inquiry, 21 March 2019 T245.44-46 [red pagination 249].

⁸⁵⁹ Exhibit 4, Transcript of the 2019 Inquiry, 21 March 2019 T270.17-26 [red pagination 274].

⁸⁶⁰ Exhibit 4, Transcript of the 2019 Inquiry, 21 March 2019 T280.48-T281.4 [red pagination 284-285].

(iv) Dr Cala

601. As I have indicated Dr Cala conducted the autopsy in respect of Laura (see [125]-[130] above). I have summarised the evidence he gave at the trial at [392]-[408]. Dr Cala provided two reports to the 2019 Inquiry, the first dated 26 November 2018, and the second dated 13 February 2019.⁸⁶¹
602. In his report of 26 November 2018, Dr Cala expressed the view at the outset that, “It is simply remarkable and unthinkable that the four Folbigg children lived their entire lives in Australia from 1989 to 1999 and are all now deceased.”⁸⁶²
603. In relation to Caleb, he expressed the view that even by contemporary standards, after a thorough scene examination, full autopsy and ancillary testing, a diagnosis of SIDS is not correct. He stated SIDS is after all a diagnosis of exclusion – that is, the diagnosis may be made only if there are no suspicious circumstances surrounding the death, the scene examination, the subsequent autopsy and the result of ancillary tests are all subsequently “negative”. He stated that an infant who dies aged less than one month of age would not be a SIDS death on the grounds of being too young. Dr Cala opined that the finding of blood and frothy fluid on or around the external airway may be highly significant. He stated it was a most unusual finding if an infant is found deceased and has not been bed sharing. Dr Cala repeated it could well be a highly significant finding that requires an explanation. He stated that he was concerned that an external agent may have caused the blood and froth around the mouth. He also stated that the so called “lazy larynx” is unrelated to the death. He described it as a relatively benign abnormality of the larynx that is discovered in the neonatal period which the infant outgrows as cartilage strengthens.⁸⁶³
604. In relation to Patrick, Dr Cala stated that, but for the ALTE, Patrick appeared to be a normal baby and progressing quite well. He noted that when he was examined soon after the ALTE, he exhibited signs of respiratory difficulties. He stated this was a most unusual finding following a seizure when the *post-ictal* period usually results in intense drowsiness and a period of sleep.⁸⁶⁴
605. Dr Cala stated he would not conclude that Patrick’s cause of death was epilepsy. He said death from epilepsy at Patrick’s age was very rare. He stated that no person saw Patrick have a seizure at the time of or just prior to him being found. He noted that the pathological findings of the brain are subsequent to the cardiac arrest as a result of the ALTE, but the underlying cause of the ALTE is unknown. He stated that although he cannot definitely prove smothering had occurred, he was concerned that smothering could explain Patrick’s ALTE and his sudden death. He stated, in his opinion, it was not an unreasonable view to express.⁸⁶⁵
606. In relation to Sarah, Dr Cala stated he could not give the cause of death as SIDS. He stated the previous two deaths alone would make him extremely cautious about this death being due to SIDS. He stated that he would give the cause of death as “Undetermined”.⁸⁶⁶

⁸⁶¹ Exhibit 2-M, Report of Dr Allan Cala (26 November 2018); Exhibit 2-N, Further Report of Dr Allan Cala (13 February 2019).

⁸⁶² Exhibit 2-M, Report of Dr Allan Cala (26 November 2018) [red pagination 4094].

⁸⁶³ Exhibit 2-M, Report of Dr Allan Cala (26 November 2018) [red pagination 4098-4100].

⁸⁶⁴ Exhibit 2-M, Report of Dr Allan Cala (26 November 2018) [red pagination 4103].

⁸⁶⁵ Exhibit 2-M, Report of Dr Allan Cala (26 November 2018) [red pagination 4103-4104].

⁸⁶⁶ Exhibit 2-M, Report of Dr Allan Cala (26 November 2018) [red pagination 4106].

607. Dr Cala stated he was not aware of any medical literature which ascribed elongation of the uvula as giving rise to fatal consequences to the airways.⁸⁶⁷
608. In relation to Laura, Dr Cala stated that it was necessary to point out that Laura apparently had a cold or flu type illness within days prior to her death and the presence of myocarditis may reflect a generalised viral infection. He stated that he disagreed with Professor Cordner that myocarditis was the cause of death. Dr Cala stated that “the finding of “an abnormality” at autopsy is not automatically “upgraded” to **the** (emphasis in original) cause of death unless it satisfies other criteria such as according with the clinical history, or after laboratory tests are performed”.⁸⁶⁸
609. Dr Cala stated that, apart from Laura’s recent cold or flu type illness, he had no knowledge or information that indicated Laura had been unwell or showed any symptoms of an underlying more serious illness prior to her death. He stated that although on occasions a person with myocarditis can die suddenly and unexpectedly, he did not consider this to be likely as Laura had not been unwell on the day of her death and the amount of inflammation in the heart was quite light and patchy. Dr Cala stated that he had seen fatal causes of myocarditis in this age group and, in his view, this case was not typical of sudden death from myocarditis.⁸⁶⁹
610. In dealing with smothering generally, Dr Cala expressed the view that physical evidence found after fatal smothering had occurred could be anything from nil to some, depending on the age of the child, the amount of struggle that occurred, whether the child has teeth and various other factors which are irrelevant for present purposes.⁸⁷⁰
611. In conclusion, he stated that as the pathologist charged with the investigation of Laura’s death, he could not disregard the “long shadow of the other three deceased children”. He stated that despite autopsies, there were no convincing pathological findings which could singularly or collectively explain the deaths of the three children. He stated that it remained his opinion there exists the possibility that each of the Folbigg children died, not from natural disease, but from inflicted injury, most likely in the form of smothering.⁸⁷¹
612. Dr Cala in his further report dated 13 February 2019 responded to the affidavit of Professor Hilton. He stated that he performed Laura’s autopsy examination in the presence of Professor Hilton. He stated that Professor Hilton agreed that the cause of death should be given as “Undetermined”. He pointed out that forensic pathologists often hold differing opinions about a particular case.⁸⁷²
613. In relation to Professor Cordner, Dr Cala expressed the view that the five photomicrographs Professor Cordner sent to the pathologists were not representative of the seven blocks of heart tissue. He stated this type of digital sampling would give a highly distorted picture of the amount of myocarditis present as other areas of the heart sample were not shown to the group (of pathologists). He stated that the photomicrographs were not a true or accurate representation

⁸⁶⁷ Exhibit 2-M, Report of Dr Allan Cala (26 November 2018) [red pagination 4106].

⁸⁶⁸ Exhibit 2-M, Report of Dr Allan Cala (26 November 2018) [red pagination 4108].

⁸⁶⁹ Exhibit 2-M, Report of Dr Allan Cala (26 November 2018) [red pagination 4108].

⁸⁷⁰ Exhibit 2-M, Report of Dr Allan Cala (26 November 2018) [red pagination 4111].

⁸⁷¹ Exhibit 2-M, Report of Dr Allan Cala (26 November 2018) [red pagination 4117-4118].

⁸⁷² Exhibit 2-N, Further Report of Dr Allan Cala (13 February 2019) [red pagination 4140-4141].

of the amount of inflammation that he saw when examining the seven glass slides. Further, he pointed out the case outline given by Professor Cordner to the group ignored the highly important relevant aspects of the family history, in particular, that the death was the fourth in the family.⁸⁷³

614. Early in his evidence before the 2019 Inquiry, Dr Cala explained how he would deal with a second and a third infant death when the first one is what he described as “a pure SIDS death”. He said that before he committed himself to making a diagnosis, he had to look very closely at the circumstances of the death and the autopsy finding but also the circumstances of the first death and review both. He suggested that a police investigation was necessary. He stated that since 2004 he had not been in the situation where there was a third death but he would be extremely cautious. He stated that if he was on the receiving end of a third death, assuming the other two had been investigated elsewhere, he would not call it a category of SIDS.⁸⁷⁴
615. Dr Cala agreed with Professor Cordner that smothering by way of compression or obstruction of the nose and mouth can be grouped under the term “mechanical asphyxia”. He agreed that smothering can leave signs but does not have to leave signs. He also agreed that marks around the nose and mouth, depending upon what was used and the force and internal signs that might be generated by the child, haemorrhages of one sort or another may be signs of smothering.⁸⁷⁵
616. Dr Cala stated that the forensic literature shows that there have been quite a number of cases of people including infants that have been smothered without leaving any trace. He said it was difficult though to say that any one child may or may not have been smothered when there are absolutely no physical signs. He said that in those circumstances diagnosis is based on an examination of the circumstances, what we know about the environmental factors surrounding the child’s death about the people who are with the child at the time and any other factors that may be considered important.⁸⁷⁶
617. Dr Cala was asked questions about the blood and froth observed around Caleb’s mouth. He said that if it was present and visible with the naked eye, he would have expected that Dr Cummings, who carried out the autopsy, would have described it. He questioned where the blood and froth came from. He stated he did not think it was caused from pulmonary oedema because he would have expected that Dr Cummings would have seen it lower down in the airways and it would have come out from there. Dr Cala stated he was not categorically excluding it, so the blood and froth could have been from external pressure on the nose and mouth although there were no findings of injury around the nose and mouth, none that he had seen. He said the blood and froth did not exclude the possibility of some external agent having been applied, either accidentally or deliberately, to Caleb’s outer airway. He stated in his experience, the finding of blood and froth around the mouth is quite uncommon in relation to sudden infant deaths where the infants do not bed share.⁸⁷⁷
618. In relation to Patrick, Dr Cala was referred to his evidence at the trial that he considered there was a possibility that Patrick’s ALTE was the result of him being deliberately smothered. He explained this evidence by stating that if Patrick was

⁸⁷³ Exhibit 2-N, Further Report of Dr Allan Cala (13 February 2019) [red pagination 4142-4143].

⁸⁷⁴ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T76.5-24 [red pagination 78].

⁸⁷⁵ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T104.27-T106.43 [red pagination 106-108].

⁸⁷⁶ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T111.9-17 [red pagination 113].

⁸⁷⁷ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T127.35-T132.21 [red pagination 129-134].

deliberately smothered, he may have had a respiratory and/or cardiac arrest brought on by that and that might explain the ALTE.⁸⁷⁸

619. Dr Cala agreed that the autopsy report on Patrick did not say he died from untreatable seizures. Dr Cala pointed to the fact that the report indicated that Patrick was thought to have had intractable seizures, which he thought were “frankly unarguable” but then stated, “The underlying cause of the encephalopathy was a brain abnormality [which] was not determined on investigation”.⁸⁷⁹ Dr Cala, along with the other pathologists, rejected Professor Blackwell’s view that the bacteria in Patrick’s death did not reflect contamination.⁸⁸⁰
620. Dr Cala stated Patrick’s cause of death should be stated as undetermined. He stated he accepted the pathology that was found but said he did not know and was “not convinced about the final acute, the immediate cause of death.” He said he did not know, but that looking at Patrick’s death and the medical history and immediate circumstances that were known, he would leave it open. He said that when he accepted the pathology, he was referring to the fact that Patrick had seizures and that he had the gliosis and infarcts.⁸⁸¹
621. In relation to Sarah, Dr Cala was referred to the two tiny punctate abrasions around Sarah’s lips. He stated he did not know what their causes were. He accepted what Professor Hilton had said about resuscitation causing injuries around children’s mouths and on their face. He said abrasions, in his experience, were unusual but it is also fair to say that they may be caused by resuscitation attempts. He stated any manipulation around a child’s nose and mouth such as what happens when resuscitation is attempted, can cause injuries.⁸⁸²
622. Dr Cala was referred to Professor Hilton’s evidence concerning his observations of the position of the uvula which he found when carrying out the autopsy on Sarah (see [594] above). He expressed the view that he did not think it had any bearing on the cause of death.⁸⁸³
623. Dr Cala also stated that in relation to Sarah there were some marks around about the lower lip and the chin. He said he was not certain of the cause of these marks. He stated he did not want to elevate it and say they indicated smothering because he did not believe they did. He said they can be explained in a number of ways, but any marks around a deceased child’s mouth and face are a concern and raise the question of how those marks came about. He said he did not share the view that in relation to the second and third child it would be more likely to expect signs of smothering if they were indeed smothered.⁸⁸⁴
624. Dr Cala stated that he performed a facial dissection on Laura as part of his autopsy because he wanted to specifically look at any possible injuries to the child’s face and particularly around the mouth and that was not easily done by just lifting the

⁸⁷⁸ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T147.25-32 [red pagination 150].

⁸⁷⁹ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T152.18-T154.5 [red pagination 155-157].

⁸⁸⁰ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T152.18-T154.5 [red pagination 155-157].

⁸⁸¹ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T163.47-T164.9 [red pagination 166-167].

⁸⁸² Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T172.40-50 [red pagination 175].

⁸⁸³ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T176.34-46 [red pagination 179].

⁸⁸⁴ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T185.33-46 [red pagination 188].

lips up or down. He said it was important to look for the possibility of injuries that might have some forensic significance. He did not find any injuries.⁸⁸⁵

625. In dealing with Laura's myocarditis, Dr Cala was referred to his report to the 2019 Inquiry that the inflammatory infiltrate was "light in amount and patchy in distribution". He was asked whether that was consistent with what he had said at the autopsy, and replied that it was not. He would describe it as moderate so "there appears to be a discrepancy". He stated that "in the areas of examination of the heart, in particular, the left ventricle, the inflammatory infiltrate was light and patchy, in other words, it was small in amount, a small number of lymphocytes aggregated around the cardiac cells, but it was accentuated in areas" which he described in "portions in the middle of the left ventricle to put it up to moderate – to put it up maximally to moderate intensity".⁸⁸⁶ He stated at its most severe it was moderate in intensity.
626. Dr Cala was also referred to his statement that if he had examined Laura's body in isolation, he might give the cause of death as myocarditis. He stated he would be cautious about giving an unequivocal cause of death based purely on a pathological finding. He said he knew that myocarditis was a potentially serious condition but he would be cautious about looking at a slide or slides without knowing anything else about the case saying it was unequivocally the cause of death.⁸⁸⁷
627. Dr Cala agreed that there was no evidence of deliberate smothering on autopsy but given that there were four deaths he was not satisfied by any of the diagnoses he saw in relation to the first three children and he was not satisfied that myocarditis purely explained Laura's death. He said that as smothering can leave no trace, it remained a possibility. He thought that in light of the fact there were four deceased children, all of whom had died suddenly and somewhat unexpectedly, he raised non-accidental asphyxia in the form of deliberate smothering as a possibility to explain Laura's death, and possibly the deaths of the other three children.⁸⁸⁸
628. Dr Cala stated he found the video of Laura taken the day before she died to be important.⁸⁸⁹ He described it as showing a child who appeared to be in very good health but who, less than 24 hours later, was deceased. He stated she exhibited no signs of symptoms so he was of the view that based on the video it was even less likely that she died of myocarditis, although he accepted that she could be part of a small number who died from myocarditis suddenly and unexpectedly. Dr Cala agreed he could not categorically exclude it as a cause of death.⁸⁹⁰
629. In answer to questions asked of him by counsel appearing for Ms Folbigg, Dr Cala agreed that back in 1990 there were limited opportunities to genetically assess cardiac function.⁸⁹¹

⁸⁸⁵ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T195.46-T196.4 [red pagination 198-199].

⁸⁸⁶ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T198.7-37 [red pagination 201].

⁸⁸⁷ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T200.34-47 [red pagination 203].

⁸⁸⁸ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T202.4-13 [red pagination 205].

⁸⁸⁹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit K, Original footage depicting Laura Folbigg in a swimming pool on 28 February 1999.

⁸⁹⁰ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T203.34-T204.8 [red pagination 206-207].

⁸⁹¹ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T230.47-50 [red pagination 233].

630. Dr Cala also agreed with the other pathologists that both the blood and froth and the high haemosiderin in Caleb's lungs were non-specific findings.⁸⁹²
631. Dr Cala was also asked about Caleb's laryngomalacia. He stated his understanding was that it was not an inherently dangerous condition and he would defer to Dr Springthorpe's view that it was a relatively benign process (see [39]-[40] above). Dr Cala said it is a condition that has been known for some time over many years and children do not die from it. However, he agreed that he did not have the expertise to state what level of laryngomalacia was likely to kill somebody.⁸⁹³
632. Dr Cala, along with the other pathologists, agreed that Patrick's ALTE could have been caused by a great number or a great variety of disorders, including neurological disorders. He agreed, along with the other pathologists, that Patrick had an encephalopathic disorder at the time of death. Dr Cala was asked whether or not the disorder could have developed on 18 October 1990 or prior thereto. He was asked whether this was not something that, as a forensic pathologist, he wished to speculate on. Dr Cala responded that he was not speculating as what he would bear in mind is that leading up to the time of whatever caused the ALTE, he had no information whatsoever that Patrick was other than well. He stated that an abnormal EEG was something that would be almost expected as a consequence following the ALTE. He said he saw nothing in the autopsy report to suggest that Patrick had a chronic, degenerative, neurological condition. Dr Cala stated he did not know whether Patrick's ALTE could have been caused by an epileptic fit.⁸⁹⁴
633. In relation to Laura, Dr Cala agreed with counsel for Ms Folbigg that a moderate level of myocarditis could trigger an arrhythmia. He agreed that the slides of Laura's heart that were taken were representative, rather than being complete. He agreed that some of the slides demonstrated necrotic tissue. He stated necrosis or necrotic tissue means dead tissue in a living person. He said you need to see that to make a formal diagnosis of myocarditis. He said if you do not see that and "you just have inflammatory cells literally wandering through the heart that is not a pathological change to bring it up to the standards you require to call it myocarditis, so you need to see that necrosis".⁸⁹⁵
634. Dr Cala disagreed with counsel for Ms Folbigg that Caleb's laryngomalacia was a potential cause of death. He repeated that he was not convinced by anything he had seen that it was in any way serious and stated that he found it difficult to accept that Caleb went from a condition which is relatively benign to being elevated to be undoubtedly the cause of death.⁸⁹⁶
635. Dr Cala rejected the proposition that the difference of opinion between him and the other three forensic pathologists was the weight he gave to the four deaths in one family as indicating homicide. He agreed there was nothing in the medical records that indicated homicide. He agreed that his evidence was that he suspected deliberate smothering. He stated he gave weight to the four deaths in one family. He said he could not ignore that but rejected that it may have unduly affected his judgment.⁸⁹⁷

⁸⁹² Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T124.11-16 [red pagination 126].

⁸⁹³ Exhibit 4, Transcript of the 2019 Inquiry, 21 March 2019 T244.25-T245.10 [red pagination 248-249].

⁸⁹⁴ Exhibit 4, Transcript of the 2019 Inquiry, 21 March 2019 T262.41-T269.9 [red pagination 266-273].

⁸⁹⁵ Exhibit 4, Transcript of the 2019 Inquiry, 21 March 2019 T276.8-27 [red pagination 280].

⁸⁹⁶ Exhibit 4, Transcript of the 2019 Inquiry, 21 March 2019 T277.27-41 [red pagination 281].

⁸⁹⁷ Exhibit 4, Transcript of the 2019 Inquiry, 21 March 2019 T285.39-T287.34 [red pagination 289-291].

The Immunology and Microbiology Experts

(i) Professor Blackwell

636. Professor Blackwell at the time of the 2019 Inquiry was the Conjoint Professor in Immunology and Microbiology at the School of Health, University of Newcastle, with extensive qualifications and experience both in Australia and overseas. She stated her research had been focused on genetic development and environmental factors that make individuals more susceptible to infectious diseases and conditions in which infection has been implicated.⁸⁹⁸
637. In her first report dated 5 March 2019, Professor Blackwell referred to the fact that none of the experts at the trial said they had experienced four infant deaths in a family and nor could they cite any report of such an occurrence in scientific or medical literature. She stated that they appeared to have overlooked three studies, one of which reported five consecutive siblings whose deaths were diagnosed as SIDS and another study which identified two families who had four SIDS deaths and two families which had three SIDS deaths. She stated there was no history to suggest that those deaths had been other than natural.⁸⁹⁹
638. Professor Blackwell also stated that, in relation to SIDS or SUDI, the genetic background of a child needs to be assessed in relation to the infectious agents eliciting an inflammatory response, the developmental state of the child and other environmental factors which can affect some of the inflammatory responses.⁹⁰⁰ She stated that despite some reluctance to accept that minor infections can trigger SUDI or SIDS, there is a growing body of evidence that infection plays a role in these deaths.⁹⁰¹
639. In relation to Patrick, she stated the hypothesis that there was a viral encephalitis is not supported by any microbiological or immunological evidence. She stated the main injuries appear to be neurological. She stated, however, there were three organisms isolated from his blood clot culture obtained at autopsy. Contrary to the views of the pathologists (see [619] above), she stated it was difficult to dismiss the findings as contamination as there would have been little time for the breakdown of mucosal barriers.⁹⁰²
640. In relation to Sarah, Professor Blackwell pointed to the fact that the autopsy showed that Sarah had a “**profuse**” (emphasis in original) number of coliforms, alphae-haemolytic streptococci and scant numbers of *S. aureus*. She stated other findings consistent with SIDS included petechial haemorrhage in lungs, pericardium and thymus.⁹⁰³
641. In conclusion, Professor Blackwell stated that particularly for Sarah and Laura, the unusual background of the Folbigg family did not negate the fact that potentially significant organic illnesses were present in these children.⁹⁰⁴

⁸⁹⁸ Exhibit 2-T, Report of Professor Cecilia Blackwell (5 March 2019) [red pagination 4813].

⁸⁹⁹ Exhibit 2-T, Report of Professor Cecilia Blackwell (5 March 2019) [red pagination 4765].

⁹⁰⁰ Exhibit 2-T, Report of Professor Cecilia Blackwell (5 March 2019) [red pagination 4766].

⁹⁰¹ Exhibit 2-T, Report of Professor Cecilia Blackwell (5 March 2019) [red pagination 4769].

⁹⁰² Exhibit 2-T, Report of Professor Cecilia Blackwell (5 March 2019) [red pagination 4770-4771].

⁹⁰³ Exhibit 2-T, Report of Professor Cecilia Blackwell (5 March 2019) [red pagination 4771].

⁹⁰⁴ Exhibit 2-T, Report of Professor Cecilia Blackwell (5 March 2019) [red pagination 4772].

642. Her supplementary report added little to these views, although Professor Blackwell did suggest that there was a possibility of genetic variants being responsible for the death.⁹⁰⁵ However, it is more appropriate to deal with this issue in the context of the genetic evidence presented at the 2019 Inquiry and more importantly to that presented at the present Inquiry.
643. In her evidence before the 2019 Inquiry, Professor Blackwell agreed that, in her view, further investigation of the cause of the children's death should include genetic assessments by whole genome sequencing (**WGS**). She agreed that the work carried out by the 2019 Inquiry in obtaining samples from each of the children of Ms Folbigg is the sort of work she considered should be done.⁹⁰⁶
644. Professor Blackwell was referred to the fact that she initially considered that the swollen uvula in Sarah was associated with her death whilst, in her report dated 5 March 2019, she said the swollen uvula might have resulted from an inflammatory response to a respiratory infection. She stated the reason for the change was that there was not much evidence that the swollen uvula was blocking her breathing.⁹⁰⁷
645. Professor Blackwell, in response to being asked how minor infections could trigger death, stated that in the period most affected by SIDS, children have the lowest level of immunoglobulins that would be protection against infection. She stated that if an infection gets into the body while they are going to be dependent on the non-specific immune system, the white cells which go in to kill the organism will be turned into antibodies, so a minor infection might trigger a very massive inflammatory response.⁹⁰⁸

(ii) Professor Clancy

646. Professor Clancy provided a report to the 2019 Inquiry dated 13 March 2019. Professor Clancy had held the role as Head of the Immunology at the Royal Prince Alfred Hospital. He occupied the position of Foundation Professor of Pathology at the University of Newcastle for 25 years and Director of Clinical Immunology at the John Hunter Hospital in Newcastle for 30 years.⁹⁰⁹
647. In his report, he said he agreed with the post-mortem diagnosis of SIDS in relation to Caleb and Sarah, which was made by the attending pathologists, and agreed to by Professors Cordner and Duflou. He also agreed with the diagnosis of acute myocarditis in respect of Laura, made by Professors Cordner and Duflou. He stated that the diagnosis in Patrick is difficult but he agreed that hypoxic-ischaemic encephalopathy resulting from an ALTE is the most likely diagnosis. He was also uncertain why Dr Cala did not identify myocarditis as the cause of death in respect of Laura.⁹¹⁰
648. Professor Clancy expressed the view that any conviction of Ms Folbigg based on

⁹⁰⁵ Exhibit 2-U, Further Report of Professor Cecilia Blackwell (undated).

⁹⁰⁶ Exhibit 4, Transcript of the 2019 Inquiry, 22 March 2019 T314.22-39 [red pagination 319].

⁹⁰⁷ Exhibit 2-T, Report of Professor Cecilia Blackwell (5 March 2019) [red pagination 4764]; Exhibit 4, Transcript of the 2019 Inquiry, 22 March 2019 T316.6-15 [red pagination 321].

⁹⁰⁸ Exhibit 4, Transcript of the 2019 Inquiry, 22 March 2019 T321.30-48 [red pagination 326].

⁹⁰⁹ Exhibit 2-W, Report of Professor Robert Clancy (13 March 2019) [red pagination 4927].

⁹¹⁰ Exhibit 2-W, Report of Professor Robert Clancy (13 March 2019) [red pagination 4928].

medical grounds would be unsafe. He generally agreed with the opinion of Professor Blackwell.⁹¹¹

649. In a supplementary report of 17 March 2019, Professor Clancy reported on his review of microbiology in the case of each of Sarah and Laura.
650. In relation to Sarah, he stated that the bacteria of the type found in Sarah's lung tissue is commonly present in children that die unexpectedly and without any readily identifiable alternate cause of death. He stated that a confident diagnosis of SIDS can be made as the cause of Sarah's death on clinical grounds. He said the microbiology report adds confidence to this diagnosis by the finding of both streptococcus and staphylococcus species in the lung culture. In contrast to the pathologists' evidence, he agreed with Professor Blackwell that airways contamination from cardio respiratory resuscitation is a possibility but not a likely cause of the bacteria found in the lung biopsy.⁹¹²
651. In relation to Laura, he concurred with the view of the attending pathologists that the gut derived bacteria in her spleen and lungs likely represented contamination. He stated that he concurred with the conclusion that Laura's cause of death was myocarditis and that the microbiological findings neither support nor refute that diagnosis.⁹¹³
652. In his evidence before the 2019 Inquiry, Professor Clancy stated he was not aware of the recent research referred to by Professor Horne which demonstrates there was no longer considered to be a connection between ALTEs and SIDS. He said he would not accept it because if you went back and looked at the data of ALTEs and SIDS patients, the parallelism is quite remarkable.⁹¹⁴
653. In his examination, Professor Clancy commented that in standard post-mortems the contamination rate is less than 10% and that minor infections are incredibly important in SIDS in the sense that they appear to "trigger at a critical stage of changeover of the mucosal immune response, they trigger a bizarre immune response which are seen locally in the local tissues".⁹¹⁵
654. I have summarised Professor Blackwell and Professor Clancy's evidence and referred to the dispute between them and the pathologists as to the cause of the bacteria in Sarah's lung (see [650]). It is unnecessary for me to reach a conclusion as to whether the cause of that bacteria was infection or contamination arising out of resuscitation efforts. Ultimately, it is a question which has little bearing on the ultimate outcome of the present Inquiry.

The Paediatric Neurologists

(i) Dr Ryan

655. Dr Ryan provided a report to the 2019 Inquiry dated 15 March 2019. At the time, she was the Director of the Department of Neurology at the Royal Children's Hospital, Melbourne; Honorary Clinical Professor in the Faculty of Medicine,

⁹¹¹ Exhibit 2-W, Report of Professor Robert Clancy (13 March 2019) [red pagination 4928].

⁹¹² Exhibit 2-W, Supplementary Report of Professor Robert Clancy (17 March 2019) [red pagination 5064]; Exhibit 4, Transcript of the 2019 Inquiry, 22 March 2019 T350.34-T351.35 [red pagination 355-356].

⁹¹³ Exhibit 2-W, Supplementary Report of Professor Robert Clancy (17 March 2019) [red pagination 5066].

⁹¹⁴ Exhibit 4, Transcript of the 2019 Inquiry, 22 March 2019 T329.22-44 [red pagination 334].

⁹¹⁵ Exhibit 4, Transcript of the 2019 Inquiry, 22 March 2019 T345.29-47 [red pagination 350].

University of Melbourne; and, Adjunct Clinical Professor at the School of Clinical Sciences, Monash University. Dr Ryan's report provided her assessment of Patrick's neurological condition and its likely aetiology/aetiologies.⁹¹⁶

656. Dr Ryan pointed out in her report that there were many other causes of infantile encephalopathy other than viral encephalitis. She said the exclusion of a viral cause, therefore, failed to exclude other causes of infantile encephalopathies. Those causes included genetic disorders affecting brain development and metabolism, conditions affecting neurotransmitter synthesis and function and inborn errors of metabolism affecting other aspects of cerebral function.⁹¹⁷
657. Dr Ryan stated that, from her review of the clinical file provided, she was not convinced that Patrick's clinical history is consistent with him having neurologic deficits resulting from a single hypoxic-ischaemic episode occurring on 18 October 1990.⁹¹⁸
658. In that regard, she pointed to the fact that when Patrick was first brought to the Emergency Department, he was pale and lethargic but had some back arching. She noted he was hypothermic, tachycardic and tachypnoeic. She stated that he was, therefore, very unwell. Dr Ryan noted, however, on the same day he had a head ultrasound and EEG, which were normal, and within a few hours of admission he was described in the nursing notes as feeding well. She stated that, had Patrick sustained a severe hypoxic-ischaemic episode on the morning of 18 October 1990 – one sufficiently severe to cause the change seen on his subsequent imaging and his post-mortem examination – it is difficult to imagine that he would have been able to feed well that day and that his EEG could have been entirely normal.⁹¹⁹
659. Dr Ryan also pointed out that Patrick's physiotherapy assessment on 14 January 1991 documented a child in whom there were no fixed severe abnormalities of tone or reflexes, such as would be expected after a significant hypoxic-ischaemic brain injury. She noted that the major finding was his visual loss. Dr Ryan stated that isolated visual loss is not a common finding after hypoxic brain injury. She noted that on a physiotherapy review, some time but not necessarily less than one month later, Patrick's vision was felt to be much better than had previously been the case. She stated that suggested that he had a fluctuating picture – potentially more consistent with a metabolic or other encephalopathy – rather than a fixed neurologic deficit related to a static hypoxic-ischaemic injury sustained some months earlier.⁹²⁰
660. Dr Ryan stated that in the case of Patrick, there are a number of alternative diagnoses potentially causative of his neurological condition which had not been excluded by his previous testing. Those conditions included but were not limited to disorders of creatine metabolism, alternating hemiplegia of childhood, neurotransmitter disorders, and genetic channelopathies causing infantile encephalopathies and cardiac arrhythmias. She stated that all of those conditions which can cause progressive neurologic deficit in infancy can be associated with epilepsy or seizure like episodes and can result in the premature death of affected children.⁹²¹

⁹¹⁶ Exhibit 2-AJ, Report of Professor Monique Ryan (15 March 2019) [red pagination 5653].

⁹¹⁷ Exhibit 2-AJ, Report of Professor Monique Ryan (15 March 2019) [red pagination 5649].

⁹¹⁸ Exhibit 2-AJ, Report of Professor Monique Ryan (15 March 2019) [red pagination 5651].

⁹¹⁹ Exhibit 2-AJ, Report of Professor Monique Ryan (15 March 2019) [red pagination 5651].

⁹²⁰ Exhibit 2-AJ, Report of Professor Monique Ryan (15 March 2019) [red pagination 5652].

⁹²¹ Exhibit 2-AJ, Report of Professor Monique Ryan (15 March 2019) [red pagination 5652].

661. In her evidence to the 2019 Inquiry, Dr Ryan referred to the suggestion in her report dated 15 March 2019 that Patrick’s case might be better understood with the benefit of additional genetic testing by either whole exome sequencing (**WES**) or ideally by WGS. She stated that her conclusion on reviewing further documents provided by the 2019 Inquiry was that a causative genetic condition for Patrick’s presentation was not identified on the basis of that genetic testing. She stated, however, that did not change her substantive view that his presentation was potentially consistent with an as yet unidentified genetic disorder.⁹²²
662. Dr Ryan stated that her underlying view was based on the fact that there were aspects of his clinical course which were atypical or unexplained and which were and remained poorly understood at the time of his death and remained poorly understood at the time of giving evidence. She stated that one of the potential causes for that course and for Patrick’s condition was an underlying genetic disorder. She stated that obviously the concern was that an alternative explanation is inflicted injury but she said there were things about Patrick’s course which she felt to be atypical or inconsistent with a single inflicted injury at the age of four and a half months, which is why she suggested that a genetic condition was a possible alternative diagnosis. Dr Ryan referred again to a number of things about Patrick’s presentation which were atypical of an acute hypoxic-ischaemic insult at the age of four and a half months. She also stated there were a number of things which appeared to her to be atypical of a case of a child having sustained that sort of insult, and so her question was whether Patrick in fact had a different condition or diagnosis and in children with progressive neurological disorders in the first 12-18 months of life, a genetic cause would be one of the top two or three things you would consider.⁹²³
663. Dr Ryan agreed that she was referring to genetic disorders for which the genetic cause or basis is not yet known and stated that every week in the medical literature, the cause of genetic disorders is better delineated by the finding of new genes that cause recognised or novel clinical syndromes.⁹²⁴
664. Dr Ryan was asked if she understood that when Patrick arrived in Emergency, he was hypoxic. She stated that, on the information that she was given, when he arrived at the Emergency Department, he was found to have a low blood oxygen on the oximetry. She agreed it was 88%, which she described as “low but not terribly low”.⁹²⁵
665. It was put to Dr Ryan that such a level was hypoxic and she rejected that, stating that hypoxia is slightly different. She explained that hypoxia occurs where a low oxygen level is measured in the blood, which is measured by means of a blood gas measurement. She stated that so far as she could determine, Patrick did not have a blood gas measurement, and oximetry (where you put a probe on the fingers or the toes) can be inaccurate. In those circumstances, Dr Ryan said she would not infer that a child who had an oxygen level measured by oximetry on a single occasion of 88% was hypoxic.⁹²⁶
666. It was put to Dr Ryan that Patrick was invariably described as an otherwise normal

⁹²² Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T583.1-14 [red pagination 590].

⁹²³ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T583.25-T584.24 [red pagination 590-591].

⁹²⁴ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T584.49-T585.9 [red pagination 591-592].

⁹²⁵ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T585.23-35 [red pagination 592].

⁹²⁶ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T585.37-T586.2 [red pagination 592].

and healthy baby. She noted, however, that on the day that he presented to hospital he was moving in an abnormal fashion and he was neck arching. There were entries in the notes that he always did this. She stated there were two things that were contrary to describing him as a well, behaving normally baby. First, the fact that he had torticollis, which she said could be a benign phenomenon, but is not always benign, and that he tended to arch his back at times.⁹²⁷

667. Dr Ryan accepted that it was possible that Patrick did have a single hypoxic-ischaemic episode on 18 October 1990. It was put to her that it was reasonably possible, given the results of the genetic testing, but she stated she did not think she would infer that from the genetic testing stating that there was sufficient doubt about his presentation and his clinical course which prevented her feeling comfortable ascribing his findings and his subsequent course to the after effects of a single hypoxic-ischaemic episode.⁹²⁸
668. Dr Ryan was referred to evidence given by Associate Professor Fahey which included the opinion that an unrecognised seizure on presentation was unlikely to be the cause of the ALTE. She stated she did not agree entirely. She stated that, contrary to Associate Professor Fahey's report, she did not think the literature on near drowning was relevant in this setting. She said, leaving aside the near drowning cases and just talking about seizures, a single unrecognised seizure, if it were prolonged, can result in a hypoxic-ischaemic injury to the brain and the sort of pathological changes subsequently seen on Patrick's post-mortem evaluation. She stated she did not feel it could be confidently excluded as a cause for his acute episode on 18 October 1990. Dr Ryan stated there was nothing she had heard from Associate Professor Fahey or Dr Colley that caused her to alter her ultimate opinion that she was not convinced that a single hypoxic-ischaemic episode had occurred on that day. She stated that the sort of points that Associate Professor Fahey and Dr Colley had raised were things she had taken into consideration in coming to her conclusions. She suggested a family history of epilepsy was unnecessary.⁹²⁹
669. It was put to Dr Ryan that, although Patrick had oxygen from the ambulance when it arrived and during the ambulance journey to hospital, Patrick's respiratory effort did remain impaired, with a reading of 88%, which tended towards the conclusion that he was hypoxic. Dr Ryan repeated her view that she did not think you could read too much into a single measurement of oxygen saturation levels from the periphery. She stated that one thing that happens when children or adults have a severe hypoxic-ischaemic injury, is that there is evidence of other end organ injury after the fact, so if there is a very low oxygen level in the blood for any period of time, sufficient to cause brain injury, then there will usually be kidney failure and other abnormal blood tests will be identified. Dr Ryan stated that was supported by the Constantinou Article to which Associate Professor Fahey referred.⁹³⁰
670. Dr Ryan was asked by counsel for Ms Folbigg whether the brain changes shown in the EEG and CT scans, as disclosed in the report on those scans, could have occurred by reason of some neurological difficulty other than a hypoxic event. She explained that they could, stating that you could sustain a hypoxic-ischaemic injury as part of a seizure and the changes were potentially consistent with epilepsy. She

⁹²⁷ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T586.25-46 [red pagination 593].

⁹²⁸ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T587.23-30 [red pagination 594].

⁹²⁹ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T596.30-T597.1 [red pagination 603-605].

⁹³⁰ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T599.12-29 [red pagination 606].

said, however, CT scans give very poor tissue definition and do not distinguish well between different pathologies.⁹³¹

671. Dr Ryan was asked by counsel for Ms Folbigg to assume that when Patrick was put to bed at about 7:00pm [on 17 October 1990], that he was said by his mother to be suffering a fever and was sweating, crying and clingy. Dr Ryan was asked if that was a piece of evidence which could be of assistance to the Inquiry in understanding what might have gone on. In response, she explained she thought it was relevant, stating that, in general, children who have a genetic or other predisposition to seizures are more likely to have them when they have an intercurrent illness especially one that is associated with a significant fever.⁹³²
672. Dr Ryan also stated that it was difficult to be entirely sure whether or not Patrick had a progressive neurological condition. She stated that one of the things which worried her on reviewing the notes was that when Patrick was seen by Dr Wilkinson, his neurologist, 12 days after the ALTE, he was felt to be active and interested and Dr Wilkinson noted that, “on examination, I could not find any neurological problem”. She observed that by November 1990, when Patrick was readmitted to hospital, it was apparent that he was blind, which seemed like quite a significant change and she thought it very problematic “if one is postulating that this is not a progressive disorder”.⁹³³

(ii) Associate Professor Fahey

673. Associate Professor Fahey provided a report to the 2019 Inquiry dated 30 March 2019. At the time, among other appointments, he was Head of Child Neurology at Monash Children’s Hospital; Associate Professor at the Department of Paediatrics, Monash University; and, Clinical Associate Professor at the Department of Medicine, University of Melbourne.⁹³⁴
674. At the outset of his report, Associate Professor Fahey dealt with the genetic testing carried out in respect of Patrick. He stated that he discussed the WGS result with Dr Buckley and viewed the working data document that he prepared with Professor Kirk. Associate Professor Fahey stated he supplied a list of 204 genes explicitly relating to epilepsy, metabolic conditions and dystonia. He stated no genetic variants were identified which could be considered pathogenic, as it was understood in 2019, using standardised interpretive methods in Patrick, his mother nor his siblings.⁹³⁵
675. Associate Professor Fahey said he agreed with Dr Ryan’s comments that “the causes of encephalopathy are protean, but can include infections, hypoxic-ischaemic brain injury, inborn errors of metabolism, trauma, toxic injury and genetic conditions affecting brain development or other aspects of cerebral function”. He referred to Dr Ryan’s comments that there are a number of neurologic conditions which were not tested for in Patrick in 1990, but which might be identified by means of WGS in 2019. He stated that from the work of Dr Buckley and Professor Kirk, that testing had been done directly on Patrick’s DNA sample and in those of his siblings. Associate Professor Fahey stated that no pathogenic changes were identified.⁹³⁶

⁹³¹ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T603.6-37 [red pagination 610].

⁹³² Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T604.40-T605.1 [red pagination 611-612].

⁹³³ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T609.11-20 [red pagination 616].

⁹³⁴ Exhibit 2-AK, Report of Associate Professor Michael Fahey (30 March 2019) [red pagination 5680].

⁹³⁵ Exhibit 2-AK, Report of Associate Professor Michael Fahey (30 March 2019) [red pagination 5682].

⁹³⁶ Exhibit 2-AK, Report of Associate Professor Michael Fahey (30 March 2019) [red pagination 5683].

676. Associate Professor Fahey said he also agreed with Dr Ryan that there was little clinical or pathological evidence and no microbiological evidence of viral encephalitis.⁹³⁷
677. Associate Professor Fahey further agreed with Dr Ryan as to the range of contemporary testing which would be considered appropriate in a child presenting in 2019 as Patrick did on 18 October 1990. He stated, however, that in Patrick, metabolic testing was undertaken which was reasonable and, in most instances, would be similar to that which is standard as at the time of preparing his report. He noted that metabolic and genetic testing was later extended to include a range of conditions under the guidance of Doctors Wilkinson and Colley on Patrick and his siblings without a cause being identified.⁹³⁸
678. In expressing his opinion, Associate Professor Fahey said there was no doubt Patrick presented acutely unwell on 18 October 1990 and ultimately showed evidence in his brain on the post-mortem of gliosis caused by ischaemia. Furthermore, he stated that Patrick was hypoxic, tachycardic and tachypnoeic on presentation. He said that he was confident that Patrick did not have infective encephalitis and also confident the testing at the time of presentation, combined with post-mortem examination and genomic sequencing, makes a neurometabolic condition very unlikely. He also noted that genome testing excluded any recognised conditions associated with genetic epilepsies, encephalopathy, cardiac arrhythmias or sudden death. Associate Professor Fahey stated that the outstanding issue for him is, regardless of any proposed aetiology, Patrick had a period where the medical and nursing staff felt he was alert and responsive and able to feed. Associate Professor Fahey stated that the other issue he regarded as problematic was how to explain the evolution of the EEG and CT scan over days, and the clinical evolution over months culminating with Patrick's death. Associate Professor Fahey then sought to outline a number of theories which could explain what occurred.⁹³⁹
679. The first assumption Associate Professor Fahey made was of a theory of hypoxia on presentation. He stated a normal EEG with worsening over days is reported in the near drowning literature. He referred to the Constantinou Article, describing the evolution of EEG and clinical seizures between 36-96 hours after the event, stating that in that study seizures began after initial presentation followed by a striking interval of near normality before a neurological deterioration, with an evolution of the seizure disorder in some instances over days and an associated evolution of neuroimaging findings.⁹⁴⁰
680. Associate Professor Fahey then assumed a theory of unrecognised seizure on presentation, stating that in these circumstances an EEG may also be initially normal and evolve with time. He referred to an article by Bonkowsky, Guenther, Srivastava and Fillaux, that in 3.6% of ALTEs studied, the event represented the onset of epilepsy. However, he referred to the accompanying editorial in which the point was made that all of those with both ALTE and epilepsy have a family history and that a final diagnosis of child abuse was identified in 11% of the children studied.⁹⁴¹
681. So far as sudden unexplained death in epilepsy is concerned, Associate Professor

⁹³⁷ Exhibit 2-AK, Report of Associate Professor Michael Fahey (30 March 2019) [red pagination 5683].

⁹³⁸ Exhibit 2-AK, Report of Associate Professor Michael Fahey (30 March 2019) [red pagination 5684].

⁹³⁹ Exhibit 2-AK, Report of Associate Professor Michael Fahey (30 March 2019) [red pagination 5690-5691].

⁹⁴⁰ Exhibit 2-AK, Report of Associate Professor Michael Fahey (30 March 2019) [red pagination 5690-5691].

⁹⁴¹ Exhibit 2-AK, Report of Associate Professor Michael Fahey (30 March 2019) [red pagination 5691].

Fahey described it as a rare condition affecting one in 4,500 children with epilepsy per year and more likely in those with longstanding epilepsy, with frequent seizures despite multiple medications and in those of a young age at onset. Associate Professor Fahey stated that in children it is also associated with specific genetic changes, particularly those with the sodium, potassium and calcium ion channels and those who have apnoea during epileptic events. He noted the pathogenic changes within those genes were not identified in Patrick.⁹⁴²

682. Associate Professor Fahey said he interpreted Patrick's physiotherapy assessment at seven months of age differently from Dr Ryan. He stated it represented a deviation from typical motor development in addition to the "severe visual impairment".⁹⁴³
683. Finally, Associate Professor Fahey referred to the question asked of Dr Ryan as to whether Patrick's condition was consistent with a single hypoxic episode on 18 October 1990, and possible alternative aetiologies for his condition. He stated that although speculation of alternative genetic causes are appropriate, he was now confident that alternative diagnoses for the 18 October 1990 event had been thoroughly investigated. Thus, at least by inference, Associate Professor Fahey was lending his support to the proposition that Patrick's ALTE was the result of a single hypoxic event.⁹⁴⁴
684. In his evidence to the 2019 Inquiry, Associate Professor Fahey confirmed that he had asked Dr Buckley to consider a list of 204 genes explicitly relating to epilepsy, metabolic conditions and dystonia. He stated that he was satisfied that of the genes that could be identified in 2019, which related to his area of expertise, there was no pathogenic variant identified in Ms Folbigg or her children. He stated that he used the expression they "virtually eliminate a recognised genomic cause" because absolute is not a reality in medicine or in genomics, but reiterated that he had not identified anything which is a consistent finding or indeed a pathogenic disease cause finding in Patrick.⁹⁴⁵
685. Associate Professor Fahey stated that at face value Patrick was hypoxic at the time he presented at the Emergency Department after the ALTE. He noted Patrick responded to oxygen at that time but stated that at the end of the day, Patrick's pathology showed that he had ischaemic changes. He stated Patrick's EEG and the evolution of the changes were consistent with what could be seen after a hypoxic event. He stated that, in his opinion, before 18 October 1990, Patrick was a typically developing child and after the event he had an evolution of changes, stating that care is needed regarding the wording of evolution as opposed to progressive, because there were no findings suggestive either pathologically, biochemically or genomically of an underlying progressive disease.⁹⁴⁶
686. In his evidence, Associate Professor Fahey again referred to the Constantinou Article, which described a group of 14 children who presented similarly to how Patrick presented and, of those, half of them were comatose and remained comatose, but half of them had a period of apparent lucidity and had an interval of near normality before neurological deterioration, with an evolution of seizure

⁹⁴² Exhibit 2-AK, Report of Associate Professor Michael Fahey (30 March 2019) [red pagination 5692].

⁹⁴³ Exhibit 2-AK, Report of Associate Professor Michael Fahey (30 March 2019) [red pagination 5693].

⁹⁴⁴ Exhibit 2-AK, Report of Associate Professor Michael Fahey (30 March 2019) [red pagination 5694].

⁹⁴⁵ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T588.6-T589.49 [red pagination 595-596].

⁹⁴⁶ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T590.27-T591.5 [red pagination 597-598].

disorders, in some instances over days. He stated that was echoed in some of the older literature on drowning.⁹⁴⁷

687. Associate Professor Fahey was asked whether he had excluded the theory of unrecognised seizure on presentation. He responded he thought it was less likely and said there were some other points which were not in his report which supported that. He stated that if Patrick had a seizure, which was one which led him to have a low oxygen saturation, that first seizure was very different to any of the other seizures he presented with across his life. He stated that would make the first event different from the other events which he would consider unusual.⁹⁴⁸
688. Associate Professor Fahey effectively repeated the conclusion he reached in his report, namely, that he believed that Patrick had a presentation consistent with a severe hypoxic event on 18 October 1990 and he did not believe that an alternative diagnosis had been found.⁹⁴⁹

The genetic evidence at the 2019 Inquiry

689. Evidence as to whether a genetic variant (or mutation) could have caused the death of any of the children was given by Dr Bridget Wilcken and the experts to whom I have referred at [499(e)].
690. Prior to dealing with the evidence of these experts, it is necessary to say something first about the significance of the genetic evidence, the method used for the interpretation of genetic evidence and the circumstances surrounding the manner in which the evidence came to be given at the 2019 Inquiry. I have gratefully adopted much of the written submissions of Counsel Assisting this Inquiry on the former two issues. Those submissions were accepted by all of the parties to the Inquiry, with the possible exception of Mr Folbigg. However, counsel for Mr Folbigg did not dispute any of the submissions made in relation to these matters by Counsel Assisting, nor for that matter, their summary of the conclusions reached by each of the experts on the genetic question. His submission simply was that it was not sufficient to raise a reasonable doubt as to Ms Folbigg's guilt.
691. It is convenient to deal with these matters using the same headings used by Counsel Assisting.

(i) DNA and genetic variants

692. Like many organisms, much of the human body is made up of proteins. DNA is a chemical that contains genetic information for building and maintaining an organism, by coding for the body to make particular proteins. The genome is a complete set of the DNA in an organism.⁹⁵⁰
693. Almost every cell in the human body contains that person's genome, which was inherited from a combination of their biological parents. The information in DNA is written in an alphabet of four letters: A, C, G and T. These stand for the four nucleobases, which are the chemical building blocks of DNA.⁹⁵¹

⁹⁴⁷ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T593.9-19 [red pagination 600].

⁹⁴⁸ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T593.34-46 [red pagination 600].

⁹⁴⁹ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T595.27-31 [red pagination 602]; Exhibit 2-AK, Report of Associate Professor Michael Fahey (30 March 2019) [red pagination 5694].

⁹⁵⁰ Edwin Kirk, *The Genes that Makes Us* (Scribe Publications, 2020) p 8.

⁹⁵¹ Edwin Kirk, *The Genes that Makes Us* (Scribe Publications, 2020) p 8.

694. In DNA, those nucleobases are arranged into clusters of three, which form into one of twenty different amino acids. A gene is a stretch of amino acids in the DNA that codes for a particular protein. A 21st arrangement of nucleobases tells the body to “stop”. That is, to complete that particular protein code.⁹⁵²
695. Professor Kirk described DNA for a lay audience in this way:⁹⁵³
- You can think of nucleobases as the letters, amino acid names as the words they spell, and genes as sentences. Each sentence explains how to build a particular protein, and each molecule of DNA contains many of these sentences. It’s a manual for building parts of the body.
696. A genetic variant is a permanent change in the DNA sequence. A “missense variant” is a genetic variant in which a different amino acid is substituted from the usual amino acid at a particular location on the gene.⁹⁵⁴
697. There is considerable genetic variation between human beings. On average, a person will have three million places at which their genome differs from their neighbour’s.⁹⁵⁵ Most of these variations sit in between the genes, or in a place that does not affect the protein code for a gene. About 40,000 variants in each person, on average, result in a difference in the parts of genes that code for protein.⁹⁵⁶ Most of these variations are benign or have very subtle consequences,⁹⁵⁷ and account for typical differences between individuals: who has brown eyes and who has blue, who is tall and who short, etcetera.
698. Variants are identified by comparing difference between the DNA of an individual who has been tested, and the reference genetic sequence. The reference sequence is not necessarily ‘normal’ or even representative of the most common sequence at any given base – but is used as a common reference point by testing laboratories.⁹⁵⁸
699. While many gene variants have no, or negligible effect, some genetic variations, are disease causing – or “pathogenic”.
700. The term genetic “mutation” is sometimes used instead of “genetic variant” – for instance in respect of variants that are capable of causing disease. But for the purposes of this Inquiry, the term variant has been preferred.
701. The term “phenotype” means an “observable trait”, and in the genetic context refers to the clinical manifestation or presentation of a person’s genes.⁹⁵⁹ Tall with brown eyes is a phenotype for the genes that determine those traits. In the case of a disease causing or “pathogenic” genetic variant, the phenotype is the observable manifestations of the disease.
702. The field of genetics is at an age of rapid expansion and discovery. Notwithstanding

⁹⁵² Edwin Kirk, *The Genes that Makes Us* (Scribe Publications, 2020) p 8.

⁹⁵³ Edwin Kirk, *The Genes that Makes Us* (Scribe Publications, 2020) p 8.

⁹⁵⁴ ‘Missense Variant’, *National Cancer Institute* (Web Page) <<https://www.cancer.gov/publications/dictionaries/genetics-dictionary/def/missense-variant>>.

⁹⁵⁵ Edwin Kirk, *The Genes that Makes Us* (Scribe Publications, 2020) p 89.

⁹⁵⁶ Edwin Kirk, *The Genes that Makes Us* (Scribe Publications, 2020) p 8.

⁹⁵⁷ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [1.1] [red pagination 47].

⁹⁵⁸ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [1.1] [red pagination 47].

⁹⁵⁹ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [2.1] [red pagination 50]; 2019 Inquiry Report p 548; NSW Health, ‘Glossary’, Centre for Genetics Education (Web Page, 26 February 2016) <www.genetics.edu.au/publicationsand-resources/glossary>.

the huge amount of progress between the trial in 2003 and the Inquiry in 2019, and yet further progress to the time of this Inquiry – a great deal remains unknown.

(ii) Variant classification, including the ACMG Guidelines

703. Various guidelines are available for the classification of genetic variants, particularly in the context of clinical diagnostic medicine. The purpose of such guidelines is to impose a level of consistency and rigour to the task of classifying genetic variants across different laboratories.
704. There are multiple systems for variant classifications in use but the dominant system is the classification system of the American College of Medical Genetics and Genomics and the Association for Molecular Pathology (**the ACMG Guidelines**).⁹⁶⁰
705. Variant classification under the ACMG Guidelines is a probabilistic exercise, in which different types of evidence are weighted and combined to assess the probability that a particular variant is disease-associated.⁹⁶¹ Genetic variants are classified into one of five categories; Benign, Likely Benign, VUS, Likely Pathogenic and Pathogenic.⁹⁶²
706. Benign and likely benign means that there is a very high degree of confidence that a variant is harmless (a 1% and 10% chance of pathogenicity, respectively).⁹⁶³ At the other end of the spectrum, Pathogenic means a very high degree of confidence (99% chance) that a variant is associated with Mendelian disease - that is a disorder caused by mutation in a single gene.⁹⁶⁴ Likely pathogenic refers to a variant that is assessed as having sufficient evidence to be medically actionable, at a 90% confidence threshold.⁹⁶⁵ Variants that have some evidence for pathogenicity, but insufficient to reach the 90% confidence threshold, or for which there is conflicting evidence, are categorised as VUS.⁹⁶⁶
707. Categories of evidence related to a variant are assigned weightings such as “supporting”, “moderate”, and “strong” evidence, in favour of either pathogenicity, or benignity. The ACMG Guidelines are prescriptive as to how these weightings can be combined to arrive at a classification, but allow some modification of weightings in certain circumstances.
708. In a report presented to the present Inquiry, Professors Kirk and Skinner pointed out that there was broad agreement about the way different types of evidence were used in assessing whether a variant is pathogenic. They stated that, as per the ACMG Guidelines, each type of evidence is assigned a code that includes information about whether it supports the variant being pathogenic (P) or benign (B) and the assessed strength of that evidence. They stated the relevant evidence strengths for this discussion are Strong (S), Moderate (M) and Supporting (P). They gave as an example, PM2, as evidence for a variant being pathogenic (P) of moderate strength

⁹⁶⁰ Sue Richards et al, ‘Standards and guidelines for the interpretation of sequence variants: a joint consensus recommendation of the American College of Medical Genetics and Genomics and the Association for Molecular Pathology’ (2015) 17(5) *Genetics in Medicine: Official Journal of the American College of Medical Genetics* 405-424.

⁹⁶¹ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [1.3] [red pagination 47].

⁹⁶² Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [1.4] [red pagination 47-48].

⁹⁶³ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [1.4] [red pagination 47-48].

⁹⁶⁴ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [1.4] [red pagination 47-48].

⁹⁶⁵ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [1.4] [red pagination 47-48].

⁹⁶⁶ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [1.4] [red pagination 47-48].

(M) – 2 in the ACMG list of PM evidence. They stated there were rules for combining the available evidence to categorise variants.⁹⁶⁷

709. Although in the present Inquiry a number of the experts utilised the ACMG Guidelines, a number also recognised that the stringency required by them in the context of making clinical decisions may be inappropriate for the purpose of identifying whether a reasonable hypothesis of innocence exists.⁹⁶⁸
710. Counsel Assisting the present Inquiry submitted that, whilst recognising their limitations, the ACMG Guidelines provide both a convenient rubric of factors relevant to assessing pathogenicity, as well as a useful metric against which the analyses of the experts can be exposed and compared.⁹⁶⁹
711. That may be so, but it is important to remember that my task is to be satisfied, on the whole of evidence, that there is no reasonable hypothesis available which is inconsistent with Ms Folbigg's guilt. Whilst the finding that a genetic variant at both extremes of the ACMG spectrum will be powerful evidence in support of or contrary to a reasonable alternative hypothesis, it seems to me that care must be taken in considering the evidence which placed reliance on the ACMG Guidelines as my task is different to clinical diagnostics which the ACMG Guidelines are designed to assist.

Written reports of the experts who gave evidence at the 2019 Inquiry

712. A number of the experts called in the 2019 Inquiry provided separate reports and participated in joint reports. They were examined concurrently at that Inquiry, with the exception of Professor Cook, as noted at [499(e)].
713. It is convenient to deal with the reports given in chronological order. Once again, I have drawn substantially on the submissions of Counsel Assisting on these matters which may be said to be uncontroversial.
714. As part of the 2019 Inquiry's initial investigations, a report was obtained from (the now) Professor Wilcken.⁹⁷⁰
715. Professor Wilcken explained that the technology used prior to the trial, which tested for all significant disorders of organic acid metabolism and fatty acid oxidation, remains state of the art. Accordingly, she concluded that the exclusion of all such significant disorders remained valid. She opined that the other negative studies

⁹⁶⁷ Exhibit 7-03, Report of Professors Kirk and Skinner (31 October 2022) [red pagination 48].

⁹⁶⁸ For example, the CALM2-G114R variant could meet the definition of pathogenic under the ACMG Guidelines, but not be responsible for the girls' deaths: either because CALM2-G114R occasions a disorder that would not have caused the death of two small children, or because, notwithstanding it could have caused their deaths in a similar manner, they were killed by their mother. Similarly, the variant could fail to meet the definition of likely pathogenic under the ACMG Guidelines due to insufficient available evidence, but still present a reasonable – even likely – cause of the girls' deaths, that cannot be negated by the balance of evidence. Professor Nyegaard expressed the view, with which Professor Toft Overgaard agreed, that the Guidelines may not be an appropriate tool to determine the likely effect of CALM2-G114R, simply because there is currently insufficient data to satisfy a number of its criteria: Transcript of the 2022 Inquiry, 15 November 2022 T157.22-28 (Nyegaard). Further, the Guidelines require 90% certainty to conclude a variant is likely pathogenic, and do not then distinguish between degrees of certainty less than 90% and more than 10%, which affects utility. This is particularly so where a variant would be on the cusp of "likely pathogenic", and is "detrimental": Transcript of the 2022 Inquiry, T157.22-158.13 (Toft Overgaard and Nyegaard).

⁹⁶⁹ Counsel Assisting's Written Closing Submissions (4 April 2023) 92 [330].

⁹⁷⁰ Exhibit 2-AC, Genetics tender bundle, Report of Professor Bridget Wilcken (24 November 2018) [red pagination 5503].

including the clinical data in each case, and the urine metabolic screening tests carried out on Patrick, Sarah and Laura Folbigg, supported this conclusion.⁹⁷¹

716. Professor Wilcken opined that if a cause of death other than human interference were to be found in relation to each of the children, it was very likely that there must be a strong genetic component. She observed there had been a great deal of development in genetic testing since the time of the trial and recommended consulting with a clinical geneticist and a genomics expert.⁹⁷²

The initial report of Dr Colley

717. Dr Colley provided a report to the 2019 Inquiry dated 26 November 2018. In that report, she noted that there had been a fundamental change in genetic testing since 2000, especially in the preceding five years with the development of robust genomic technology. She described genomic interrogation, either by WES or WGS, as a hypothesis-free study of the DNA. She stated a known or presumed diagnosis as a starting point is not needed, but the DNA sequences are studied and variants are interrogated against a known human healthy genome and the clinical features of the patient. She pointed out that variants of unknown significance may need further clarification by in-family (parental samples) segregation or functional studies.⁹⁷³
718. Dr Colley explained that the whole exome refers to all the DNA content that is involved in coding for proteins (exons). Further, she stated the whole genome refers to the non-coding elements (introns) in the genome, in addition to the exome, as well as the mitochondrial DNA. She observed that increasingly deep intronic variants had been found to cause splice-site changes that lead to disruption of the correct reading of the code and synthesis of the normal protein.⁹⁷⁴
719. Dr Colley stated that the laboratory technique of WES only captures approximately 85% of the exome and thus is not perfect technology. She stated that the whole genome platform ensures that all exomes are fully captured and interrogated, and WGS captures all classes of genetic variation in one test and has been shown to be more efficient than WES in detecting mutations and is very useful when a specific clinical diagnosis is not achievable.⁹⁷⁵
720. In those circumstances, Dr Colley made the following recommendations:
- (1) a discussion of the utility and best strategy for performing genomic studies with a multifaceted team of specialists including clinical geneticists and genomicists, anatomical pathologists and molecular pathologists;
 - (2) involve a NSW Health pathologist in molecular genetics to report the genomic study results and interpretation from a NATA (National Association of Testing Authorities) accredited molecular genetics laboratory to issue diagnostic (not research) reports;
 - (3) consider the samples available from each child, the ability and method to extract DNA from these samples and whether it is possible to have

⁹⁷¹ Exhibit 2-AC, Genetics tender bundle, Report of Professor Bridget Wilcken (24 November 2018) [red pagination 5502].

⁹⁷² Exhibit 2-AC, Genetics tender bundle, Report of Professor Bridget Wilcken (24 November 2018) [red pagination 5503].

⁹⁷³ Exhibit 2-AA, Report of Dr Alison Colley (26 November 2018) [red pagination 5289].

⁹⁷⁴ Exhibit 2-AA, Report of Dr Alison Colley (26 November 2018) [red pagination 5289].

⁹⁷⁵ Exhibit 2-AA, Report of Dr Alison Colley (26 November 2018) [red pagination 5289].

DNA from the parents as an in-family control to test variants that require segregation analysis; and

(4) variant analysis by team of clinical geneticists and genetic pathologists.⁹⁷⁶

721. Following upon Dr Colley's report, material was produced to the 2019 Inquiry by NSW Health in December 2018 in compliance with summonses.⁹⁷⁷ The material included biological samples containing DNA from each of the four Folbigg children.

Samples available for genetic testing

722. The blood spots taken from each of the children at the time of their birth as part of the Newborn Screening Program and held at the Children's Hospital at Westmead were available.⁹⁷⁸

723. In respect of each of Patrick, Sarah and Laura, tissue samples taken at the time of their autopsies in 1991, 1993 and 1999 respectively and fixed in glass and wax block slides held at the Coroner's Court were also available.⁹⁷⁹

724. In respect of Patrick, additionally available were kidney, liver, skin, skeletal muscle and heart samples taken at the time of his autopsy in 1991 and frozen at minus 80 degrees Celsius.⁹⁸⁰

725. In respect of Sarah, additionally available was one tube of extracted genomic DNA from fibroblasts, and two ampules of archived fibroblast cells stored in liquid nitrogen, held at the Children's Hospital at Westmead.⁹⁸¹

726. In respect of Laura, held at the Children's Hospital at Westmead was formalin-immersed brain tissue taken at the time of her autopsy in 1999.⁹⁸²

727. Ms Folbigg provided to her legal representatives a sample for the purpose of genetic testing.⁹⁸³ Ms Folbigg consented to the sample being made available to the 2019 Inquiry for further genetic testing.⁹⁸⁴

Engagement of multi-disciplinary panel of experts

728. The 2019 Inquiry engaged Dr Buckley to advise and assist in the task of arranging for genetic testing to be undertaken. Dr Buckley is a genetic pathologist and clinical director of the NSW Health South Eastern Area Laboratory Services at the Prince of Wales Hospital in Sydney. He holds a PhD in the field of molecular genetics, obtained in 1991.⁹⁸⁵

⁹⁷⁶ Exhibit 2-AA, Report of Dr Alison Colley (26 November 2018) [red pagination 5289].

⁹⁷⁷ 2019 Inquiry Report, ch 7 [32].

⁹⁷⁸ Exhibit 2-AC, Genetics tender bundle, List of samples held by NSW Health (15 November 2018) [red pagination 5495].

⁹⁷⁹ Exhibit 2-AC, Genetics tender bundle, Histology request forms of Patrick, Sarah and Laura (undated), pp 1-5 [red pagination 5496-5500].

⁹⁸⁰ Exhibit 2-AC, Genetics tender bundle, Email from Amber Richards to genetics data interpretation teams (10 December 2018) [red pagination 5543].

⁹⁸¹ Exhibit 2-AC, Genetics tender bundle, List of samples held by NSW Health (15 November 2018) [red pagination 5495].

⁹⁸² Exhibit 2-AC, Genetics tender bundle, List of samples held by NSW Health (15 November 2018) [red pagination 5495].

⁹⁸³ Exhibit 2-AG, Report of Professor Carola Vinuesa (2 December 2018) [red pagination 5636].

⁹⁸⁴ Exhibit 2-AF, Joint report of Canberra genetics team (29 March 2019) [red pagination 5585].

⁹⁸⁵ Exhibit 2-Z, Joint report of Sydney genetics team (29 March 2019) CV of Dr Michael Buckley [red pagination 5255-5265]; Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T372.33-38 [red pagination 377].

729. Professor Skinner is a paediatric cardiologist and cardiac electrophysiologist working as a consultant at Starship Children's Hospital in Auckland, New Zealand. He is an Honorary Professor in Paediatrics, Child and Youth Health at the University of Auckland.⁹⁸⁶ As noted above at [499(e)], Professor Skinner prepared separate reports focussing on the cardiac aspects of the results.⁹⁸⁷

The 2019 Inquiry's consultation meetings

730. The 2019 Inquiry held three consultation meetings from December 2018 to February 2019 at which the experts identified above discussed the options for genetic testing on the produced samples, and the process to be adopted in the interpretation phase.
731. Given the age of the samples, and in some instances uncertainty as to the conditions in which the samples had been stored, the experts assessed that the quality of the DNA able to be extracted from the samples was unknown and potentially likely to be poor. Nonetheless, an important consideration was the interest in retaining, if possible, some of the samples available for future testing in the event of further developments relevant to cause of death.
732. There was consensus among the experts that there would likely be a significant advantage to having both parents' DNA, particularly in circumstances where it was expected that good quality DNA from the children would only be likely in respect of Sarah.⁹⁸⁸ This was described as "trio sequencing".⁹⁸⁹ It was anticipated at that stage that the consequences of some variants may not be able to be fully understood without the father's genetic information.⁹⁹⁰ Nonetheless, there was consensus that undertaking sequencing of available DNA material from the children and Ms Folbigg would still be a worthwhile exercise if Mr Folbigg's DNA was not available.⁹⁹¹
733. Mr Folbigg was invited to provide a DNA sample for the purpose of genetic testing. Mr Folbigg declined to provide a sample. There was no power available to the 2019 Inquiry to compel Mr Folbigg to provide such a sample. That position did not change in this Inquiry.
734. At the 10 December 2018 meeting Professor Vinuesa discussed a report prepared by her dated 2 December 2018 concerning the results of WES undertaken at the Centre for Personalised Immunology on Ms Folbigg's DNA extracted from a buccal swab and saliva. That report identified two candidate genes in Ms Folbigg: CALM2 and MYH6. Professor Vinuesa opined "given the associations between heterozygous mutations in both genes and sudden cardiac death, cardiac investigation in Kathleen Folbigg is advisable".⁹⁹²
735. At a further consultation meeting on 4 February 2019, it was agreed the Sydney and Canberra teams would pursue parallel analyses of the primary data through

⁹⁸⁶ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) CV of Professor Jonathan Skinner [red pagination 5161-5196]; Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T369.8-9 [red pagination 374], T369.13-21 [red pagination 374].

⁹⁸⁷ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5148-5204].

⁹⁸⁸ Exhibit 2-CB, Transcript of first meeting with expert geneticists (10 December 2018) [red pagination 7887].

⁹⁸⁹ Exhibit 2-CB, Transcript of first meeting with expert geneticists (10 December 2018) [red pagination 7899].

⁹⁹⁰ Exhibit 2-CB, Transcript of first meeting with expert geneticists (10 December 2018) [red pagination 7886].

⁹⁹¹ Exhibit 2-CB, Transcript of first meeting with expert geneticists (10 December 2018) [red pagination 7886, 7890-7891].

⁹⁹² Exhibit 2-AG, Report of Professor Carola Vinuesa (2 December 2018) [red pagination 5636].

dual pipelines and then amalgamate the results into a single list for filtering and assessment of pathogenicity.⁹⁹³

736. Following the meeting, on 11 February 2019, Professor Skinner provided a list of recommended cardiac investigations in respect of Ms Folbigg. He recommended:
- (a) a thorough clinical history relevant to cardiac issues;
 - (b) a good clinical examination;
 - (c) resting 12 lead ECG;
 - (d) standing and exercise ECG with post-exercise recording to at least six minutes;
 - (e) echocardiogram; and
 - (f) Holter (24 hours ECG).
737. Professor Vinuesa agreed with Professor Skinner's list of investigations.⁹⁹⁴ Over the course of the following weeks and months, results from these investigations were produced to the 2019 Inquiry. Those results were considered by the experts in their reports, and in their evidence before the 2019 Inquiry, as detailed further below.
738. At a final consultation meeting on 27 February 2019, after the data had been initially reviewed by the experts, it was agreed the data coverage was sufficient and further genetic testing by way of segregation in respect of the CALM2 and MHY6 variants (the subject of Professor Vinuesa's 2 December 2018 report) was not required. The experts also discussed the list of terms to be included in the literature search to be undertaken as part of the interpretation process.

The genetic sequencing of the children and Ms Folbigg

739. On the basis of the discussions at the December 2018 meeting, with the assistance of Dr Buckley the 2019 Inquiry engaged two genetics services laboratories to conduct extraction and testing of some of the available samples.
740. The Australian Genomics Research Facility (**AGRF**) was engaged to conduct DNA extraction and WGS in respect of available samples from Sarah (fibroblasts) and Patrick (frozen liver tissue), and from Ms Folbigg (buccal sample). The AGRF laboratory was selected because it is accredited for WGS on the types of samples provided to it.
741. Accreditation in this context refers to accreditation of the qualification, training and experience of staff; correctly calibrated and maintained equipment; adequate quality assurance processes; and appropriate sampling practices against an international standard by the NATA.⁹⁹⁵
742. The Victorian Clinical Genetics Service (**VCGS**) was engaged to conduct DNA extraction and WGS in respect of blood spot samples from Caleb and Laura. The VCGS laboratory was awaiting approval of accreditation for WGS at the time of sequencing, though this accreditation would not extend to the age of the samples

⁹⁹³ Exhibit 2-CC, Transcript of second meeting with expert geneticists (4 February 2019) T10.10-35 [red pagination 7922].

⁹⁹⁴ Exhibit 2-CD, Emails exchanged between Professor Skinner and Professor Vinuesa (11 and 12 February 2019) [red pagination 7932].

⁹⁹⁵ See 'Accreditation', AGRF (Web Page) <<http://www.agrf.org.au/about/accreditation>>.

provided to it. No laboratory in Australia is accredited for WGS on that type of sample.

743. On 2 January 2019, samples from Sarah, Patrick and Ms Folbigg for WGS were delivered to AGRF in Melbourne. On 10 January 2019, samples from Caleb, Patrick, Sarah and Laura were provided to VCGS, also in Melbourne.

744. Ultimately, WGS was conducted on:

- (a) DNA extracted from a frozen liver tissue sample from Patrick;
- (b) DNA extracted from fibroblasts from Sarah;
- (c) DNA extracted from a blood spot sample from Caleb; and
- (d) DNA extracted from the buccal sample from Ms Folbigg.⁹⁹⁶

745. WES was conducted on DNA extracted from a blood spot sample from Laura, which was unsuitable for WGS because of microbial contamination of the sample.⁹⁹⁷

746. Completion of the extraction and sequencing exercises by AGRF and VCGS took some four to five weeks. The quality of the results and data produced, given the age of the samples, exceeded the experts' initial expectations. Professor Kirk gave evidence in the 2019 Inquiry that:

I think it's remarkable that it was possible to perform testing of this type on these samples, and the resulting data quality was good... I don't know that something like this has been attempted before, at least not in this kind of context, and the outcome was that we got very high quality data that was able to be interpreted.⁹⁹⁸

747. By 15 February 2019, all data from the sequencing was provided to the Sydney and Canberra teams. The experts were requested to, and did, report on their interpretation of the results by 29 March 2019.

Analysis and reports

748. At the NSW Health Pathology Genetics Laboratory at the Prince of Wales Hospital in Sydney, variant analysis of the sequencing data was conducted through a genomic analysis bioinformatics pipeline called the Genomic Annotation and Interpretation Application.⁹⁹⁹

749. At the Canberra Clinical Genomics laboratory, variant analysis of the sequencing data was conducted through a separate bioinformatics pipeline.¹⁰⁰⁰

750. Ultimately, each laboratory analysed the same data and the same genes. Almost 1,400 unique candidate genes were identified for analysis.¹⁰⁰¹

⁹⁹⁶ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T403.24-404.1 [red pagination 408-409]; Exhibit 2-Z, Joint report of Sydney genetics team (29 March 2019) [red pagination 5208].

⁹⁹⁷ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T407.3-20 [red pagination 412]; Exhibit Z, Joint report of Sydney genetics team (29 March 2019) [red pagination 5208].

⁹⁹⁸ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T407.36-44 [red pagination 412].

⁹⁹⁹ Exhibit 2-Z, Joint report of Sydney genetics team (29 March 2019) [red pagination 5210].

¹⁰⁰⁰ Exhibit 2-AF, Joint report of Canberra genetics team (29 March 2019) [red pagination 5584].

¹⁰⁰¹ Exhibit 2-AW, Gene lists from Sydney and Canberra genetics teams [red pagination 6809].

751. In addition, the data was re-analysed considering:
- (a) cardiac/non-cardiac genes which had been published in relation to sudden death in infancy/childhood;
 - (b) genes associated with childhood neurological disorders; and
 - (c) likely pathogenicity in any phenotype not restricted to sudden death in infancy/childhood.¹⁰⁰²
752. As noted above, it was agreed by the experts that the ACMG Guidelines would be used for assessing the pathogenicity of variants.¹⁰⁰³
753. All experts involved in the interpretation of the sequencing data were provided with documents relevant to the phenotype or clinical presentation of the children and Ms Folbigg.¹⁰⁰⁴ The phenotype or observable clinical features of the children was of healthy, well-grown, normally developing children who are normal in appearance, each of whom suffer a catastrophic event leading to death in three of them, and severe neurological sequelae in the fourth child which precedes his later death.¹⁰⁰⁵
754. The relevant medical history and results of historical and recent cardiac-related investigations on Ms Folbigg were considered by the experts in the interpretation process.
755. Members of the Sydney Team prepared a joint report interpreting the significance of genetic variants, identified through the Sydney pipeline, present in the children and in Ms Folbigg and potentially relevant to the children's causes of death, along with a report in response to the Canberra team's joint report, referred to below. A supplementary report was also prepared by members of the Sydney team, with input from Professor Skinner.¹⁰⁰⁶
756. Members of the Canberra Team prepared a joint report interpreting the significance of genetic variants identified through the Canberra pipeline and a report responding to a Sydney team report. Members of the Canberra Team also prepared (with the endorsement of Professors Schwartz, Cook and Toft Overgaard) a response to the supplementary report from the Sydney Team.¹⁰⁰⁷
757. Professor Skinner prepared a report specifically addressing cardiac-related variants in the children's and Ms Folbigg's genes as reported by the Sydney and Canberra pipelines, and the cardiac-related clinical presentation of each of them.¹⁰⁰⁸ Upon receipt of additional cardiac testing information in relation to Ms Folbigg,

¹⁰⁰² Exhibit 2-Z, Joint report of Sydney genetics team (29 March 2019) [red pagination 5213].

¹⁰⁰³ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T402.25-31 [red pagination 407].

¹⁰⁰⁴ See generally Exhibit 2-AC, Genetics tender bundle [red pagination 5300-5579].

¹⁰⁰⁵ Exhibit 2-Z, Joint report of Sydney genetics team (29 March 2019) [red pagination 5209]; Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T367.26-30 [red pagination 372], T381.9-382.21 [red pagination 386-387].

¹⁰⁰⁶ Exhibit 2-Z, Joint report of Sydney genetics team (29 March 2019) [red pagination 5210], Exhibit 2-AX, Written response from Professor Kirk and Dr Buckley to joint expert report of Professor Vinuesa and Professor Cook (9 April 2019) [red pagination 6900-6901] and Exhibit 2-BV, Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (5 July 2019) [red pagination 7859].

¹⁰⁰⁷ Exhibit 2-AF, Joint report of Canberra genetics team (29 March 2019) [red pagination 5582], Exhibit 2-AY, Written response from Professor Vinuesa and Professor Cook to response from Professor Kirk and Dr Buckley (12 April 2019) [red pagination 6904], and Exhibit 2-BW, Response from Professor Carola Vinuesa, Professor Matthew Cook, Professor Peter Schwartz, Professor Michael Toft Overgaard and Dr Todor Arsov to the Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (11 July 2019).

¹⁰⁰⁸ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5148-5204].

he prepared a supplementary report and provided a further letter addressing the results of the additional testing and Ms Folbigg's clinical presentation.¹⁰⁰⁹

The experts' reports

A. Joint report of the Sydney genetics team dated 29 March 2019

758. At the outset of their report, the Sydney team – comprising Dr Colley, Dr Buckley and Professor Kirk – stated that any putative genetic condition that resulted in four deaths in such young siblings would by definition have to be unusually severe. They stated that this implies either a recessive condition or gonadal mosaicism for autosomal dominant disorder in an unaffected patient. They stated it was hard to reconcile such a severe phenotype with an individual being alive and well in their 50s, noting that this goes far beyond the variability that is observed in dominant conditions. This was referring to the fact that Ms Folbigg and Mr Folbigg remain alive in their 50s, which was inconsistent with the children inheriting such an unusual genetic condition from either of them.¹⁰¹⁰
759. The Sydney team pointed out that a characteristic of genomic testing in complex disease is that the laboratory data must be interpreted in the context of the clinical presentation. They stated that the clinical phenotype and the laboratory results together can be considered to form a single testing process.¹⁰¹¹
760. Dr Colley stated she had read the reports and file notes from Justice Health on Ms Folbigg. She noted that Ms Folbigg had an ECG in 2011 and another in 2018, and both were normal, including normal QT measurements. She stated that an echocardiogram in 2011 was reported as normal, as was an echocardiogram in February 2019. Dr Colley stated she did not find any documentation of an episode of syncope (fainting) with loss of consciousness. However, there was a report of Ms Folbigg having an episode of dizziness and chest pains following an emotional episode. She noticed that the Justice Health file mentioned the possible diagnosis of the Takotsubo cardiac condition to explain her symptoms. She explained that this rare cardiac condition is not inherited and does not have a known genetic cause and does not cause death in childhood.¹⁰¹²
761. The joint report stated that variant pathogenicity was assessed and categorised according to the ACMG Guidelines. They pointed out that not all disease associated genes had been identified and the clinical significance of variation in many genes is not well understood. They stated the published data indicates the use of the ACMG Guidelines for the interpretation of sequence variant pathogenicity improves the consistency of interpretation of variant pathogenicity, although they stated that up to 30% of variant pathogenicity interpretations remained discordant between laboratories.¹⁰¹³
762. The joint report stated the terms “likely pathogenic” and “pathogenic” refer to a 90% and 99% likelihood that a variant can be pathogenic when present at the appropriate zygosity. They stated the terms “likely benign” and “benign” similarly

¹⁰⁰⁹ Exhibit 2-BJ, Further report of Professor Jonathan Skinner (24 April 2019) [red pagination 7700-7703]; Exhibit 2-BK, Letter from Professor Jonathan Skinner to the 2019 Inquiry (30 April 2019) [red pagination 7704-7705].

¹⁰¹⁰ Exhibit 2-Z, Joint report of the Sydney genetics team (29 March 2019) [red pagination 5208].

¹⁰¹¹ Exhibit 2-Z, Joint report of the Sydney genetics team (29 March 2019) [red pagination 5208].

¹⁰¹² Exhibit 2-Z, Joint report of the Sydney genetics team (29 March 2019) [red pagination 5210].

¹⁰¹³ Exhibit 2-Z, Joint report of the Sydney genetics team (29 March 2019) [red pagination 5211].

refer to a 90% and 99% likelihood of a correct call that a variant is benign at the appropriate zygosity.¹⁰¹⁴

763. The Sydney team reported that a total of 279 unique high confidence variants were identified in the data from the five genomic studies. They stated that, of these, 21 were present in all four siblings; 84 were present in three of the four siblings; 73 were present in two of the four siblings; 87 were present in a single sibling; and, 14 were not present in any child but were only present in Ms Folbigg.¹⁰¹⁵
764. They stated that the 14 variants that were only present in Ms Folbigg and not transmitted to her children were excluded from further analysis. They stated of the remaining 265 high confidence variants, 167 were excluded as there was no evidence of a Mendelian disease associated with the gene. Three were excluded as they were variants in genes associated with X-linked disorders whose clinical features are unrelated to the clinical presentation of the four children. They also stated that 58 variants were excluded as the observed clinical features were inconsistent with the clinical presentation of the four children and a further 28 were excluded for similar reasons.¹⁰¹⁶
765. The Sydney team reported that nine variants were selected for further characterisation as they were in genes where sudden unexpected death might arise.¹⁰¹⁷ They stated that after detailed review none of the variants identified were deemed causal for the phenotype in the Folbigg children.¹⁰¹⁸
766. It is unnecessary to deal with eight of these variants as the major controversy between the Sydney team and the Canberra team – comprising Professors Vinuesa and Cook and (then) Dr Arsov – related to the CALM2-G114R variant which is the focus of the present Inquiry.
767. The CALM2-G114R variant was present in Ms Folbigg, Sarah and Laura's samples. It will be necessary to deal with that variant in greater detail when considering the evidence available at the present Inquiry, but for the moment it is sufficient to note that the Sydney team described CALM2-G114R as encoding calmodulin-2 – one of the three calmodulin genes that encode the same protein product. They stated that calmodulin mediates the action of a variety of different enzymes, ion channels and other proteins via calcium binding. They stated that, in the context of cardiac rhythm disorders, the interactions with ion channels are particularly relevant. Evidence had been accumulated to support a relationship between variants in CALM1-3 and a severe form of LQTS. They stated that CALM2 associated LQTS is an unusually severe form of LQTS. Where parental DNA has been available, all reported LQTS-associated variants have been shown to have arisen *de novo*.¹⁰¹⁹ The Sydney team stated that, in the present case, the variant was located in the linker region between EF3 and EF4 and is not directly involved in coordinating calcium. They stated there is a very clear phenotype:genotype correlation with all but one reported pathogenic variant being located in the C domain of the CALM proteins and clustered within the EF-hand structural motifs.¹⁰²⁰ It is more convenient to deal with the location of the

¹⁰¹⁴ Exhibit 2-Z, Joint report of the Sydney genetics team (29 March 2019) [red pagination 5211].

¹⁰¹⁵ Exhibit 2-Z, Joint report of Sydney genetics team (29 March 2019) [red pagination 5212].

¹⁰¹⁶ Exhibit 2-Z, Joint report of Sydney genetics team (29 March 2019) [red pagination 5212].

¹⁰¹⁷ Exhibit 2-Z, Joint report of Sydney genetics team (29 March 2019) [red pagination 5212].

¹⁰¹⁸ Exhibit 2-Z, Joint report of Sydney genetics team (29 March 2019) [red pagination 5213].

¹⁰¹⁹ Exhibit 2-Z, Joint report of Sydney genetics team (29 March 2019) [red pagination 5216].

¹⁰²⁰ Exhibit 2-Z, Joint report of Sydney genetics team (29 March 2019) [red pagination 5217].

genetic variant and its significance when I deal with the evidence of Professors Toft Overgaard and Nyegaard which was given at the present Inquiry (see [964]-[1038] below).

768. The Sydney team referred to the Crotti Article to which I have referred at [11] above. They noted that that article described four infants with recurrent cardiac arrest and dramatically prolonged QT interval, three of whom had *de novo* variants in CALM1 and one of whom had a *de novo* variant in CALM2. They also referred to two other articles reporting on findings of the *de novo* CALM2 variant in other individuals.¹⁰²¹ Ultimately, they described the variant as a VUS as it had the following attributes:

- PM2 absent from controls;
- PP3 multiple lines of computational evidence supported deleterious effect on the gene or gene product; and
- BS2 observed in a healthy adult individual.¹⁰²²

They stated it was not appropriate to use the rule PM1 – located in a mutational hotspot as the variant is located outside of the EF-hand motifs where pathogenic variants cluster is in a region where variants exist in normal populations.¹⁰²³

B. Report of Professor Skinner dated 31 March 2019

769. In his report, Professor Skinner stated that most sudden cardiac deaths in children occur in children with a structurally normal heart which after death looks normal both to the naked eye and under the microscope. He stated that genetic defects are collectively known as “cardiac ion channelopathies”. He stated that rapid movement of sodium potassium and calcium ions across the cardiac cell wall are required for depolarisation and repolarisation of the cardiac cells with every heartbeat. He stated that if the channels through which the ions must pass are defective, then repolarisation or depolarisation is abnormal and there is a risk of serious ventricular arrhythmia – a rhythm so fast and uncoordinated that there is no output from the heart. Sudden syncope, cardiac arrest or sudden death occurs. He stated the conditions most commonly implicated are LQTS, Catecholaminergic Polymorphic Ventricular Tachycardia (**CPVT**) and Brugada Syndrome.¹⁰²⁴

770. In what he described as general comments, Professor Skinner stated that in his more than 15 years investigating young sudden natural deaths, he had never encountered four sudden deaths of children of any age in one family. However, he stated that there was a small number of cardiac inherited conditions where such a scenario of multiple sudden deaths in infancy is theoretically possible.¹⁰²⁵

771. However, Professor Skinner stated that for a genetic cardiac condition to cause such a sudden death in children at such a young age, the condition must be highly malignant and thus its presence in either parent would seem very unlikely since they would not be expected to be alive or would have features of severe disease. He stated in general, such malignant cardiac genetic conditions arise in three circumstances:

¹⁰²¹ Exhibit 2-Z, Joint report of Sydney genetics team (29 March 2019) [red pagination 5217-5218].

¹⁰²² Exhibit 2-Z, Joint report of Sydney genetics team (29 March 2019) [red pagination 5218].

¹⁰²³ Exhibit 2-Z, Joint report of Sydney genetics team (29 March 2019) [red pagination 5218].

¹⁰²⁴ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5149].

¹⁰²⁵ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5150].

- (1) *de novo* - the mutation arising first in the child – such that only that single child would be affected;
 - (2) as a consequence of germ-line mosaicism - where the mutation occurs within the gonads of either parent giving an up to a one in two chance of each child being affected;
 - (3) as a combination of a recessive gene, one coming from each parent (giving a one in four chance of each child being affected).¹⁰²⁶
772. Professor Skinner stated that the most common, but still rare, example of the first and second circumstances would be CPVT, most commonly due to mutations in the RYR2 gene, which had not been identified in the present case. He stated another condition would be the calmodulin type LQTS (mutations in the CALM genes) which would be associated with an abnormal ECG (which was not the case for Patrick).¹⁰²⁷
773. In relation to Patrick, Professor Skinner stated that Patrick had normal ECGs for his age and no abnormalities were seen.¹⁰²⁸
774. In relation to Laura, he stated that the agonal rhythm observed on the ECG taken on 1 March 1999 (recorded during resuscitation efforts by the Ambulance crew) made a non-cardiac death more likely than one from primary cardiac arrhythmia but he did not consider it to be conclusive.¹⁰²⁹
775. Professor Skinner then identified features which pointed to cardiac arrhythmia as a cause of syncope. He summarised them as the coincident presence of palpitations, sudden syncope without warning particularly during exercise, injury occurring at the time of syncope and especially to the face (unconscious before hitting the ground), absence of prior nausea and absence of factors likely to lead to a fall in blood pressure.¹⁰³⁰
776. Professor Skinner reviewed documents providing information concerning Ms Folbigg's clinical history. He noted that Ms Folbigg had an EEG following a blackout during pregnancy, commenting that fainting is common during pregnancy and rarely due to a rhythm disturbance although that was possible. He referred to the fact that, in March 2009, Ms Folbigg presented for review with feeling dizzy two to three times a day after hitting her head in the shower. He stated it seemed very unlikely that these events were cardiac related. He noted that, in May 2008, there was an "alleged collapse". Referring to the fact that the notes stated the "collapse occurred after a vomit" and Ms Folbigg was found "sweaty and with reduced blood pressure", he stated that was consistent with a common situational vasovagal common faint related to dehydration with nausea and vomiting.¹⁰³¹
777. Professor Skinner also observed that Ms Folbigg was reviewed by a cardiology registrar at Westmead Hospital following five episodes of chest pain over the previous year. He noted her chest pain was described as atypical for angina and occurred at times of stress. He stated that he would not have had confidence that the ECGs which were performed would have been reviewed for QT length given the

¹⁰²⁶ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5150].

¹⁰²⁷ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5150].

¹⁰²⁸ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5150-5151].

¹⁰²⁹ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5152].

¹⁰³⁰ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5153].

¹⁰³¹ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5153-5154].

test was to look for ischaemia though it is likely a profound abnormality would be recognised. He stated he strongly suspected that any significant arrhythmia would have been reported.¹⁰³²

778. Professor Skinner noted that clinical notes revealed that, on 23 June 2017, Ms Folbigg turned white whilst in the bathroom and “grabbed the bar of the toilet”, “slowly turned white and began to collapse”. The notes stated she did not injure herself but was found to be drowsy and pale and actively vomiting. He remarked that a note made during her medical evaluation following that incident that reported that Ms Folbigg’s heart rate rose from 67 to 113 on standing and she felt “washed out and thirsty”. Professor Skinner commented that the presence of nausea and vomiting, thirst and tachycardia on standing all point to a decreased intravascular volume. He stated it was likely a common faint, although Ms Folbigg did not completely lose consciousness.¹⁰³³
779. Professor Skinner also pointed to the fact that, on 24 December 2018, a good quality 12 lead ECG was done as part of the investigations for the 2019 Inquiry. He stated the automated QTc interval was well within the normal range. He noted that the ECG was normal, an important negative finding on the lack of Brugada signature, conduction disease and early repolarisation.¹⁰³⁴
780. Professor Skinner said some conclusions can be drawn on the cardiac phenotype of Ms Folbigg. He noted she was now over 50 years of age, which was 50 years over which an inherited heart condition can present and signs on cardiac tests can develop. He stated that conditions such as hypertrophic or dilated cardiomyopathy tend to progress over time and if she was going to develop those conditions it would reasonably be expected there would be clinical signs or abnormal ECG or echocardiogram by now. He noted the ECGs showed no features to suggest Brugada Syndrome or LQTS. He expressed the opinion that Ms Folbigg did not have LQTS and further she has no ECG features to suggest she is a gene carrier for it on two 12 lead ECGs.¹⁰³⁵
781. In dealing with the CALM2-G114R variant, Professor Skinner stated that calmodulin disease would potentially be a plausible cause of death in Laura and Sarah. He stated that ECGs are typically very abnormal in this condition and that given there were no 12 lead ECGs in either Laura or Sarah, this cannot be excluded by this method.¹⁰³⁶
782. Professor Skinner stated, however, that to date when the variant has been found to be disease causing, the variants cause severe disease, resulting in cardiac arrest or death at a young age and almost invariably with severe QT prolongation when discovered prior to death. He stated such variants occurred *de novo* and are not compatible with long life without treatment. He further stated that the presence of the same variant in Ms Folbigg, who has not suffered a cardiac arrest nor typical arrhythmic syncope and has a normal ECG, effectively excludes this variant as a cause of death in these children.¹⁰³⁷

¹⁰³² Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5154].

¹⁰³³ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5154].

¹⁰³⁴ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5154-5155].

¹⁰³⁵ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5155].

¹⁰³⁶ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5156].

¹⁰³⁷ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5156].

783. He expressed the view that the available clinical data and genetic analyses provided no convincing evidence for the presence of any known form of cardiac inherited disease as a potential cause for the sudden death of the four Folbigg children.¹⁰³⁸

C. Joint report of the Canberra genetics team dated 29 March 2019

784. Prior to the delivery of the report of the Canberra genetics team, Professor Vinuesa stated that “excellent coverage” was obtained from WES conducted on the two samples of Ms Folbigg’s genetic DNA. Professor Vinuesa stated that analysis of the exome for variants in genes previously shown to cause sudden unexpected death identified two candidates, CALM2 and MYH6.¹⁰³⁹

785. In the joint report, Professors Vinuesa and Cook stated that the ACMG Guidelines were not intended to be applied to research findings, rather researchers continue to report their findings of “likely pathogenic” variants on a case by case basis without necessarily adhering or even referring to the ACMG criteria. They noted that approach was recognised by the ACMG. They stated as there was no criteria for reporting variants which might form the basis for non-clinical actions, they had elected to provide information regarding VUS which are not clinically actionable, but for which a causal action in relevant pathology cannot be excluded with confidence based on current knowledge. They stated that the report thus considered and discussed VUS, in addition to “likely pathogenic” or “pathogenic” variants, that could plausibly cause the phenotypes observed in the Folbigg children.¹⁰⁴⁰

786. In that context, they also stated in the case of Ms Folbigg there are further considerations that make it difficult to identify whether she might harbour pathogenic or likely pathogenic variants. They noted they still did not have a full cardiac assessment of Ms Folbigg including the tests required to diagnose LQTS. They said in those circumstances scoring of variants might underestimate pathogenicity.¹⁰⁴¹

787. In their summary findings, Professors Cook and Vinuesa stated that no known pathogenic or likely pathogenic variants in genes that could explain unexpected death were found in four out of four children.¹⁰⁴²

788. The report identified two likely pathogenic (IDS and CALM2) and one borderline VUS or likely pathogenic (MYH6) missense novel or ultra-rare variants that could contribute to the observed phenotypes found in the children. Ultimately, the only one which assumed any real significance in the present Inquiry was the CALM2 variant found in Sarah and Laura which was described in the joint report as likely pathogenic.¹⁰⁴³ It is in those circumstances unnecessary to deal with the specific conclusion concerning the pathogenicity of the other two variants (IDS and MYH6) or the other variants of unknown significance identified in the report as having the potential to contribute to disease.

789. In relation to the CALM2 variant, the joint report noted that several infants with severe forms of LQTS who displayed life threatening ventricular arrhythmias

¹⁰³⁸ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5157].

¹⁰³⁹ Exhibit 2-AG, Report of Professor Carola Vinuesa (2 December 2018) [red pagination 5636].

¹⁰⁴⁰ Exhibit 2-AF, Joint report of the Canberra genetics team (29 March 2019) [red pagination 5590-5591].

¹⁰⁴¹ Exhibit 2-AF, Joint report of the Canberra genetics team (29 March 2019) [red pagination 5591].

¹⁰⁴² Exhibit 2-AF, Joint report of the Canberra genetics team (29 March 2019) [red pagination 5591].

¹⁰⁴³ Exhibit 2-AF, Joint report of the Canberra genetics team (29 March 2019) [red pagination 5594].

together with delayed neuro development and epilepsy were found to have heterozygous mutations in either this gene or another member of the calmodulin gene family. They also noted that mutations in this gene have also been identified in patients with less severe forms of LQTS.¹⁰⁴⁴

790. In those circumstances, applying the ACMG Guidelines they concluded that the variant was likely pathogenic. They accepted that there was no strong (SP) indicators of pathogenicity but described two which provided moderate support (MP). They were the variant hotspot or functional domain – Gly114 lies in the EF-hand 3 domain (PM1) (see the explanation of these terms in the summary of the evidence of Professors Toft Overgaard and Nyegaard below) and that the variant was rare in healthy databases (PM2). They also stated that there was supporting criteria for the interpretation of likely pathogenic, namely co-segregation in the family (PP1) and low rate of benign missense variation (PP2). They also stated that it was phenotype specific for disease - SIDS (PP4).¹⁰⁴⁵
791. The joint report also stated that only thirty patients had been described as carrying CALM mutations of which 20 were *de novo* mutations and three inherited. They stated that at present it could not be established if the mutation in Ms Folbigg occurred *de novo*. They stated Ms Folbigg may or may not be affected by LQTS but the diagnosis is plausible based on the clinical history of multiple syncope episodes. They said the interpretation of this variant would be influenced by additional cardiac testing.¹⁰⁴⁶

D. Report of Professor Kirk and Dr Buckley in response to the report of Professors Vinuesa and Cook dated 9 April 2019

792. In a report dated 9 April 2019, Professor Kirk and Dr Buckley rejected the CALM2 variant as a possible cause of death. They stated that variants in CALM2 are associated with a severe early-onset form of LQTS. They stated the fact that Ms Folbigg has reached her present age without signs of LQTS represents strong evidence against this being a pathogenic variant. Further, in relation to the specific criteria applied by Professors Vinuesa and Cook, they stated PM1 was incorrectly applied as the amino acid residue affected by the variant is not located within the calcium binding domains where the known pathogenic variants cluster. They also stated that PP1 was incorrectly applied as in order to apply the criteria there would need to be multiple members of the family clearly affected by severe LQTS and there were no family members so clearly affected. They referred in that regard to the report of Professor Skinner which I have referred to at [769]-[783] above.¹⁰⁴⁷
793. They also stated that the classification of PP2 was debatable and that PP4 was incorrectly applied. They stated the criteria for PP4 is “patient’s phenotype or family history is highly specific for a disease with a single genetic aetiology”. They stated that SIDS (listed as the phenotype by Professors Vinuesa and Cook) is not a condition with a single genetic aetiology. They also stated that LQTS is also not

¹⁰⁴⁴ Exhibit 2-AF, Joint report of the Canberra genetics team (29 March 2019) [red pagination 5601].

¹⁰⁴⁵ Exhibit 2-AF, Joint report of the Canberra genetics team (29 March 2019) [red pagination 5602-5603].

¹⁰⁴⁶ Exhibit 2-AF, Joint report of the Canberra genetics team (29 March 2019) [red pagination 5603].

¹⁰⁴⁷ Exhibit 2-AX Written response from Professor Kirk and Dr Buckley to joint expert report of Professor Vinuesa and Professor Cook (9 April 2019) [red pagination 6900-6901].

a condition with a single genetic aetiology and in any case, there was no evidence that any family member was affected by LQTS.¹⁰⁴⁸

794. In summary, the conclusion reached by Professor Kirk and Dr Buckley, which is superseded to an extent by their subsequent report (outlined below at [902]-[907]), was that there were multiple errors in the classification process for this variant which led to undue weight being placed on the likelihood that it is pathogenic.¹⁰⁴⁹

E. A further report in response from Professors Vinuesa and Cook dated 12 April 2019

795. At the outset of the report in response, Professors Vinuesa and Cook emphasised their task was not a diagnostic exercise that aims to identify clinically actionable mutations. Secondly, they emphasised that the fundamental limiting factor they faced in reporting genomic variants is uncertainty regarding the phenotypes they were attempting to explain. They stated that in those circumstances the logic of enquiry was therefore different from that of routine diagnostic genomics because in this case the phenotypic information is incomplete, absent or uncertain.¹⁰⁵⁰
796. Professors Vinuesa and Cook pointed out that in diagnostic genomics a phenotype is defined by clinical investigation and examination with a view to making differential diagnoses which could plausibly be caused by a single genetic defect. They stated, by contrast, in the Folbigg case there is a large degree of phenotypic uncertainty. They said there was not only uncertainty with respect to the Folbigg children but also uncertainty with respect to Ms Folbigg and her wider family. They stated that makes the issue of interpreting the genetics of the family much less routine than for ordinary diagnostic genomics.¹⁰⁵¹
797. In relation to CALM2, they accepted that the ECG examination had found no positive evidence of LQTS in Ms Folbigg, although stating this cannot be excluded in the absence of additional tests including an exercise ECG. They also pointed out that although Professor Kirk and Dr Buckley focused exclusively on the phenotype of LQTS, that is only one of the phenotypes conferred by mutations in CALM2. They stated others included CPVT and Idiopathic Ventricular Tachycardia (**IVT**).¹⁰⁵²
798. Professors Vinuesa and Cook also disagreed with the functional inferences of Professor Kirk and Dr Buckley based on the amino acid residue affected by the identified CALM2 mutation. They said calmodulin proteins interact with a very large number of proteins and that different mutations have been shown to affect different channels and to some extent confer different phenotypes (referring to LQTS, CPVT, IVT and SUD). They stated specifically that two of the three inherited, that is, not *de novo*, published pathogenic CALM1-2 mutations (CALM1 and CALM2 encode proteins with identical amino acid sequence) are not calcium binding residues and have been shown to cause CPVT, Idiopathic Ventricular Fibrillation (**IVF**) and SUD. They also pointed out calmodulin is one of the most highly conserved proteins in

¹⁰⁴⁸ Exhibit 2-AX Written response from Professor Kirk and Dr Buckley to joint expert report of Professor Vinuesa and Professor Cook (9 April 2019) [red pagination 6902].

¹⁰⁴⁹ Exhibit 2-AX Written response from Professor Kirk and Dr Buckley to joint expert report of Professor Vinuesa and Professor Cook (9 April 2019) [red pagination 6903].

¹⁰⁵⁰ Exhibit 2-AY Written response from Professor Vinuesa and Professor Cook to response from Professor Kirk and Dr Buckley (12 April 2019) [red pagination 6904].

¹⁰⁵¹ Exhibit 2-AY Written response from Professor Vinuesa and Professor Cook to response from Professor Kirk and Dr Buckley (12 April 2019) [red pagination 6904-6905].

¹⁰⁵² Exhibit 2-AY Written response from Professor Vinuesa and Professor Cook to response from Professor Kirk and Dr Buckley (12 April 2019) [red pagination 6905].

nature. They stated that three genes (CALM1, CALM2 and CALM3) encode the same protein and still there is a very low rate of mutations in calmodulin. They stated the substantive point was that there were no known benign missense loss of function mutations within exons 1-4 of CALM2 pointing out that G114 is encoded in exon 2.¹⁰⁵³

The oral evidence at the 2019 Inquiry

799. As I indicated all the experts were examined concurrently. However, for the purpose of this Report it is preferable to set out the salient points of their evidence separately.

a. Dr Colley

800. Dr Colley described a phenotype as the observable characteristics of a person. Physical malformation which can be present and sometimes called birth defects forms part of a phenotype. These are called morphological features – dysmorphology. She stated a phenotype also includes other observable characteristics such as behaviour. She gave the example of cognitive understanding.¹⁰⁵⁴
801. Dr Colley described a syncopal episode as when someone loses consciousness and drops to the floor. She said the most common form was a vasovagal episode where the vagus nerve is overstimulated, the heart rate slows and the blood pressure goes low and the person loses consciousness and drops to the floor. She said it was not a phenotype, it happens intermittently.¹⁰⁵⁵
802. Dr Colley was referred to the statement in her report that in respect of all the children there was no evidence of pregnancy related complications which was important because quite often with children with a genetic condition there are problems surrounding pregnancy.¹⁰⁵⁶ She also stated that with children who have a genetic predisposition to infection, one would expect more serious infections than just a runny nose or a cold.¹⁰⁵⁷
803. Dr Colley provided a helpful description of DNA and genetic variants. She stated the DNA is the molecule which encodes or is written in the genetic instructions. She stated that the DNA molecule is inside all the cells in the body in a nucleus or centre of the cells. She stated that DNA is a double stranded molecule – down the sides are phosphates and sugars which are bound together and the rungs of the ladder are nuclear bases joined together with hydrogen bonds. She said it was helical and also coiled around proteins called histones which allow a lot of DNA to be tightly coiled and protected, and a large amount of DNA into a small space.¹⁰⁵⁸
804. Dr Colley stated the DNA is coiled into strands called chromosomes, with 23 pairs of chromosomes in the human genotype. She said they were important because the genes that are encoded in that DNA are the instructions for how our bodies work, how they function and how the different cells in our body do the jobs they need to do.¹⁰⁵⁹

¹⁰⁵³ Exhibit 2-AY Written response from Professor Vinuesa and Professor Cook to response from Professor Kirk and Dr Buckley (12 April 2019) [red pagination 6905-6907].

¹⁰⁵⁴ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T376.37-377.8 [red pagination 381-382].

¹⁰⁵⁵ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T377.24-35 [red pagination 382].

¹⁰⁵⁶ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T381.1-18 [red pagination 386].

¹⁰⁵⁷ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T383.26-33 [red pagination 388].

¹⁰⁵⁸ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T398.7-18 [red pagination 403].

¹⁰⁵⁹ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T398.20-25 [red pagination 403].

805. Dr Colley described a variant as a change in one of the four nuclear bases – adenine, thymine, guanine and cytosine. She said that in many cases a change does not make any difference at all to the outcome – the protein may not change just because there is a variant.¹⁰⁶⁰
806. She referred to the ACMG Guidelines which look at each variant to determine if it is definitely pathogenic which would mean it would alter the resultant protein in such a way as would cause damage to the cell. She agreed with the proposition that sequencing provides knowledge of the variants and there is a separate exercise to determine whether these variants matter in a sense of whether they are causative of some disease which includes looking at the phenotype of the person.¹⁰⁶¹
807. Dr Colley stated that in carrying out this work the Sydney team started by looking at all possible variants that could cause infant demise. She stated that following that, there was a candidate gene list prepared by various specialists that the Sydney team agreed to go back and look at in more detail.¹⁰⁶²
808. Dr Colley stated that a pathogenic variant is one which causes a harmful change. She stated a variant is described as likely pathogenic when there is not the same level of evidence as in the case of a variant described as pathogenic whilst a VUS is one where “we don’t know... we don’t have clear evidence in one direction of pathogenic or benign”.¹⁰⁶³
809. Dr Colley was asked whether the rapid progression of science in the area affects the reliability of the work being undertaken. She stated, looking to the future as much as we can, she did not believe it would be necessary for the work which was done to be done in a different way.¹⁰⁶⁴
810. Dr Buckley agreed stating it was very unlikely despite the advances and the expectation there would be new diseases, as most diseases would not be relevant to the present clinical situation. Professor Kirk agreed.¹⁰⁶⁵
811. Professor Skinner also agreed stating that if you have four very young children who have a catastrophic event, if a parent carried the same genetic marker, they would not be expected to be alive. He explained that if neither of the parents had the genetic marker and all four children did carry the same genetic marker, then maybe that could explain it, but the chance of that happening four times in a row would be very small because there would be four *de novo* changes. Dr Buckley agreed stating that if there was a *de novo* variant in all four children it would have been seen.¹⁰⁶⁶
812. Dr Colley was asked whether she was aware that Laura had myocarditis. She said there was a finding to that effect in the post-mortem but there was nothing prior to the post-mortem that made anyone think that she had a pathogenic condition for her heart, as she did not present with heart failure, and children who have long standing heart problems do not grow well so they tend to be small and perhaps less active. Dr Colley said there was no evidence of any long term condition although she

¹⁰⁶⁰ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T399.1-7 [red pagination 404].

¹⁰⁶¹ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T399.9-48 [red pagination 404-405].

¹⁰⁶² Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T402.43-48 [red pagination 407].

¹⁰⁶³ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T417.5-9 [red pagination 422].

¹⁰⁶⁴ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T432.41-433.2 [red pagination 437-438].

¹⁰⁶⁵ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T433.20-43 [red pagination 438].

¹⁰⁶⁶ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T433.48-434.9 [red pagination 438-439].

agreed that she did not know what happened in the short term and was not able to say whether myocarditis was the cause of her death or not.¹⁰⁶⁷

813. It should be noted that in relation to Patrick, Dr Colley, whilst acknowledging that a blood gas would have been desirable, agreed with Associate Professor Fahey that Patrick was hypoxic on presentation. In general, she deferred to Associate Professor Fahey's opinion.¹⁰⁶⁸
814. I deal with Dr Colley's evidence concerning the incident in which Ms Folbigg fainted after a swimming race at paragraphs [835]-[836] below.

b. Professor Skinner

815. Professor Skinner was asked about the ECG performed on Patrick on 18 October 1990. He described it as entirely normal. He stated there was nothing to suggest LQTS which he said was one of the commoner causes of sudden death in childhood. He also stated there was nothing to suggest Brugada Syndrome which more rarely causes such sudden death.¹⁰⁶⁹
816. Professor Skinner was referred to a second ECG which he stated was a little more difficult to interpret but said again there was no evidence of LQTS. He stated the rhythm and conduction system seemed to be functioning normally and there was no feature of the ECG which suggested an ongoing or acute inflammation. He also stated the echocardiogram conducted on Patrick showed no abnormality.¹⁰⁷⁰
817. Professor Skinner described the heart rhythm recorded by the ambulance officers when they attended on Laura as an agonal rhythm which he said was typically associated with the primary rhythm being asystole – that is, the heart stopping. He said his conclusion was that this rhythm was from a non-cardiac death rather than a primary cardiac arrhythmia but he did not think that was a conclusive finding.¹⁰⁷¹
818. Professor Skinner was referred to the Justice Health report of 8 March 2009 when Ms Folbigg presented complaining of dizziness. He stated that intermittent dizziness is not a likely sign of heart rhythm problems.¹⁰⁷²
819. He was also referred to the entry of 8 March 2008 when Ms Folbigg presented after “an alleged collapse” in her cell after vomiting and on examination had low blood pressure and an attenuated pulse. He stated the incident was very likely related to the fact that her blood pressure was low from dehydration.¹⁰⁷³
820. Professor Skinner also referred to the ECG conducted on Ms Folbigg in June 2011. He noted the ECG report stated she was complaining of chest pain and dyspnoea on emotional stress. He stated everything was described as normal and it could be taken as excluding evidence of cardiomyopathy or a heart muscle disease.¹⁰⁷⁴
821. Professor Skinner also referred to the review undertaken by a cardiology registrar

¹⁰⁶⁷ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T565.32-39 [red pagination 572].

¹⁰⁶⁸ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T592.5-14 [red pagination 599].

¹⁰⁶⁹ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T385.17-25 [red pagination 390].

¹⁰⁷⁰ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T385.36-43 [red pagination 390-391].

¹⁰⁷¹ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T387.18-388.23 [red pagination 392-393].

¹⁰⁷² Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T391.17-23 [red pagination 396].

¹⁰⁷³ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T391.38-48 [red pagination 396].

¹⁰⁷⁴ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T392.12-20 [red pagination 397].

at Westmead Hospital in May 2011 where Ms Folbigg presented with “atypical chest pain”. He said “atypical” meant not typical for angina. He noted the report referred to a normal exercise test with no ECG changes. He stated that if Ms Folbigg had CPVT it would have been expected that there would be abnormal rhythm, ventricular extra beats during the exercise test and he did not think that a Registrar would miss significant ventricular tachycardia during an exercise test.¹⁰⁷⁵

822. Professor Skinner was referred to a Justice Health entry where the clinical notes recorded that Ms Folbigg turned white whilst in the bathroom and began to collapse. He said the presence of nausea and vomiting and the marked rise in the heartrate on standing, led him to believe that it was a common faint or near faint.¹⁰⁷⁶
823. He was also referred to an ECG performed on Ms Folbigg in 2018 for the purpose of the 2019 Inquiry. He stated that the ECG was a normal ECG with important negative findings namely the absence of Brugada signature and no features to suggest conduction system disease, LQTS.¹⁰⁷⁷
824. Professor Skinner also referred to the echocardiogram carried out on Ms Folbigg on 22 February 2019. He stated the echocardiogram was reported as normal. He said important negative findings included a normal chamber size, normal left ventricular septal and free wall thickness and normal left ventricular function. He said what that means is that the heart muscle is neither abnormally thin nor abnormally thick and is functioning normally.¹⁰⁷⁸
825. Professor Skinner said some useful conclusions can be drawn. He stated that Ms Folbigg is now over 50 years of age, that is, over 50 years in which an inherited heart condition can present itself. He said conditions which cause sudden death tend to progress over time and if Ms Folbigg was going to develop those conditions, he would have expected it be shown. He stated the syncopal episodes were consistent with situational or vasovagal syncope rather than arrhythmia syncope. He stated the ECGs showed no features of Brugada Syndrome nor do they show any signs of conduction system disease.¹⁰⁷⁹
826. He said that as a specialist in LQTS, he did not think Ms Folbigg had LQTS nor did she have any ECG features that suggested she was a gene carrier for it.¹⁰⁸⁰
827. Professor Skinner also commented that the foremost common and plausible genes which cause sudden death in infancy were not present in the Folbigg family.¹⁰⁸¹
828. Professor Skinner made some general comments concerning sudden infant death. He stated that most sudden cardiac deaths in children occur in children with structurally normal hearts which look normal both to the naked eye and under the microscope. He stated that these genetic defects are commonly known as cardiac ion channelopathies. He stated there was rapid movement of sodium, potassium and calcium ions across the cardiac cell wall which are required for depolarisation and repolarisation of the cardiac cell with every heartbeat. He stated that if the

¹⁰⁷⁵ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T392.45-393.30 [red pagination 397-398].

¹⁰⁷⁶ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T394.25-40 [red pagination 399].

¹⁰⁷⁷ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T395.30-41 [red pagination 400].

¹⁰⁷⁸ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T396.34-46 [red pagination 401].

¹⁰⁷⁹ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T397.15-28 [red pagination 402].

¹⁰⁸⁰ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T397.30-34 [red pagination 402].

¹⁰⁸¹ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T450.16-18 [red pagination 455].

channels through which the ions travel are defective, then repolarisation or depolarisation is abnormal and there is a risk of serious ventricular arrhythmia, a rhythm so fast and uncoordinated that there is no output from the heart and sudden syncope cardiac arrest or sudden death can occur. He said the most common types of these are known as LQTS, CPVT and Brugada Syndrome and there is a long list of genes which cause these conditions. He said that the mode of death and the rhythm recorded during transient loss of consciousness due to these conditions is ventricular tachycardia which means that the bottom part of the heart is beating extremely quickly and/or ventricular fibrillation which is basically a seizure of the bottom part of the heart and is not asystole or slowing of the heart typically, it is the very rapid rhythm which causes death.¹⁰⁸²

829. Professor Skinner also stated that he had never encountered four sudden deaths of children of any age within one family unit.¹⁰⁸³
830. In relation to the CALM2-G114R variant found in Ms Folbigg, Laura and Sarah, Professor Skinner agreed with Professor Kirk that the presence of the variant in someone who is alive and well and in their early 50s, indicates strongly against it being a variant of the type which causes infant deaths as the two things are not consistent and that, of itself, represents strong evidence against pathogenicity. Professor Skinner added that calmodulin has not appeared amongst studies of SIDS victims.¹⁰⁸⁴
831. Professor Skinner accepted that all these inherited heart conditions have variable penetration and sometimes expression (These terms are referred to in the Glossary which is contained in Annexure 1 to this Report and discussed further when I deal with the evidence given at the present Inquiry.) He suggested, however, that the literature as at the date he gave evidence showed that if it is a *de novo* mutation, they have a severe disease which might cause a lethal outcome in the first year or two but if you have a familial disease, there is not a single case of a sudden death under the age of two.¹⁰⁸⁵
832. Professor Skinner referred to the criteria PP4 – phenotype specific for disease. He stated, to his knowledge, calmodulin had never been linked to SIDS. He accepted he had not read every paper but he believed he would have known if calmodulin had presented in SIDS. He accepted it caused sudden cardiac arrest in infants but to date there have been witnesses because the children or infants were awake. He described SIDS as a specific phenotype so to say that is supportive is stretching the criterion.¹⁰⁸⁶
833. Dr Arsov and Professor Vinuesa gave evidence of discussions they had with Ms Folbigg concerning an incident which occurred when she fainted in a swimming competition. Dr Arsov said that Ms Folbigg told him that when she was 11 or 12 years of age she was in a swimming competition and after swimming for a while she felt unwell and fainted. Professor Vinuesa said that she subsequently spoke to Ms Folbigg who told her the incident occurred in the water as soon as she finished the

¹⁰⁸² Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T454.15-35 [red pagination 459].

¹⁰⁸³ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T454.45-46 [red pagination 459].

¹⁰⁸⁴ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T474.15-36 [red pagination 480].

¹⁰⁸⁵ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T478.20-30 [red pagination 484].

¹⁰⁸⁶ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T480.9-18 [red pagination 486].

race. Professor Vinuesa said she did not know if she fell to the bottom of the pool though she did faint in the pool.¹⁰⁸⁷

834. Professor Skinner said this was a really important event which he needed to know more about. He said two conditions are quite specific. He said LQTS type 1 and CPVT can cause sudden loss of consciousness, particularly while swimming. He said that the detail of the event is pivotal. He said if she sank to the bottom of the pool and was pulled out by someone and given resuscitation, that is one story, if she just won the race, felt a bit dizzy and was pulled out and recovered, that is a completely different story, so the details are really important.¹⁰⁸⁸
835. Dr Colley dealt with the swimming pool incident in response to questions from counsel for Ms Folbigg. She noted that in the notes she read there was no documentation of syncope. She said syncope with stress is really important but syncope means you lose consciousness, you drop down. She stated that the notes showed episodes of what she would call pre-syncope dizziness, light headedness, not feeling well, which comes with dehydration and perhaps emotional stress. She stated with emotional stress and dehydration you get vasovagal or pre-syncope. Dr Colley stated in a case of true syncope you lose consciousness. When someone is swimming and has a syncope, they usually sink to the bottom of the pool. She said they are brought out of the pool unconscious, an ambulance is called and hopefully they get resuscitated. Dr Colley stated that when she met Ms Folbigg she never mentioned any need for resuscitation, losing consciousness or going to hospital.¹⁰⁸⁹
836. Dr Colley stated that she thought it was more likely that Ms Folbigg had a vasovagal event arising from dehydration and emotional stress. She stated that was probably more likely than actually having true syncope, sinking in the pool and having been resuscitated and taken off to hospital. She stated, however, that it was an important distinction; one is associated with a common event in teenage girls in swimming carnivals and one associated with LQTS, a very serious condition. She stated, “we really don’t have a clear phenotype here”.¹⁰⁹⁰
837. In answer to questions from counsel for Ms Folbigg, Professor Skinner stated that if there is a familial LQTS then about a third of the people in the family who are gene carriers will have a normal ECG on a single examination. He also stated that myocarditis can trigger arrhythmia.¹⁰⁹¹
838. In further examination by counsel for Ms Folbigg, Professor Skinner somewhat qualified his earlier comment that sudden infant death is unlikely to be caused by the variant CALM2 gene. He said he would not say it was unlikely but that it had not been proven.¹⁰⁹²

c. Professor Kirk

839. In dealing with the question of a genetic variant, Professor Kirk noted that the idea of a variant implies some sort of benchmark against which the variant is compared and although there is what is called “a reference sequence”, it is something of an

¹⁰⁸⁷ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T506.28-507.34 [red pagination 512-513].

¹⁰⁸⁸ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T507.38-46 [red pagination 513].

¹⁰⁸⁹ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T572.27-37 [red pagination 579].

¹⁰⁹⁰ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T573.6-16 [red pagination 580].

¹⁰⁹¹ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T511.30-33 [red pagination 517].

¹⁰⁹² Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T527.27-32 [red pagination 533].

artificial construct. He said that is why an understanding of the phenotype is a very important part of the ability to classify whether a variant is potentially disease causing or not.¹⁰⁹³

840. Professor Kirk indicated that the laboratory work had produced very high quality data that was able to be interpreted.¹⁰⁹⁴
841. Professor Kirk described the use made by the Sydney team of the OMIM database in identifying the genetic variants which were to be tested. He stated that OMIM database is a database of both genes and, most importantly, of human conditions associated with variation in those genes. He stated it was compendious but not complete which was partly because there is new information that gets published all the time. He stated, however, it is a baseline that is always consulted because it is an important resource in the field and the Sydney team looked to it to see if there were phenotypes, conditions in OMIM related to the genes in which the variants were identified.¹⁰⁹⁵
842. Professor Kirk stated there were many genetic conditions which vary in severity and one of the ways they manifest themselves is in relation to age of onset. He stated there were some examples where the range was from a lethal condition in infancy to a very mild condition in later adulthood. He said if you were talking about something that can cause multiple deaths in very young children then, by definition, you are talking about a severe condition.¹⁰⁹⁶
843. Professor Kirk explained that there were three calmodulin genes all of which encode for the same protein. He stated that was important because if the variant is present in one of the three genes its implications are likely to be relevant to the other two. He stated that if a variant in the population in CALM1 appears to be the benign then it is likely the same variant occurring in CALM2 or 3 would also be benign.¹⁰⁹⁷
844. Professor Kirk stated that the genes are involved in the regulation of calcium which is important to cardiac rhythm and cardiac contractions. In relation to the clinical features he said that many of the people who have been described have had a very severe form of LQTS with onset even before birth. He said in almost all the reported variants and certainly in all of those of the infant cases, the variants have arisen *de novo*. He said that was a signature of something that is highly lethal.¹⁰⁹⁸
845. Professor Kirk stated there are some very rare families, only a handful who reported, who have a less severe condition, CPVT, and in those families there are some situations where the parents are either affected in a minor way or are healthy but have abnormalities on stress testing or on other provocative testing. He stated in those families the age of the onset of symptoms is much later and the earliest death is about four years of age for any of them and most of the deaths have been in the range of 10 to 16 years.¹⁰⁹⁹
846. Professor Kirk stated that the calmodulin genes had particular characteristics

¹⁰⁹³ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T401.20-28 [red pagination 406].

¹⁰⁹⁴ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T407.42-44 [red pagination 412].

¹⁰⁹⁵ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T423.11-45 [red pagination 428].

¹⁰⁹⁶ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T409.33-41 [red pagination 414].

¹⁰⁹⁷ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T469.14-20 [red pagination 475].

¹⁰⁹⁸ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T469.22-29 [red pagination 475].

¹⁰⁹⁹ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T469.39-49 [red pagination 475].

having four “domains”, EF-hand domains, and within those domains there are binding sites for calcium which are important. He said there are four sets of those, two at one end of the protein which so far have not been reported as being involved in the disease and two at the other end which have been reported as being involved. He stated that all of the variants associated with the more severe form of the condition have been in the regions where the calcium sensing occurs. He said there have been just two variants outside the calcium sensing region and they have been associated with more variable and less severe forms of the condition. Professor Kirk stated that the variant that was identified in the Folbigg family (CALM2-G114R) fell outside that region and is in a region where there is some benign population variation. He stated there are three variants in the population between where this variant lies and the nearest calcium sensing region and another in the other direction towards the last of the calcium sensing regions.¹¹⁰⁰

847. Professor Kirk stated it is also an amino acid that is, “in proteins within these domains, relatively variable and, even within this protein, at that position, there are three different situations; there is two glycines and...[a methionine].” He pointed out at the end of the protein this amino acid does not exist at all. He stated it could be concluded from that there is no strong evidence that the glycine has an important function, although he accepted a change in that glycine could conceivably produce a diseased state. Notwithstanding this, Professor Kirk stated that the criterion that says this is a known functional domain without benign variation cannot be applied because it is not in the functional domain and there is nearby benign variation.¹¹⁰¹
848. Professor Kirk stated that Ms Folbigg did not have the clinical features that would be consistent with any of the known manifestations of the condition. He stated the possibility of CPVT could not be excluded without additional testing but that would not be consistent with infant deaths in the family.¹¹⁰²
849. Professor Kirk stated that the calmodulin gene was a gene where there was a high degree of conservation in general. He explained that if you see a protein that has changed very little during evolution, one of the implications is that in terms of reproductive fitness, those changes are not well tolerated. He stated that knowing that something is highly conserved does not mean that any change must be disease causing but it is one of the things that must be considered.¹¹⁰³
850. Referring to the ACMG Guidelines, Professor Kirk stated one of the criteria, PM1, refers to a variant being located in a known critical functional domain or hotspot without benign variation and the variation in the Folbigg family (CALM2-G114R) was not in the functional domain. PM1 refers to pathogenicity (P) and moderate (M). Professor Kirk stated it was not appropriate to apply that standard. Professor Kirk stated that the EF-hand domain section work that Dr Buckley did, showed the glycine falls outside, just outside, but clearly outside the EF-hand domain and well outside the calcium-sensing area. He said that was a fact not a matter of clinical judgment.¹¹⁰⁴
851. Professor Kirk summarised his views on CALM2-G114R as follows. He stated that the reason for finding a variant that is not present in the parents but is in the child

¹¹⁰⁰ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T470.19-36 [red pagination 476].

¹¹⁰¹ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T470.38-41 [red pagination 476].

¹¹⁰² Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T471.5-13 [red pagination 477].

¹¹⁰³ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T471.15-17 [red pagination 477].

¹¹⁰⁴ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T473.36-42; T475.39-47 [red pagination 479; 481].

is a strong piece of evidence, is precisely because of severe conditions that are not present in healthy parents. He stated it was true that it cannot be said whether Ms Folbigg has a *de novo* variant or not, but she did not have a severe condition. He stated it can be said with certainty that her children did not have a *de novo* variant. The lack of information about Ms Folbigg's parents did not prevent them from accurately assessing that piece of information.¹¹⁰⁵

852. Professor Kirk repeated that with regard to the EF-hand domain it is a matter of fact. The variant is not in the domain. So far as PM2 is concerned, Professor Kirk stated that you need a clear diagnosis of a condition in people you are testing to even consider applying this criterion. He said Ms Folbigg has no condition and there is no basis on which you could possibly apply the criterion in the Folbigg family. He stated he thought it was reasonable to apply PP2. He stated the criteria for PP4 is the patient's phenotype or family history highly specific for a disease with a specific genetic aetiology. He says SIDS does not fall into that category so there is no way of applying that criterion. He accepted there are limitations to knowledge so it was not inconceivable that CALM2 could prove to be relevant to the death of two of the children. He stated he thought it was very unlikely but not inconceivable.¹¹⁰⁶
853. In cross-examination by counsel for Ms Folbigg, Professor Kirk emphasised the difference of approach between the Sydney team and Professor Vinuesa. He stated that Professor Vinuesa was a very experienced and eminent researcher and was approaching the issue the way you might approach a research project thinking about possibilities and expanding the different areas of knowledge that we currently have. He said, by contrast, the Sydney team was more focused on known disease association.¹¹⁰⁷ Regardless of the difference of approach referred to by Professor Kirk, it must be borne in mind that my task is to consider whether there are any reasonable possibilities consistent with the innocence of Ms Folbigg for the death of her children including Sarah and Laura.

d. Dr Buckley

854. Dr Buckley, like Professor Kirk, was a genetic pathologist. He stated the fact that having Ms Folbigg's DNA provided a benefit to him in the work he did as it enabled the Sydney team to determine whether a variant was present just in a child or had in fact been inherited from the child's mother. He stated not having a DNA sample from Mr Folbigg did not have much effect because the Sydney team did not identify any variant in the children that appeared to have been inherited from Mr Folbigg.¹¹⁰⁸
855. Dr Buckley explained that variants come with frequencies in the population and if you have a variant of a frequency of one in three thousand it is simply too high a frequency in the population for it to be a plausible cause of death. He stated the Sydney team used the information about frequency to help sort the "very, very, very" large number of variants that every single one of us has into a manageable number of variants for analysis. He stated the team "only excluded things if they were present at more than one in a thousand, so we set a reasonably... generous cut-off so we didn't get any false negatives." In relation to SIDS, he stated that as far as they could tell something in the range of two to 20% of causes can be

¹¹⁰⁵ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T481.26-35 [red pagination 487].

¹¹⁰⁶ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T481.37-482.23 [red pagination 487-488].

¹¹⁰⁷ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T514.38-43 [red pagination 520].

¹¹⁰⁸ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T404.3-31 [red pagination 409].

attributed directly to monogenic genetic causes. He stated that in the majority of sudden unexplained death in infancy, a genetic cause is not found.¹¹⁰⁹

856. Dr Buckley stated he applied the ACMG Guidelines as part of a set of evidence stating the evidence that emerges from this is used together with any other evidence which is important. He stated, for example, that the ACMG Guidelines only apply in a situation where the pathogenicity of a variant has not been completely nailed down. He said that if there is objective evidence from other studies where the pathogenicity of a variant is known, then you do not need to apply the ACMG Guidelines. He described it as a set of tools used to come to a medical conclusion.¹¹¹⁰ He also stated that in understanding the concept of a VUS it must be considered that the likely pathogenic group and the likely benign group together account for only 20% of the variations. He stated the vast majority of variants are in the VUS category but it is critical to understand that there are a very, very large number of variants so that the likelihood that any one variant is going to be pathogenic is remarkably low.¹¹¹¹
857. Dr Buckley said that full penetrance at an early age is an important consideration. He described penetrance as a concept of the ability of a variant to cause a disease. He stated that if every single person who has the variant gets the disease, then it is 100% penetrant but if only one in two get it then it is 50% penetrant. He stated that difference may be due to environmental factors and you can be non-penetrant despite having the variant.¹¹¹²
858. Dr Buckley stated that the analysis performed was hypothesis free whole genome or exome analysis. He stated what that meant was that the Sydney team did not have a group of genes that were interrogated to see if there were variants in them having presumed what the disease process was. By contrast, the team chose to look at the data itself to see what emerged from the data and whether that was consistent with the clinical phenotype that had been observed in the Folbigg family. Dr Buckley described some limitations in the process. He stated the team was using the human reference genome. He stated that the team assumed that is correct although there may be some minor points where it is not. He said the team was basing their examination on particular DNA samples taken from particular tissues where the assumption is made that the DNA circulating in our blood is the same constitution as what is in our brains or in our hearts or what is in our fingernails. He said whilst it is an assumption, it is likely to be a very good assumption. He also stated that the team was dealing with tissue which has been taken from children in the distant past and there may be some deterioration in the DNA as a result of storage or of fixation or of freezing. He agreed with Professor Kirk's summary that although the tests undertaken were not perfect, they were very, very good tests.¹¹¹³ It should be noted that in the present Inquiry it was not suggested that the tests were inadequate to reach the conclusions drawn by each of the experts.
859. Dr Buckley stated that he wanted the examining laboratory to be aware of the clinical situation, namely that this was a nuclear family where there was a sudden unexplained death. He did not wish to identify the family nor did he wish to raise any particular hypotheses. He stated the team had some discussions around the

¹¹⁰⁹ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T408.19-409.8 [red pagination 413-414].

¹¹¹⁰ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T415.24-31 [red pagination 420].

¹¹¹¹ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T417.39-45 [red pagination 422].

¹¹¹² Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T421.18-27 [red pagination 426].

¹¹¹³ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T422.22-431.41 [red pagination 427-436].

CALM2 and MYH6 variants, so he wished the laboratory to take a look at these to see if they could see any other sort of mutational mechanism around those genes, but he stated it should be a non-exclusive interest, stating “By all means look at those genes, but also look as carefully at everything else.” He stated that CALM2 was identified to form part of the exercise because it was a gene which has a known role in cardiac disease and the frequency of the variant in the population was such that it could be admitted into evidence, explaining that it was at an appropriately low frequency and was present in two of the children who had a catastrophic event and also present in Ms Folbigg.¹¹¹⁴

860. Dr Buckley agreed that advances in genetics are continuing at a pace. He referred to the fact that the test carried out was a multifaceted test endeavouring to correlate clinical presentation with genetic findings in a laboratory; the two being essential components. He stated one of the difficulties with this family was that the presenting clinical features could be summed up as being normally developing, normal grown children who had not had any preceding significant medical illnesses, presented with a sudden catastrophic event. He said in those circumstances they were in essence trying to tie normality to variants in genes.¹¹¹⁵
861. It should be noted that Professor Vinuesa, during the course of her evidence, commented that all that was being contemplated was the most simple scenario of the single gene causing disease. She stated there is increasing evidence of digenic causes of disease, namely, two genes coming together. She said, first, the frequency of each of these does not need to be so ultra-rare. Further, she stated there was good evidence that even common variants can substantially modify the incidence of disease.¹¹¹⁶

e. Professor Vinuesa

862. Professor Vinuesa is a graduate in medicine and surgery with a Diploma from the Royal College of Obstetricians and Gynaecologists in London, UK. She has a PhD in immunology and was a Fellow of the Faculty of Science of the Royal College of Pathologists in Australasia. She was a Fellow of the Australian Academy of Science and Principal Research Fellow of the National Health Medical Research Council.¹¹¹⁷
863. She was asked, and agreed, that she did not have formal qualifications in genetics or in diagnostic genetics work. She agreed she did not have any clinical role in Australia.¹¹¹⁸
864. Although Professor Vinuesa stated that there were a number of variants which she suggested should be considered as having the probability of being pathogenic, in light of the evidence in the present Inquiry, it is only necessary to focus on her evidence in relation to the CALM2-G114R gene which all the experts agreed was of relevance. She stated, however, that she disagreed with the Sydney team’s assessment of Ms Folbigg’s current health stating that, in her view, there had been insufficient medical examination undertaken, largely of a cardiac related nature, to enable Ms Folbigg’s state of health to be properly understood.¹¹¹⁹

¹¹¹⁴ Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T452.33-43; T468.29-33 [red pagination 457; 474].

¹¹¹⁵ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T520.2-14 [red pagination 526].

¹¹¹⁶ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T520.37-47 [red pagination 526].

¹¹¹⁷ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T460.20-27 [red pagination 466].

¹¹¹⁸ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T460.29-31 [red pagination 466].

¹¹¹⁹ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T467.25-T468.2 [red pagination 473-474].

865. In dealing with the CALM2-G114R gene, Professor Vinuesa sought first to make a general point regarding the scoring of all the variants under consideration. She stated that there was not enough information to be able to score some variants giving, as an example, PS2: whether the mutation was *de novo*. She stated that if Ms Folbigg had a related syndrome, for example, CPVT, the team did not have information from her parents so it was unable to be established if she had a *de novo* mutation.¹¹²⁰
866. Professor Vinuesa then dealt with PM1: “functional domain”. She stated what is normally done is to go to one of the databases that identifies functional domains. She stated one of the most accepted ones is UniProt. She said that UniProt clearly states that the EF-hand 3 domain is a recognised functional domain spanning amino acids 81 to 116 and the variant occurs in 114. She admitted this was subject to interpretation and different laboratories look at things differently but, in her view, it sits in a functional domain. This is to be contrasted with the views of Professors Kirk and Skinner that the particular variant identified in Sarah and Laura sat outside a functional domain and well outside the calcium-sensing area.¹¹²¹
867. Professor Vinuesa agreed that this was a difference in interpretation in relation to PM2 of the ACMG Guidelines.¹¹²²
868. Professor Vinuesa then dealt with PP1 of the items to be considered in the ACMG Guidelines, namely, consideration of family. She stated that is one of the problems in all the scorings as there was not full information from Ms Folbigg so again it could be argued that she could be first affected and suffer from CPVT and just has not displayed clinical manifestations. She stated, however, that it was very important and had not been considered that Ms Folbigg could be non-penetrant, which she stated would not make the variant benign. Professor Vinuesa explained that non-penetrance is extremely common in cardiac conditions. She stated that the fact that Ms Folbigg had not displayed a phenotype and might be completely healthy does not rule the variant out. She said it cannot be scored properly but you could assume that she could be affected because of the clinical history of several syncope. She stated that if all the investigations came back negative you would say that Ms Folbigg was not affected but at that point in time there was uncertainty.¹¹²³
869. In dealing with PP2, she stated that there was a low rate of benign missense variation in the CALM2 gene. A missense variant is a genetic alteration in which a single base pair substitution alters the genetic code in a way that produces an amino acid that is different from the usual amino acid at that position. Some missense variants alter the function of the protein. Professor Vinuesa indicated that no benign variants could be found in the first four exomes. She stated that if a benign variant exists it would be very informative to know the frequency. She stated, however, that because no benign variants were found in the first four exomes she believed it still met the criteria for a low rate of missense variation.¹¹²⁴
870. Professor Vinuesa stated she agreed with the Sydney team’s assessment of PP3 (see [768] above). She stated it has to be borne in mind there has been variable expressivity of many different permutations. She stated it was known there were

¹¹²⁰ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T475.3-25 [red pagination 481].

¹¹²¹ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T475.27-43 [red pagination 481].

¹¹²² Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T475.45-T476.6 [red pagination 481-482].

¹¹²³ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T476.10-27 [red pagination 482].

¹¹²⁴ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T476.29-38 [red pagination 482].

four different phenotypes: CPVT, IVF, LQTS and sudden infant death. She stated that we are learning that each mutation might cause a different effect. She said it follows that the fact that this mutation has never been found does not mean it could not cause a phenotype similar in the spectrum to what was being looked at. She said, in those circumstances, she still scores these as a possibility for sudden unexpected death in infancy. She stated there was sufficient criteria for likely pathogenicity.¹¹²⁵

871. Professor Vinuesa referred to the evidence of Professor Skinner which I have summarised at [831] above. In response to that evidence, she sought to point out that there have been only three mutations outside of the calcium coordinating residues and each of them had presented with different phenotypes; IVF in one, sudden unexpected death in another and CPVT in another. She stated there were different ages affected. She stated in those circumstances, “who is going to tell us” that the next residue is not going to come with slightly different phenotypes and a slightly earlier age of onset. She agreed, however, that from the published cases they have tended to be either late onset for the inherited ones and early onset for the *de novo* ones. Professor Vinuesa emphasised that the variant under consideration was a novel variant. She stated precisely because the variant was novel, the potential for pathogenicity is greater than those that might already be known except for those proven pathogenic. She stated she would classify the variant as likely pathogenic according to her interpretation of the criteria. She qualified this by saying she was not sure whether Ms Folbigg was affected and it was not known for certain whether the children had the phenotype.¹¹²⁶
872. Professor Vinuesa was referred to the comments by Professor Skinner that calmodulin had never been linked to SIDS (see [832] above). She was asked if it would remove the SIDS death from PP4. She stated that it would not, noting there was no ECG from Sarah and the one from Laura was not, according to Professor Skinner, diagnostic nor could he exclude a channelopathy on the basis of the ECG because it was of a poor quality.¹¹²⁷
873. Professor Vinuesa emphasised that genetic discoveries were being made all the time and that the syndromes being dealt with were very relatively recent and the more evidence and new cases which are presented, the more evidence there will be to support some of these associations.¹¹²⁸ Professor Vinuesa also stated that it was not appropriate to use exclusively ACMG criteria to classify the variants. She stated the criteria was used as an orientation for clinical practice and to take clinical actions and, in those circumstances, particularly when the risk of surgical procedures can be high, clinicians want to be extremely confident that the variant is pathogenic.¹¹²⁹
874. Professor Vinuesa referred to Professor Skinner’s comment that details of the incident when Ms Folbigg fainted in the swimming pool were pivotal (see [834] above). She referred to the recommendations for the diagnosis of LQTS which she said very clearly state that syncope associated with swimming is due to LQTS until proven otherwise. She stated that because that the first presentation for some types of LQTS is typically sudden death, that gives a consistent phenotype in the

¹¹²⁵ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T476.40-T477.22 [red pagination 482-483].

¹¹²⁶ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T478.38-T480.2 [red pagination 484-486].

¹¹²⁷ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T480.38-48 [red pagination 486].

¹¹²⁸ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T495.26-32 [red pagination 501].

¹¹²⁹ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T505.17-24 [red pagination 511].

children and it clarifies some of the key cardiac arrhythmia presentations that were being looked into. She stated it eliminates some of the uncertainty regarding some of the phenotypes.¹¹³⁰

875. By contrast, Professor Kirk somewhat downplayed the significance of the fainting episode. He stated that the purpose of the statement in the diagnostic criteria for LQTS that fainting during swimming is LQTS until proven otherwise is to ensure an immediate assessment of a child who has just experienced such an event because of the possibility that that might be the diagnosis and to ensure that they are adequately investigated and if a diagnosis is made, that management should be instituted. He said that is not to say that it is the most likely explanation. He stated, in the case of Ms Folbigg, there was an ensuing 38 years in which there have been a number of ECGs and one stress test that were normal so it is in that overall context in which the phenotypes should be considered. Professor Kirk explained that in order to segregate a variant and interpret it, you need to have a clear phenotype to start with and in the present case there are four children but the variants are present in two and it is not clear on what basis we are selecting which two we think have got the phenotype. He stated if you want to do a segregation test, you really need to know in advance what you are going to segregate against. He said you cannot after the fact say “well I’ve got it in these two, they must have had the phenotype”. He said, that does not work. However, he stated if the history was that Ms Folbigg slipped to the bottom of the pool that would make him think very seriously about the possibility that the children may have CPVT and he would institute appropriate investigations and be guided by the results of those.¹¹³¹

Ms Folbigg’s evidence at the 2019 Inquiry

876. Prior to Ms Folbigg giving evidence, the Inquirer indicated Ms Folbigg’s evidence and her cross-examination would be restricted to evidence about the diary entries, possession of the diaries and the disposal of her diaries.¹¹³²
877. Because of the importance of the diary evidence to this Inquiry, I have set out in the Annexure 3 to this Report the diary entries which were the subject of cross-examination and the cross-examination which took place. I will not repeat details of the cross-examination in this section of the report but rather deal with the evidence which Ms Folbigg gave on her possession of her diaries and their disposal.
878. Ms Folbigg was asked by counsel for the Director of Public Prosecutions how many diaries she “got rid of”. She responded, she only had a clear recollection of getting rid of one. She was asked how many diaries she kept in the 10 or 11 year period covering her children’s deaths and she said she could not answer because she did not write in them regularly.¹¹³³
879. Ms Folbigg was referred to her statement in the Electronically Recorded Interview with a Suspected Person (**ERISP**) with Detectives Ryan and Engdahl that she had three diaries she remembered possessing but recalled only throwing out one (see [267] above). She agreed she may have lost some others along the way.¹¹³⁴

¹¹³⁰ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T571.5-34 [red pagination 578].

¹¹³¹ Exhibit 4, Transcript of the 2019 Inquiry, 17 April 2019 T573.32-T574.18 [red pagination 580-581].

¹¹³² Transcript of the third directions hearing at the 2019 Inquiry, 20 December 2018 T6.6-10; Exhibit 4, Transcript of the 2019 Inquiry, 18 March 2019 T5.8-11 [red pagination 6].

¹¹³³ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T621.44-T622.26 [red pagination 629-630].

¹¹³⁴ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T622.47-T623.33 [red pagination 630-631].

880. Ms Folbigg was also asked about her statement in the ERISP that she used to write the diaries as basically a sort of vent or a release. She stated that was the truth. She was referred to her statement in the interview that she had “just got rid of them all”. She agreed she may have said that but she only remembered getting rid of one.¹¹³⁵
881. It was put to her that the fact she made a diary entry on 19 June 1999 is inconsistent with what she told the police that she had not written in her diary after 9 May 1999 and said she did not recall the entry. She was also referred to her entry in July 1999 when she said, “decided to start writing in a diary again. Have missed being able to vent regularly”. She stated she did not recall that she produced the diary to the police after she retrieved it from a built-in wardrobe. She stated that there was a diary she was writing in which was very visible on her bedside table.¹¹³⁶
882. The questions asked and answers given concerning the production of the 1999 diary are set out on pp 292-298 of Annexure 3. It was put to Ms Folbigg that the answers she gave that she had not written in the diary since 9 May 1999 were false and she knew she had written in a diary since then. She reiterated she threw the diaries out because she had finished with them. She denied that she got rid of the diaries because there was significantly incriminating material in them.¹¹³⁷
883. Ms Folbigg stated that she did not recall writing in her diary around the time Patrick died although she conceded she may well have.¹¹³⁸
884. Ms Folbigg was asked about the conversation she had in early May 1999 when Mr Folbigg discovered one of her diaries (see [183] above). She stated it did not concern her that he had found the diary.¹¹³⁹
885. Ms Folbigg agreed she was upset when she was asked questions about the diary during her interview because the police were trying to suggest she was guilty of killing her own children. She stated she did not get that feeling until later in the interview. She said she did not believe there would be anything in the diaries to be highly concerned about. She said she was slightly surprised when the police started asking questions about it in the interview.¹¹⁴⁰
886. It was put to Ms Folbigg that when the police executed a search warrant at her home they found another diary in a crocheted bag with clothes wrapped around it and then finally inside plastic. She stated she did not recall that. She denied that she ever hid her diaries denying that they were hidden stating that people always knew she was writing in them, they were always in places where people could see them.¹¹⁴¹
887. Ms Folbigg was referred to a transcript of a listening device placed in her home at 8 Millard Close, Singleton. The transcript records the following statements made by Ms Folbigg at 7:53am on 24 July 1999:

“I should have fucking done what I was gunna do, stuck it underneath that.”¹¹⁴²

¹¹³⁵ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T623.43-T624.43 [red pagination 631-632].

¹¹³⁶ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T625.41-T627.37 [red pagination 633-635].

¹¹³⁷ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T628.46-T630.9 [red pagination 636-638].

¹¹³⁸ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T630.36-47 [red pagination 638].

¹¹³⁹ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T631.9-50 [red pagination 639].

¹¹⁴⁰ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T632.2-25 [red pagination 640].

¹¹⁴¹ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T633.1-41 [red pagination 641].

¹¹⁴² Exhibit 2-AZ, Diaries tender bundle, Listening device transcription number 4 (24 July 1999) [red pagination 7471].

888. Ms Folbigg agreed it recorded what she said but stated she had no idea what she was talking about. She was asked whether it could have been a concern about not having hidden the diary well enough. She stated, “No, because my diaries were not a concern to me that I had to hide them anyway.”¹¹⁴³
889. The balance of the cross-examination by counsel for the Director of Public Prosecutions and by counsel for Mr Folbigg concerned the contents of the diaries and is set out in Annexure 3 to this Report. It should be noted that counsel for Ms Folbigg objected to Mr Folbigg’s counsel’s cross-examination on the basis that Mr Folbigg’s right of appearance was to protect his reputation or character and there was nothing arising out of the diary entries for counsel for Mr Folbigg to go over material which had already been addressed by the Director of Public Prosecutions. Notwithstanding the objections, the cross-examination by Mr Folbigg’s counsel was permitted.¹¹⁴⁴ It is not for me to say whether this was an appropriate exercise of discretion by the Inquirer. Suffice to say, Ms Folbigg was subjected to hostile cross-examination by two counsel over a period of two days and despite Mr Folbigg’s counsel’s statement at the outset of her cross-examination that she would endeavour not to repeat the areas covered by the Director of Public Prosecutions,¹¹⁴⁵ it is self-evident from Annexure 3, which shows extensive cross-examination by both counsel on the same diary entries, that she failed in this endeavour.
890. Ms Folbigg was asked further questions by Counsel Assisting the Inquiry concerning the disposal of her diaries. She stated that her evidence was a recollection of what she thought she meant at the time she was writing them. However, she stated she did not believe she reconstructed anything. She believed she read the diaries, tried to put her mind back to what it was she was feeling and the emotion behind what she was reading, and attempting to explain what it was she put in those pages. Counsel Assisting stated she was not suggesting that Ms Folbigg did not try to do that but suggested it was impossible given the significant events that had intervened. Ms Folbigg rejected that contention.¹¹⁴⁶
891. Ms Folbigg also rejected the contention that the evidence she gave as to the diaries was clearly affected by the significant events that had taken place since she wrote them. She stated that she would not say that she had been entirely unaffected by the events which had occurred since 2003 in giving evidence as to what she meant in the late 1990s. She stated, “You couldn’t possibly be unaffected by something like this.” However, she rejected the proposition that the account had been so coloured by the events that had occurred since the diary entries were written, that her evidence must be considered in that light. She stated she would not agree with that.¹¹⁴⁷
892. Ms Folbigg accepted that the ordinary plain meaning of the words in the diaries could objectively be seen to convey a different meaning to that which she stated in her evidence.¹¹⁴⁸
893. Ms Folbigg agreed that before her ERISP on 23 July 1999 she knew that Mr Folbigg had given the police at least one of the diaries. She also stated she understood, in

¹¹⁴³ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T633.47-T634.9 [red pagination 641-642].

¹¹⁴⁴ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T679.10-21 [red pagination 687].

¹¹⁴⁵ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T674.15-16 [red pagination 682].

¹¹⁴⁶ Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T792.29-T793.18 [red pagination 802-803].

¹¹⁴⁷ Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T793.11-T794.9 [red pagination 803-804].

¹¹⁴⁸ Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T795.39-46 [red pagination 805].

2001 or 2002, Mr Folbigg found some other diaries which he gave to the police. She stated that she only remembered actually getting rid of one of the diaries and that was on Mother's Day (1999) and she could not say why she told the police something different. She conceded that what she told the police back in 1999 about events around that time was more likely to be accurate.¹¹⁴⁹

894. It was put to her that it was more likely that she threw the diaries away after she heard that Mr Folbigg had given her diary to the police and she denied it. She stated that "the diaries were not that important as in information wise and they didn't concern me in any way".¹¹⁵⁰
895. Counsel Assisting the Inquiry asked Ms Folbigg whether having considered the matter over the last couple of days she had any recollection of the circumstances she came to make the remarks recorded in the listening device of 24 July 1999. She said she did not. She said it could have been about something else other than the diary.¹¹⁵¹
896. Ms Folbigg was also referred to the transcript of a listening device on 23 July 1999 which recorded a conversation between her and Mr Folbigg. The transcript recorded Mr Folbigg say, "I came home to get the diary and take it back to work and I couldn't find it." Her response was recorded as, "I couldn't find it and they found it...and I've gone I didn't have it so...". She agreed that was clearly in relation to the diary that was seized that night although she said she was unsure if it was the 1997-1998 diary.¹¹⁵²
897. It was suggested to Ms Folbigg that the words which were recorded indicated she knew of the existence of the diary before the police found it on the execution of the search warrant. She agreed because Mr Folbigg had already told her he had handed her diary in and she assumed there may have been others around the house.¹¹⁵³
898. Ms Folbigg was asked about the questions put to her by the Inquirer concerning the diary entry of 25 October 1997. She was asked by Counsel Assisting whether it was a view she held today that some supernatural power took her first three children away. She said it was. She said she had no answers as to why she had survived and outlived her children. She was constantly trying to search for that answer. She was asked if she understood the difference between not having any answers and coming upon an answer of supernatural power. She responded it followed along as a basis of trying to put together all the mystical and spiritual beliefs that she had at the time and still now has. Ms Folbigg reaffirmed the belief that some supernatural power took all her children, and she still believed that the children who had died communicated with Laura who was then alive and warned her how she should behave. She stated she always believed that once you died your spirit rests or goes to another place or is at peace.¹¹⁵⁴

¹¹⁴⁹ Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T796.39-T798.25 [red pagination 806-808].

¹¹⁵⁰ Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T800.28-48 [red pagination 810].

¹¹⁵¹ Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T802.31-44 [red pagination 812].

¹¹⁵² Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T803.33-40 [red pagination 813].

¹¹⁵³ Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T803.48-T804.13 [red pagination 813-814].

¹¹⁵⁴ Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T804.43-T805.47 [red pagination 814-815].

Additional material provided to the 2019 Inquiry following the conclusion of the evidence

899. As I pointed out early in this Report (see [11] above) following conclusion of the evidence, the Inquirer was provided with an advance copy of the Crotti Article and a letter from Professor Schwartz to Professor Vinuesa suggesting that the identification of a novel genetic variant in the CALM2-G114R gene found in Ms Folbigg, Sarah and Laura provided an explanation for the sudden death of those two children.
900. Professor Schwartz has a distinguished career in cardiology. In 2019, he was the Director of the Centre for Cardiac Arrhythmias of Genetic Origin and of the Cardiovascular Genetics Laboratory at the Instituto Auxologico Italiano, Milan; Extraordinary Professor in Internal Medicine at the University of Stellenbosch; and, Honorary Professor in the Department of Medicine and Member of the Board of the Hatter Institute for Cardiovascular Research in Africa at the University of Cape Town, South Africa. His curriculum vitae describes his main area of research as being that of sudden cardiac death from different angles including genetic mechanisms.¹¹⁵⁵
901. In his letter of 20 June 2019 to Professor Vinuesa, Professor Schwartz stated that the CALM2-G114R variant is indeed novel. He stated that whilst it was reported as residing in the EF-hand 3 domain, that is not correct. He stated the variant was located in the interdomain linker between EF-hands 3 and 4 of the Ca²⁺ binding terminal lobe. Professor Schwartz said there was not a single variant around that position. He stated as there are only eight missense variants in CALM2, its presence in two cases in the Folbigg family is statistically significant. He stated the identification of the CALM2 variant justifies fully reopening the case because it raises significant doubts (in addition to the other pathogenic non-cardiac variant in the third infant with encephalopathy).¹¹⁵⁶
902. Following receipt of that material, Professors Skinner and Kirk and Dr Buckley provided a supplementary report dated 5 July 2019. They noted that in their original report and in the evidence given to the Inquiry, they assessed the variant (CALM2-G114R) as a VUS, maintaining the view that the available evidence made it unlikely that the variant was relevant to the deaths of Sarah and Laura.¹¹⁵⁷
903. They stated that in reaching that conclusion they did not apply the criterion PP2 (Missense variant in a gene that has a low rate of benign missense variation) because the data for this gene from the Genome Aggregation Database (**gnomAD**) indicate that this variant does not meet the usual threshold for applying the criterion. However, they stated that subsequent to the substantive hearings at the 2019 Inquiry, the publication Wiel et al, “MetaDome: Pathogenicity analysis of genetic variants” (2019) *Human Mutation*, became available in advance online form. They stated the methodology proposed in that article allowed the tolerance to missense substitution of amino acid 114 in CALM2 to be quantified. They stated the results

¹¹⁵⁵ Exhibit 2-BT, Letter from Professor Peter Schwartz to Professor Carola Vinuesa (20 June 2019) [red pagination 7840].

¹¹⁵⁶ Exhibit 2-BT, Letter from Professor Peter Schwartz to Professor Carola Vinuesa (20 June 2019) [red pagination 7837-7838].

¹¹⁵⁷ Exhibit 2-BV, Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (5 July 2019) [red pagination 7859].

indicated that CALM2 was highly intolerant to missense substitution. In those circumstances, they accepted that the criterion PP2 could be used.¹¹⁵⁸

904. However, they stated adding the criteria in PP2 does not change the classification of the variant as a VUS. In their report they stated it was important to understand that almost all of the previously reported disease associated variants in the three CALM genes, CALM1, CALM2 and CALM3, involved amino acids located within two specific regions (domains) of the protein, the EF-hand 3 and EF-hand 4. They stated only three amino acids outside those two domains had been associated with disease prior to the Crotti Article. They stated these three are in a different part of the protein from the location of the Gly114 amino acid. They stated that, in other words, there had never been a report of a change in the protein in the vicinity of Gly114 that was disease associated.¹¹⁵⁹
905. They repeated their comments in their earlier reports that the fact that Ms Folbigg is alive and has no clear evidence of any cardiac illness is inconsistent with her having such a condition. They stated that it was Professor Skinner's opinion that the documented fainting events for which medical records were available were not typical for cardiac events. They stated that where there was information about the parents of a person affected by a CALM-related condition, it is almost always found not to have been inherited from a healthy parent. They noted the Crotti Article stated that where parents had been tested the variant is almost always *de novo*.¹¹⁶⁰
906. Professor Kirk and Dr Buckley (the report was only reviewed by Professor Skinner for accuracy with respect to clinical information and cardiac investigation) stated that the available information associated with the CALM2 genes indicates a variant affecting amino acids outside the EF-hand domains leads to generally less severe medical conditions compared to variants affecting EF-hand amino acids, although they are still life threatening. They stated the main specific condition is CPVT whilst IVF was also reported. They stated, however, that for all types, 81% of cardiac events were the result of adrenergic stimuli; 62% were associated with exercise. They also stated that the youngest age of death that they could find documented in the medical literature of a patient with a non EF-hand CALM variant is four years.¹¹⁶¹
907. In conclusion, they stated that the information regarding the existence of a different pathogenic variant at Gly114Arg is relevant, increasing the likelihood that the variant is pathogenic and that it might be relevant to the deaths of Sarah and Laura. They stated, however, for it to be the sole cause of their death an exceptional clinical scenario would be required, outside the range previously reported in association with variants in this group of genes. They accepted the possibility that the variant contributed to, but was not the sole cause of death of Sarah or Laura. However, they noted that each of these possibilities would require at least two different causes of death for children in the family because Caleb and Patrick did not inherit the CALM2-G114R variant.¹¹⁶²

¹¹⁵⁸ Exhibit 2-BV, Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (5 July 2019) [red pagination 7859].

¹¹⁵⁹ Exhibit 2-BV, Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (5 July 2019) [red pagination 7859].

¹¹⁶⁰ Exhibit 2-BV, Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (5 July 2019) [red pagination 7859-7860].

¹¹⁶¹ Exhibit 2-BV, Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (5 July 2019) [red pagination 7860].

¹¹⁶² Exhibit 2-BV, Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (5 July 2019) [red pagination 7862].

908. A response was provided by Professor Vinuesa and Dr Arsov on 11 July 2019 in a report which was stated to have been reviewed by Professors Schwartz, Cook and Toft Overgaard.¹¹⁶³
909. In this response report, Professor Vinuesa and Dr Arsov referred to the conclusion reached by Professor Kirk and Dr Buckley that the variant is not pathogenic due to the unlikely clinical scenario of different genetic causes for the deaths of four children. They stated that, contrary to the Sydney team, they did not consider death a phenotype. They stated their starting point was that the phenotype that caused death in each child remained ambiguous, a conclusion they said was supported by the relevant and inconsistent clinical and pathological analyses of the Folbigg children. They stated there were numerous examples where two different monogenic conditions causing similar (or different) clinical presentations manifest in a single family and even in a single individual, leading to manifestation of two different phenotypes. They stated they were not aware of any facts to refute that the two female Folbigg children died as a result of the CALM2-G114R variant, while the two male children died from different causes, whether genetic or otherwise. Professor Vinuesa and Dr Arsov also referred to Professor Kirk and Dr Buckley's claim that the variant is of the type that if it was pathogenic, it would not usually be expected to cause death at such a young age. They stated that making such an assumption rather than acknowledging uncertainty is risky. They referred to what they described as the well-established and accepted basic principles in formal genetics of variable clinical expressivity – being, variable age of onset and variable severity of disease caused by the same genetic mutation or different mutations in the same gene.¹¹⁶⁴
910. Professor Vinuesa and Dr Arsov also stated that Professor Kirk and Dr Buckley's assertion that a CALM2-G114R variant cannot be disease making if present in a phenotypically healthy carer is incorrect. They said a healthy related person can be the carrier of a mutation that can be lethal in another related person. They referred to mosaicism which they said described the phenomenon where a person with a deleterious variant appears phenotypically healthy as they do not carry the mutation in one or several tissues. They said the phenomenon arises due to a *de novo* mutation occurring during cell division of a developing embryo as opposed to the mutation occurring in either parental sperm or egg. They said it was incorrect to state that mosaicism is very unlikely.¹¹⁶⁵
911. With respect to incomplete penetrance and seemingly healthy individuals, in the context of LQTS they stated that Professor Schwartz first posited that there could be patients with LQTS and a completely normal ECG. They stated it was now accepted there were patients with LQTS and completely normal ECG that appear healthy but are at risk of sudden cardiac death.¹¹⁶⁶

¹¹⁶³ Exhibit 2-BW, Response from Professor Carola Vinuesa, Professor Matthew Cook, Professor Peter Schwartz, Professor Michael Toft Overgaard and Dr Todor Arsov to the Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (11 July 2019).

¹¹⁶⁴ Exhibit 2-BW, Response from Professor Carola Vinuesa, Professor Matthew Cook, Professor Peter Schwartz, Professor Michael Toft Overgaard and Dr Todor Arsov to the Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (11 July 2019) [red pagination 7863-7864].

¹¹⁶⁵ Exhibit 2-BW, Response from Professor Carola Vinuesa, Professor Matthew Cook, Professor Peter Schwartz, Professor Michael Toft Overgaard and Dr Todor Arsov to the Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (11 July 2019) [red pagination 7864-7865].

¹¹⁶⁶ Exhibit 2-BW, Response from Professor Carola Vinuesa, Professor Matthew Cook, Professor Peter Schwartz, Professor Michael Toft Overgaard and Dr Todor Arsov to the Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (11 July 2019) [red pagination 7866].

912. Professor Vinuesa and Dr Arsov stated that it was incorrect to say that the variant is of a type that if pathogenic would almost always be expected to have arisen *de novo* or have been inherited from a parent with mosaicism for the variant. They referred to an article by Marsman et al (**Marsman Article**)¹¹⁶⁷ which reported on a family with IVF caused by the CALM1 variant manifesting in childhood and adolescence, whilst IVF was also reported as the cause of death of two children with the G114W variant inherited from a healthy mother (referred to in the Crotti Article). They stated that in the Marsman Article, the CALM1 variant was also carried by a seemingly healthy mother having five children with the variant, two of whom died from SUD, two with syncope and cardiac arrest, whilst the fifth remained asymptomatic. They stated moreover the variant is found in an interdomain linker region of calmodulin, rather than a calcium binding region as is the variant identified in Ms Folbigg and her children.¹¹⁶⁸
913. Professor Vinuesa and Dr Arsov also stated that as recorded by Associate Professor Raju, Ms Folbigg had a long standing history of recurrent transient loss of consciousness/syncope that started in childhood and there have also been several syncope episodes recorded in her prison health records made available to the Inquiry. They noted that Professor Schwartz stated that normal QT intervals can be found in people at risk of sudden death due to LQTS.¹¹⁶⁹
914. Professor Vinuesa and Dr Arsov noted the conclusion of Professor Kirk and Dr Buckley that, for the CALM2-G114R variant to be pathogenic, an exceptional clinical scenario was required. They stated the rare genetic variants are by definition responsible for exceptional clinical scenarios.¹¹⁷⁰

Conclusions reached at the 2019 Inquiry

915. I have summarised the conclusions reached by the Inquirer at [5]-[11] above. However, it is important to set out the conclusions in a little more detail for the purpose of considering how they may be affected by the evidence led at the present Inquiry.

i. The possibility that the CALM2-G114R variant was the cause of death of Sarah and Laura

916. The Inquirer, generally speaking, accepted the evidence of Dr Buckley, Professor Kirk and Dr Colley on questions relating to genetics. In relation to the CALM2-G114R variant he stated that he preferred their expertise and that there was no reasonable possibility that the variant caused the death of Sarah and Laura.¹¹⁷¹ He stated Professor Vinuesa's evidence was, at its highest, that she "would not feel comfortable with excluding its potential for pathogenicity" on the basis that it was "conceivable" that the mutation in Ms Folbigg was non-penetrant.¹¹⁷²

¹¹⁶⁷ Exhibit 15-09, Roos F Marsman et al, 'A Mutation in CALM1 Encoding Calmodulin in Familial Idiopathic Ventricular Fibrillation in Childhood and Adolescence' (2014) 63(3) *Journal of the American College of Cardiology* 259-266.

¹¹⁶⁸ Exhibit 2-BW, Response from Professor Carola Vinuesa, Professor Matthew Cook, Professor Peter Schwartz, Professor Michael Toft Overgaard and Dr Todor Arsov to the Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (11 July 2019) [red pagination 7866].

¹¹⁶⁹ Exhibit 2-BW, Response from Professor Carola Vinuesa, Professor Matthew Cook, Professor Peter Schwartz, Professor Michael Toft Overgaard and Dr Todor Arsov to the Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (11 July 2019) [red pagination 7866-7867].

¹¹⁷⁰ Exhibit 2-BW, Response from Professor Carola Vinuesa, Professor Matthew Cook, Professor Peter Schwartz, Professor Michael Toft Overgaard and Dr Todor Arsov to the Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (11 July 2019) [red pagination 7868].

¹¹⁷¹ 2019 Inquiry Report, ch 7 [168].

¹¹⁷² 2019 Inquiry Report, ch 5 [105].

917. In an addendum to his report, the Inquirer described the difference between the approach of the Sydney team and the Canberra team that the Sydney team applied a clinical standard, allowing only for known disease associations with the particular phenotype of the children (sudden death in infancy during sleep) and Ms Folbigg, which they did not consider to be uncertain. He stated that the Canberra team applied a research-based standard, allowing for known disease associations with a broader phenotype, noting they did not consider the phenotype of either of the children or Ms Folbigg to be certain.¹¹⁷³
918. The Inquirer accepted that Professor Schwartz was an expert in his field concerning the study of calmodulin genetic variants and that there is variable clinical expressivity including variable age at onset for calmodulin mutations and there was, as at the time of writing his report, uncertainty in ongoing learning as to such expressivity.¹¹⁷⁴
919. The Inquirer referred to findings in the Crotti Article which he said demonstrated not only the extreme rarity of pathogenic calmodulin variants but the even more extreme rarity of sudden cardiac death during sleep caused by such variants in previous asymptomatic carriers. He noted that Sarah and Laura each died aged under two years of age during a period of sleep and had not been symptomatic for any cardiac condition. He stated that it remained the case that there was no reported case of a death of such a nature (asymptomatic sudden cardiac death in infancy during a sleep period) being associated with the calmodulin variant.¹¹⁷⁵
920. However, the Inquirer found that as a result of the Crotti Article, it was now plausible that Sarah and Laura may have had a cardiac condition and that raised the possibility that it caused their deaths. He said that was based on considering the genetic evidence in isolation and it was necessary for him to look at the whole of the evidence and in doing so, the fact that all experts agreed, that the genetic explanation was an “exceptional clinical scenario” and was a relevant matter to consider.¹¹⁷⁶
921. He stated that he remained of the view, having regard to the diary entries made by Ms Folbigg, her lies and obfuscation, the evidence of Mr Folbigg concerning her relationship with her children and the tendency and coincidence evidence, that the only conclusion reasonably open was that Ms Folbigg smothered Sarah and Laura. In those circumstances, he did not consider it necessary to re-open the Inquiry.¹¹⁷⁷

ii. Patrick’s ALTE and Death

922. The Inquirer stated that having regard to the medical, including genetic, evidence in the Inquiry the following conditions were not excluded as having caused the ALTE, but that it was not reasonably possible that any of them caused it:

- (a) epilepsy, or an initial seizure;
- (b) an unidentified genetic or metabolic condition;

¹¹⁷³ 2019 Inquiry Report, Addendum [44]-[45].

¹¹⁷⁴ 2019 Inquiry Report, Addendum [46].

¹¹⁷⁵ 2019 Inquiry Report, Addendum [49]-[53].

¹¹⁷⁶ 2019 Inquiry Report, Addendum [56].

¹¹⁷⁷ 2019 Inquiry Report, Addendum [58]-[59].

- (c) an unidentified degenerative brain condition or neurological disease or condition;
- (d) infection or virus other than encephalitis; and
- (e) a SIDS type event.¹¹⁷⁸

923. The Inquirer stated that he closely considered Dr Ryan’s opinion that Patrick’s presentation at the time of and after the ALTE and prior health was not consistent with a single hypoxic episode on 18 October 1990. However, he determined to prefer Associate Professor Fahey’s opinion which supported a single such event. He gave the following reasons.¹¹⁷⁹
924. First, Associate Professor Fahey and Dr Wilkinson had the qualifications and experience to give opinion evidence on the same subject matter, and Dr Wilkinson’s opinions were tested at trial and supported by his correspondence contemporaneous with his investigations of Patrick after the ALTE. The Inquirer stated that Dr Ryan relied on two notes of previous back arching and torticollis in support of her opinion. He stated it should have been uncontroversial that on the available evidence, Patrick was healthy before the ALTE and that no other medical expert, including Associate Professor Fahey, attributed such weight to these discrete notations in the volume of Patrick’s clinical records.¹¹⁸⁰
925. The Inquirer was critical of Dr Ryan’s evidence stating she was inexplicably unprepared to either give serious consideration to the consensus of other medical opinions which were inconsistent with her own or accept the weight of records and evidence indicating that Patrick was healthy and developing normally prior to the ALTE. He stated, for example, Dr Ryan was unprepared to accept that Patrick was hypoxic on the arrival at the hospital in part because an oximetry probe can misread blood oxygen levels. He stated that Dr Ryan’s position added to his overall impression that she was unprepared to give reasonable consideration to the factual evidence that was available.¹¹⁸¹
926. The Inquirer accepted that none of the experts gave a conclusive explanation for why there was a delay in the onset of Patrick’s seizures and why the initial EEG was normal compared with the deterioration seen later. He stated, however, Associate Professor Fahey’s opinion appeared to be supported by clinical and forensic pathology evidence (including Dr Kan’s findings) and whilst demonstrating some variation in reasoning, was “overall compatible with Dr Wilkinson’s evidence that delay in onset was consistent with – indeed, Dr Wilkinson said it was typical after asphyxia damage for progressive change and seizures produced down the track – an initial event”. He stated that expert opinion supports a single asphyxial event having occurred on 18 October 1990, with a cause other than one attributable to a respiratory or recognised neurological condition.¹¹⁸²
927. In relation to Patrick’s death, the Inquirer found that on the available medical evidence it was possible its cause was a seizure or similar event relating to encephalopathy in his brain.¹¹⁸³ He stated further, on the available medical evidence, it was reasonably

¹¹⁷⁸ 2019 Inquiry Report, ch 5 [308].

¹¹⁷⁹ 2019 Inquiry Report, ch 5 [310].

¹¹⁸⁰ 2019 Inquiry Report, ch 5 [311]-[312].

¹¹⁸¹ 2019 Inquiry Report, ch 5 [312].

¹¹⁸² 2019 Inquiry Report, ch 5 [305]-[321].

¹¹⁸³ 2019 Inquiry Report, ch 5 [332].

possible that his death was caused by an asphyxial event. He stated the answer to the question of which of these it was lies not in the medical evidence in relation to Patrick but in the consideration of a number of different aspects of the evidence in this case.¹¹⁸⁴

iii. The diaries and their disposal

928. The Inquirer accepted that the diary entries contained no express admissions by Ms Folbigg of having killed her children. He stated, however, it was entirely proper in fact finding in circumstantial evidence cases for inferences to be drawn and for individual pieces of evidence to be considered in combination like strands in a cable.¹¹⁸⁵
929. The Inquirer stated he accepted Ms Folbigg's submission and the opinion of the psychiatrist, Dr Diamond, that Ms Folbigg's diary entries had to be read on the basis of her "deep-seated psychological (but very private) subjective experiences" in light of her early childhood trauma. He stated the entries must be read with an understanding, to the extent such an understanding is permitted by the contents of the diary entries, that the entries could merely reflect self-blame for deaths which occurred from natural unexplained causes. He stated, however, the difficulty with this interpretation as an expression of guilt or responsibility based on omission for acts not done rather than the commission of acts done, as contended by Ms Folbigg, is that such an interpretation cannot be applied sensibly to many of the most inculpatory entries in Ms Folbigg's diaries. He stated that in many places Ms Folbigg expressed a feeling of guilt or responsibility by reference to acts done by her with such matters being within her control and thus the subject of concerted efforts by her to avoid their repetition. The Inquirer seemed to accept Dr Diamond's opinion that Ms Folbigg was and remains diagnosed with complex PTSD but stated those observations were only supportive of Ms Folbigg's interpretation of the diary entries to the extent the entries were sensibly able to be read as expressions of guilt or responsibility based on omissions.¹¹⁸⁶
930. However, the Inquirer stated that even making every allowance for her deep seated psychological subjective experiences and childhood trauma, and any emotional state Ms Folbigg may have been in at the time of her writing the various entries, it is impossible to give the diary entries any meaning other than their ordinary English meaning. He stated that Ms Folbigg's account that terms such as "becoming frustrated, angry, losing her temper, losing control and snapping her cog" all referred to a slight frustration but not to any physical conduct by her towards the children was inconsistent with other evidence, in particular, that of Mr Folbigg. The Inquirer stated that Ms Folbigg's attempts at explanation simply came from her best attempts to twist the ordinary English meaning of her own words in order to arrive at some innocent explanation.¹¹⁸⁷
931. In that context the Inquirer referred to Ms Folbigg's statements in her ERISP with the police that she got up to go to the toilet in the middle of the night and on the way back she checked Sarah and found she was not breathing. He stated that this was inconsistent with the diary entry in respect of Sarah prior to Laura's birth, "I really needed him to wake up that morning and take over from me. This time I have

¹¹⁸⁴ 2019 Inquiry Report, ch 5 [332].

¹¹⁸⁵ 2019 Inquiry Report, ch 8 [460].

¹¹⁸⁶ 2019 Inquiry Report, ch 8 [471].

¹¹⁸⁷ 2019 Inquiry Report, ch 8 [475]-[479].

already decided that if I ever feel that way again, I'm going to wake him up." He stated that entry is to be considered in light of the August 1993 calendar sheet on which Ms Folbigg recorded, "Sarah left us. 1:00am" and Mr Folbigg's account of having awoken at 1:10am and observed that Ms Folbigg and Sarah were not in the room before going back to sleep. He referred to the cross-examination of Ms Folbigg on this diary entry which is dated 16 May 1997 (Annexure 3, p 153). The Inquirer stated that, in that cross-examination, Ms Folbigg:

- (a) first denied she was referring in that entry to the morning of Sarah's death;
- (b) then accepted "it may have been" but said repeatedly she was not 100% clear on that;
- (c) when it was put to her that she was awake with Sarah that morning she said, "If I was caring for her then yes I most likely was";
- (d) when it was suggested to her that this was in fact on the morning that Sarah died, Ms Folbigg responded, "I can't say with any clarity on that";
- (e) she then denied she was awake when Sarah died; and
- (f) she refused to agree that although she told police she was not awake at the time Sarah died, her diary entry demonstrated something different had occurred.¹¹⁸⁸

932. The Inquirer described the evidence as a clear attempt by Ms Folbigg to avoid the only rational possible meaning of the words written in her diary and to avoid admitting she had been untruthful when questioned by the police. He stated that the fresh evidence before the Inquiry from a listening device at Ms Folbigg's home and the prevarication in Ms Folbigg's answers in cross-examination on this subject, provided significant support of the truthfulness of Mr Folbigg's testimony and demonstrated again that Ms Folbigg lied to the police when she said she simply found Sarah dead. The Inquirer stated it also demonstrated Ms Folbigg's interest in trying to avoid suspicion about what she had done by prevailing on Mr Folbigg to go to the police and change his evidence.¹¹⁸⁹

933. As far as the disposal of the diaries were concerned, the Inquirer concluded that the statements in the listening devices to which I have referred at [887] and [896] above and Ms Folbigg's diary entry of July 1999, "I just pray it doesn't come back to bite me like my 97 one has" (Annexure 3, p 291) demonstrated Ms Folbigg's interest in preventing the contents of her diaries being seen.¹¹⁹⁰

934. In that context, the Inquirer concluded that Ms Folbigg was untruthful in several respects – to the police in her interview and in her evidence which she gave before the Inquiry, including about her possession and dispossession of the diaries and whether she appreciated the significance of their contents. He also concluded the diary entries were written by a reasonably intelligent woman in plain language and he should interpret them in accordance with the ordinary English meaning of the words. He also stated that the plain meaning of the diary entries is one of virtual admissions of guilt for the deaths of Caleb, Patrick and Sarah, and admissions that she appreciated she was at risk of causing similarly the death of Laura.¹¹⁹¹

¹¹⁸⁸ 2019 Inquiry Report, ch 8 [481]-[485].

¹¹⁸⁹ 2019 Inquiry Report, ch 8 [487]-[489].

¹¹⁹⁰ 2019 Inquiry Report, ch 8 [495]-[496] and [505].

¹¹⁹¹ 2019 Inquiry Report, ch 8 [507].

935. In those circumstances, the Inquirer concluded that on the basis of the non-medical evidence, including the diaries, he had no reasonable doubt about Ms Folbigg's guilt for the offences for which she was convicted.¹¹⁹²

¹¹⁹² 2019 Inquiry Report, ch 8 [508].

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936. I have set out at [17] above the direction given to me by the Governor of New South Wales. As would be expected from the direction, a great deal of the evidence was focused on the CALM2-G114R variant as a possible cause of the death of Sarah and Laura. That evidence was provided by a number of distinguished researchers and clinicians in the field, most, but not all, of whom gave evidence at the Inquiry. I deal with that evidence in Section 2 below. In addition, evidence was given as to the possible causes of Patrick's ALTE and death. That evidence is dealt with in Section 3. Fourth, evidence from expert pathologists was adduced including from Professor Cordner and Dr Cala who gave evidence at the 2019 Inquiry. This is dealt with in Section 4. Section 5 deals with the question of whether myocarditis was a reasonably possible cause of Laura's death.
937. Sixth, in relation to the diaries, expert psychological and psychiatric evidence was given at the Inquiry. In contrast to the evidence adduced at the 2019 Inquiry, this evidence was directed to the question of whether Ms Folbigg suffered from any mental health condition which may have had a causative effect on the contents of her diaries, in particular, whether the entries were consistent or not with that condition and whether in these circumstances the admissions made by her were reliable indicators of guilt.
938. In addition to the expert evidence, affidavits of Megan Donegan were sworn on 18 February 2019¹¹⁹³ and 8 December 2022.¹¹⁹⁴ There was also tendered an affidavit of Colin Donegan dated 11 March 2019.¹¹⁹⁵ I deal with these in Section 7.
939. Before dealing with these issues, it is appropriate to refer to the evidence led on the question of whether Ms Folbigg had a cardiac condition possibly derived from having the CALM2-G114R variant. As can be seen from what I have written, this assumed some significance in the 2019 Inquiry, as it did in the present Inquiry. That is dealt with in Section 1 below.

¹¹⁹³ Exhibit 32-02, Affidavit of Megan Donegan (18 February 2022).

¹¹⁹⁴ Exhibit 32-02A, Affidavit of Megan Donegan (8 December 2022).

¹¹⁹⁵ Exhibit 32-06, Affidavit of Colin Donegan (11 March 2019).

Section 1

Did Ms Folbigg have a cardiac condition potentially derived from the CALM2-G114R variant?

Section 1 – Did Ms Folbigg have a cardiac condition potentially derived from the CALM2-G114R variant?

a. The evidence of Billi-Jo Ann Buckley

940. Ms Buckley swore an affidavit for the purpose of the Inquiry on 19 October 2022.¹¹⁹⁶ She stated she was a close friend of Ms Folbigg whilst they were at school and remained friends thereafter.¹¹⁹⁷
941. Ms Buckley stated that she recalled going to a swimming carnival with Ms Folbigg at the New Lambton swimming pool, in New South Wales. She said that to the best of her recollection she was 15 at the time.¹¹⁹⁸
942. Ms Buckley stated swimming races were being organised by teachers from the school. She stated she recalled Ms Folbigg saying to her that she was anxious about swimming and did not want to go into the pool. She said she did not swim well and was worried about getting into the water. She ultimately agreed to go into the swimming race with her.¹¹⁹⁹
943. Ms Buckley said that Ms Folbigg and she started off the race together but she got ahead of her in the pool. She said when she got out of the pool, after completing one lap, she saw that people were with Ms Folbigg on the lefthand side of the pool, Ms Folbigg was lying down and struggling to get up. Ms Buckley was not sure what was going on but knew that they were attending to Ms Folbigg. She recalls two of her friends, Ms Chapman and Ms Donegan, telling her that Ms Folbigg had a panic attack and had to be retrieved from the bottom of the pool.¹²⁰⁰
944. Ms Buckley also recalled an incident when Ms Folbigg was 17 or 18 years of age when they were living together in Cardiff, New South Wales. She said that after Ms Folbigg went to the bathroom, she came out and she said, “I do not feel well”. Ms Buckley noticed that Ms Folbigg’s face was pale. She stated that as soon as Ms Folbigg said that, she collapsed and fell on the floor in the hallway outside the bathroom. She was unconscious for approximately 30 seconds.¹²⁰¹
945. Ms Buckley did not give evidence at the Inquiry.

b. The evidence of Associate Professor Raju

946. Associate Professor Raju is a Clinical Cardiac Electrophysiologist with an interest in cardiogenetic disease. He is a practising clinician and trained as a Cardiologist and Electrophysiologist in Australia and in the United Kingdom with a doctorate that involved consideration of significant components of molecular genetics in Sudden Unexplained Deaths.¹²⁰²
947. Associate Professor Raju indicated that he first met Ms Folbigg on 20 February 2019, when he was asked by her legal representatives to assess her cardiac health.

¹¹⁹⁶ Exhibit 14-05, Affidavit of Billi-Jo Buckley (19 October 2022) [red pagination 224-227].

¹¹⁹⁷ Exhibit 14-05, Affidavit of Billi-Jo Buckley (19 October 2022) [red pagination 225].

¹¹⁹⁸ Exhibit 14-05, Affidavit of Billi-Jo Buckley (19 October 2022) [red pagination 225].

¹¹⁹⁹ Exhibit 14-05, Affidavit of Billi-Jo Buckley (19 October 2022) [red pagination 225].

¹²⁰⁰ Exhibit 14-05, Affidavit of Billi-Jo Buckley (19 October 2022) [red pagination 225].

¹²⁰¹ Exhibit 14-05, Affidavit of Billi-Jo Buckley (19 October 2022) [red pagination 225-226].

¹²⁰² Transcript of the 2022 Inquiry, 14 November 2022 T40.11-17 (Raju); Exhibit 10-02, Report of Associate Professor Raju (5 November 2022) [red pagination 10, 19-34].

He indicated the history she gave him included a number of fainting episodes. He stated this was the primary concern in the context of both her family history and the potential DNA variants that she carried.¹²⁰³

948. On 18 April 2019, Associate Professor Raju supervised a postural ECG and exercise provocation performed on Ms Folbigg. He stated he also saw historical ECGs and an echocardiogram.¹²⁰⁴

949. Associate Professor Raju was referred to his report to the Inquiry dated 5 November 2022 which in turn referred to earlier reports that he had prepared in February and April 2019.¹²⁰⁵ He was asked if he adhered to the view he expressed in his February 2019 report to the following effect:

“Overall, on the basis of current available data, I believe Ms Folbigg has either no evidence of any significant cardiogenetic disease, or less likely, so-called forme-fruste disease or a true idiopathic ventricular fibrillation phenotype. The latter two phenomena are acknowledged as demonstrating predisposition to arrhythmias in the absence of manifest abnormalities on testing outside times of transient arrhythmias.”¹²⁰⁶

950. Associate Professor Raju stated that, in principle, that remained his overall feeling. He stated Ms Folbigg did not have sufficient data to confirm a diagnosis. He stated she had some minor abnormalities but it was difficult to say with confidence that they related to any of the phenotypes that might be associated with the DNA variant that she carried.¹²⁰⁷

951. Associate Professor Raju confirmed that ‘forme fruste’ refers to a presentation where the appearance of a disease is so mild that it is not apparent when you do a basic set of tests. He stated that an IVF phenotype is not observable before it occurs.¹²⁰⁸

952. Associate Professor Raju was referred to the view he expressed in his report that Ms Folbigg’s history of losing consciousness or fainting is more consistent with neurocardiogenic syncope rather than arrhythmic aetiology.¹²⁰⁹ He explained that a reflex syncope comes from an unconscious response from the brain which controls heart rate or blood pressure. He stated that when those reflexes are activated to lower your heart rate or blood pressure, what results is a transient loss of consciousness. He stated that neurocardiogenic syncope or vasovagal syncope is a subcategory under that umbrella term as they are related to pathology, that is in the reflexes rather than true cardiac pathology. He stated that by comparison, life-threatening arrhythmias which can be a consequence of the kind of cardiogenic disease that has been proposed in Ms Folbigg is completely different and pathological.¹²¹⁰

953. Associate Professor Raju was referred to the statement in his report describing Ms Folbigg as having a long standing history of recurrent transient loss of

¹²⁰³ Transcript of the 2022 Inquiry, 14 November 2022 T40.22-43 (Raju); Exhibit 10-02, Report of Associate Professor Raju (5 November 2022) [red pagination 10-13].

¹²⁰⁴ Transcript of the 2022 Inquiry, 14 November 2022 T40.45-T41.3 (Raju); Exhibit 10-02, Report of Associate Professor Raju (5 November 2022) [red pagination 12-13].

¹²⁰⁵ Transcript of the 2022 Inquiry, 14 November 2022 T41.33-37 (Raju); Exhibit 10-02, Report of Associate Professor Raju (5 November 2022) [red pagination 13].

¹²⁰⁶ Transcript of the 2022 Inquiry, 14 November 2022 T41.43-49 (Raju); Exhibit 10-02, Report of Associate Professor Raju (5 November 2022) [red pagination 13].

¹²⁰⁷ Transcript of the 2022 Inquiry, 14 November 2022 T42.3-7 (Raju).

¹²⁰⁸ Transcript of the 2022 Inquiry, 14 November 2022 T42.11-21 (Raju).

¹²⁰⁹ Transcript of the 2022 Inquiry, 14 November 2022 T42.30-32 (Raju); Exhibit 10-02, Report of Associate Professor Raju (5 November 2022) [red pagination 13].

¹²¹⁰ Transcript of the 2022 Inquiry, 14 November 2022 T42.35-T43.6 (Raju).

consciousness that started in childhood.¹²¹¹ He stated that multiple recurrent syncopal episodes usually point away from life-threatening pathology. He stated Ms Folbigg gave him a number of specific examples often post exertion rather than in the middle of peak exertion. He stated that was important because syncopes both in mid-exertion and post-exertion can be related to arrhythmic syncope, but post-exertion syncope is commonly seen in individuals who do a lot of exercise and can be a consequence of reflex syncope.¹²¹² He stated the one concern he had was the episode in the swimming pool described by Ms Buckley. However, he said there was not enough information about the event to clearly differentiate whether that might be arrhythmic or not. He said the one thing Ms Folbigg was able to tell him was that it occurred after she had completed the swimming race which is less indicative of an arrhythmia, although it was still somewhat concerning.¹²¹³ Associate Professor Raju stated that he described a syncope in the context of swimming as a red flag, because it points towards potential arrhythmic cause as swimming has a particular association with CPVT, which is one of the potential cardiogenetic disorders that a carrier of her DNA variant can be predisposed to. He also stated it was associated with the commonest sub-type of LQTS. He said, ideally, the incident would be interrogated in more detail. However, he said the fact that Ms Folbigg said it happened after completion of the race, and in the context of the other episodes, meant it sounded very much like neurocardiogenic aetiology.¹²¹⁴

954. Associate Professor Raju referred to the chronology of cardiac events which was prepared by those assisting the Inquiry. He stated that none of the events were described in sufficient detail to help differentiate the likely mechanism or aetiology.¹²¹⁵
955. Associate Professor Raju, with the assistance of various slides, gave a very helpful explanation of LQTS, CPVT and IVF. He stated that calmodulinopathy is a disease of calmodulin that can manifest in humans in one of those three phenotypes. He stated LQTS, as the name suggests, is characterised by a longer than normal QT interval, so individuals affected by LQTS tend to have prolongation of that in comparison to normal. However, he acknowledged that perhaps one in three individuals affected by the genetic risks for LQTS will have a QT interval within the normal spectrum.¹²¹⁶ He stated that, by contrast, CPVT is associated with an otherwise normal resting ECG and abnormalities are only apparent during a catecholaminergic surge – essentially an adrenalin surge. He stated that the diagnosis of CPVT often requires either some kind of exercise provocation or a direct injection of adrenalin in order to provoke the abnormality.¹²¹⁷ He explained that IVF is essentially a kind of leftover diagnosis for individuals who are predisposed to ventricular fibrillation, which is essentially the most severe life-threatening dangerous heart rhythm. He stated that IVF means that, not only is the ECG normal at rest, but there is no apparent heart disease at all until a sudden unexpected life-threatening event equating to cardiac

¹²¹¹ Transcript of the 2022 Inquiry, 14 November 2022 T43.27-29 (Raju); Exhibit 10-02, Report of Associate Professor Raju (5 November 2022) [red pagination 10].

¹²¹² Transcript of the 2022 Inquiry, 14 November 2022 T43.31-47 (Raju).

¹²¹³ Transcript of the 2022 Inquiry, 14 November 2022 T43.50-T44.14 (Raju).

¹²¹⁴ Transcript of the 2022 Inquiry, 14 November 2022 T44.25-43 (Raju).

¹²¹⁵ Transcript of the 2022 Inquiry, 14 November 2022 T45.23-41 (Raju); Exhibit 10-02, Report of Associate Professor Raju (5 November 2022) [red pagination 11].

¹²¹⁶ Transcript of the 2022 Inquiry, 14 November 2022 T46.22-T47.1 (Raju).

¹²¹⁷ Transcript of the 2022 Inquiry, 14 November 2022 T47.18-28 (Raju).

death occurs. Associate Professor Raju stated that there may be causes of those cardiac conditions other than having been produced by the CALM variants.¹²¹⁸

956. Associate Professor Raju also explained that Brugada Syndrome is another cardiogenetic primary arrhythmia syndrome. He stated it is yet another cardiogenetic disease that predisposes a person to sudden unexplained death which tends to be more severe in male individuals, and predominantly affects individuals in their 30s and 40s and is exceptionally rare in children.¹²¹⁹
957. Associate Professor Raju was referred to his first report of cardiac examinations which had been conducted in relation to Ms Folbigg. He stated he reviewed an ECG taken in March 2003.¹²²⁰ He agreed that he noted that a borderline QT interval was evident. He stated the particular ECG struck him as not being diagnostically abnormal but of “sufficient unusualness” that it was worth making a specific comment on. He explained the reference to “notched inferior T-waves and small U-waves” was one of the alternative manifestations of ECG abnormality seen in specific sub-types of LQTS, which again struck him as being worthy of comment.¹²²¹
958. Associate Professor Raju then referred to a subsequent ECG dated 24 December 2018 which he described as entirely normal. He also stated that an ECG of 17 May 2011 with which he was supplied subsequent to his report was normal.¹²²²
959. Associate Professor Raju also referred to the postural ECG and exercise provocation test he supervised on Ms Folbigg in April 2019. He said, in addition to doing those tests after the end of the exercise provocation, he did a modified high ECG precordial trace to look for manifest evidence of the Brugada Syndrome. He referred to the statement in his report that during the exercise provocation test, Ms Folbigg had a moderate hypertensive response followed by a precipitous drop of blood pressure immediately post exercise. He stated that her blood pressure peaked at 200, which was unusual in his experience as most people peak at somewhere between 160 and 180. He said, however, the most important thing was that when you stop exercising your blood pressure should fall but in most people it falls slowly. He said Ms Folbigg’s blood pressure fell immediately back to near baseline which is a finding seen in lots of highly trained individuals who do a lot of exercise and tends to associate with post-exertional neurocardiogenic syncope. He stated it was not consistent with an arrhythmogenic syncope.¹²²³
960. Associate Professor Raju was referred to the report of Professor Arthur Wilde (**Professor Wilde**) of 24 October 2022 where he described the exercise test results as consistent with CPVT. He stated that he believed what looked like a couplet and triplet from the ECG were probably artefactual – that is, something non-physiological and not related to an abnormality in the heart at all.¹²²⁴ He stated that after Professor Wilde had reported on these as pathological, he went back and revisited it and stated “it is very difficult to say with any confidence as to whether those specific things are real – i.e. heart rhythm abnormality – or artefact”.¹²²⁵ He

¹²¹⁸ Transcript of the 2022 Inquiry, 14 November 2022 T47.41-T48.32 (Raju).

¹²¹⁹ Transcript of the 2022 Inquiry, 14 November 2022 T48.40-49.3 (Raju).

¹²²⁰ Exhibit 14-06, ECG of Kathleen Folbigg dated 24 March 2003 [red pagination 228].

¹²²¹ Transcript of the 2022 Inquiry, 14 November 2022 T49.28-44 (Raju).

¹²²² Transcript of the 2022 Inquiry, 14 November 2022 T49.46-T50.26 (Raju).

¹²²³ Transcript of the 2022 Inquiry, 14 November 2022 T50.37-T51.27 (Raju).

¹²²⁴ Transcript of the 2022 Inquiry, 14 November 2022 T51.48-T52.8 (Raju).

¹²²⁵ Transcript of the 2022 Inquiry, 14 November 2022 T52.8-10 (Raju).

stated if you work on the basis they are genuine then it is certainly consistent with CPVT. He stated that if they were genuine couplets, that is a genuine couplet and triplet that it is certainly consistent with and suggestive of CPVT. Whereas if they are artefactual, they are still consistent with CPVT, but not diagnostic of it.¹²²⁶

961. Associate Professor Raju was referred to Professor Wilde's supplementary report of 9 November 2022 where he noted that, having printed out the exercise ECG and measuring the QT intervals himself, he considered it became slightly prolonged after three minutes of exercise and that is particular to LQTS Type 1. Associate Professor Raju said he had the greatest respect for Professor Wilde but having gone back and revisited the ECG, he did not think it prolonged at that level. He said there is, he guessed, a grey area.¹²²⁷
962. Associate Professor Raju was asked, taking into account the views expressed by Professor Wilde and Professor Schwartz, what his conclusion was as to whether Ms Folbigg presented with any of the calmodulinopathy phenotypes. He stated he had not seen Professor Schwartz's report. He stated that in the absence of Ms Folbigg's genetic risk he would have said that her tests are not completely normal, but are not of sufficient abnormality to be diagnostic of any of the phenotypes associated with the variant. He noted that, having said that, when you put the minor abnormalities that you see in an ECG from two decades ago, with some undertaken while on the treadmill, it is certainly plausible that she has a very mild phenotype, either LQTS or CPVT. He stated he was not persuaded that is the case, but it is certainly plausible.¹²²⁸ He thought that the Brugada Syndrome phenotype was less likely.¹²²⁹
963. Associate Professor Raju stated that his primary contribution to the Brohus Article was the patient history as the only cardiologist who consulted with Ms Folbigg, and then he undertook a final review of the manuscript before publication. He stated his conclusions, having undertaken the exercise requested of him by the Inquiry, do not deviate from any of the conclusions expressed in the Brohus Article about the CALM2-G114R variant.¹²³⁰

¹²²⁶ Transcript of the 2022 Inquiry, 14 November 2022 T52.10-17 (Raju).

¹²²⁷ Transcript of the 2022 Inquiry, 14 November 2022 T53.9-20 (Raju).

¹²²⁸ Transcript of the 2022 Inquiry, 14 November 2022 T54.36-50 (Raju).

¹²²⁹ Transcript of the 2022 Inquiry, 14 November 2022 TT55.17-20 (Raju).

¹²³⁰ Transcript of the 2022 Inquiry, 14 November 2022 T57.18-50 (Raju).

Section 2

The CALM2-G114R variant – a possible cause
of the deaths of Sarah and Laura Folbigg



Section 2 – The CALM2-G114R variant – a possible cause of the deaths of Sarah and Laura Folbigg

The evidence of Professor Toft Overgaard and Professor Nyegaard

964. Professor Toft Overgaard is the Head of the Department of Chemistry and Bioscience at Aalborg University. He is a Professor of Protein Science and has been studying mutations in calmodulin and their effects for a number of years.¹²³¹
965. Professor Toft Overgaard has a PhD in Protein Science and a Master of Science in Chemistry and Biotechnology from Aarhus University. He was a post-doctorate fellow in the Department of Structural Biology at Stanford University Medical School. Professor Toft Overgaard was part of the team which identified and characterised the first human calmodulin mutation that was found and published in 2012. He has co-authored 15 scientific papers describing calmodulin mutations.¹²³²
966. Professor Nyegaard has a PhD in Human Genetics and is a Professor in Personalised Medicine at Aalborg University. Her research area was in genetic diversity linking variation in a genome to phenotype. She was also a post-doctorate fellow at Stanford University Medical School.¹²³³
967. Both Professors Toft Overgaard and Nyegaard were contributors to the Brohus Article.¹²³⁴
968. Professors Toft Overgaard and Nyegaard supplied slides for the Inquiry to assist in understanding the issues raised. They were, with respect, most helpful and provided great assistance to me in understanding the genetic issues raised in the Inquiry. Counsel Assisting in their written submissions have summarised that evidence in a manner which was not contested and on which I cannot improve. The immediately following paragraphs in this report reproduce that summary. Some of the matters contained in the summary were averted to in the evidence before the 2019 Inquiry. However, the evidence of Professors Toft Overgaard and Nyegaard draw the matters together and provide a basis for consideration of the other evidence led on these issues at this Inquiry. It should be noted that some of the material in the summary is drawn from the evidence of certain of the other experts who gave evidence.

*Calmodulin Protein, the CALM Genes and Calmodulinopathies*¹²³⁵

969. With respect to the calmodulin protein, and the three genes which encode for it (CALM1, CALM2 and CALM3), the following is drawn primarily from the evidence of Professors Nyegaard and Toft Overgaard (which comprised two reports, plus an

¹²³¹ Transcript of the 2022 Inquiry, 15 November 2022 T70.7-10 (Toft Overgaard); Exhibit 6-02, Report of Professors Michael Toft Overgaard and Mette Nyegaard (18 October 2022) CV of Professor Toft Overgaard [red pagination 25-27].

¹²³² Transcript of the 2022 Inquiry, 15 November 2022 T70.14-35 (Toft Overgaard); Exhibit 6-02, Report of Professors Michael Toft Overgaard and Mette Nyegaard (18 October 2022) CV of Professor Michael Toft Overgaard [red pagination 25-27].

¹²³³ Transcript of the 2022 Inquiry, 15 November 2022 T70.43-T71.3 (Nyegaard); Exhibit 6-02, Report of Professors Michael Toft Overgaard and Mette Nyegaard (18 October 2022) CV of Professor Mette Nyegaard [red pagination 28-30].

¹²³⁴ Transcript of the 2022 Inquiry, 15 November 2022 T72.36-43 (Toft Overgaard and Nyegaard); Exhibit 15-02, Malene Brohus et al, 'Infanticide vs inherited cardiac arrhythmias' (2020) 23 *Europace* 441-450.

¹²³⁵ Counsel Assisting's Written Closing Submissions (4 April 2023) 92 [331].

addendum;¹²³⁶ and joint oral evidence by reference to illustrative slides).¹²³⁷ Unless otherwise specified, these matters were not the subject of dispute or contradictory evidence.

*CALM Gene Conversation*¹²³⁸

970. The calmodulin protein is fundamental to human life and appears highly intolerant to any genetic variation.
971. The function of calmodulin is to bind to calcium, a signalling molecule critical “for all or many basic cell functions”.¹²³⁹ Indeed, a calcium signal is the very first thing that happens when a human egg is fertilised; calmodulin’s role is to decode that signal and translate it to other proteins inside the cell.¹²⁴⁰ Calmodulin also plays an important role in the regulation of sodium and potassium, as well as calcium, and consequently, is critical to the electrical activity of the heart.¹²⁴¹
972. The calmodulin protein is also unusual in that it is encoded for in three different genes, CALM1, CALM2 and CALM3, each of which are identical and highly conserved.¹²⁴² The three CALM genes are often treated as interchangeable, and there is evidence that the same variants in different genes cause the same cardio-genetic phenotype such that they are considered relevantly interchangeable in this context.¹²⁴³ However, their separate roles or importance in different parts or functions of the body are not well understood, and it is possible phenotypes may ultimately diverge between otherwise identical variants in the three genes.¹²⁴⁴
973. CALM1-3 are highly conserved genes across all life forms, and particularly vertebrates. There are no common genetic variants observed in the CALM genes. This tends to suggest that variants in these genes are more likely to be incompatible with life or to otherwise cause significant harm, because evolutionary selection pressure prevents changes to the gene. That is, in highly conserved genes, variation is so deleterious that variant carriers either do not progress in gestation (that is, they are never born), or they die before they can reproduce and pass on the variation to their offspring. Therefore, the variant never gets a foothold in the wider population, as less- or non-pathogenic variants do.¹²⁴⁵
974. Indeed, up until the discovery of the first CALM variant in 2012, the scientific

¹²³⁶ Exhibit 6-02, Report of Professors Michael Toft Overgaard and Mette Nyegaard (18 October 2022) [red pagination 10]; Exhibit 6-03, Addendum to the Report of Professors Michael Toft Overgaard and Mette Nyegaard (12 November 2022) [red pagination 35]; Exhibit 6-06, Further Report of Professors Michael Toft Overgaard and Mette Nyegaard (10 February 2023) [red pagination 107].

¹²³⁷ Exhibits 6-04 and 6-05, PowerPoint slides displayed to Professors Toft Overgaard and Nyegaard during their oral evidence (15 November 2022) [red pagination 49-50] (of which slides 1-12 were prepared by Counsel Assisting and the balance by Professors Toft Overgaard and Nyegaard); Exhibit 6-07, PowerPoint slides displayed to Professors Toft Overgaard and Nyegaard during their oral evidence (13 February 2023) [red pagination 121].

¹²³⁸ Counsel Assisting’s Written Closing Submissions (4 April 2023) 92 [332] - 94[338].

¹²³⁹ Transcript of the 2022 Inquiry, 15 November 2022 T78.48-49 (Toft Overgaard).

¹²⁴⁰ Transcript of the 2022 Inquiry, 15 November 2022 T79.8.11 (Toft Overgaard).

¹²⁴¹ Exhibit 6-02, Report of Professors Michael Toft Overgaard and Mette Nyegaard (18 October 2022) [1]-[2], [4] [red pagination 11-13]; Exhibit 15-02, Malene Brohus et al, ‘Infanticide vs inherited cardiac arrhythmias’ (2020) 23 Europace 441-450 [red pagination 14].

¹²⁴² Transcript of the 2022 Inquiry, 15 November 2022 T74.27-28 (Nyegaard); 16 February 2023 T445.46-446.1 (Wilde).

¹²⁴³ Transcript of the 2022 Inquiry, 13 February 2023 T195.20-46; 212.30-35 (Toft Overgaard and Nyegaard); 17 February 2023 T481.5-8 (MacRae opined that CALM genes are at least interchangeable for the purposes of variant effect mapping); 22 February 2023 T582.17-20 (Abrams).

¹²⁴⁴ Transcript of the 2022 Inquiry, 15 November 2022 T108.22-33; 13 February 2023 T212.27-44 (Nyegaard).

¹²⁴⁵ Transcript of the 2022 Inquiry, 15 November 2022 T74.2-41; T75.44-77.35; T81.37-T84.24 (Toft Overgaard and Nyegaard).

community regarded any CALM variant as incompatible with life, based upon both the fundamental role the protein plays in multiple functions of the human body and that the genes are highly conserved across vertebrate life forms.¹²⁴⁶

975. Calmodulin variants are considered “ultra-rare”.¹²⁴⁷ In humans, of our approximately 20,000 genes, the three CALM genes are, by some measures, among the top 13 most conserved genes (and by any measure, among the most highly conserved of all genes).¹²⁴⁸ No CALM variants are common, and no CALM variants have been definitely identified as “benign” or “likely benign” under the ACMG Guidelines.¹²⁴⁹
976. The presence of a single carrier of CALM3-G114R in the UK BioBank dataset (which appears to have been the same person in the Regeneron database, being the company that sequenced a number of the UK Biobank participants) does not change the characterisation of G114R (whether in CALM1, 2 or 3) as “ultra-rare”.

*Mechanism of Disease*¹²⁵⁰

977. The mechanism through which CALM variants cause calmodulinopathies is not well understood in all cases, although in relation to certain variants a probable causal mechanism has been well established.
978. Calmodulin is critical to a number of stages of the heart’s rhythm;¹²⁵¹ its importance “cannot be overestimate[d]”.¹²⁵² Each beat of the heart muscle is the product of a complex chain of openings and closings of a number of voltage-gated channels into and out of the heart muscle cells.
979. For every heartbeat to occur, rapid movement of sodium, potassium and calcium ions across the cardiac cell wall is required for depolarisation and repolarisation of the cardiac cells. If the channels through which the ions travel are defective, then repolarisation or depolarisation is abnormal and there is a risk of serious ventricular arrhythmia – an abnormal heart rhythm causing sudden syncope (that is, blackout), cardiac arrest, or sudden death.”¹²⁵³ Those channels are specific to particular molecules, allowing the passage of calcium, sodium or potassium, respectively, into and out of heart cells.¹²⁵⁴ These movements trigger, or stop, essential phases of the heartbeat. These channels include: calcium (RyR2 and Cav 1.2), sodium (Nav1.5) and potassium (Kir1.2).¹²⁵⁵ Calmodulin is understood to be important to the opening and closing of each of those channels at the correct time (albeit some potassium ions are not known to be regulated by calmodulin).¹²⁵⁶ This is depicted in the following slides which form part of the evidence before this Inquiry, as indicated in the footnotes.

¹²⁴⁶ Transcript of the 2022 Inquiry, 15 November 2022 T79.21-23; T87.19-25 (Toft Overgaard).

¹²⁴⁷ Transcript of the 2022 Inquiry, 15 November 2022 T108.16 (Nyegaard).

¹²⁴⁸ Transcript of the 2022 Inquiry, 15 November 2022 T85-49-T86.27 (Nyegaard).

¹²⁴⁹ Transcript of the 2022 Inquiry, 15 November 2022 T87.14-17; T104.32-105.30; T111.7-9 (Toft Overgaard and Nyegaard); T319.11-16 (Vinuesa).

¹²⁵⁰ Counsel Assisting’s Written Closing Submissions (4 April 2023) 106 [375] - 111 [385].

¹²⁵¹ Transcript of the 2022 Inquiry, 15 November 2022 T87.36-88 (Toft Overgaard).

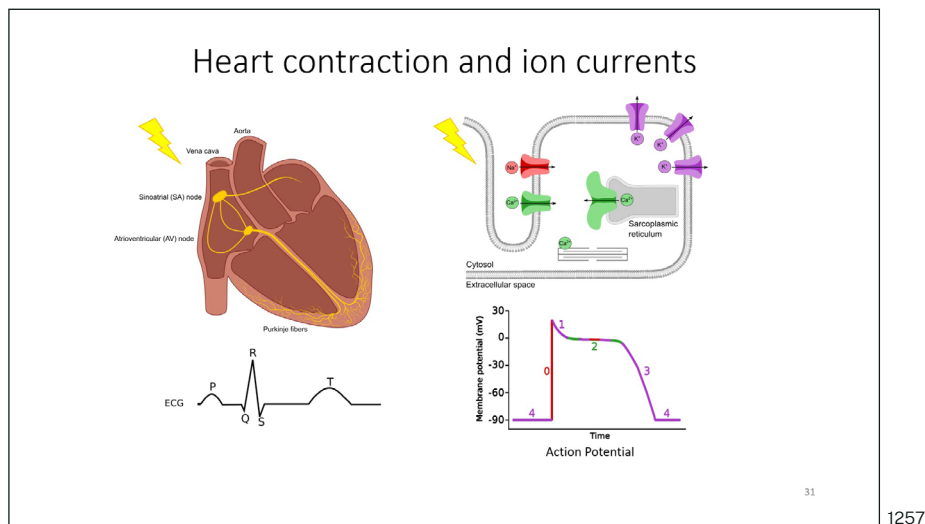
¹²⁵² Transcript of the 2022 Inquiry, 13 February 2022 T208.33 (Toft Overgaard).

¹²⁵³ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5152].

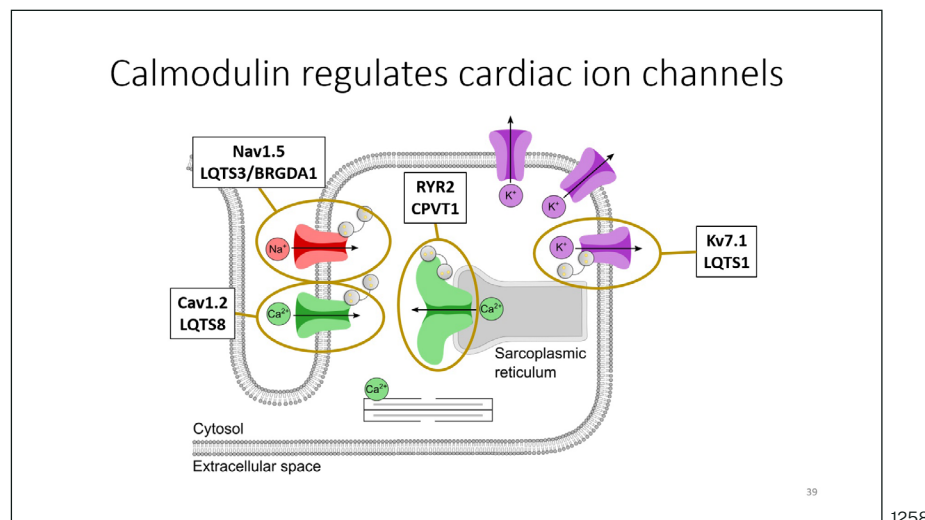
¹²⁵⁴ Transcript of the 2022 Inquiry, 15 November 2022 T93.15-46 (Toft Overgaard).

¹²⁵⁵ Transcript of the 2022 Inquiry, 15 November 2022 T90.12-93.9 (Toft Overgaard).

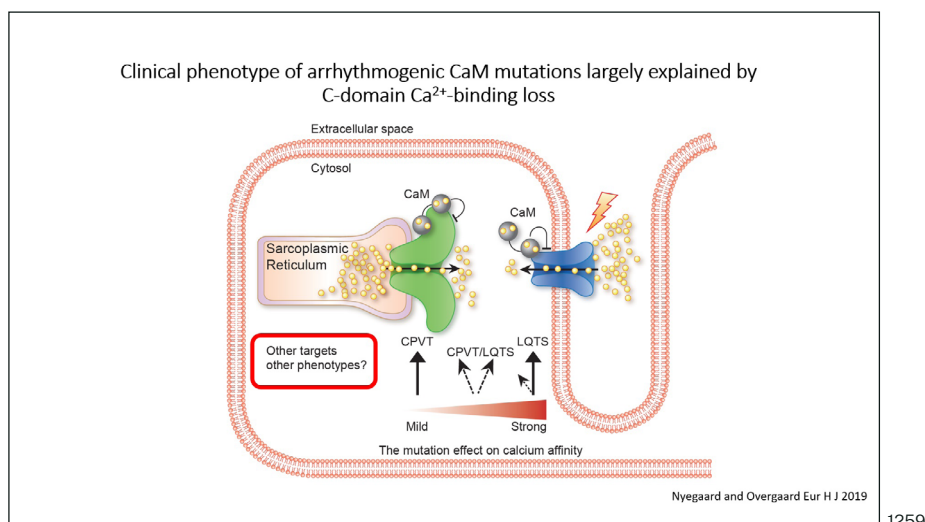
¹²⁵⁶ Transcript of the 2022 Inquiry, 15 November 2022 T93.36-40; 94.24-31 (Toft Overgaard).



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¹²⁵⁷ Exhibit 6-05, Printed version of the PowerPoint slides displayed to Professors Toft Overgaard and Nyegaard during their oral evidence on 15 November 2022, slide 31 [red pagination 80].

¹²⁵⁸ Exhibit 6-05, Printed version of the PowerPoint slides displayed to Professors Toft- Overgaard and Nyegaard during their oral evidence on 15 November 2022, slide 39 [red pagination 88].

¹²⁵⁹ Exhibit 6-05, Printed version of the PowerPoint slides displayed to Professors Toft- Overgaard and Nyegaard during their oral evidence on 15 November 2022, slide 40 [red pagination 89].

980. It is understood that certain CALM variants can cause arrhythmogenic dysfunction by:
- (1) interfering with the correct function of the calcium voltage gated channels RyR2 (variation in the RyR2 gene is associated with CPVT, and certain variants in CALM genes at locations which interact with the RyR2 receptor tend to be associated with CPVT¹²⁶⁰); and
 - (2) interfering with the correct function of the calcium voltage gated channel Cav1.2 (variations in the CALM genes which have a functional effect on the Cav1.2 channel tend to be associated with LQTS¹²⁶¹).
981. The Brohus Article reported the results of a number of functional assays (the nature of which are described below at [988] and following) that showed CALM2-G114R had damaging effects on the protein's ability to bind to both the RyR2 and Cav1.2 channels. However, as discussed further below, this does not *necessarily* indicate the CALM2-G114R variant will actually occasion arrhythmogenic dysfunction.
982. More recently, a functional effect on the potassium channel was also observed in the CALM3-N138K variant,¹²⁶² as well as in the G114W, E46K, F124L and Q50R variants (but not in ten other calmodulin variants also tested for such effects).¹²⁶³ G114W in particular exhibited “greatly diminished binding to KCNQ1”, which is significant to the potential pathogenicity of G114R, given it is also at the 114th allele.¹²⁶⁴ However, only CALM3- N138K was clearly linked to a specific phenotypic effect.
983. Curiously, the effect of the N138K variant on the potassium channel was observed to mediate the otherwise predicted severe LQTS phenotype resulting from the variant's effect on the Cav 1.2 calcium channel. This was suggested to explain the otherwise apparent “mismatch” in that case between the severe LQTS predicted by taking into account only the variant's expected impact on the calcium channel, and the family's milder phenotype.¹²⁶⁵
984. Finally, in response to the commentary of other experts to this Inquiry, Professor Toft Overgaard performed new functional assays with respect to the effect of CALM2-G114R on the sodium Nav1.5 channel (the nature of functional assays are otherwise described below). His initial (unpublished at the time he gave evidence, but subsequently published) results indicated that, at the molecular level, the CALM2-G114R variant also produces a functional effect on how calmodulin binds to the sodium channel.¹²⁶⁶ This observed effect is consistent with the location of G114 at calmodulin's binding site with the sodium channel, and with the nature and size of

¹²⁶⁰ Transcript of the 2022 Inquiry, 15 November 2022 T94.49-95.39 (Toft Overgaard); and see, e.g. Exhibit 15-31, Mette Nyegaard et al, 'Mutations in calmodulin cause ventricular tachycardia and sudden cardiac death' (2012) 91 (4) *American Journal of Human Genetics* 703-712. As noted elsewhere, Dr MacRae was the only expert to consider that the evidence with respect to CPVT was not “definitive”: Transcript of the 2022 Inquiry, 17 February 2023 TT517.15-17 (MacRae).

¹²⁶¹ Transcript of the 2022 Inquiry, 15 November 2023 T96.5-50 (Toft Overgaard).

¹²⁶² Exhibit 15-06, Koichi Kato et al, 'Novel CALM3 Variant Causing Calmodulinopathy With Variable Expressivity in a 4-Generation Family' (2022) 15(3) *Circulation: Arrhythmia Electrophysiology* 183-194 [red pagination 102].

¹²⁶³ Exhibit 15-263, Po Wei Kang et al, 'Arrhythmia-associated Calmodulin Variants Interact with KCNQ1 to Confer Aberrant Membrane Trafficking and Function' (2023) *Preprints* [red pagination 3694].

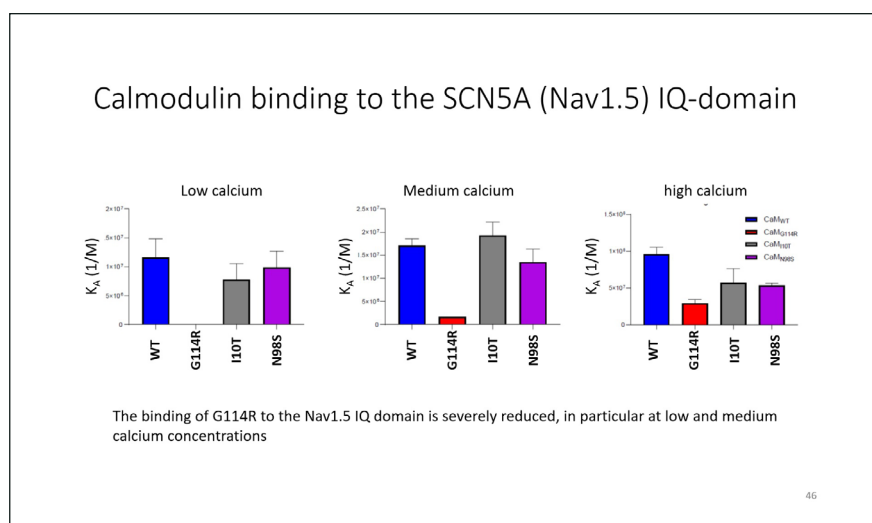
¹²⁶⁴ Exhibit 15-263, Po Wei Kang et al, 'Arrhythmia-associated Calmodulin Variants Interact with KCNQ1 to Confer Aberrant Membrane Trafficking and Function' (2023) *Preprints* [red pagination 3694].

¹²⁶⁵ Transcript of the 2022 Inquiry, 15 November 2022 T97.32-98.49 (Toft Overgaard and Nyegaard); Exhibit 15-06, Koichi Kato et al, 'Novel CALM3 Variant Causing Calmodulinopathy With Variable Expressivity in a 4-Generation Family' (2022) 15(3) *Circulation: Arrhythmia Electrophysiology* 183-194 [red pagination 102].

¹²⁶⁶ Transcript of the 2022 Inquiry, 15 November 2022 T99.1-15 (Toft Overgaard).

the change in structure occasioned by a change from a “G” (glycine) amino acid to an “R” (arginine) acid.¹²⁶⁷

985. Of note, variants in the sodium Nav1.5 channel gene are associated with Brugada Syndrome, as well as one type of LQTS (LQTS 3).¹²⁶⁸ Brugada Syndrome is another arrhythmogenic disorder, not previously associated with CALM variants. This is of particular note as Brugada Syndrome would, potentially, better explain certain aspects of the circumstances of Sarah and Laura’s deaths than CPVT or CALM-LQTS.¹²⁶⁹ Specifically, fever has been an observed trigger of cardiac arrhythmia in children with Brugada Syndrome, fever and childhood illness resulting in fainting are warning signs for Brugada Syndrome, and the gene otherwise associated with Brugada Syndrome and LQTS type 3 is also known as the “nocturnal death syndrome gene” and associated with sudden cardiac death while at rest.¹²⁷⁰
986. The results of Professor Toft Overgaard’s assays showed that the G114R variant had a severe effect on calcium binding to the sodium channel (Nav1.5) at low and medium calcium ranges (it essentially does not bind at all at low ranges) and an intermediate effect at the high calcium range, when compared to the wild type. The presumed benign variant I10T, as well as the pathogenic N98S variant (which is not located at a sodium binding site), did not show pronounced effects of this kind.¹²⁷¹ This is depicted in the following slide which forms part of the evidence before this Inquiry, as indicated in the footnote.



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¹²⁶⁷ See discussion below from [1004]-[1009].

¹²⁶⁸ Transcript of the 2022 Inquiry, 15 November 2022 T149.7-42 (Toft Overgaard).

¹²⁶⁹ Transcript of the 2022 Inquiry, 15 November 2022 T149.1-48 (Toft Overgaard).

¹²⁷⁰ Transcript of the 2022 Inquiry, 15 November 2022 T154.21-31 (Toft Overgaard); 14 February 2023 T290.5-16 (Vinuesa); Exhibit 5-07, Further Joint Report of Professors Vinuesa, Cook and Arsov (23 January 2023) [red pagination 192]. Professor Vinuesa also referred to a 2018 paper which showed that a “Brugada Syndrome mutation” changed a part of the calmodulin in the residues around G114: Transcript of the 2022 Inquiry, 14 February 2023 T290.45-50 (Vinuesa).

¹²⁷¹ Transcript of the 2022 Inquiry, 15 November 2022 T151.23-41 (Toft Overgaard); Exhibit 6-05, Printed version of the PowerPoint slides displayed to Professors Toft Overgaard and Nyegaard during their oral evidence on 15 November 2022, slide 46 [red pagination 95].

¹²⁷² Exhibit 6-05, Printed version of the PowerPoint slides displayed to Professors Toft Overgaard and Nyegaard during their oral evidence on 15 November 2022, slide 46 [red pagination 95].

987. This research presents a significant area for further study (both because the impacts of CALM variants on the sodium channel were as yet unidentified, and because this discovery tends to suggest pathogenicity of a kind more explicable of Sarah and Laura’s deaths).¹²⁷³ However, it was accepted by the experts that this research is at too preliminary a stage to permit conclusions as to the actual effect of the CALM2-G114R variant on aspects of the human heart rhythm dependant on the sodium channel (which could theoretically be mitigating, as well as aggravating), or to conclude that CALM2-G114R in fact causes Brugada Syndrome, LQTS 3 or that these additional functional effects would otherwise explain the sudden deaths of young children while asleep.¹²⁷⁴

*Functional Assays*¹²⁷⁵

988. The functional effect of a genetic variant on molecular interactions can be observed at the molecular and cellular levels in laboratory studies called functional assays.¹²⁷⁶
989. Functional assays can provide supporting evidence of varying degrees of strength; they are used to “discover, delineate and figure out the molecular pathways behind... clinical diagnoses” and can be used to identify new treatment options.¹²⁷⁷
990. For obvious ethical reasons, it is not possible to prove the functional effects of a genetic variant by inserting it into a human embryo and observing the results. The functional effects of newly discovered variants are therefore examined through staged laboratory examinations of the behaviour of the protein at different molecular and cellular levels.¹²⁷⁸
991. For example, as occurred in the first assay reported in the Brohus Article, the calmodulin protein carrying the variant to be studied is isolated. The variant is then exposed to calcium, and its interactions are observed. As these interactions are occurring at the molecular, sub-microscopic level, the effects are inferred from changes in measurable fluorescence, from which the extent of calcium binding can be deduced. The same process is repeated for the unmodified calmodulin protein (ie. the “wild type”), and for other variants of known pathogenicity or suspected non-cardiac pathogenicity/benign status. By comparing these results, the effect of the variant on the capacity of the calmodulin to bind to calcium (which is essential for certain of the heart rhythm functions) can be estimated.¹²⁷⁹
992. Other functional assays can also suggest specific effects on particular channels in the cells. In this case, as reported in the Brohus Article, functional effects were studied in human embryonic kidney cells.¹²⁸⁰ It is also possible – though it has not been done in this case – to observe the effect of a variant by inserting it into the CALM genes of other living animals (albeit even animal models do not necessarily translate to the human model).¹²⁸¹

¹²⁷³ Transcript of the 2022 Inquiry, 15 November 2022 T152.12-28 (Toft Overgaard).

¹²⁷⁴ Transcript of the 2022 Inquiry, 15 November 2022 T154.21-155.11 (Toft Overgaard).

¹²⁷⁵ Counsel Assisting’s Written Closing Submissions (4 April 2023) 73 [386] - 76 [397].

¹²⁷⁶ Professor Toft Overgaard explained the nature of the different functional assays used in his research and in the Brohus article in some detail in his oral evidence: Transcript of the 2022 Inquiry, 15 November 2022 T112.47 (Toft Overgaard).

¹²⁷⁷ Transcript of the 2022 Inquiry, 15 November 2022 T125.37-41 (Toft Overgaard).

¹²⁷⁸ Transcript of the 2022 Inquiry, 15 November 2022 T125.4-26 (Toft Overgaard).

¹²⁷⁹ Transcript of the 2022 Inquiry, 15 November 2022 T114.45-118.43 (Toft Overgaard).

¹²⁸⁰ Transcript of the 2022 Inquiry, 15 November 2022 T133.45-47 (Toft Overgaard).

¹²⁸¹ Transcript of the 2022 Inquiry, 15 November 2022 T125.4-26 (Toft Overgaard).

993. A number of genetic experts who gave evidence in this Inquiry were hesitant to place significant weight on the results of the functional assays in this case. This was for a number of reasons.
994. First, functional assays are generally not used to *identify* pathogenicity, but rather, to identify the mechanism through which a variant that is already matched to a clear phenotype, has that effect.¹²⁸² There are myriad reasons why function effects in a petri dish, particular in different types of cells and in different ratios to that in a human, will not necessarily translate to a particular phenotype. The field of cardio-genetics had previously accepted pathogenicity demonstrated on the basis of single cell functional assays, only to have these findings overturned following the release of the large population genome databases. For this reason, the diagnostic value of functional assays without clear evidence of a genotype-phenotype connection is, for many experts, highly suspect.
995. Second, the functional assays used in this case necessarily change the amino acid at the variant site in *all* copies of calmodulin being studied (assays one and two in the Brohus Article, and the more recently reported Toft Overgaard assays), or else mix variant copies with the host cell's wild type in uncontrolled ratios (assays three and four in the Brohus Article¹²⁸³). Whereas, in a real person, the variant will appear in only one of six possible locations on the DNA which encode for calmodulin (each of the three CALM genes having two copies of the 114th allele, only one of which will carry the variant). It is clear that the compensatory effect of the other unvaried CALM genes does not prevent pathogenicity (otherwise there would be no calmodulinopathy); nevertheless, this is a distinction between what occurs in a laboratory and what occurs in a human person.¹²⁸⁴
996. Third, while functional assays relating to calcium binding on either the Cav1.2 or RyR2 channels have been shown to be good predictors of pathogenicity, and of LQTS versus a CPVT phenotype, they appear to be relatively poor predictors of the severity of the effect.¹²⁸⁵
997. Fourth, functional assays that have not been validated to a diagnostic standard¹²⁸⁶ may have greater probative weight if they have also been conducted in respect of “benign” variants, so as to establish a relevant baseline from which the possibility of “false positives” can be assessed.¹²⁸⁷ The absence of known benign CALM variants complicates this approach in relation to calmodulin. However, a variant that does not appear to be associated with cardiac arrhythmia (I10T) was identified in the gnomAD database, and, as noted above, included in additional functional assays conducted by Professor Toft Overgaard.¹²⁸⁸ The results showed a functional effect similar to wild type, and distinct from known pathogenic variants and G114R, increasing, to

¹²⁸² Transcript of the 2022 Inquiry, 15 November 2022 T121.9-16 (Toft Overgaard).

¹²⁸³ Transcript of the 2022 Inquiry, 15 November 2022 T133.45-49 (Toft Overgaard).

¹²⁸⁴ And see, e.g. Exhibit 34-03 Report of Dr MacRae (27 January 2023) [red pagination 38]; Exhibit 34-04 Report of Dr Abrams (27 January 2023) [red pagination 140-141].

¹²⁸⁵ See, eg, Exhibit 6-06, Report of Professors Michael Toft Overgaard and Mette Nyegaard (10 February 2023) [red pagination 113]; Transcript of the 2022 Inquiry, 17 February 2023 T495.39-45 (MacRae).

¹²⁸⁶ It is noted that Assays which are validated to a diagnostic standard may have little utility in advancing research work of the kind necessary to learn more about CALM variants as they, by necessity, reflect a well-established body of knowledge: Transcript of the 2022 Inquiry, 15 November 2022 T125.34-49 (Toft Overgaard and Nyegaard).

¹²⁸⁷ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [2.2] [red pagination 54].

¹²⁸⁸ Transcript of the 2022 Inquiry, 15 November 2022 T127.9-44 (Toft Overgaard and Nyegaard).

at least some extent,¹²⁸⁹ the probative value of the functional assays conducted in this case.¹²⁹⁰

998. There is no issue that the functional assays conducted in this case were carried out to the highest standard.¹²⁹¹ The research work itself has not been criticised. Rather, there are inherent limitations in *any* functional assays of the kind described above. Where, as here, the phenotype associated with the variant is not certain, the functional assays may *suggest* certain effects or consequences, particularly by comparing effects with those of other known pathogenic variants. Ultimately the majority of genetic experts in this Inquiry, including a number who co-authored the Brohus Article (which used the calcium binding and calcium channel assays reported there to predict an “intermediate” phenotype), agreed that the capacity of the assays to predict any *specific* phenotype, or severity of phenotype, was extremely limited. The fact of additional assay results with respect to sodium (for G114R) and potassium (for G114W), as well as the CALM3-N138K case in which a *mediating* effect was revealed, may help explain this. As canvassed in more specific detail below, the genetic experts otherwise divided as to the extent to which the assays could be relied upon to show a probable cardio-pathogenic effect of *any* kind.

999. In summary, the relevant functional assays show that:

- (1) in vitro, CALM2-G114R produces an adverse effect on the function of both calcium channels, Cav1.2 (well associated with LQTS) and RyR2 (well associated with CPVT);¹²⁹²
- (2) the effect is different from wild type and from a presumed benign variant (at least in respect of serious cardiovascular disease), suggesting there is not a false positive result of the assay;¹²⁹³
- (3) the calcium binding functional effects, considered alone:
 - (a) are *most* consistent with the effects of other variants associated with CPVT, or milder LQTS, phenotypes (which tend to be less associated with an increased likelihood of sudden cardiac death at a very young age);¹²⁹⁴
 - (b) are not quite as pronounced as N98S, which is otherwise associated with a mixed phenotype.

1000. To the extent these functional assays were considered reliable predictors of phenotype, there is something of a “mismatch” between the phenotype predicted by reference only to the calcium channel effects, and the deaths of Sarah and Laura Folbigg at 10 and 18 months of age.¹²⁹⁵

¹²⁸⁹ Exhibit 7-04, Report of Professor Edwin Kirk (15 January 2023) [red pagination 72].

¹²⁹⁰ Transcript of the 2022 Inquiry, 15 November 2022 T128.30-46 (Toft Overgaard).

¹²⁹¹ Transcript of the 2022 Inquiry, 15 November 2022 T122.33 (Toft Overgaard).

¹²⁹² Exhibit 15-02, Malene Brohus et al, ‘Infanticide vs inherited cardiac arrhythmias’ (2020) 23 *Europace* 441-450, 441 [red pagination 17-18].

¹²⁹³ Transcript of the 2022 Inquiry, 15 November 2022 T135.42-136.24 (Toft Overgaard).

¹²⁹⁴ Exhibit 15-02, Malene Brohus et al, ‘Infanticide vs inherited cardiac arrhythmias’ (2020) 23 *Europace* 441-450, 441 [red pagination 18-19].

¹²⁹⁵ Transcript of the 2022 Inquiry, 15 November 2022 T136.26-137.38 (Toft Overgaard); Exhibit 9-02, Report of Professor Wilde (24 October 2022) [red pagination 29].

- (1) all experts agreed the functional assays associated with CALM2-G114R could not be used to reliably predict a *specific* phenotype, notwithstanding the majority remained of the view these assays predicted *some* detrimental effect; and
- (2) a first round of tests has also shown a functional effect of CALM2-G114R on the sodium channel.¹²⁹⁶ There are other reasons to think that CALM2-G114R would have a deleterious effect on sodium binding (this is expanded on immediately below). However, this is the first time a CALM variant has been tested for this effect. And, unlike with calcium affinity, where a substantial body of work had (from most expert’s perspectives) established a link between specific functional effects associated with established LQTS and CPVT phenotypes, there is no such comparable body of work in this case.

*Location of Amino Acid and Protein Structure*¹²⁹⁷

1001. The location of the variant amino acid on the protein can also help explain (or predict) possible functional effects. Where structural models of interacting proteins are available, it is possible to identify whether the variant sits at a particularly meaningful binding site.¹²⁹⁸
1002. At present, the locations most clearly associated with pathogenicity in CALM genes are in the alleles located around calcium binding sites.¹²⁹⁹ However, the reason for this is unclear. It may not be a result of these sites being the “most” pathogenic (while still consistent with life), but merely that they are more likely to be associated with LQTS. Variant locations associated with LQTS were identified relatively early in the course of scientific research into CALM variants because many of the first CALM variant cases identified were the result of cardiologists screening for calmodulin variants in their LQTS patients that were negative for more commonly associated variants.¹³⁰⁰ A number of experts noted that CALM2-G114R does not sit at such a site (albeit this was not said to be determinative of pathogenicity). However, Professors Toft Overgaard and Nyegaard qualified this, providing structural models of the calmodulin protein which showed G114R sits at the “terminating” location of one of these sites.¹³⁰¹
1003. Professors Toft Overgaard and Nyegaard also observed that G114R sits at a sodium channel binding location. This is depicted in the following slides which form part of the evidence before this Inquiry, as indicated in the footnotes.

¹²⁹⁶ Exhibit 6-03, Addendum to the Report of Professors Toft Overgaard and Nyegaard (12 November 2022) [red pagination]; Exhibit 6-05, Printed version of the PowerPoint slides displayed to Professors Toft Overgaard and Nyegaard during their evidence on 15 November 2022, slide 46 [red pagination 95].

¹²⁹⁷ Counsel Assisting’s Written Closing Submissions (4 April 2023) 115 [398] - 118 [408].

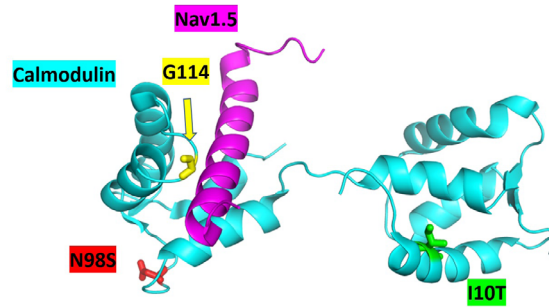
¹²⁹⁸ Transcript of the 2022 Inquiry, 15 November 2022 T140.33-41 (Toft Overgaard).

¹²⁹⁹ Transcript of the 2022 Inquiry, 15 November 2022 T102.36-103.22 (Toft Overgaard).

¹³⁰⁰ Transcript of the 2022 Inquiry, 15 November 2022 T111.21-112.15 (Toft Overgaard and Nyegaard).

¹³⁰¹ Transcript of the 2022 Inquiry, 13 February 2023 T222.25-38 (Toft Overgaard).

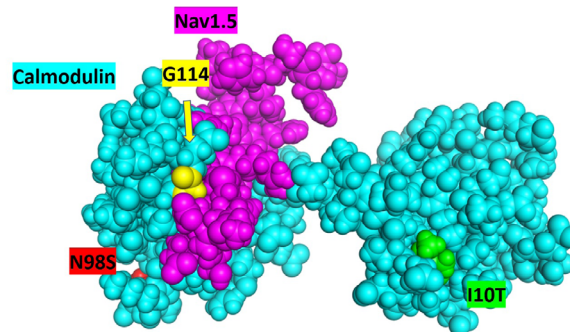
Calmodulin binding to Nav1.5 (peptide)



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1302

Calmodulin binding to Nav1.5 (peptide)



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1303

1004. The particular amino acid swap occasioned by the variant is also likely to be significant: that is, the size, shape, composition and charge of the amino acid present in the wild type, as compared to the amino acid in the variant, in the context of its location and likely function on the protein.¹³⁰⁴
1005. For example, it is speculated that N98S has an intermediate effect on calcium binding both because it does not appear directly at a binding site, and also because the variant “S” (serine) “can also coordinate calcium because it has free electrons on the oxygen on the side chain”.¹³⁰⁵ Whereas N98I inserts an isoleucine, “I”, which “doesn’t have any extra electrons so [is] more severe than N98S”.¹³⁰⁶
1006. CALM2-G114R replaces the smallest and most flexible amino acid, and the only amino acid that does not create a side chain – a glycine (“G”) – with a large, more rigidly structured amino acid, indeed the second largest of all the amino acids, an

¹³⁰² Exhibit 6-05, Printed version of the PowerPoint slides displayed to Professors Toft Overgaard and Nyegaard during their oral evidence on 15 November 2022, slide 44 [red pagination 93].

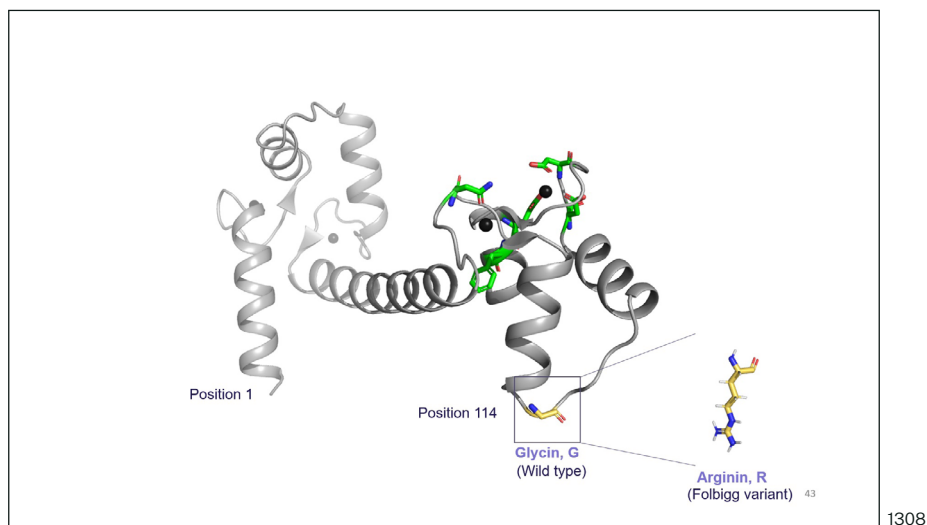
¹³⁰³ Exhibit 6-05, Printed version of the PowerPoint slides displayed to Professors Toft Overgaard and Nyegaard during their oral evidence on 15 November 2022, slide 45 [red pagination 94].

¹³⁰⁴ Transcript of the 2022 Inquiry, 15 November 2022 T109-110; 142.50-143.7 (Toft Overgaard).

¹³⁰⁵ Transcript of the 2022 Inquiry, 15 November 2022 T142.39-44 (Toft Overgaard).

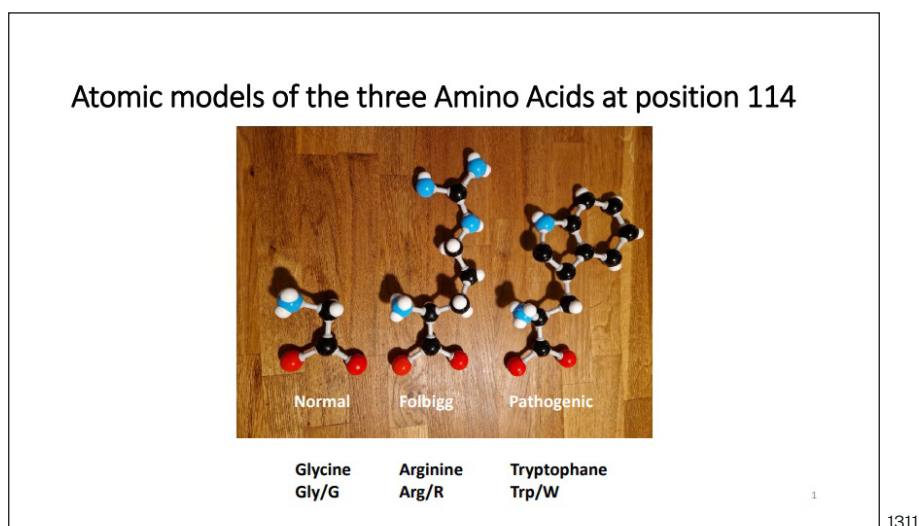
¹³⁰⁶ Transcript of the 2022 Inquiry, 15 November 2022 T143.17-21 (Toft Overgaard).

arginine (“R”), at a potentially significant sodium channel binding site.¹³⁰⁷ This is depicted in the following slide which forms part of the evidence before this Inquiry, as indicated in the footnote.



1007. Professors Toft Overgaard and Nyegaard describe this change as “dramatic”.¹³⁰⁹

1008. Notably, CALM3-G114W (which is known to occasion CPVT/IVF) also creates a dramatic change, replacing the glycine with tryptophan, “W”, the largest of the amino acids.¹³¹⁰ Professors Toft Overgaard and Nyegaard prepared physical models to aid the comparison, as depicted in the following slide which forms part of the evidence before this Inquiry, as indicated in the footnote.



¹³⁰⁷ Transcript of the 2022 Inquiry, 15 November 2022 T109.14-110.35 (Toft Overgaard).

¹³⁰⁸ Exhibit 6-05, Printed version of the PowerPoint slides displayed to Professors Toft Overgaard and Nyegaard during their oral evidence on 15 November 2022, slide 43 [red pagination 92].

¹³⁰⁹ Transcript of the 2022 Inquiry, 15 November 2022 T109.14-110.35 (Toft Overgaard).

¹³¹⁰ Transcript of the 2022 Inquiry, 13 February 2023 T194.30-195.13 (Toft Overgaard).

¹³¹¹ Exhibit 6-07, PowerPoint slides displayed to Professors Toft Overgaard and Nyegaard during their oral evidence on 13 February 2023, slide 1 [red pagination 121].

1009. Unlike G114W, however, G114R is positively charged.¹³¹² It is unknown whether this may differentiate the G114R phenotype from the G114W CPVT phenotype.
1010. Professors Toft Overgaard and Nyegaard provided three reports to the Inquiry. First, a report dated 18 October 2022.¹³¹³ Second, a report dated 12 November 2022, described as an addendum to the report dated 18 October 2022.¹³¹⁴ Third, a report dated 10 February 2023, addressing additional material and the evidence of Dr Calum MacRae (**Dr MacRae**).¹³¹⁵ Professors Toft Overgaard and Nyegaard gave evidence before the Inquiry, first on 15 November 2022 and again on 13 February 2023.
1011. A great deal of the evidence given by Professors Toft Overgaard and Nyegaard both in their reports and before the Inquiry has been summarised above and I will not repeat what I have set out in those paragraphs.
1012. In their first report, Professors Toft Overgaard and Nyegaard referred to the tests (assays) for the work that was done for the Brohus Article. They stated that the first assay conducted was to test calmodulin's ability to bind calcium using fluorescence. They stated the G114R mutation severely reduces the ability to bind calcium, at a similar level as the two cardiac arrhythmia mutations, N98S and G114W. The report stated these tests demonstrate that the G114R mutation is damaging for calmodulin binding to calcium.¹³¹⁶ In his evidence before the Inquiry, Professor Toft Overgaard clarified that the effect was slightly less in respect of the G114R variant than either the N98S or the G114W variant. He was asked whether it was possible from the assay to make a prediction about phenotype and he said, "No, but with the knowledge we have... you can say we have an educated guess in what the phenotype would be."¹³¹⁷ By reference to the slides produced at the Inquiry,¹³¹⁸ he stated that he would characterise that calcium binding effect to be in the range which is between a mild and a strong effect which signifies "that we could be milder Long QT or CPVT from the knowledge we had at that time point".¹³¹⁹
1013. The second assay tested the ability of calmodulin to bind the two cardiac calcium channels Cav1.2 and RyR2 at low and medium high calcium concentrations, in a manner similar to the two cardiac arrhythmia mutations N98S and G114W. The report stated that these tests demonstrate that the G114R mutation is damaging for calmodulin binding to Cav1.2 and RyR2.¹³²⁰ In his evidence at the Inquiry, Professor Toft Overgaard stated that it indicated that "just like the N98S, for which we know a lot, it has a reduced capability of binding, so it has a potential to not function correctly on the channel, [in] assisting the channel in closing".¹³²¹
1014. The third assay carried out tested the calmodulin effect on the Cav1.2 function

¹³¹² Transcript of the 2022 Inquiry, 13 February 2023 T194.49-195.3 (Toft Overgaard).

¹³¹³ Exhibit 6-02, Report of Professors Michael Toft Overgaard and Mette Nyegaard (18 October 2022).

¹³¹⁴ Exhibit 6-03, Addendum to Report of Professors Michael Toft Overgaard and Mette Nyegaard and Errata (12 November 2022).

¹³¹⁵ Exhibit 6-06, Further Report of Professors Michael Toft Overgaard and Mette Nyegaard (10 February 2023).

¹³¹⁶ Exhibit 6-02, Report of Professors Michael Toft Overgaard and Mette Nyegaard (18 October 2022) [red pagination 15].

¹³¹⁷ Transcript of the 2022 Inquiry, 15 November 2022 T119.40-49 (Toft Overgaard).

¹³¹⁸ Exhibit 6-05, Printed version of the PowerPoint slides displayed to Professors Toft Overgaard and Nyegaard during their oral evidence on 15 November 2022, slide 49 [red pagination 98].

¹³¹⁹ Transcript of the 2022 Inquiry, 15 November 2022 T120.43-121.1 (Toft Overgaard).

¹³²⁰ Exhibit 6-02, Report of Professors Michael Toft Overgaard and Mette Nyegaard (18 October 2022) [red pagination 15].

¹³²¹ Transcript of the 2022 Inquiry, 15 November 2022 T130.24-26 (Toft Overgaard).

using electrophysiology. In their report, Professors Toft Overgaard and Nyegaard stated the G114R mutation reduces the ability of calmodulin to sense the increase in calcium after the channel opens. They stated that the channel loses the ability to inactivate (close) properly in response to calcium – the so-called Calcium Dependent Inactivation (CDI) effect. They stated the effect of the G114R mutation is identical to the effect of the G114W mutation and slightly less severe than the impact of the N98S mutation. They stated that the test demonstrated the G114R mutation is damaging to the Cav1.2 calcium channel function.¹³²² In his evidence at the Inquiry, Professor Toft Overgaard confirmed that this conclusion was reached from testing the wild type (the natural situation) and the N98S, G114R and G114W variants.¹³²³

1015. During the course of his evidence, Professor Toft Overgaard was referred to the criticism by Professor Wilde¹³²⁴ of the conclusion reached in the Brohus Article that:

The effect of the mutations are experimentally similar to the N98S variant, which has been associated with LQTS, CPVT, IVF, or a mixed phenotype; and SUD at a young age has been observed for a number of other calmodulinopathy cases, including a carrier of an N98S mutation (SUD while asleep) which displays a similar functional impact as the G114R and G114W mutations.¹³²⁵

1016. Professor Wilde commented that:

An important difference between the functional characteristics of the N98S variant compared to the two variants at position 114 is the less ‘calcium-dependent inactivation’ of the N98S variant (CDI, figure 5b in the Brohus paper), which is expected to lead to more QT prolongation and, in my mind, an increased likelihood of sudden cardiac death at very young age (and during sleep).¹³²⁶

1017. Professor Wilde expressed the view that the authors of the Brohus Article underestimated the difference in CDI for these variants.
1018. Professor Toft Overgaard stated that, in a simple sense, Professor Wilde was completely correct. He agreed that it seems like the effect is lower than for N98S. He stated the reason the word “similar” was used was not to discuss whether or not these are significant differences or if they translated to significantly different clinical phenotypes. He agreed it was correct that if you want to compare the severity of LQTS, this particular assay may suggest that G114R has a lower impact than N98S.¹³²⁷
1019. Professor Toft Overgaard was also asked if he accepted Professor Wilde’s comments that there is something of a “mismatch” between the phenotype that is presumed for the Folbigg family, being the death of two infants at 10 months and 18 months while asleep, and what the functional assays reported in the Brohus Article, which predicted CPVT or possibly mild LQTS.¹³²⁸ Professor Toft Overgaard stated he thought Professor Wilde could be correct in saying this has not been observed

¹³²² Exhibit 6-02, Report of Professors Michael Toft Overgaard and Mette Nyegaard (18 October 2022) [red pagination 15].

¹³²³ Transcript of the 2022 Inquiry, 15 November 2022 T130.33-T131.5, T134.37-49 (Toft Overgaard).

¹³²⁴ Transcript of the 2022 Inquiry, 15 November 2022 T136.37-T137.4 (Toft Overgaard).

¹³²⁵ Exhibit 15-02, Malene Brohus et al, ‘Infanticide vs inherited cardiac arrhythmias’ (2020) 23 Europace 441, 449 [red pagination 19].

¹³²⁶ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 28].

¹³²⁷ Transcript of the 2022 Inquiry, 15 November 2022 T137.19-26 (Toft Overgaard).

¹³²⁸ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 29].

before and it goes against the general correlation between the impact on calcium binding and this particular assay in the severity of LQTS.¹³²⁹

1020. The report of Professors Toft Overgaard and Nyegaard described the fourth assay carried out as testing the calmodulin effect on the RyR2 function using a so-called Store Overload Induced Calcium Release. They stated the test demonstrated that the “G114R mutation results in a decreased ‘termination threshold’ of RyR2 calcium channel opening, with an effect similar to [the] G114W mutation”.¹³³⁰ The report stated that was in contrast to normal calmodulin, where binding to the RyR2 channel increases the probability for the channel to close. They stated that meant that when G114R or G114W calmodulin binds to RyR2, each RyR2 opening releases an excess of calcium into the cardiac cell compared to when non-mutated calmodulin binds. They stated the tests demonstrate that the G114R mutation is damaging to the RyR2 calcium channel function.¹³³¹ Professor Toft Overgaard was asked during the course of his evidence that if he was to predict a phenotype from this test in relation to G114R and G114W, the prediction would be CVPT. He agreed.¹³³²
1021. Professors Toft Overgaard and Nyegaard very helpfully explained two of the terms used in considering the effect of genetic mutations, or variants. They described reduced penetrance by an example, namely, that if three individuals carry the same disease-causing mutation, two suffer from the disease, while the third is completely unaffected. They explained that if penetrance is less than 100%, some carriers of a pathogenic gene mutation will not be affected by the disease. They stated it was very well-known phenomenon in genetics and relevant for essentially all mutations linked to disease. They stated the more people identified as carrying a particular mutation, the more accurately the penetrance could be calculated.¹³³³
1022. Professors Toft Overgaard and Nyegaard also described variable expressivity by an example, namely, that if three individuals carried the same disease-causing mutation, two suffer a lot and one is only mildly affected. They stated once again it is very common and a well-recognised phenomenon in genetics that carriers with the same mutation are not affected to the same degree.¹³³⁴
1023. Professors Toft Overgaard and Nyegaard stated that reduced penetrance and variable expressivity of the phenotype is believed to be caused by modifier genes, epigenetics or environmental factors or an interplay between those factors. They stated that in calmodulin genes, mutations are so rare that it is not possible to perform any meaningful statistical calculations or estimates on penetrance. They stated that it was already established that some calmodulin mutations have reduced penetrance. Professors Toft Overgaard and Nyegaard explained that a reduced penetrance (lower than 100%) is seen for many other calmodulin mutations in the small number of families in the International Calmodulinopathy Registry (**ICalmR**) (see [1155]-[1164] below). They stated that it was very likely also the case for the CALM2-G114R mutation which explains why Ms Folbigg is still alive. They opined that the multiple syncopes Ms Folbigg has experienced suggests that the CALM2-G114R mutation has variable expressivity with a milder expression. They also stated it was accepted that mutations in the CALM genes can cause variable expression

¹³²⁹ Transcript of the 2022 Inquiry, 15 November 2022 T137.28-38 (Toft Overgaard).

¹³³⁰ Exhibit 6-02, Report of Professors Michael Toft Overgaard and Mette Nyegaard (18 October 2022) [red pagination 15].

¹³³¹ Exhibit 6-02, Report of Professors Michael Toft Overgaard and Mette Nyegaard (18 October 2022) [red pagination 15].

¹³³² Transcript of the 2022 Inquiry, 15 November 2022 T139.12-17 (Toft Overgaard).

¹³³³ Exhibit 6-02, Report of Professors Michael Toft Overgaard and Mette Nyegaard (18 October 2022) [red pagination 17].

¹³³⁴ Exhibit 6-02, Report of Professors Michael Toft Overgaard and Mette Nyegaard (18 October 2022) [red pagination 17].

including fatal arrhythmias. They referred to two other examples of families like the Folbigg family where people in the family were affected differently by the same mutation.¹³³⁵

1024. In their first report, Professors Toft Overgaard and Nyegaard stated that given the biophysical and functional impact of the CALM2-G114R variant, they considered that the mutation likely caused the natural deaths of Sarah and Laura. They also stated that, in their opinion, both from the available research data and understanding human genetics, the CALM2-G114R mutation is enough to have caused the death of those two children.¹³³⁶
1025. In their evidence to the Inquiry, Professors Toft Overgaard and Nyegaard were referred to the observations contained in the Brohus Article (which I have set out in the second paragraph of [16] above). Professor Toft Overgaard stated the first conclusion, that “Both mutations [G114R and G114W] impair RyR2 binding and regulation to a similar extent as other known CPVT associated CaM mutations”,¹³³⁷ was based on the second and fourth assays. He stated the second conclusion, that “Both mutations impair Cav1.2 CDI to an intermediary extent, consistent with a possible mild LQTS, but likely not severe LQTS”,¹³³⁸ was based on the third assay. He stated the third conclusion, that “The mutations are not among the most severe in terms of reduced Ca²⁺ sensing, likely due to the location in a linker region between Ca²⁺ -binding sites”,¹³³⁹ was derived from the first assay. He pointed out the CALM2-G114R variant is identified between the top two calcium binding locations between the EF-hand 3 and 4. He said that was the explanation for the third conclusion.¹³⁴⁰ He stated the variant was not binding directly to calcium and you can get “say [a] medium effect” from that particular mutation compared to some of the other more devastating mutations.¹³⁴¹
1026. In relation to the fourth conclusion, Professor Toft Overgaard referred to his earlier evidence which I have set out at [1013] above whilst in relation to the fifth conclusion, he agreed that refers to all of the assays insofar as they are comparing.¹³⁴²
1027. Professor Toft Overgaard also stated he agreed with the conclusion referred to in that paragraph of the Brohus Article which I have set out at [15] particularly the last passage, “Thus, calmodulinopathy emerges as a reasonable explanation for a natural cause of [Sarah and Laura’s] deaths.”¹³⁴³
1028. Professor Nyegaard stated she agreed with this conclusion.¹³⁴⁴
1029. Professor Toft Overgaard clarified he was not asserting that Sarah and Laura, in fact, died by reason of calmodulinopathy, but said that, from what was known, he

¹³³⁵ Exhibit 6-02, Report of Professors Michael Toft Overgaard and Mette Nyegaard (18 October 2022) [red pagination 17-19].

¹³³⁶ Exhibit 6-02, Report of Professors Michael Toft Overgaard and Mette Nyegaard (18 October 2022) [red pagination 19].

¹³³⁷ Exhibit 15-02, Malene Brohus et al, ‘Infanticide vs inherited cardiac arrhythmias’ (2020) 23 *Europace* 441, 449 [red pagination 19].

¹³³⁸ Exhibit 15-02, Malene Brohus et al, ‘Infanticide vs inherited cardiac arrhythmias’ (2020) 23 *Europace* 441, 449 [red pagination 19].

¹³³⁹ Exhibit 15-02, Malene Brohus et al, ‘Infanticide vs inherited cardiac arrhythmias’ (2020) 23 *Europace* 441, 449 [red pagination 19].

¹³⁴⁰ Transcript of the 2022 Inquiry, 15 November 2022 T142.18-30 (Toft Overgaard).

¹³⁴¹ Transcript of the 2022 Inquiry, 15 November 2022 T141.32-T142.44 (Toft Overgaard).

¹³⁴² Transcript of the 2022 Inquiry, 15 November 2022 T143.46-T144.8 (Toft Overgaard).

¹³⁴³ Transcript of the 2022 Inquiry, 15 November 2022 T144.23-37 (Toft Overgaard).

¹³⁴⁴ Transcript of the 2022 Inquiry, 15 November 2022 T145.35-47 (Nyegaard).

thought it was likely that they died by reason of the CALM2-G114R variant. He stated that view was based on the functional assays “plus the knowledge we have from the calmodulin variants and severity in general”.¹³⁴⁵

1030. In the addendum to their report, dated 12 November 2022, Professors Toft Overgaard and Nyegaard dealt with certain criticisms of their report dated 18 October 2022 made by Professor Wilde and Professors Kirk and Skinner. I have already dealt with one of the criticisms raised by Professor Wilde (see [1015]-[1017] above). The addendum referred to the fact that the report of Professors Kirk and Skinner raised concerns about fever as a trigger for arrhythmic events for calmodulinopathies as it had, up to that stage, only been seen in Brugada Syndrome. Professors Kirk and Skinner expressed the opinion that it cannot be relevant for the Folbigg case as Brugada Syndrome is a sodium channel disease in children caused by mutations in the *SNC5A* gene (*Nav1.5*).¹³⁴⁶ Professors Toft Overgaard and Nyegaard stated that the comments by Professors Kirk and Skinner did not recognise that the *Nav1.5* sodium channel is critically regulated by calmodulin. They stated they investigated existing molecular structures of *Nav1.5* in complex (sic) with calmodulin to ascertain where the mutated G114 residue in the Folbigg variant is located relative to the core binding site for calmodulin in the *Nav1.5*. They stated the investigation showed the G114 residue is located in a **key position** (emphasis in addendum) tucked in between calmodulin and the part of the *Nav1.5* ion channel that constitutes the anchoring point for calmodulin binding to *Nav1.5*. They stated that the CALM2-G114R mutation causes a change in the G114 residue whereby the Glycine amino acid residue is changed to an Arginine amino acid residue. They stated that they predicted that changing the small neutral Glycine (the smallest of the 20 amino acids) into a large and positively charged Arginine (one of the largest of the 20 amino acids) is highly likely to cause a disturbance of calmodulin binding to this important anchor point. They stated that they performed a calmodulin-*Nav1.5* binding assay, similar to the assays performed in the Brohus Article with *CaV1.2* and *RyR2* calmodulin binding domains. They stated the tests demonstrate that the Folbigg CALM2-G114R variant impaired binding to the cardiac sodium channel.¹³⁴⁷
1031. In his evidence to the Inquiry, Professor Toft Overgaard stated he thought that made it easy to understand the apparent discrepancy between the functional assays in the Brohus Article and the particular phenotypic expression in the family. He agreed that it could have a moderating effect because it is on an ion channel that has an ion current in the opposite direction, but in the case of the CALM2-G114R variant he could not predict whether or not it would be having a mitigating or enhancing effect. He accepted further work needed to be done in that area.¹³⁴⁸
1032. In their addendum report, Professors Toft Overgaard and Nyegaard disagreed with the use of the ACMG Guidelines stating that they were developed for use in clinical settings to determine appropriate clinical action. They stated the classification system relies heavily on data generated by the research community and was never intended as a tool to investigate novel links between variants and phenotypes. They stated the use of the ACMG Guidelines to make deterministic judgments for the CALM2-G114R variant is highly problematic because the classification system is

¹³⁴⁵ Transcript of the 2022 Inquiry, 15 November 2022 T147.35-39 (Toft Overgaard).

¹³⁴⁶ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022), including answers to additional questions (1 November 2022) [red pagination 65].

¹³⁴⁷ Exhibit 6-03, Addendum to Report of Professors Michael Toft Overgaard and Mette Nyegaard (12 November 2022) and Errata [red pagination 38-39].

¹³⁴⁸ Transcript of the 2022 Inquiry, 15 November 2022 T154.36-155.46 (Toft Overgaard).

not developed for this purpose.¹³⁴⁹ In her evidence, Professor Nyegaard described the ACMG Guidelines as a “really nice tool to recognise something that is already known”, but it is difficult to classify an unknown variant.¹³⁵⁰

1033. In their further report dated 10 February 2023, Professors Toft Overgaard and Nyegaard referred to the report of Dr MacRae and, in particular, his reference to a preprint article which he co-authored, presented as Floyd et al, ‘Proactive variant effect mapping to accelerate genetic diagnosis for paediatric cardiac arrest’ (2022) (**Floyd Article**). Professor Toft Overgaard stated the fact that it was a preprint article meant that it had not been peer reviewed.¹³⁵¹ Both the preprint and the peer reviewed article were in evidence in the Inquiry.¹³⁵²
1034. Professor Toft Overgaard noted that the article attempted to assign a functional property to all possible calmodulin variants, the functional property being measured in a yeast system, describing it as the yeast complementarity approach. He stated it involved putting every possible variant in CALM1, 2 and 3 into the yeast and see how they grow compared to the yeast with normal calmodulin. He stated the paper takes that data and uses a subset of known calmodulin human variants and assigns a value to those to determine whether they are pathogenic or benign. He stated the article takes that value from ClinVar or the gnomAD databases and generates an algorithm that predicts the likelihood of cardiac pathogenicity.¹³⁵³
1035. Professor Toft Overgaard stated the algorithm was effective to show pathogenicity in certain cases, but the weakness is that whilst the authors can demonstrate it in some cases, it does not lead to a conclusion that other variants are or are not pathogenic.¹³⁵⁴
1036. In their further report, Professors Toft Overgaard and Nyegaard noted that the variant effect score of CALM2-G114R was specifically addressed in the preprint Floyd Article, pointing to the following statement made in the article:

The impact of refined variant interpretation incorporating variant effect map data in the cases presented here is significant. As genetic testing is increasingly incorporated clinically in cases such as this and indeed beyond the clinic to other sectors of society, improvements in this process will remain critical. A recent striking impact of genetic diagnosis in casting doubt on an infanticide conviction is just one example of this, where the map we use here predicts a high likelihood of pathogenicity for a CALM2 VUS found in the associated cardiac arrests.¹³⁵⁵

1037. Professors Toft Overgaard and Nyegaard stated that, for reasons which were unclear, the reference to the CALM2-G114R variant was removed from the peer reviewed Floyd Article. To investigate how the G114R variant would perform in the model, they plotted the yeast-survival scores from the article. It is unnecessary

¹³⁴⁹ Exhibit 6-03, Addendum to Report of Professors Michael Toft Overgaard and Mette Nyegaard (12 November 2022) and Errata [red pagination 44-45].

¹³⁵⁰ Transcript of the 2022 Inquiry, 15 November 2022 T157.9-15 (Nyegaard).

¹³⁵¹ Exhibit 6-06, Further Report of Professors Michael Toft Overgaard and Mette Nyegaard dated 10 February 2023 [red pagination 114-116].

¹³⁵² Exhibit 15-17, Brendan J. Floyd et al, ‘Proactive variant effect mapping to accelerate genetic diagnosis for pediatric cardiac arrest’ (2022) *Preprints*; Exhibit 15-257, Brendan Floyd et al, ‘Proactive Variant Effect Mapping Aids Diagnosis in Pediatric Cardiac Arrest’ (2023) *Circulation: Genome and Precision Medicine* (forthcoming).

¹³⁵³ Transcript of the 2022 Inquiry, 13 February 2023 T188.26-T189.5 (Toft Overgaard); Exhibit 6-06, Further Report of Professors Michael Toft Overgaard and Mette Nyegaard dated 10 February 2023 [red pagination 114-115].

¹³⁵⁴ Transcript of the 2022 Inquiry, 13 February 2023 T192.9-29 (Toft Overgaard).

¹³⁵⁵ Exhibit 15-17, Brendan J. Floyd et al, ‘Proactive variant effect mapping to accelerate genetic diagnosis for pediatric cardiac arrest’ (2022) *Preprints* [red pagination 217].

to set out their methodology, but they concluded that the variant effect mapping approach used in the paper strongly predicts a high likelihood of pathogenicity for the G114R and G114W variants.¹³⁵⁶

1038. Professors Toft Overgaard and Nyegaard in their further report also referred to Dr MacRae's comment that the data does not support the assertion that all calmodulin genes can be treated in a single interchangeable protein for the purpose of variant study in vitro or in vivo.¹³⁵⁷ They disagreed stating that with the updated ICalmR, it was evident that the three CALM genes appeared to be interchangeable with respect to cardiac arrhythmias precipitating from missense variants.¹³⁵⁸ In relation to Dr MacRae's comment that it was not valid to look at the effects of a variant in a CALM3 gene to infer what would happen in the CALM2 gene,¹³⁵⁹ Professors Toft Overgaard and Nyegaard stated that, given that the three CALM genes complete the calmodulin proteins and all three genes are expressed in the heart, they proposed in 2012 that all three CALM genes could be candidates for screening in patients with CPVT and unexplained sudden cardiac deaths. They stated that turned out to be correct as the accumulation of data in the ten years since the initial publication now demonstrated the frequency of CPVT phenotypes is essentially the same for the three genes.¹³⁶⁰

The reports and evidence of Professors Vinuesa and Cook, and Dr Arsov

1039. Professor Vinuesa, Dr Arsov and Professor Cook provided a joint report to the Inquiry dated 25 October 2022,¹³⁶¹ and a further joint report dated 23 January 2023 which included their response to the evidence of Professors Toft Overgaard and Nyegaard.¹³⁶² In addition, Professors Vinuesa and Cook produced a further report dated 1 February 2023 describing a cardiac arrhythmia modifying variant in the Folbigg children.¹³⁶³ Prior to any of these reports being prepared, Professor Vinuesa had provided a separate report dated 10 October 2022.¹³⁶⁴
1040. Dr Arsov, at the time he gave his evidence, was Professor of Genetics at the University of Goce Delchev, Macedonia, describing himself as a geneticist both in a research and clinical capacity.¹³⁶⁵
1041. Professor Vinuesa obtained her medical degree from the University of Madrid in 1993, a Diploma of the Royal College of Obstetricians and Gynaecologists in the United Kingdom in 1995, and a Doctorate in Philosophy and Immunology from the University of Birmingham in 2000. She is a Fellow of the Faculty of Science

¹³⁵⁶ Exhibit 6-06, Further Report of Professors Michael Toft Overgaard and Mette Nyegaard dated 10 February 2023 [red pagination 116].

¹³⁵⁷ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 33-34].

¹³⁵⁸ Exhibit 6-06, Further Report of Professors Michael Toft Overgaard and Mette Nyegaard dated 10 February 2023 [red pagination 116].

¹³⁵⁹ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 35].

¹³⁶⁰ Exhibit 6-06, Further Report of Professors Michael Toft Overgaard and Mette Nyegaard dated 10 February 2023 [red pagination 116].

¹³⁶¹ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022).

¹³⁶² Exhibit 5-07, Further Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov, in response to the evidence of Professors Toft Overgaard and Nyegaard (23 January 2023).

¹³⁶³ Exhibit 5-08, Further Joint Report of Professors Carola Vinuesa and Matthew Cook, describing a cardiac arrhythmia modifying variant in the Folbigg children (1 February 2023).

¹³⁶⁴ Exhibit 5-04, Report of Professor Carola Vinuesa (10 October 2022).

¹³⁶⁵ Transcript of the 2022 Inquiry, 14 February 2023 T228.25-45 (Arsov); Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 169].

at the Royal College of Pathologists in Australasia and a Fellow of the Australian Academy of Health & Medical Science. At the time of writing the reports, she was the Royal Society Wolfson Fellow and Principal Group Leader in immunogenetics at the Francis Crick Institute in the United Kingdom, an Honorary Professor in the Department of Medicine at the University College London and Visiting Professor at the Australian National University.¹³⁶⁶

1042. As I have indicated earlier (see [499(e)]) Professors Vinuesa and Cook, and later Dr Arsov, provided joint reports to the 2019 Inquiry whilst Professor Vinuesa and Dr Arsov gave evidence at that Inquiry.
1043. I will deal with the reports prepared by these three experts and their evidence at the Inquiry chronologically. Prior to doing so, however, it is convenient to deal separately with the evidence of Professor Vinuesa and Dr Arsov concerning the swimming pool incident to which I have referred at [833]. This evidence is of importance not only to clarify to the extent possible what occurred in the swimming pool incident but also because their evidence on this topic is relevant in considering their impartiality as experts.
1044. In the joint report of Professors Vinuesa, Cook and Dr Arsov of 25 October 2022, the following statement was made:

The description of Ms Folbigg fainting while swimming as a presyncope rather than syncope in the last Inquiry was incorrect, since Ms Folbigg suffered a complete loss of consciousness. Ms Folbigg was dragged out of the pool, and found herself by the side of the pool when she regained consciousness. This was how the event was described to Professor Arsov when collecting a patient history from Ms Folbigg in 2018, and to Professor Vinuesa when she spoke to Ms Folbigg on the phone to explain the results of genetic testing in December 2018. It was also how the event was described to Professor Raju when collecting a patient history from Ms Folbigg in 2019 (see Exhibit 2-BL). We understand that the event was also witnessed by many of Ms Folbigg's peers as it was at a school swimming carnival.¹³⁶⁷

Both Dr Arsov and Professor Vinuesa were examined on this statement by Counsel Assisting.

a. Dr Arsov

1045. Dr Arsov took what he described as a pedigree of the Folbigg family from notes taken when he visited Ms Folbigg at the Silverwater Correctional Centre on 8 October 2018. He said it was based on all the information she gave him.¹³⁶⁸
1046. Dr Arsov said he only spoke to Ms Folbigg once subsequently when he visited her to take biological samples for her DNA analysis.¹³⁶⁹
1047. Dr Arsov was referred to his evidence at the 2019 Inquiry to which I have referred at [833]. He was asked at that Inquiry whether Ms Folbigg fainted in the water or out of the water and responded, "I don't remember that we went into that much

¹³⁶⁶ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 159-160].

¹³⁶⁷ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) 28 [red pagination 143].

¹³⁶⁸ Exhibit 2-AE, Pedigree of Kathleen Folbigg [red pagination 5581]; Exhibit 5-10, PowerPoint slides displayed to Dr Arsov during his oral evidence on 14 February 2023 slide 16 [red pagination 244]; Transcript of the 2022 Inquiry, 14 February 2023 T242.24-T243.2 (Arsov).

¹³⁶⁹ Transcript of the 2022 Inquiry, 14 February 2023 T243.9-29 (Arsov).

detail”.¹³⁷⁰ He stated in that evidence, “so I wasn’t seeking to establish any specific diagnosis, we were just kind of asking what her health issues may have been” and agreed with Counsel Assisting that he could not tell the Inquiry any more than what he had said.¹³⁷¹

1048. In his evidence at the present Inquiry, Dr Arsov was asked by Senior Counsel Assisting whether the answer, “I don’t remember that we went into that much detail” was true and he said it was.¹³⁷² He was then asked whether as at April 2019 he could not remember if Ms Folbigg had told him whether she fainted in or out of the water. He said that she knew she lost consciousness, “I mean that’s what she said, that she kind of woke up on the side of the pool, is what I remember”.¹³⁷³ In the course of a lengthy answer which followed he made the following comment, “So you have to know how far you go and push with these things. To me at the time it really wasn’t very important the exact circumstances of whether she fainted in or out of the pool. I mean all of this I learned afterwards about CPVT or other conditions...what I remember is that she woke up on the side of the pool.”¹³⁷⁴
1049. Dr Arsov was referred to the statement in the report dated 25 October 2022 that she was “dragged out the pool”¹³⁷⁵ and asked whether that was an inference he made from what Ms Folbigg had told him. He responded, “...it sounds plausible, I mean this would have been an interpretation a bit, I suppose, because you know, I mean if she was in a swim race, fainted, woke up on the side of the pool, as I said, I mean I didn’t go through the details and sequences...”¹³⁷⁶
1050. Dr Arsov had been supplied with a report of Associate Professor Raju dated 18 April 2019 for the purposes of his report to the present Inquiry. Associate Professor Raju’s report recorded, “She believes she swam 25 metres, completed the race and her next recollection is recovering consciousness on the side of the pool. She does not recall any other events but it is clear that she was helped out of the pool on that occasion”.¹³⁷⁷ Dr Arsov was asked whether he was relying on that account when he included the words “requiring her to be dragged out of the pool”. He stated it would have been a while ago so he could not be 100% sure but it makes sense.¹³⁷⁸ He was asked why he did not use Associate Professor Raju’s words “helped out” and said the report was prepared after a conversation Professor Vinuesa had with Ms Folbigg. Dr Arsov was then referred to the fact that in the joint report, the statement “Ms Folbigg was dragged out of the pool” was how the event was described to him when collecting a patient history from Ms Folbigg in 2018 and to Professor Vinuesa when she spoke to Ms Folbigg on the phone to explain the results of the genetic testing in December 2018. He agreed it was not correct that is what Ms Folbigg told him. He was directed to the fact the statement went on to say that that is how the event was described to Associate Professor Raju and he was asked if he accepted

¹³⁷⁰ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T506.45 [red pagination 512].

¹³⁷¹ Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T506.50-T507.9 [red pagination 512-513].

¹³⁷² Transcript of the 2022 Inquiry, 14 February 2023 T246.1-7 (Arsov).

¹³⁷³ Transcript of the 2022 Inquiry, 14 February 2023 T246.9-15 (Arsov).

¹³⁷⁴ Transcript of the 2022 Inquiry, 14 February 2023 T246.18-40 (Arsov).

¹³⁷⁵ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 68].

¹³⁷⁶ Transcript of the 2022 Inquiry, 14 February 2023 T247.48-248.4 (Arsov).

¹³⁷⁷ Exhibit 2-BL, Report of Associate Professor Hariharan Raju (18 April 2019) [red pagination 7707].

¹³⁷⁸ Transcript of the 2022 Inquiry, 14 February 2023 T248.36-T249.7 (Arsov).

that Associate Professor Raju described it differently. He accepted that Associate Professor Raju used a different word.¹³⁷⁹

1051. He was asked whether the use of the words “dragged out of the pool” were used to exaggerate what was known about Ms Folbigg’s syncope in the pool and he responded, “Not - not really”.¹³⁸⁰ He was then asked what he would say to the suggestion there had been an exaggeration of the description of that swimming event in order to put Ms Folbigg closer to a phenotype. He responded, “Not really, no. I mean she did faint in the swimming pool so that to me it doesn’t – I mean, it doesn’t really – yeah. She fainted in a swimming pool.”¹³⁸¹

b. Professor Vinuesa

1052. Professor Vinuesa was asked how many times she had spoken to Ms Folbigg on the telephone and she said there were three that she could remember, one before and one after genetic testing and one around the mosaicism testing. She acknowledged that her memory is not perfect, and there could have been another one but she could not remember terribly well. She said the second call after the genetic testing was after doing her own analysis of the raw data. Prior to being questioned about a recording of that conversation she said she could not recall whether she discussed the results of the genetic testing with Ms Folbigg at any other time.¹³⁸²

1053. The recording of the telephone conversation which took place on 3 January 2019 recorded the following:

Professor Vinuesa: – there is now a list of genes that have been proven to cause some, in particular, it tends to be cardiac conditions, mainly arrhythmias, changes of the heart rhythm –

Ms Folbigg: Yep, yep.

Professor Vinuesa: – and sometimes it can lead to, you know, either sudden cardiac death or episodes of, you know, syncope or fainting which –

Ms Folbigg: Oh ok.

Professor Vinuesa: – Todor has discussed with you.

Ms Folbigg: Yes, yeah.

Professor Vinuesa: Um, from the description that Dr Arsov, um, told me, it seems that you might have had a few of these episodes during your lifetime. Is that correct?

Ms Folbigg: Yes, yeah. I was just thinking about that. I just sort of wrote down, yeah yeah. As a kid I had it a few times. Usually if sick, like temperatures, flus, measles, that sort of thing. I tended to faint, from what I, what I’ve been told, you know, sort of thing.

Professor Vinuesa: And was that often? Did you have many of those?

Ms Folbigg: Um, no, oh I don’t recall actually too many. But um, yeah I was just told that if I was sick I tended to, so. It was like ‘oh, ok’. Um, as a teenager, it was usually after physical exertion, like if I was –

Professor Vinuesa: Yeah.

Ms Folbigg: –doing athletics racing or anything like that, you know, I tended to faint.

¹³⁷⁹ Transcript of the 2022 Inquiry, 14 February 2023 T249.1-T250.44 (Arsov).

¹³⁸⁰ Transcript of the 2022 Inquiry, 14 February 2023 T250.36-38 (Arsov).

¹³⁸¹ Transcript of the 2022 Inquiry, 14 February 2023 T250.49-251.3 (Arsov).

¹³⁸² Transcript of the 2022 Inquiry, 14 February 2023 T281.49-282.28 (Vinuesa).

Professor Vinuesa: Yeah.

Ms Folbigg: I remember a swimming carnival where I got out the end of the pool and just fainted, you know, sort of thing. So, um, and that was all sort of –

Professor Vinuesa: And that was while swimming? Or while you were out of the pool?

Ms Folbigg: No. I'd finished swimming. I got to the end of the race and was just standing there, you know, sort of thing, waiting for whatever –

Professor Vinuesa: Yeah.

Ms Folbigg: – and people just said they needed to fetch me off the ground, sort of thing. Yeah, you know. And as an adult, while your pregnancy with BPs and stuff I was usually lightheaded and whatever else.¹³⁸³

1054. Professor Vinuesa was also referred to her evidence at the 2019 Inquiry to the following effect:

Q. Did she fall to the bottom of the water?

A. Was – somebody looked after her so I don't know whether she fell to the bottom of the water.

Q. Fainted and got of the pool?

A. No, she just told me she fainted at the end of the race and I don't know if she fell to the bottom of the pool.

Q. You don't know whether she fainted in the pool or out of the pool?

A. No, she did faint in the pool.¹³⁸⁴

1055. Professor Vinuesa agreed that was her recollection as at April 2019. She stated, "To be honest what stuck with me probably is 'I was fetched out' and fetched out in the context of a pool you would imagine she's fetched out of the pool".¹³⁸⁵ She stated she probably mis-remembered. She said the dragging out of the pool was partly also the recollection of Dr Arsov and they read Associate Professor Raju's report which also said she was helped out of the pool.¹³⁸⁶

1056. Professor Vinuesa was asked whether, when Ms Folbigg told her of the fainting episode in the pool, she regarded that of particular significance. She said they probably did not regard it as having particular significance, because it was not mentioned in any of their joint reports. She stated the first time it arose was during the hearings at the 2019 Inquiry when there was a discussion among the experts. Professor Vinuesa acknowledged that she is not a cardiologist. She was referred to the evidence of Professor Skinner at the 2019 Inquiry which I have set out at [834]. She agreed it was after this evidence that she made her reports which were somewhat different to what Ms Folbigg appeared to have told her in the telephone conversation. Professor Vinuesa agreed but she said that is what she thought she remembered. She stated that if she "misunderstood or mis-remembered then it's a mistake but you've heard the conversation". She said, "It was fast, rushed, vague,

¹³⁸³ Exhibit 14-11, Transcript and audio recordings of two telephone calls between Kathleen Folbigg and Professor Carola Vinuesa dated 3 January 2019 [red pagination 334].

¹³⁸⁴ Transcript of the 2022 Inquiry, 14 February 2023 T284.50-285.10 (Vinuesa); Exhibit 4, Transcript of the 2019 Inquiry, 16 April 2019 T507.21-34 [red pagination 513].

¹³⁸⁵ Transcript of the 2022 Inquiry, 14 February 2023 T285.27-29 (Vinuesa).

¹³⁸⁶ Transcript of the 2022 Inquiry, 14 February 2023 T285.20-43 (Vinuesa).

and I was there to try to explain her genetic tests. I was imagining there would be a cardiologist taking a history at some point. I was not taking notes.”¹³⁸⁷

1057. Professor Vinuesa was asked whether she accepted that the best record of what Ms Folbigg told her was the telephone call that was recorded on 3 January 2019. She pointed out again that she was not taking notes and this was a very rushed and vague conversation. She agreed that the statement that the syncope occurred whilst swimming and Ms Folbigg was “dragged out of the pool” did not accurately reflect what she was told in January 2019. She was asked whether she had exaggerated the nature of the syncope at the swimming carnival to support a conclusion of Ms Folbigg’s pathogenicity. She rejected that proposition.¹³⁸⁸
1058. Professor Vinuesa was also referred to the statement in the 25 October 2022 report that “Ms Folbigg suffered a complete loss of consciousness”.¹³⁸⁹ She was asked on what information she based that assertion and replied, “Well, she said she fainted, fainting is the suffering of a loss of consciousness”.¹³⁹⁰ She said Ms Folbigg told Dr Arsov that she woke up by the side of the pool and she told Dr Raju that there was – that again she had a fainting episode which he described also as a syncope. She was again asked and agreed that the account Ms Folbigg gave her in the telephone conversation does not indicate that she was dragged out of the pool.¹³⁹¹
1059. Professor Vinuesa was also asked a number of questions concerning her independence and impartiality. She was asked whether she had ever spoken to Ms Folbigg in gaol and responded that she went to visit her in gaol in June 2021. She was asked why she did that and she stated because “it is a current ethical standard to inform patients of our research and let them know particularly when we end an investigation”. She was asked, after the particular investigation she conducted on the topic of mosaicism, whether she conducted any further investigation in relation to Ms Folbigg and she said, “No”.¹³⁹²
1060. Professor Vinuesa was asked whether, by June 2021, when she went to visit Ms Folbigg in the gaol she had become “obsessed over her case”. She responded she was “obsessed about the science and about the science being accurately recorded and finished properly”.¹³⁹³ She was also asked whether, by June 2021, she had an emotional reaction to the circumstances of Ms Folbigg’s case. She responded that she was “very surprised with the result of the previous Inquiry because I thought the scientific data were sufficiently strong” particularly when it was known there was another family that had mutation in the same residue, where there was a death of a child and a cardiac arrest of a second child. She said she had a surprised and disappointed reaction to that. However, she denied that formed any part of the reason why she chose to visit Ms Folbigg in gaol rather than speaking to her on the phone.¹³⁹⁴
1061. Professor Vinuesa agreed she obtained the results of the mosaicism testing in

¹³⁸⁷ Transcript of the 2022 Inquiry, 14 February 2023 T286.15-287.28 (Vinuesa).

¹³⁸⁸ Transcript of the 2022 Inquiry, 14 February 2023 T287.34-288.25 (Vinuesa).

¹³⁸⁹ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 143].

¹³⁹⁰ Transcript of the 2022 Inquiry, 14 February 2023 T288.41-44 (Vinuesa).

¹³⁹¹ Transcript of the 2022 Inquiry, 14 February 2023 T288.36-289.39 (Vinuesa).

¹³⁹² Transcript of the 2022 Inquiry, 14 February 2023 T291.27-45 (Vinuesa).

¹³⁹³ Transcript of the 2022 Inquiry, 14 February 2023 T292.22-25 (Vinuesa).

¹³⁹⁴ Transcript of the 2022 Inquiry, 14 February 2023 T292.32-47 (Vinuesa).

September and early October 2020 and next spoke to Ms Folbigg when she visited her in gaol in June 2021. She was asked why there was such a delay between getting the results and telling Ms Folbigg about them. She stated she had initially told the lawyers about the results. Professor Vinuesa acknowledged that she was not the treating cardiologist so it would not necessarily be appropriate for her to provide those results in isolation. She said she wanted to tell Ms Folbigg that she had finished the investigation. Professor Vinuesa was asked whether she decided to finish the investigation because she was leaving the country to undertake another professional path. She said not exclusively. She was then asked whether she wanted to meet Ms Folbigg and say goodbye and responded, “I thought it was a good thing to say as well. I mean thank you and goodbye, and that’s what you normally do to patients when you finish an investigation”.¹³⁹⁵

1062. Professor Vinuesa was asked whether it was true that after the conclusion of the 2019 Inquiry she was very active in seeking out people who might perform functional assays in relation to the CALM2-G114R variant. She stated that was not completely correct because she sought Professor Toft Overgaard before the conclusion of the 2019 Inquiry. She was asked, with that clarification as to timing, whether she enlisted Professor Toft Overgaard. She said she did not enlist anyone. She said she wrote to Professor Toft Overgaard and he said he would be interested in conducting functional assays. She stated she had never met Professor Toft Overgaard but got his reference from one of the top cardiologists in the world who she also had never met before.¹³⁹⁶
1063. Professor Vinuesa was then asked about her contribution to the Brohus Article. She said she contributed the information on the genetics, the sequencing and what they knew about the tissues that had been tested. She said the “three senior authors wrote the paper together” referring to herself, Professor Schwartz and Professor Toft Overgaard. She stated the others who were named authors had the opportunity to review the paper.¹³⁹⁷
1064. Professor Vinuesa was referred to the fact that she had signed an acknowledgment that she had read the Expert Witness Code of Conduct in Schedule 7 to the *Uniform Civil Procedures Rules 2005* (NSW) and agreed to be bound by it. She agreed that, when she signed the document, she had in her mind that the Expert Witness Code of Conduct required that an expert witness not be an advocate for a party, and that she understood that the expectation was that an expert’s paramount duty is to assist the Court impartially on matters relevant to their area of expertise. She was asked whether she considered that she had maintained independence and objectivity in relation to her work on the Folbigg matter and she said she had.¹³⁹⁸ Professor Vinuesa was referred to Professor Schwartz’s comment to the following effect:

I have no idea about whether Kathleen Folbigg has killed her children or not and even though this is not a nice thing to say to a certain extent, I don’t really care, this is not for me to say.¹³⁹⁹

Professor Vinuesa was asked whether she took the same attitude to the case. She

¹³⁹⁵ Transcript of the 2022 Inquiry, 14 February 2023 T293.39-294.42 (Vinuesa).

¹³⁹⁶ Transcript of the 2022 Inquiry, 14 February 2023 T294.49-295.23 (Vinuesa).

¹³⁹⁷ Transcript of the 2022 Inquiry, 14 February 2023 T295.25-46 (Vinuesa).

¹³⁹⁸ Transcript of the 2022 Inquiry, 14 February 2023 T298.16-299.29 (Vinuesa).

¹³⁹⁹ Exhibit 8-04, Report of Professor Schwartz (24 October 2022) [red pagination 38-14].

responded she did in certain respects. She said she is not the person that is going to say whether she killed them or not and she would not be able to draw a definitive conclusion. She said what she can do is have a personal opinion as an extension of her professional work.¹⁴⁰⁰

1065. Professor Vinuesa acknowledged that she did hold a personal opinion as an expression of her professional work saying, “I don’t think anybody in this room can say whether she killed them or not, but I think there is reasonable evidence that we have some natural causes of death; and that’s more or less what I’ve implied in our reports.”¹⁴⁰¹

1066. Professor Vinuesa was asked whether she accepted that over the years since the 2019 Inquiry she had written articles or spoken to the media in which she had expressed her personal view about Ms Folbigg’s innocence. She responded she expressed a view that was an extension of her professional work. She was asked whether she did it as a form of advocacy for Ms Folbigg and she responded, “as advocacy for the science”.¹⁴⁰²

1067. Professor Vinuesa was asked by me whether she endeavoured, in giving her evidence to the Inquiry, to give it objectively, having regard to the scientific findings she made. She gave the following response:

I did try to do it objectively. I mean I-if I may say, you know, when I was first approached I had never heard of Ms Folbigg. I, to this date, you know, I haven’t been paid a cent for the work we’ve done, it’s taking us numerous reports, numerous hours of my work, both, you know, during working hours and out of hours. I do this because I believe in the science that we do and I like to, you know, draw some conclusions on the science in the way that we can do it. I have no personal interest - I mean I do take personal interest in the cases that I work, but it’s not about the individuals, it is about the science.¹⁴⁰³

1068. Professor Vinuesa was then asked about an interview with a journalist, Oscar Schwartz, in December 2021. The article described an email Professor Vinuesa wrote to the lawyer which said, “As a mother I cannot think of any more worthy cause to invest time and effort in. I find it hard to believe there is someone sitting in gaol for this”. She agreed she wrote that email and she regarded the case as a worthy cause to invest her time in. Professor Vinuesa was asked about a statement that she found it “hard to believe there is someone sitting in gaol for this” and whether at that time she had formed a view of Ms Folbigg’s guilt or innocence. She responded that when she had read about the children, particularly two of them being very sick and one having myocarditis, which is a very frequent cause of death, she thought it definitely warranted a genetic investigation.¹⁴⁰⁴

1069. Professor Vinuesa was asked whether she had an emotional reaction to Ms Folbigg’s case because she was a mother herself. She responded, “I’m not sure I would describe it emotionally, but I would have thought about having four sick children and you know feeling self-blame or guilt when you have very sick children”.¹⁴⁰⁵ She was then asked the following question and gave the following answer:

¹⁴⁰⁰ Transcript of the 2022 Inquiry, 14 February 2023 T299.31-35 (Vinuesa).

¹⁴⁰¹ Transcript of the 2022 Inquiry, 14 February 2023 T299.39-43 (Vinuesa).

¹⁴⁰² Transcript of the 2022 Inquiry, 14 February 2023 T299.45-300.2 (Vinuesa).

¹⁴⁰³ Transcript of the 2022 Inquiry, 14 February 2023 T300.19-30 (Vinuesa).

¹⁴⁰⁴ Transcript of the 2022 Inquiry, 14 February 2023 T300.34-302.14 (Vinuesa).

¹⁴⁰⁵ Transcript of the 2022 Inquiry, 14 February 2023 T302.16-21 (Vinuesa).

Q. What do you say to the suggestion that that reaction that you've described has affected the objectivity with which you have undertaken your work in relation to this matter?

A. Look, I think I try always very carefully to separate my personal feelings with my professional work, because it is very important that we are completely objective, and that's why we bring co-authors and why we try and check and triple check our results and repeat and reproduce, and in our case, our contribution was finding a variant that is verifiable, you can go back to Ms Folbigg's tissues and sequence that over and over again. So, that was our contribution, and that is infallible. In the same way as the mosaicism gave us contradictory results, and I didn't settle on the first mosaicism result. As you know, we did find a mosaicism result in the urine before the paper was published. I would have very easily put that in the paper because it would have settled the case.¹⁴⁰⁶

1070. Professor Vinuesa was then referred to another section of the article and gave the following answer:

Q. About the middle of the page, the journalist writes, "Vinuesa's goal was different, it was to cast doubt on the prosecution's original argument that four unexplained infant deaths implied murder. She was hunting for alternate possibilities." Is that how you conceived of your goal or your task?

A. No. Well, that's a way to put it. I was trying to find the bottom. I was trying to find the truth, and we had a genetic mutation that looked very suspicious that we knew that that same mutation - that same recidivism in another family had killed two children and we wanted to try and know whether it was functional. That was my goal. There was - there's a lot of colour in this report, and that is not my profession, but we were trying to get to the bottom and understand this variant.¹⁴⁰⁷

1071. Professor Vinuesa was asked whether she had been in regular email communication with Ms Folbigg's legal team since she became involved in the matter in 2019 and stated "absolutely not".¹⁴⁰⁸

1072. Later in her examination, Professor Vinuesa was asked whether she denied she had spoken out publicly as an advocate to Ms Folbigg's cause. She stated that she had, adding that she thought she was entitled to have her opinion which is an extension of her science. She agreed that in her public statements she expressed affinity for the view that Ms Folbigg did not kill her children.¹⁴⁰⁹ She agreed that she tweeted urging people to sign the Petition to the Governor to pardon Ms Folbigg. Professor Vinuesa was referred to a tweet she made to a journalist, "It is important that articles like yours change the public perception of Kathleen so that she gets out of gaol with dignity." She was asked in the context of that tweet why she was interested in changing or improving the public perception of Kathleen Folbigg. She responded that she was allowed to feel empathy and if she was convinced of her science then the logical thinking was that Ms Folbigg should not be in gaol. Professor Vinuesa agreed that the tweet showed that she had a fairly strong view that the work she and her colleagues had done demonstrates that Ms Folbigg may well have been innocent of the crimes, and in those circumstances she felt some degree of sympathy for Ms Folbigg in the position she found herself. She was then asked whether it was possible that her sympathy and conviction had unconsciously influenced her in dealing with the experts who have either come to a contrary or

¹⁴⁰⁶ Transcript of the 2022 Inquiry, 14 February 2023 T302.23-36 (Vinuesa).

¹⁴⁰⁷ Transcript of the 2022 Inquiry, 14 February 2023 T303.4-15 (Vinuesa).

¹⁴⁰⁸ Transcript of the 2022 Inquiry, 14 February 2023 T304.24-26 (Vinuesa).

¹⁴⁰⁹ Transcript of the 2022 Inquiry, 15 February 2023 T346.22-34 (Vinuesa).

more nuanced view than she had. She stated that all she had contributed to the Inquiry was an initial finding of the calmodulin mutation and the negative finding that Ms Folbigg was a mosaic, and everything else came from the experts in their field. She said the evidence she provided cannot be manipulated, “You can test it, you can find this mutation”.¹⁴¹⁰

1073. I then asked Professor Vinuesa if, when I came to consider her evidence in the context of the Inquiry, I should limit it to those two matters. She agreed, I should.¹⁴¹¹
1074. In subsequent examination by Senior Counsel for Ms Folbigg, Professor Vinuesa sought to qualify that remark saying that was in terms of the investigation but the reports “encompass also our expertise in the analysis of the variants and in the interpretation of the variants”.¹⁴¹²
1075. Professor Vinuesa was asked by Senior Counsel for the Director of Public Prosecutions whether there was clear difference between her personal views and the scientific opinions she expressed as a witness called to assist the Inquiry. She stated there was because she tried to “very consciously separate what I do in my science...but, of course, my opinion is an extension of our professional work”.¹⁴¹³
1076. In further examination by Counsel Assisting, Professor Vinuesa was asked again about the answers given to me to the effect that all she contributed to the Inquiry was the initial finding of the mutation and the finding Ms Folbigg was not a mosaic. She stated that was in terms of scientific results but stated that she, as well as Professor Cook and Dr Arsov in their joint reports, had contributed to the interpretation, to the analysis and to the other areas of understanding that they are qualified to comment on. She repeated that she separated her personal opinion from the content of the reports and stated that they have been “extremely careful to write things that are accurate, that are backed up by scientific literature, that are referenced and that are shared by my co-authors”.¹⁴¹⁴

Conclusion on the fainting incident in the swimming pool

1077. In my opinion, the statement in the telephone conversation between Ms Folbigg and Professor Vinuesa and the history taken by Associate Professor Raju provide the only reliable evidence of the fainting episode which occurred in the swimming pool. It is true that Ms Buckley stated that Ms Folbigg had a panic attack and had to be retrieved from the bottom of the pool, and she was not examined on this matter. However, her evidence was based on what she was told by two school friends many years ago. Whilst I accept that it was her best recollection, I do not think it provides a basis for a conclusion that, during the course of the swimming race, Ms Folbigg lost consciousness and fell to the bottom of the pool.
1078. In those circumstances, I am unable to accept the statement by Professors Vinuesa, Cook and Dr Arsov, in their 25 October 2022 report, that Ms Folbigg suffered a complete loss of consciousness, was dragged out of the pool and found herself by the side of the pool when she regained consciousness.

¹⁴¹⁰ Transcript of the 2022 Inquiry, 15 February 2023 T346.22-350.24 (Vinuesa).

¹⁴¹¹ Transcript of the 2022 Inquiry, 15 February 2023 T350.26-28 (Vinuesa).

¹⁴¹² Transcript of the 2022 Inquiry, 15 February 2023 T354.8-10 (Vinuesa).

¹⁴¹³ Transcript of the 2022 Inquiry, 15 February 2023 T358.11-16 (Vinuesa).

¹⁴¹⁴ Transcript of the 2022 Inquiry, 15 February 2023 T360.21-38 (Vinuesa).

1079. As I have demonstrated, the statements in the 25 October 2022 report are inconsistent with what each of Professor Vinuesa and Dr Arsov were told concerning the swimming pool incident. Professor Vinuesa frankly admitted this whilst Dr Arsov, somewhat more grudgingly, also did so.
1080. It was not submitted by anyone at the Inquiry that this was a deliberate attempt to exaggerate Ms Folbigg's symptoms to demonstrate that she was adversely affected by the CALM2-G114R variant carried by her. Even if such a submission had been made, I would not have been prepared to accept it. First, the 25 October 2022 report itself does not place particular reliance on the circumstances of the swimming pool incident. Rather, after referring to that incident, the report states there is a growing body of evidence that links syncope including vasovagal syncope (i.e., syncope of neurocardiogenic or reflex aetiology) with calmodulinopathy. The precise circumstances of the swimming pool incident was not a critical factor in reaching that conclusion. Second, both Dr Arsov and Professor Vinuesa denied any deliberate exaggeration. Having viewed them in the witness box, I am prepared to accept that evidence. However, I am also of the view that whilst there was no deliberate attempt to exaggerate the symptoms, Professor Vinuesa and Dr Arsov may have unconsciously done so to support the proposition enunciated by Professor Skinner in his evidence to the 2019 Inquiry that if Ms Folbigg had sunk to the bottom of the pool and was pulled out by someone and given resuscitation, that would be a significant factor in determining whether Ms Folbigg suffered a cardiac disease as a result of the variant.
1081. That raises the question of the general reliability of the report. Counsel Assisting the Inquiry submitted that Professor Vinuesa takes great professional pride in her work and seeks to undertake it in an objective and scientific manner. They submitted the evidence established that she is strongly motivated to identify and emphasise evidence supportive of a genetic cause of death of the Folbigg children. They submitted that may at times have caused her to unconsciously highlight features of the case favouring a genetic cause of death and her evidence must be considered in that light. They did not seek to cavil with the views she expressed that her motivation in supporting the establishment of the Inquiry stems from her concern that the science had not been rigorously evaluated.¹⁴¹⁵
1082. I accept Counsel Assisting's submission on this evidence. There can be little doubt that Professor Vinuesa had an emotional reaction to Ms Folbigg's position and had a belief in her innocence. Nonetheless, I am prepared to accept her evidence that she genuinely attempted to assist the Inquiry in the work she did in preparation for the reports, the reports themselves and her evidence before the Inquiry. Apart from the exaggeration of the swimming pool incident, there is nothing in the reports or in her evidence to suggest the contrary. Professor Vinuesa admitted she had an emotional reaction but stated she was able to put it to one side for the purpose of presenting her reports and evidence. There was nothing in the evidence she gave to the Inquiry to suggest she did not do so. In particular, she did not attempt to deny the error in the report or her emotional reaction. Finally, it must be remembered that the report was co-authored by Professor Cook. It was not suggested that he had any emotional involvement in the case.

¹⁴¹⁵ Counsel Assisting's Written Closing Submissions (4 April 2023) 86 [304]-[305].

1083. Further, as Counsel Assisting submitted, Professor Vinuesa’s expert opinion, to an extent, has been superseded by the more specialised experts who gave evidence at the Inquiry. Although I think it is fair to say that she sought to give evidence beyond the initial finding of the calmodulin mutation and the negative finding that Ms Folbigg was a mosaic as she said herself, “everything else [came] from the expertise of people in their fields”.¹⁴¹⁶ In those circumstances, Counsel Assisting submitted there does not appear to be any fact in issue with respect to which Professor Vinuesa expresses an opinion not shared by others or where her opinion could be determinative of the Inquiry’s findings.¹⁴¹⁷
1084. In all these circumstances, I accept that, in preparing the reports and giving evidence before the Inquiry, Professor Vinuesa sought to act objectively and impartially as an expert. I reach the same conclusion with Dr Arsov.

The report of Professor Vinuesa dated 10 October 2022

1085. In this report, Professor Vinuesa described the further investigations of mosaicism which had been carried out since the conclusion of the 2019 Inquiry. She stated that “we [the persons who co-authored the Brohus Article] attempted to rule out cardiac mosaicism (i.e. the possibility that the CALM2 variant in Ms Folbigg was present in some tissues but not in the heart)” but did not complete those studies until after the paper was accepted.¹⁴¹⁸ She said the results of the studies confirm the view expressed in the Brohus Article that Ms Folbigg was not a mosaic for the variant.¹⁴¹⁹
1086. Professor Vinuesa stated it was determined not to do a heart biopsy because the risk involved was not justified. It is unnecessary to set out the alternative tests which were performed but she stated the result was that, without a heart biopsy, heart mosaicism in Ms Folbigg could not be conclusively ruled out given the lack of clear mosaicism in the other tissues tested. However, she felt comfortable with the conclusion in the Brohus Article that “in this family, the CALM2 variant was inherited from their extant mother, who did not appear to be a mosaic”.¹⁴²⁰ She stated, however, that Ms Folbigg’s clinical history of multiple stress induced syncope still raises the issue that she is symptomatic for a cardiac arrhythmia condition such as CPVT.¹⁴²¹
1087. The report also set out the investigations of the BSN variants found in Caleb and Patrick and, in particular, the investigation of a possible link between the Folbigg BSN variants and sudden death, epilepsy, febrile convulsions or the regulation of body temperature.¹⁴²² In her evidence at the Inquiry, Professor Vinuesa indicated that although too little was known of the effect of one of the variants to form any conclusion as to its pathogenicity she stated it was worth reporting in the Brohus Article.¹⁴²³ She also described more recent research showing that mice born with compound heterozygous variants in BSN are not born at the normal Mendelian frequencies (indicating prenatal lethality), and separate research identifying a

¹⁴¹⁶ Transcript of the 2022 Inquiry, 15 February 2023 T350.22-24 (Vinuesa).

¹⁴¹⁷ Counsel Assisting’s Written Closing Submissions (4 April 2023) 86 [306].

¹⁴¹⁸ Exhibit 5-05, Report of Professor Carola Vinuesa (10 October 2022) [red pagination 75].

¹⁴¹⁹ Exhibit 5-05, Report of Professor Carola Vinuesa (10 October 2022) [red pagination 75].

¹⁴²⁰ Exhibit 15-02, Malene Brohus et al, ‘Infanticide vs inherited cardiac arrhythmias’ (2020) 23 *Europace* 441, 449 [red pagination 19].

¹⁴²¹ Exhibit 5-05, Report of Professor Carola Vinuesa (10 October 2022) [red pagination 76].

¹⁴²² Exhibit 5-05, Report of Professor Carola Vinuesa (10 October 2022) [red pagination 77].

¹⁴²³ Transcript of the 2022 Inquiry, 15 February 2023 T327.14-30; T328.11-19 (Vinuesa).

number of pedigrees with biallelic variants in BSN segmented with epilepsy.¹⁴²⁴ However, as Counsel Assisting pointed out in their written submissions, her evidence went no higher than the statement, “All we are saying is we need to wait. We know too little but there is something intriguing here”.¹⁴²⁵ None of the other experts called were prepared to attribute the BSN variants as a possible cause of death of Caleb and Patrick. Indeed, Professor Vinuesa pointed out in her report of 10 October 2022 that investigations since the Brohus Article suggest that the Folbigg BSN variants are unlikely to cause sudden death in humans on their own, at least in the absence of other genetic or environmental factors (although in oral evidence she qualified this by reference to the more recent research referred to immediately above).¹⁴²⁶

The joint report of Professors Vinuesa, Cook and Dr Arsov dated 25 October 2022

1088. I have already set out the curriculum vitae of Dr Arsov and Professor Vinuesa (see above at [1040]-[1041]). Their co-author Professor Cook was, at the time of the report, Professor of Experimental Medicine at the University of Cambridge and Visiting Professor at the Australian National University. Prior to his appointment to the University of Cambridge, he had been Professor of Medicine at the Australian National University Medical School and Medical Director of the Canberra Clinical Genomics Canberra Health Services.¹⁴²⁷ Professor Cook described himself in evidence as a Physician Scientist. He stated he was professionally qualified as a Physician Specialist in Clinical Immunology and also a Specialist in Pathology. He noted that he had a PhD in immunogenetics, and during the course of his career, in addition to his clinical practice, his research activities have been directed at understanding the genetic and cellular basis of immune diseases. He stated he had not been directly involved in cardiac genetics and would not regard himself as being in a position to express views in a field of electrophysiology.¹⁴²⁸
1089. In their report, Professors Vinuesa, Cook and Dr Arsov referred to an article published by an international team of scientists led by Professor Pascale Guicheney (**Professor Guicheney**) of the Sorbonne University in Paris, France. The article described a four generation family in which a CALM3 variant (N138K) segregated with LQTS (Kato et al, 2022) (**Kato Article**) and noted the variant described in the article displayed a high degree of variable expressivity with some family members remaining asymptomatic and healthy in later life, while others suffered from a range of symptoms including near syncope, vagal syncope and sudden death. The authors expressed the view that the Kato Article displaced the Sydney team’s claim that the ‘clinical scenario’ of the Folbigg family was ‘out of the range’ of the previously reported calmodulinopathies (the reference to the Sydney team was a reference to the views expressed by Professor Skinner, Professor Kirk and Dr Buckley in their report of 5 July 2019)¹⁴²⁹ (see [902]-[907] above). They stated the Kato Article provided an example of exactly what the Sydney team considered an exceptional clinical scenario.¹⁴³⁰

¹⁴²⁴ Transcript of the 2022 Inquiry, 15 February 2023 T324.9-325.9; T327.35-T328.12 (Vinuesa).

¹⁴²⁵ Transcript of the 2022 Inquiry, 15 February 2023 T324.6-7 (Vinuesa); Counsel Assisting’s Written Closing Submissions (4 April 2023) 153 [540].

¹⁴²⁶ Exhibit 5-05, Report of Professor Carola Vinuesa (10 October 2022) [red pagination 78].

¹⁴²⁷ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 164].

¹⁴²⁸ Transcript of the 2022 Inquiry, 15 February 2023 T364.31-T365.16 (Cook).

¹⁴²⁹ Exhibit 2-BV, Supplementary report of Professor Jonathan Skinner, Professor Edwin Kirk and Dr Michael Buckley (5 July 2019).

¹⁴³⁰ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 127].

1090. The authors stated that the deaths of both Folbigg girls were consistent with calmodulinopathy. They stated that, as described in the Brohus Article and recorded in the ICalmR (see [1144]-[1167] below), 15-20% of patients with calmodulin variants die while asleep and death can occur at any age, including in the first two years of life. They stated that both girls died whilst suffering from respiratory tract infections and Laura was also suffering from myocarditis, suggesting that infection, fever and, in the case of Laura, heart inflammation, may have provided a trigger or lowered the threshold for the occurrence of lethal cardiac arrhythmia.¹⁴³¹
1091. Professors Vinuesa, Cook and Dr Arsov stated that variable expressivity and incomplete penetrance is a common occurrence in inherited cardiac arrhythmic disorders and also occurs in the case of calmodulinopathies. They again referred to the Kato Article on this issue. They stated that CALM variants appear to cause more severe disease in childhood compared to adulthood and, regardless of whether Ms Folbigg is symptomatic or not, or whether she is mosaic or not, the functional studies of the CALM2-G114R variant described in the Brohus Article indicates the variant is pathogenic and arrhythmogenic. They stated that, coupled with the findings of the recent Kato Article, Ms Folbigg's limited symptomatology has little bearing on whether the Folbigg girls died as a result of the CALM2-G114R variant.¹⁴³²
1092. In elaborating on the question of whether myocarditis in conjunction with the variant could have caused Laura's death, the authors opined that a child with an arrhythmogenic genetic variant has a lower threshold for developing a fatal arrhythmia than a child without such a variant. They stated that, as a general proposition, when a child with such a variant develops myocarditis they are at greater risk of suffering a fatal arrhythmia because the electrical conduction of their heart has already been compromised.¹⁴³³
1093. The authors referred to the ICalmR. I deal with the establishment and maintenance of this Registry in dealing with the evidence of Professor Schwartz (see [1144]-[1148] below). For present purposes, it is sufficient to note that the authors described ICalmR as a gene-based registry that aggregates the clinical experience of patients with genetic variants in one of the three CALM genes. They stated that when a new patient is encountered, reference to the ICalmR can result in either of two possible scenarios. First, a patient is diagnosed with a genetic variant that is already included in the ICalmR. They stated that the presence of the genetic variant in question in the ICalmR does not guarantee that the next instance of the same genetic variant can be interpreted with certainty. They stated that interpreting the pathogenicity (or not) of the variant depends on how well the previous case with the variant was characterised clinically and what information was generated about the variant. They stated further that since there can be phenotypic variation of a specific variant, accurate and conclusive or exclusive genotype-phenotype correlations cannot necessarily be drawn from a single, or even a few precedent cases. The second scenario referred to was when a patient is diagnosed with a genetic variant that is not included in the ICalmR. The authors stated that possibility did not exclude pathogenicity because registries are incomplete. They said that was for two reasons: first, not all existing cases are registered; and, second, not all possible genetic

¹⁴³¹ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 129].

¹⁴³² Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 130].

¹⁴³³ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 137].

variants can be registered. They stated that, in those circumstances, ICalmR must be considered as just a sample of all possible genetic variants in the CALM genes.¹⁴³⁴

1094. Professors Vinuesa, Cook and Dr Arsov stated that, at present, in publicly accessible databases, 83 CALM missense variants (of the possible 2,831) are likely to be considered benign (recorded in gnomAD) whereas 37 pathogenic or likely pathogenic CALM missense variants have been recorded in ICalmR and/or ClinVar. They stated that meant that less than 5% of all possible variants have been observed.¹⁴³⁵
1095. The authors stated at the time of this discovery in the Folbigg children, CALM2-G114R was not recorded in either ICalmR or gnomAD stating its absence from gnomAD means it is extremely rare in the population which arouses the suspicion that this may be because it is pathogenic. The authors expressed the view that the small sample size of the pathogenic variants recorded in ICalmR is not just due to low case ascertainment but also because the calmodulin proteins are relatively intolerant to substitution.¹⁴³⁶
1096. The authors stated that in assessing the pathogenicity of the CALM2-G114R variant, the previously reported phenotypes of fatal calmodulinopathies are relevant as they provide information about the relationship between specific genetic variants and different types of arrhythmia. They stated the information is not definitive and so far there are no other incidents of the G114R variant having occurred. They stated in those circumstances the result of the functional analysis of the variant set out the Brohus Article is important in determining pathogenicity.¹⁴³⁷
1097. The authors stated that when considering predictions for a new variant based on the location of known variants, the most specific example is when a variant has previously been described as affecting the same amino acid as the new variant. They stated that was the case for CALM2-G114R because the CALM3-G114W substitution had been reported previously. They stated that provides an important precedent for pathogenic substitution arising outside of the EF-hand domain and in precisely the same amino position as G114R. The authors stated that when that genetic analysis is combined with the functional evidence set out in the Brohus Article and the improved understanding of the variable expressivity and incomplete penetrance of hereditary calmodulinopathies (as highlighted by the Kato Article), it can be seen that the phenotypes of Ms Folbigg, Sarah and Laura are consistent with a range of phenotypes expected with a pathogenic variant located at G114. They said the variant is likely to produce a CPVT or IVF like phenotype with variable expressivity and potential asymptomatic carriers similar to the phenotypes produced by the other variants that sit outside the EF-hand domains.¹⁴³⁸
1098. I have already dealt with the report's description of the incident when Ms Folbigg fainted in the swimming pool after the school race, but it should be noted that

¹⁴³⁴ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 138].

¹⁴³⁵ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 139].

¹⁴³⁶ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 139].

¹⁴³⁷ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 140].

¹⁴³⁸ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 141].

the authors also pointed out that there was a growing body of evidence that links syncope, including vasovagal syncope, with calmodulinopathy. Referring to the Crotti Article, the Kato Article and two others,¹⁴³⁹ they stated that the emerging evidence in the scientific literature suggests that, rather than a binary clinical phenotype, the calmodulinopathy phenotype is a clinical spectrum which includes sudden cardiac death, cardiac arrest, various forms of syncope and asymptomatic cases. They stated that, in addition, the symptoms of calmodulinopathy also manifest at a range of ages and during a range of activities, including sleep. They stated that Ms Folbigg's history of syncope is consistent with the functional findings set out in the Brohus Article, that the CALM2-G114R variant is pathogenic and the likely cause of deaths of the Sarah and Laura. They stated, however, that Ms Folbigg being symptomatic is not a prerequisite to finding that the CALM2-G114R variant is pathogenic and capable of causing sudden cardiac death.¹⁴⁴⁰

1099. The authors also pointed out that modifier genes, namely genes that affect the phenotypic and/or molecular expression of other genes, can lead to variable clinical expressivity and incomplete penetrance. They stated the variants of such modifier genes may afford partial or complete protection to individuals with an otherwise pathogenic variant, or conversely, may work synergistically with the genetic variant for the monogenic condition and the resulting phenotype may be more severe.¹⁴⁴¹
1100. At the conclusion of the report, Professors Vinuesa, Cook and Dr Arsov each expressed their opinion as to the causes of death of Sarah and Laura Folbigg. Professor Vinuesa stated that she believed that a cardiac arrhythmia due to the CALM2-G114R variant is the most likely cause of death. She stated this was for the following reasons:
 - (a) the variant has been shown to be arrhythmogenic by functional analysis (referring to the Brohus Article);
 - (b) the variant has been shown to behave in a similar manner to the G114W and N98S variants that have caused lethal arrhythmias in children (referring to the Crotti Article);
 - (c) experts who have published extensively on calmodulin variants, including Professor Schwartz and Professor Toft Overgaard, find the clinical presentation of Laura and Sarah consistent with calmodulinopathy; and
 - (d) several publications, including the Marsman Article and the Kato Article, have demonstrated variable expressivity of CALM variants where variants have caused the deaths of young children whilst also being present in asymptomatic adults, or in adults presenting with either stress-induced or vasovagal syncope.¹⁴⁴²

¹⁴³⁹ Exhibit 2-BU, Lia Crotti et al, 'Calmodulin Mutations and Life-Threatening Cardiac Arrhythmias: Insights from the International Calmodulinopathy Registry' (2019) *European Heart Journal* (advance); Exhibit 15-06, Koichi Kato et al, 'Novel CALM3 Variant Causing Calmodulinopathy With Variable Expressivity in a 4-Generation Family' (2022) 15(3) *Circulation: Arrhythmia Electrophysiology* 183-194; Exhibit 15-41, Nieves Gomez-Hurtado et al, 'Novel CPVT-Associated Calmodulin Mutation in CALM3 (CALM3-A103V) Activates Arrhythmogenic Ca Waves and Sparks' (2016) 9(8) *Circulation: Arrhythmia and Electrophysiology* 436a; Exhibit 15-48, Naomasa Makita et al, 'Novel calmodulin mutations associated with congenital arrhythmia susceptibility' (2014) 7(4) *Circulation - Cardiovascular Genetics* 466-474.

¹⁴⁴⁰ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 144].

¹⁴⁴¹ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 147].

¹⁴⁴² Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 155-156].

1101. Dr Arsov expressed similar views stating his conclusion was supported by:

- (a) the Brohus Article;
- (b) the effect size being similar to other variants, including one affecting the same amino acid residue CALM3-G114W, causing sudden death and cardiac arrest in another family; and
- (c) additional literature since the 2019 Inquiry, such as Lisa Wren et al 'Genetic Mosaicism in Calmodulinopathy' (2019) 12(9) *Circulation – Genomic and Precision Medicine* 375-385, showing that calmodulinopathy can affect and kill very young infants.¹⁴⁴³

1102. Professor Cook expressed the view that, at the time of the 2019 Inquiry, evidence was considered regarding the CALM2-G114R variant that supported its pathogenicity. He stated that functional evidence that the variant is pathogenic has now been generated by experts in the field. He stated, in addition, the number of cases of calmodulinopathy had increased revealing further variation in penetrance and expressivity, which means that the probability that calmodulinopathy was the cause of death of the children who carried this variant has increased. He stated that, conversely, he is not aware of any new evidence that argues against the conclusion that the variant is functional and damaging, nor is he aware of any new evidence for an alternative explanation for the deaths of Sarah and Laura. He stated that he could, therefore, draw no other conclusion than the case for a genetically determined arrhythmia as the cause of the death for the girls has strengthened since the 2019 Inquiry.¹⁴⁴⁴

Further joint report of Professors Vinuesa, Cook and Dr Arsov dated 23 January 2023

1103. A significant proportion of this report contained a commentary on the reports and evidence of Professors Toft Overgaard and Nyegaard. It may be said generally that the view was expressed that the work of Professors Toft Overgaard and Nyegaard supported the authors' reasoning.¹⁴⁴⁵

1104. The report also dealt with the additional assays carried out by Professor Toft Overgaard which it was said supported the conclusions in the authors' original report.¹⁴⁴⁶ In addition, they pointed out the report of Professor Wilde, dated 24 October 2022, and the addendum to the report of Professor Schwartz, dated 4 November 2022, both indicated Ms Folbigg may have CPVT.¹⁴⁴⁷ They reiterated their view that, based on the expanded clinical spectrum of calmodulinopathies in ICalmR described by Professor Schwartz and the findings in the Kato Article, it is evident that calmodulinopathies can have variable expressivity and incomplete penetrance.¹⁴⁴⁸

¹⁴⁴³ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 157].

¹⁴⁴⁴ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 158].

¹⁴⁴⁵ Exhibit 5-07, Further Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (23 January 2023) in response to the evidence of Professors Toft Overgaard and Nyegaard [red pagination 186-190].

¹⁴⁴⁶ Exhibit 5-07, Further Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (23 January 2023) in response to the evidence of Professors Toft Overgaard and Nyegaard [red pagination 190-196].

¹⁴⁴⁷ Exhibit 5-07, Further Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (23 January 2023) in response to the evidence of Professors Toft Overgaard and Nyegaard [red pagination 201].

¹⁴⁴⁸ Exhibit 5-07, Further Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (23 January 2023) in response to the evidence of Professors Toft Overgaard and Nyegaard [red pagination 202].

1105. This report described a modifier allele, REM2 G96A, as present in all four children and presumed to be inherited from Mr Folbigg, as it was not present in Ms Folbigg.¹⁴⁴⁹ In her evidence at the Inquiry, Professor Vinuesa agreed that in dealing with REM2 in that report, what was being done was to present a potential relationship but nothing more than that and she could not comment on whether the REM2 variant had any relevant modifying effect on CALM2-G114R.¹⁴⁵⁰ Professor Cook's evidence was to a similar effect, agreeing that the REM2 variant in fact raised a potential for further enquiry, but it remains a putative modifier requiring "much more experimental evidence" to prove in fact it was a modifying gene.¹⁴⁵¹

Dr Arsov's evidence at the Inquiry

1106. I have already summarised the evidence given by Dr Arsov concerning the swimming pool incident (see above at [1047]-[1051]).

1107. In answer to questions asked by me, Dr Arsov agreed that he concluded that at least two of Ms Folbigg's children had the CALM2-G114R variant which he concluded was pathogenic and could have caused their death.¹⁴⁵² He was asked and he agreed that what he could not do was identify a precise clinical cause of death and ultimately responded, "Well, I mean, we can't say anything categorically in this life I don't think but we can talk about probabilities or likelihoods, you know, that one or another thing happened".¹⁴⁵³

1108. Dr Arsov agreed that although he was named as an author of the Brohus Article, Professors Toft Overgaard, Vinuesa and Schwartz shared senior authorship of the paper.¹⁴⁵⁴

1109. Dr Arsov also agreed that, notwithstanding the concerns he had about the use of the ACMG Guidelines, in the present case he had nevertheless used them and by reference to the use of these Guidelines he arrived at a conclusion that the CALM2-G114R variant was pathogenic.¹⁴⁵⁵

1110. Dr Arsov was referred to Professor Schwartz's commentary upon the limitations of functional assays emphasising the complexity of the clinical setting. He agreed that there were always complexities.¹⁴⁵⁶ He also agreed with Professor Toft Overgaard that there were limitations on the use of functional assays.¹⁴⁵⁷

1111. Dr Arsov was referred to the statement by Dr Abrams in his report of "the need to robustly link genetic findings with concordant phenotype to infer the causality".¹⁴⁵⁸ He stated he agreed with that approach.¹⁴⁵⁹ It was put to him that, in terms of the

¹⁴⁴⁹ Exhibit 5-08, Further Joint Report of Professors Carola Vinuesa and Matthew Cook (1 February 2023) describing a cardiac arrhythmia modifying variant in the Folbigg children [red pagination 211-212].

¹⁴⁵⁰ Transcript of the 2022 Inquiry, 15 February 2023 T341.20-34 (Vinuesa).

¹⁴⁵¹ Transcript of the 2022 Inquiry, 15 February 2023 T375.21-29 (Cook).

¹⁴⁵² Transcript of the 2022 Inquiry, 14 February 2023 T230.43-48 (Arsov).

¹⁴⁵³ Transcript of the 2022 Inquiry, 14 February 2023 T231.4-11 (Arsov).

¹⁴⁵⁴ Transcript of the 2022 Inquiry, 14 February 2023 T252.34-36 (Arsov).

¹⁴⁵⁵ Transcript of the 2022 Inquiry, 14 February 2023 T255.41-45 (Arsov).

¹⁴⁵⁶ Transcript of the 2022 Inquiry, 14 February 2023 T256.9-17 (Arsov).

¹⁴⁵⁷ Transcript of the 2022 Inquiry, 14 February 2023 T256.41-T257.7 (Arsov).

¹⁴⁵⁸ Exhibit 34-04, Report of Dr Dominic Abrams (27 January 2023) [red pagination 131].

¹⁴⁵⁹ Transcript of the 2022 Inquiry, 14 February 2023 T257.14-20 (Arsov).

phenotypic information available regarding Sarah and Laura, the data is incomplete and in fact there was no sound clinical data available. He stated that that was correct, apart from sudden unexplained death, qualifying it by reference to the myocarditis present in Laura and respiratory infections in both girls. However, he stated there was nothing “substantial of the cardiac end”.¹⁴⁶⁰ He agreed that he would defer to the views of a cardio-geneticist on the question of the interplay between myocarditis and the CALM2-G114R variant. He also accepted it was beyond his expertise to comment on the video which showed Laura playing on the day before she died (see [173]).¹⁴⁶¹ He agreed that as he was not a paediatrician it was beyond his particular specialisation to comment on that video.¹⁴⁶²

1112. Dr Arsov was referred to the conclusion in the joint report that in relation to Caleb and Patrick there was no genetic variant which had been identified which presents a plausible cause of their death.¹⁴⁶³ He agreed that as at the date of giving his evidence, he had not identified a genetic variant that he would say was pathogenic. He also agreed that outside the terrain of a pathogenic variant consideration of the possible cause of death of Caleb and Patrick is beyond his area of expertise.¹⁴⁶⁴
1113. Dr Arsov was asked some questions about Ms Folbigg’s phenotype, particularly by reference to the BS2 criterion in the ACMG Guidelines which is applied where the variant is observed in a healthy adult individual. He agreed that that criteria is in the category of strong evidence that a variant is benign.¹⁴⁶⁵ He was referred to his joint report with Professors Vinuesa and Cook of 23 January 2023 which stated that the reports of Professor Wilde and Professor Schwartz both indicated that Ms Folbigg may have CPVT, which rules out the application of BS2. He agreed that on the question of whether Ms Folbigg presented with any phenotype of calmodulinopathy, he would defer to the views of Professor Wilde, Professor Schwartz, Professor Guicheney and Professor Watkins. He said he did not defer to the views expressed by Dr MacRae because he would have to go through the report. He stated he recognised that Dr Abrams had more specialised qualifications and expertise to arrive at an opinion about Ms Folbigg’s phenotype.¹⁴⁶⁶
1114. Dr Arsov was referred to the statement in the joint report of 25 October 2022 to the effect that Ms Folbigg’s limited symptomatology had little bearing on whether the Folbigg girls died as a result of the CALM2-G114R variant (see [1091] above). He was asked, in that context, whether he took issue with the BS2 criterion in the ACMG Guidelines insofar as it provides strong evidence that a variant is benign if, in a well-documented form, it presents in a healthy adult. He stated that was correct for a documented healthy adult for a condition which is fully penetrative at a young age but stated he did not apply BS2 because the penetrance is not complete.¹⁴⁶⁷ He stated, “we cannot expect [assume] that it’s a fully penetrant condition and apply BS2”.¹⁴⁶⁸

¹⁴⁶⁰ Transcript of the 2022 Inquiry, 14 February 2023 T258.10-15 (Arsov).

¹⁴⁶¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit K, Original footage depicting Laura Folbigg in a swimming pool on 28 February 1999.

¹⁴⁶² Transcript of the 2022 Inquiry, 14 February 2023 T258.27-41 (Arsov).

¹⁴⁶³ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov *25 October 2022) [red pagination 153-154].

¹⁴⁶⁴ Transcript of the 2022 Inquiry, 14 February 2023 T259.37-260.26 (Arsov).

¹⁴⁶⁵ Transcript of the 2022 Inquiry, 14 February 2023 T260.32-46 (Arsov).

¹⁴⁶⁶ Transcript of the 2022 Inquiry, 14 February 2023 T262.7-T263.14 (Arsov).

¹⁴⁶⁷ Transcript of the 2022 Inquiry, 14 February 2023 T264.41-49 (Arsov).

¹⁴⁶⁸ Transcript of the 2022 Inquiry, 14 February 2023 T265.21-24 (Arsov).

1115. Dr Arsov was referred to the evidence of Professor Wilde and Dr Abrams that the functional assays which predicted clinical CPVT phenotype meant there was a mismatch having regard to the circumstances of the deaths of Sarah and Laura, particularly as they were under two years of age, and CPVT has not been observed as a cause of death at such a young age, and during sleep. He agreed he would generally defer to the views that have been expressed by Professor Wilde, Dr Abrams and Professor Schwartz. He recognised they, along with Professor Guicheney and Professor Watkins, had more specialised expertise to comment on the aligning of the variant with the precise observed features of CPVT.¹⁴⁶⁹
1116. Dr Arsov agreed his opinions were limited to Sarah and Laura. He stated his view was that they died of natural causes due to the pathogenic CALM2 G114R variant. He was asked whether he could express the view more highly than the fact that there was a reasonable possibility and responded that it was probabilistic that they did.¹⁴⁷⁰

Professor Vinuesa's evidence at the Inquiry

1117. Professor Vinuesa stated that she had undertaken research on the topic of novel genetic variants for over 20 years. She agreed, however, that prior to her work in the present matter, she had no experience in relation to cardiovascular genetic conditions and had not undertaken any work in relation to calmodulin. She was asked whether, when it comes to the more challenging questions of cardio-genetics in this case, she deferred to those with expertise in that field. She stated she would defer on everything to do with electrophysiology but given that the mutations were very rare, she thought she was qualified to speak about some aspects of the genetics.¹⁴⁷¹
1118. Professor Vinuesa was asked whether her current view was that the variant satisfied the ACMG Guidelines for pathogenicity. She stated that she would be flexible, she “would be happy between likely pathogenic and pathogenic”. She said she thought it could be pathogenic but given there is a bit of a grey area with the PS3 criteria – being well established functional studies – then PS3 could be moderate instead of strong and the variant would be in the likely pathogenic band.¹⁴⁷²
1119. Professor Vinuesa was referred to statements in the joint reports with Dr Arsov and Professor Cook that the ACMG Guidelines were not particularly apt for the current situation. She stated that the criteria was mainly designed for a clinical setting, because quite a bit of information is required to score against each criterion. She stated that there was not enough information, such as information from ECGs, but she said that despite those limitations she was confident that it can be applied, even on very strict terms, and still reach the pathogenic or likely pathogenic classification.¹⁴⁷³
1120. Professor Vinuesa stated that she agreed with the observation in Professor Schwartz's report that the clinical reality may be much more complex than what is

¹⁴⁶⁹ Transcript of the 2022 Inquiry, 14 February 2023 T266.32-267.26 (Arsov).

¹⁴⁷⁰ Transcript of the 2022 Inquiry, 14 February 2023 T267.38-268.26 (Arsov).

¹⁴⁷¹ Transcript of the 2022 Inquiry, 14 February 2023 T280.21-281.23 (Vinuesa).

¹⁴⁷² Transcript of the 2022 Inquiry, 14 February 2023 304.49-305.4 (Vinuesa).

¹⁴⁷³ Transcript of the 2022 Inquiry, 14 February 2023 T305.22-32 (Vinuesa).

apparent on the result of the functional assays.¹⁴⁷⁴ She added that every single assay pointed to pathogenicity. She was asked whether she accepted that when it comes to arriving at an ultimate view about the pathogenicity of a variant, it is important that in vitro data is concordant with clinical findings. She responded that she thought that has to be nuanced because for genes for which we know very little, sometimes it is sufficient to know that this is a novel variant in a gene that crosses a spectrum of disease compatible with the presentation.¹⁴⁷⁵ Professor Vinuesa was then asked whether she accepted that, when arriving at conclusions about the pathogenicity of a gene, it is necessary to identify a concordant phenotype in order to infer that causality. She stated she agreed but that in 90% of cases there is no concordance. She said, however, that the present case concerns sudden unexpected death as the phenotype, and pointed out that in some diseases that are intimately related with calmodulinopathy death is the only presentation, and in fact both stress tests and ECGs are negative. She stated that in these cases, sudden death is an absolutely accepted presentation for some cardiac arrhythmias.¹⁴⁷⁶ Professor Vinuesa was asked by me whether this is in effect a process of inference, namely, that in the absence of any other explanation it is inferred that, if a particular patient or child died having similar associated variants to other children who had died, that patient or child also died as a result of the variant. She agreed that ultimately evidence might show the inference was right or wrong. She agreed that was a fair way of putting it, but noted that normally you would wait potentially for a second case with the identical variant, which might happen in 10 years or never and that is why we have the ACMG Guidelines to assess likelihood of pathogenicity.¹⁴⁷⁷

1121. Professor Vinuesa provided a slide presentation to the Inquiry¹⁴⁷⁸ which was somewhat similar, although not identical, to that given by Professors Toft Overgaard and Nyegaard. In those circumstances it is unnecessary to describe the presentation in detail but there are a number of matters of some importance which should be mentioned.
1122. Professor Vinuesa pointed out during the presentation that for the three CALM genes, there has been a total of 23 missense variants identified, six for CALM1, eight for CALM2 and nine for CALM3. She stated it was important to note that none have been classified as benign. She said this is one of the few genes in the genome that has not had a single benign or likely benign variant identified either in ClinVar or in gnomAD. Posing the question as to why there are so few CALM variants identified, she stated they are very small genes and do not tolerate substitution. She stated the problem with having so few variants is that it would be very difficult to find them in usual cohort analysis and it would take longer, sometimes decades, to find the same variant twice, so it is a criterion that is sometimes useful for pathogenicity.¹⁴⁷⁹
1123. Professor Vinuesa emphasised that, “we don’t know too much about G114R but from the little we know it’s proven to be one of the most intriguing and unique amino acids in calmodulin”.¹⁴⁸⁰ She noted that G114 is not only conserved in all vertebrates, it is conserved in all plants and it is conserved in yeast which she stated points to it

¹⁴⁷⁴ Exhibit 8-05, Further Report of Professor Peter Schwartz (22 December 2022) in response to the evidence of Professors Toft Overgaard and Nyegaard [red pagination 44].

¹⁴⁷⁵ Transcript of the 2022 Inquiry, 15 February 2023 T311.24-T312.5 (Vinuesa).

¹⁴⁷⁶ Transcript of the 2022 Inquiry, 15 February 2023 T312.14-T313.19 (Vinuesa).

¹⁴⁷⁷ Transcript of the 2022 Inquiry, 15 February 2023 T315.14-25 (Vinuesa).

¹⁴⁷⁸ Exhibit 5-11, PowerPoint slides displayed to Professor Vinuesa during her oral evidence on 15 February 2023.

¹⁴⁷⁹ Transcript of the 2022 Inquiry, 15 February 2023 T319.7-43 (Vinuesa).

¹⁴⁸⁰ Transcript of the 2022 Inquiry, 15 February 2023 T321.29-31 (Vinuesa).

being a critical amino acid for the protein's function. She referred to the work carried out by Weile et al in 2017¹⁴⁸¹ which concluded that Glycine 114 is one of only two amino acids that does not tolerate glycine being substituted by any of the other 19 amino acids. She stated that showed it is a very unique residue. Professor Vinuesa noted that CALM2 is one of the few genes associated with sudden death below two years old. She said it has been found both *de novo* and “now we know that 40% of the cases are inherited, not *de novo*.” She stated it has already been “shown to cause a spectrum of arrhythmias including Long QT Syndrome, IVF, CPVT... and now perhaps Brugada Syndrome...”¹⁴⁸²

1124. Professor Vinuesa stated that, in developing the phenotypic picture of the Folbigg family, she did not take into account the deaths of Caleb or Patrick. She agreed with Dr Arsov that it is not known at the present time whether there was a genetic cause for the boys' death but it may be known in the future.¹⁴⁸³
1125. Professor Vinuesa stated that in her view sudden unexplained death was a phenotype. She explained that, in the context of calmodulinopathy, sudden unexplained death can be the only presentation and in syndromes of proteins that interact with calmodulinopathy we know that sudden unexpected death is the only presentation. She emphasised there would not be ECG findings and there would not be prior warnings. Professor Vinuesa was referred to the statement by Dr Abrams that “sudden death alone in the absence of other clinical findings cannot be considered a phenotype because it is non-specific”. She stated she disagreed.¹⁴⁸⁴
1126. Professor Vinuesa was also asked whether, in assessing the pathogenicity of the CALM2-G114R variant, she had taken into account the two girls' deaths. She noted that sudden cardiac death was the starting phenotype. She was asked whether she accepted the criticism that it was not appropriate to take into account the death of the girls in assessing the pathogenicity of the variant. She rejected that, emphasising her view that sudden unexpected death is a phenotype.¹⁴⁸⁵ She rejected the criticism that involved circular reasoning stating that, “we had a starting phenotype because...[Ms Folbigg] detailed a recurrent history of syncope, which is within the spectrum of sudden unexpected death, and if we had to have any hypothesis from which to perform a genetic exercise, we had to come up with the most plausible phenotype”.¹⁴⁸⁶ She stated, “you can't do a genetic exercise without having a starting phenotype”.¹⁴⁸⁷ It was put to her by me that the criticism that was levelled against her approach is that you assume the cause of death is the genetic variant because the children have the genetic variant. Professor Vinuesa stated she understood that argument but said when you undertake a genetic exercise it is because you are considering there may be a genetic cause for those deaths and the most common cause of unexpected death is cardiac. She agreed she assumed that a cardiac-related issue was one of the two most common causes of sudden infant death. She described the phenotype ultimately as sudden unexpected death possibly from cardiac arrhythmia or from epilepsy.¹⁴⁸⁸

¹⁴⁸¹ Exhibit 15-173, Jochen Weile et al 'A Framework for Exhaustively Mapping Functional Missense Variants' (2017) 13(12) *Molecular Systems Biology* 1-17.

¹⁴⁸² Transcript of the 2022 Inquiry, 15 February 2023 T321.29-322.11 (Vinuesa).

¹⁴⁸³ Transcript of the 2022 Inquiry, 15 February 2023 T332.5-39 (Vinuesa).

¹⁴⁸⁴ Transcript of the 2022 Inquiry, 15 February 2023 T333.1-29 (Vinuesa).

¹⁴⁸⁵ Transcript of the 2022 Inquiry, 15 February 2023 T333.41-T334.35 (Vinuesa).

¹⁴⁸⁶ Transcript of the 2022 Inquiry, 15 February 2023 T335.20-24 (Vinuesa).

¹⁴⁸⁷ Transcript of the 2022 Inquiry, 15 February 2023 T335.24-25 (Vinuesa).

¹⁴⁸⁸ Transcript of the 2022 Inquiry, 15 February 2023 T333.41-336.35 (Vinuesa).

1127. Professor Vinuesa was asked whether, on the topic of any relevant interplay between myocarditis and the CALM2-G114R variant, she deferred to the views of a cardio-geneticist. She stated it was very well reported in the literature that 70% of cases of myocarditis cause a prolongation of the QT interval.¹⁴⁸⁹
1128. Professor Vinuesa was referred to her evidence about the sources of information she made reference to in relation to Ms Folbigg's phenotype. In answering that question she stated she was not qualified to talk about the significance of Ms Folbigg's syncope, and instead she deferred to cardiologists on that issue. She stated she was just detailing Ms Folbigg's recurrent history of syncope which appears quite common in the literature, and even a single syncope renders a patient eligible to be listed in the ICalmR. She was asked, just as she would defer to a cardiologist as to the significance or otherwise of that history of syncope, she would defer to a cardiologist as to whether Ms Folbigg is symptomatic of a calmodulinopathy. She agreed she would, absolutely.¹⁴⁹⁰
1129. Professor Vinuesa agreed that, in her joint report with Professor Cook and Dr Arsov of 25 October 2022, she expressed the view that Ms Folbigg's symptomology had little bearing on whether the CALM2-G114R variant is pathogenic by reference to concepts including variable expressivity and incomplete penetrance. She agreed that that accorded with the broader proposition that carrying a variant classified as pathogenic does not automatically mean it has or will cause a clinically manifest disease. She stated that is the position in relation to Ms Folbigg and was also the position in relation to Sarah and Laura.¹⁴⁹¹
1130. Professor Vinuesa was referred to the views expressed by Dr Abrams and Professor Wilde that there was a mismatch between the functional tests and the current state of knowledge about CPVT or mild LQTS, having regard to the circumstances of the girls' deaths. She was asked first whether she considered she had sufficient expertise to comment on that question. She stated that her expertise would be to say that we know very little about the spectrum. She noted the functional assays are informative. She stated that she thought there was sufficient information that the mutation is damaging, as it causes a phenotype within the spectrum of calmodulinopathy, and it is not reasonable to infer from this what the precise phenotype is going to be.¹⁴⁹² Professor Vinuesa agreed that the steps taken by Professor Wilde and Dr Abrams were, first, to point to the functional assay results as reported in the Brohus Article; and, second, to the current state of knowledge about the phenotypes which fall within the broad umbrella of calmodulinopathy: LQTS, IVF and CPVT. However, she stated that they have speculated in identifying a mismatch between the functional tests and the current state of knowledge about those phenotypes because without knowing the interactions, without being able to test the interactions between the channels, one cannot draw a conclusion about what the mutation could do. She said that is why you have to say that this variant is damaging to protein function and time will tell what the final phenotype is.¹⁴⁹³ Professor Vinuesa was asked by me whether it was right that she was saying that it was impossible to draw any inference as to what caused the deaths, and she reasoned that because the children had this variant, there is a possibility that in some way their deaths resulted from it. She said that was partially fair. She stated

¹⁴⁸⁹ Transcript of the 2022 Inquiry, 15 February 2023 T337.18-21 (Vinuesa).

¹⁴⁹⁰ Transcript of the 2022 Inquiry, 15 February 2023 T339.28-46 (Vinuesa).

¹⁴⁹¹ Transcript of the 2022 Inquiry, 15 February 2023 T339.48-T340.21 (Vinuesa).

¹⁴⁹² Transcript of the 2022 Inquiry, 15 February 2023 T342.27-T343.6 (Vinuesa).

¹⁴⁹³ Transcript of the 2022 Inquiry, 15 February 2023 T343.31-T344.11 (Vinuesa).

that there has never been a benign calmodulin mutation found to date and this one has been shown to be damaging by five assays. She stated, therefore, that the possibility was quite large that it crosses a phenotype in the spectrum of calmodulinopathies which we know very little about, but includes sudden death.¹⁴⁹⁴

1131. Counsel Assisting referred Professor Vinuesa to Professor Watkins' report (Professor Watkins and his report are described below from [1358]) which suggests the task being undertaken by himself, Professor Schwartz, Professor Wilde and Dr Abrams involves a matter of judgment rather than interpretation. She stated that she recalled that report. She was asked whether she agreed with Professor Watkins' comment that there was not enough data to confirm the variant was pathogenic. She stated she agreed with that. She also agreed with his view that, "It is plausible but not provable that the variant was responsible for the sudden deaths of Laura and Sarah Folbigg". Although, she also added that Professor Watkins made the point that "in a routine clinical setting, I would absolutely conclude that a variant in this gene with these characteristics was the likely explanation following a young sudden death with a negative autopsy".¹⁴⁹⁵

Professor Cook's evidence at the Inquiry

1132. Professor Cook was referred to the reports of Professors Schwartz, Toft Overgaard, Nyegaard, Guicheney, Wilde, Watkins and Doctors Abrams and MacRae and was asked, on matters specific to calmodulin or calmodulinopathy, whether he deferred to the more specialised expertise of that group. He said he did but would clarify the nature of the deferral. He referred to the fact that there were three layers of expertise involved. The first layer is cardiology, noting that any qualified cardiologist has a specialised area of knowledge in the diagnosis and treatment of diseases of the heart and vascular system. He stated the second layer concerns specific diseases that may be relevant to the cardiac system, and increasingly specific diseases can be defined according to the underlying genes, noting that calmodulinopathies might be a specific example. He stated the reason for the distinction is that when questions arise for clinicians, such as himself, who are not in that area, then the expertise we are seeking is that which comes from knowledge of the aggregated expertise of all cases of that rare disease which really only comes from having access to the largest possible cohort of that specific disorder. He stated he would put Professor Schwartz into that second category. He was asked where he would put Professors Toft Overgaard and Nyegaard, and stated that brought him to the third layer, which concerns not only the specific disorder but a specific allele, and Professors Toft Overgaard and Nyegaard fall into that category of expertise in the field of calmodulinopathies. Professor Cook emphasised his distinction was between the general expertise and the specific expertise that comes from understanding the current phenotypic spectrum of calmodulinopathies, which only comes from a detailed knowledge of the largest possible cohort of these disorders. He was asked whether, in circumstances where he had not undertaken research or aggregated specialised experience in the field of cardiac genetics, it follows that where views have been expressed that draw on such aggregated experience, he would defer to such views. He agreed he would within the constraints that he had explained.¹⁴⁹⁶
1133. Professor Cook agreed that he was a co-author of the Brohus Article, and his contribution related to the genetic findings and discussion about their significance.

¹⁴⁹⁴ Transcript of the 2022 Inquiry, 15 February 2023 T344.15-23 (Vinuesa).

¹⁴⁹⁵ Transcript of the 2022 Inquiry, 15 February 2023 T344.37-T345.1 (Vinuesa).

¹⁴⁹⁶ Transcript of the 2022 Inquiry, 15 February 2023 T365.27-367.9 (Cook).

He was referred to the prediction in the article that “the G114R and G114W variants are pathogenic and that carriers are therefore prone to cardiac arrhythmias of IVF or CPVT-like phenotypes with a potential component of mild LQTS”.¹⁴⁹⁷ He said that, as an author of the article, he considered that was a prediction that was available having regard to the results of the functional assays. Professor Cook was referred to the mismatch identified by Professor Wilde and Dr Abrams between that prediction and the circumstances of the deaths of Sarah and Laura. He stated that it followed from the description of his particular expertise that it was difficult for him to say with any authority whether that view was valid or not, but it also follows that he would take careful regard of the opinion of Professor Schwartz based on the importance of considering the full extent of phenotypic possibilities of calmodulinopathies and the best evidence at the moment is from the assembled cohort of calmodulinopathies.¹⁴⁹⁸

1134. Professor Cook, as with Professor Vinuesa, was referred to Professor Watkins’ observation that the role or potential role of the CALM2-G114R variant in the death of Sarah and Laura is one of judgment rather than interpretation, and that it was plausible but not provable that the variant was responsible for the sudden deaths of the two girls. He was asked whether he concurred with Professor Watkins’s description of the task required in terms of the question of whether the variant was responsible for the sudden death of Sarah and Laura. He stated he did because it “neatly summarises where we stand with genomics overall for many cases at the moment” and it explains “why so much effort is currently going in to try to resolve how to deal with uncertainty in this field”.¹⁴⁹⁹
1135. In that context, Professor Cook stated he did not disagree with the concerns raised by Professor Wilde and Dr Abrams because it is very difficult to disagree with the areas of speculation and areas of agreed uncertainty. He stated he thought it was more productive to concentrate on the positive evidence.¹⁵⁰⁰
1136. Professor Cook was asked whether he agreed with Dr Abrams about the need to robustly link genetic findings with concordant phenotype to infer causality. He said he did agree, but wished to put it in context by defining his understanding of phenotype. He explained that sudden death can be the outcome of the interplay between genetic variation and environment. He stated he considered sudden death alone as a phenotype. He agreed that it was non-specific in the sense that it is one of the phenotypes that has a broad genetic footprint, and one of the first tasks is to define what the genetic footprint might be and arrive at a list of genes by a consensus that could be considered the genetic footprint for sudden death. In giving that answer, Professor Cook was referring to the work done by the Sydney and Canberra teams in identifying the relevant genes to be tested for the purpose of the 2019 Inquiry (see [748]-[750] above).¹⁵⁰¹
1137. Professor Cook was referred to the report of Professors Kirk and Skinner of 31 October 2022 in which they stated the fact of Sarah and Laura’s deaths cannot be used as evidence in classifying the variant because to do so would be to commit

¹⁴⁹⁷ Exhibit 15-02, Malene Brohus et al, ‘Infanticide vs inherited cardiac arrhythmias’ (2020) 23 *Europace* 441, 449 [red pagination 19].

¹⁴⁹⁸ Transcript of the 2022 Inquiry, 15 February 2023 T367.42-368.22 (Cook).

¹⁴⁹⁹ Transcript of the 2022 Inquiry, 15 February 2023 T368.36-369.21 (Cook).

¹⁵⁰⁰ Transcript of the 2022 Inquiry, 15 February 2023 T370.1-6 (Cook).

¹⁵⁰¹ Transcript of the 2022 Inquiry, 15 February 2023 T371.4-25 (Cook).

the logical fallacy of circular reasoning.¹⁵⁰² That is, the children died because they had the variant and, therefore, the variant is pathogenic; and, because the variant is pathogenic, the children died because they had the variant. Professor Cook was asked whether he used the fact of the girls' deaths as evidence in classifying the variant. He stated that the criteria that was relied on was the functional assay, its absence from controls, the presence of this arginine substitution in the same code on that which has previously been reported to be pathogenic when a tryptophan substitution occurs, and that there is a low rate of benign missense variation, plus multiple lines of computational evidence. He stated that did not include the premature deaths of the children.¹⁵⁰³

1138. Professor Cook agreed that Ms Folbigg's symptomatology had little bearing on whether the variant is pathogenic. He stated Ms Folbigg's symptomatology goes to the application of the BS2 criterion in the ACMG Guidelines, stating that before one considers whether or not Ms Folbigg has a phenotype that might be compatible with calmodulinopathy, it is necessary to consider that criterion. He noted that this demands dealing with a disorder that is known to be penetrant at a young age, and based on other published evidence, including the Kato Article and Marsman Article, it is known that is not the case. He said in those circumstances it becomes academic, or even irrelevant, to consider whether or not Ms Folbigg has a phenotype that would be compatible with calmodulinopathy.¹⁵⁰⁴
1139. Professor Cook was referred to his ultimate conclusion that there was a reasonable possibility that the deaths of Sarah and Laura were caused by fatal cardiac arrhythmia attributable to the CALM2-G114R variant. He was asked what, if anything, caused him to come to that conclusion in circumstances where carriers of the variant can be asymptomatic and healthy. He stated he came back to his original task which was to examine those genomes or a variant that might account for what was otherwise a sudden unexplained death. He stated that, "We identified such a candidate and...the functional evidence is compelling." He stated that takes him to the extent of his expertise.¹⁵⁰⁵
1140. Professor Cook was referred to the statement in his conclusion that the number of cases of calmodulinopathy has increased revealing further variation in penetrance and expressivity.¹⁵⁰⁶ He stated that was his reference to the ICalmR. He was also referred to his statement that this means that the probability that calmodulinopathy was the cause of death in the children that carried this variant has increased and, conversely, he was not aware of any new evidence that argues against the conclusion that the variation is functional and damaging, and he was also not aware of any new evidence for an alternate explanation of death. He was asked if it was in those circumstances he expressed the view as to the possibility that the variant caused the death of the two girls. He stated he guessed there were two steps involved. The first was to assess the evidence in support of CALM2-G114R being a pathogenic variant and expressed the view that there had been a number of strands of evidence that collectively have contributed to that conclusion. He stated that,

¹⁵⁰² Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022), including answers to additional questions (1 November 2022) [red pagination 50].

¹⁵⁰³ Transcript of the 2022 Inquiry, 15 February 2023 T372.18-39 (Cook).

¹⁵⁰⁴ Transcript of the 2022 Inquiry, 15 February 2023 T372.47-373.6 (Cook).

¹⁵⁰⁵ Transcript of the 2022 Inquiry, 15 February 2023 T373.39-374.3 (Cook).

¹⁵⁰⁶ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) [red pagination 158].

having arrived at that conclusion, that this is a pathogenic variant, it follows that it is a reasonable explanation for the deaths.¹⁵⁰⁷

The reports and evidence of Professor Schwartz

1141. I have set out the qualifications of Professor Schwartz at [900] and I will not repeat them.
1142. Professor Schwartz provided five reports to the Inquiry. The first was dated 24 October 2022, and also contained an addendum dated 8 November 2022. The second, which was dated 22 December 2022, followed the provision to Professor Schwartz of the evidence of Professors Toft Overgaard and Nyegaard. The third, dated 24 January 2023, followed the provision to Professor Schwartz of the evidence of Professor Cordner, Professor Fleming, Dr Cala and Dr Orde. The fourth, dated 3 February 2023, followed the provision to Professor Schwartz of the evidence of Professor Wilde and Dr MacRae, whilst the fifth, dated 20 February 2023, provided information relating to the ICalmR.
1143. It is convenient to deal with the fifth report and the evidence given by Professor Schwartz concerning the establishment of the ICalmR prior to dealing with his other reports and the balance of his evidence before the Inquiry.

The evidence of Professor Schwartz concerning the ICalmR

1144. In his evidence before the Inquiry, Professor Schwartz indicated he was the creator of the ICalmR. He stated that in about 1977, in conjunction with his American partner, the late Dr Moss, he established an international registry to enable information concerning LQTS to be recorded. He stated that ICalmR has provided essential information regarding LQTS. He stated that:

What we did learn with that Registry was fundamental in suggesting there's a need to repeat something like that with calmodulinopathies because we were also facing a sort of a new disease that [was] apparently extremely rare, where there are very few cases were available... and we needed to place them all together in order to begin to understand the clinical history, the response to therapy and the natural cause.¹⁵⁰⁸

1145. Professor Schwartz stated the ICalmR published its first report in 2019, and submitted a further report for publication in mid-January 2023. He stated that the latest number of patients presently on the ICalmR is 134, although he believed the Registry actually had the data of around 139-140 patients. However, he stated the new manuscript submitted for publication will deal with 134 patients.¹⁵⁰⁹
1146. Professor Schwartz stated in his evidence that all the patients on the ICalmR have a calmodulin variant. He stated that is a prerequisite unless there is no DNA available. He stated that "If we have a sudden death in a family with the calmodulinopathy occurring below age 40 and there is no other explanation, then we assume that the sudden death was due to the same mechanism". He stated that is what is done traditionally in genetic diseases.¹⁵¹⁰
1147. Professor Schwartz was asked whether all patients on the ICalmR have

¹⁵⁰⁷ Transcript of the 2022 Inquiry, 15 February 2023 T374.15-38 (Cook).

¹⁵⁰⁸ Transcript of the 2022 Inquiry, 15 February 2023 T380.26-31 (Schwartz).

¹⁵⁰⁹ Transcript of the 2022 Inquiry, 15 February 2023 T380.15-381.35 (Schwartz).

¹⁵¹⁰ Transcript of the 2022 Inquiry, 15 February 2023 T381.37-43 (Schwartz).

demonstrated a phenotype of calmodulinopathy. He described it as an interesting question stating that “In our report [presumably the upcoming ICalmR report] we are now indicating that whereas there are phenotypes that one can appropriately label as similar to Long QT Syndrome or similar to CPVT, there is a growing number of cases where the variant associated is a... calmodulin variant. But the phenotype is mixed”. He stated, “There is a group that we now call ‘uncertain diagnosis’ and these two groups are accounting for 15% of the total.” However, he stated it is very difficult to decide if the patients or the victim had IVF, CPVT or CALM. He stated that “What we are learning by the new data coming in is that the picture is no more black and white than we initially thought”.¹⁵¹¹

1148. Professor Schwartz was asked whether there were any patients on the ICalmR who are asymptomatic. He said there was, stating that was absolutely normal in any genetic disorder. He stated, “if they have the genotype, that is the critical point to enter into the Registry...Then among patients in the same family, with the same mutation, you may have some with the phenotype and some without the phenotype.”¹⁵¹²
1149. In his report of 20 February 2023, Professor Schwartz answered a number of questions submitted to him by Counsel Assisting the Inquiry. He was first asked to give details of any cases in which children with CALM mutations have died during sleep without the LQTS phenotype. He stated that one CALM1 child died suddenly in his bed at age 2.5 years, with a *de novo* mutation, and no prior ECG or examination, therefore, classified as “uncertain diagnosis”. He stated that Sarah and Laura were the only non-mosaic family involved as “uncertain diagnosis”.¹⁵¹³
1150. In answer to the second question asked of him, he stated there was no sudden death during sleep in any CALM/CPVT cases.¹⁵¹⁴
1151. The third question asked of him was how many individual non-mosaic families were represented on the ICalmR. Professor Schwartz stated that cascade parental screening was performed in 73 of the 92 index cases and showed that in 84% the variant had not been inherited but was *de novo*. However, possible germline mosaicism was evaluated only in a minority of parents and was identified in three (4% of cases). He stated that in nine cases at least, one family member was found to carry the CALM variant identified in the index case.¹⁵¹⁵
1152. The fourth question asked of Professor Schwartz was how many non-mosaic families on the ICalmR either experienced a sudden death in childhood or a phenotype severe enough to occasion sudden death if not for intervention.¹⁵¹⁶
1153. Professor Schwartz stated there were nine non-mosaic CALM families (including the Folbigg family) in the ICalmR. He said among those nine, there is more than one family in which one or more family members experienced life threatening or fatal events at a young age including both CALM-LQTS families and families with a non-LQTS phenotype.¹⁵¹⁷

¹⁵¹¹ Transcript of the 2022 Inquiry, 15 February 2023 T382.1-382.14 (Schwartz).

¹⁵¹² Transcript of the 2022 Inquiry, 15 February 2023 T382.25-47 (Schwartz).

¹⁵¹³ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 75].

¹⁵¹⁴ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 75].

¹⁵¹⁵ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 75-76].

¹⁵¹⁶ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 76].

¹⁵¹⁷ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 76].

1154. The fifth question asked of him was that of the families in the ICalmR, how many have demonstrated variable expressivity spanning from severe to mild.¹⁵¹⁸
1155. Professor Schwartz identified eight families (not including the Folbigg family) on the ICalmR falling within this category. First was what he described as a multiple-generation CALM3-LQTS family with 14 affected subjects enrolled in the ICalmR. He stated six cases were symptomatic. He said of those, four experienced syncope with an age at onset ranging from birth up to 16 years. Two subjects died suddenly, one at age 14 months during a febrile episode, and the second occurred as a first event in a child aged eight years while running. He stated the remaining eight subjects were still asymptomatic.¹⁵¹⁹
1156. Professor Schwartz stated the second family was a multiple generation CALM family with a severe form of CPVT with documented ventricular arrhythmias. There were 13 affected subjects, all were symptomatic for repeated syncope occurring mostly during physical activity including swimming or stress at an age of onset from two up to 16 years. He said two were resuscitated from an episode of ventricular fibrillation and another two died suddenly at age 13-15 years.¹⁵²⁰
1157. The third family was a CALM1-IVF family with a history of sudden death without electrocardiograph or electrocardiographic abnormalities at rest. He stated two siblings died suddenly at the age of nine or 10 years and another two were resuscitated from out of hospital cardiac arrest at ages 10 and 16 years, respectively. He stated the variant was present in the mother and another sibling, both asymptomatic, and now aged 66 and 20 years, respectively.¹⁵²¹
1158. The fourth family, a CALM2-LQTS family, included a two year old child and a mother, both carriers of the CALM2 variant and both asymptomatic.¹⁵²²
1159. The fifth family, a CALM2-CPVT family, included a child with CPVT-like features and symptomatic for exercise induced syncopal episodes at age 16. The mother was asymptomatic.¹⁵²³
1160. The sixth family, a CALM3-CPVT family, included a daughter and mother who were carriers of the same variant. The daughter suffered multiple syncope during exertion, at the time requiring cardiopulmonary resuscitation from age 10-14. The mother reported fainting episodes in childhood and exercise-induced PVCs. He stated that both were asymptomatic during the past decades of their life.¹⁵²⁴
1161. The seventh family was a CALM2-LQTS family with a now three year old child, and his father the carrier of the same variant. The child was diagnosed with LQTS on the basis of a perinatal presentation. He was implanted with an ICD at four months given the obvious high risk for sudden death. He stated the father is asymptomatic with a normal ECG.¹⁵²⁵

¹⁵¹⁸ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 77-78].

¹⁵¹⁹ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 77-78].

¹⁵²⁰ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 77].

¹⁵²¹ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 77].

¹⁵²² Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 78].

¹⁵²³ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 78].

¹⁵²⁴ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 78].

¹⁵²⁵ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 78].

1162. In response to the sixth question, directly relating to this family above, he stated the index case was reported to the ICalmR by an expert professor in paediatric cardiology, along with a very detailed clinical history. He stated the ICalmR trusts the information received by experts willing to contribute.¹⁵²⁶
1163. The eighth family had what Professor Schwartz described as CALM2-LQTS/CPVT overlap. He stated the mother was initially diagnosed with LQTS, symptomatic for exercise-induced syncope at age 11. She had also suffered a cardiac arrest in childhood. She had a 10 year old asymptomatic daughter, with initial moderate QT prolongation and subsequent ventricular ectopy at treadmill test.¹⁵²⁷
1164. The ninth family was the Folbigg family.¹⁵²⁸
1165. The seventh question asked by Counsel Assisting was how many CALM cases have been identified in which a phenotype was initially identified as LQTS in an infant which normalised over time, either into no evidence of a disease or CPVT. Professor Schwartz stated that among the 10 cases with an overlap LQTS/CPVT phenotype, one was initially diagnosed with LQTS as an infant and the phenotype persisted over the time, until CPVT-like features emerged in the patient's twenties and since then coexisted.¹⁵²⁹
1166. The eighth question was, had there been any sudden deaths or aborted cardiac deaths under four years of age on the ICalmR not attributed to LQTS. Professor Schwartz stated that there were nine cases with a major arrhythmic event below four years of age, not attributed to LQTS.¹⁵³⁰
1167. The balance of this report dealt with matters not directly related to the ICalmR and to the extent relevant will be summarised below.

The report of Professor Schwartz dated 24 October 2022

1168. In responding to the question whether the same calmodulin mutation can be expressed or operate differently in different individuals, Professor Schwartz said that this is a basic concept in genetics. He stated the mutation is the same, but the genetic background is different amongst different individuals, even amongst siblings, and the children of a parent who was a carrier of a disease-causing mutation had their DNA resulting from a mixture of maternal and paternal DNA. He stated that is why it is so common that when we follow a child with symptoms we often find that the parent carrier of the same identical disease-causing mutation is asymptomatic. He also stated that different individuals are affected differently by extrinsic factors. Professor Schwartz explained that the overall risk of having a cardiac arrhythmia can differ between two individuals even if they have the same calmodulin mutation. He said that was partly for the reasons to which he referred but especially because the arrhythmic risk for a person with a disease causing mutation is modulated by modifier genes. He described these as common genetic variants with a modest or absent effect in healthy individuals but capable of either

¹⁵²⁶ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 79].

¹⁵²⁷ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 78].

¹⁵²⁸ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 78].

¹⁵²⁹ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 79].

¹⁵³⁰ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 79].

increasing or decreasing arrhythmic risk in individuals with a disease-causing mutation.¹⁵³¹

1169. Professor Schwartz was asked a number of questions concerning the limits to which use could be made of the ICalmR in assessing the significance of the CALM2-G114R variant in Sarah and Laura Folbigg. Somewhat unhelpfully, he described the question as unclear. He stated, however, that ICalmR provides extremely important and unique information to correctly assess whether the known phenotypes of Ms Folbigg, Sarah and Laura fit, or do not fit, with the most advanced knowledge of patients with calmodulin mutations. He stated there is no other source in the world containing more information on these patients.¹⁵³²
1170. In dealing with the Brohus Article, Professor Schwartz stated that, to his knowledge, there is no evidence to prove that the CALM2-G114R variant is likely to cause one phenotype in preference to others. He stated, however, that given the intermediate impact on calcium binding (compared to the full spectrum of arrhythmic calmodulin mutations), it is reasonable to suggest that the CALM2-G114R variant could likely cause mild to no observable LQTS but definitely cause a high risk of CPVT or IVF. He stated it is entirely possible that the CALM2-G114R variant could cause cardiac arrest during sleep.¹⁵³³
1171. Professor Schwartz stated that Ms Folbigg's history of syncope is not particularly relevant in assessing the significance of the CALM2-G114R variant in Sarah and Laura stating it was compatible with either LQTS or CPVT but proves nothing either way. He stated it is now evident that a mutation carrier may have a normal phenotype and be the parent of children with the same mutation but with quite serious clinical presentation.¹⁵³⁴
1172. In dealing with the location of the CALM2-G114R variant, Professor Schwartz stated the variant resides in the inter EF-hand 3-4 linker sequence introducing a novel missense change (G114R) at an amino acid residue where a different missense change (G114W), determined to be pathogenic, has been described before in the scientific literature.¹⁵³⁵
1173. Professor Schwartz was asked whether, in his view, there was a reasonable possibility, based on available medical and scientific information, that Sarah and/or Laura's death was caused by fatal cardiac arrhythmias attributable to the CALM2-G114R variant. He responded in the following terms:

This possibility is certainly reasonable. It is actually so likely that in any 'normal' context, when an infant or child who carries Long QT Syndrome or a CPVT or a Calmodulin mutation, dies suddenly – and the post-mortem excludes other causes of death – the diagnosis made without any doubt is 'sudden death due to LQTS, or CPVT, or CALM' and the story ends there.¹⁵³⁶

The addendum to Professor Schwartz's report dated 8 November 2022

1174. Professor Schwartz referred to updates to the ICalmR, compared to what was

¹⁵³¹ Exhibit 8-04, Report of Professor Peter Schwartz (24 October 2022) [red pagination 25-26].

¹⁵³² Exhibit 8-04, Report of Professor Peter Schwartz (24 October 2022) [red pagination 28].

¹⁵³³ Exhibit 8-04, Report of Professor Peter Schwartz (24 October 2022) [red pagination 29].

¹⁵³⁴ Exhibit 8-04, Report of Professor Peter Schwartz (24 October 2022) [red pagination 30].

¹⁵³⁵ Exhibit 8-04, Report of Professor Peter Schwartz (24 October 2022) [red pagination 31].

¹⁵³⁶ Exhibit 8-04, Report of Professor Peter Schwartz (24 October 2022) [red pagination 32].

reported in 2019. He stated that what made the current data so important is the fact that the emerging pattern of clinical counterpart for patients carrying the CALM mutation is much more complex and quite at variance with the initial data. He stated that whilst it initially appeared that almost all cases were *de novo* mutations and extremely few were familial cases, the new data showed quite a different pattern. He stated that looking at patients enrolled after the completion of the initial report, the CALM variant amongst the probands were *de novo* in 79% of cases, and amongst all patient carriers of a CALM mutation, the familial cases were up to 50%. He stated also that, amongst the CALM-LQTS cases where *de novo* cases represented 93% in the 2019 Report, the number is down to 87%.¹⁵³⁷

1175. Professor Schwartz stated that the implication of this changing pattern is of major conceptional importance for the Folbigg case. He noted that various experts have supported their views about the phenotype of Ms Folbigg, Sarah and Laura by “forcefully” stating that their clinical presentation would have represented outliers, would have been unlikely based on current knowledge and would have been in contrast with the rarity of familial cases. He expressed the new data as indicating that presumption was naïve. More moderately, he stated, it was based on the fact that all the opinions by the other respected experts were based on the data available to them which “unfortunately” no longer represented the reality.¹⁵³⁸
1176. Professor Schwartz stated there was a progressive picture emerging which pointed to the fact that, besides a number of typical LQTS and typical CPVT cases, they now see more and more cases where the phenotype is blunted. He referred to the Kato Article where a calmodulin mutation (N138K) was shown to have a severe impact on the voltage gated calcium channel Cav1.2 which would be expected to result in severe LQTS. He stated, however, that the calmodulin mutation also displayed an unexpected potentiation of the calmodulin regulated voltage gated potassium channel Kv7.1 which would shorten the QT-interval, and thus could explain the large variability in expressivity of LQTS in the described family.¹⁵³⁹
1177. He stated, in particular, that this updated information meant that certain statements in the report by Professors Skinner and Kirk dated 31 October 2022 required qualification. He referred to the following statement in that report:

When genetic variants are highly lethal at a young age and have high penetrance, it follows that individuals with those variants do not usually survive to reproductive age. The majority of cases of CPVT and long QT presenting with cardiac arrest or sudden death in very young children have a variant which is present in the affected person but is not present in either parent.¹⁵⁴⁰

1178. Professor Schwartz stated that the data from several thousand patients with LQTS, either present in the Moss-Schwartz Registry or in the large referral centres “such as mine”, do not support this statement. He stated that those registries have many families in which there has been an early sudden death or an early cardiac arrest with “an alive parent” carrying the same mutation. He again referred to the updated data stating that it is evident, as time goes by and as more patients with CALM mutations are identified, there is a decrease of the *de novo* cases and an increase

¹⁵³⁷ Exhibit 8-04, Report of Professor Peter Schwartz, Addendum (24 October 2022) [red pagination 38-3].

¹⁵³⁸ Exhibit 8-04, Report of Professor Peter Schwartz, Addendum (24 October 2022) [red pagination 38-4].

¹⁵³⁹ Exhibit 8-04, Report of Professor Peter Schwartz, Addendum (24 October 2022) [red pagination 38-5].

¹⁵⁴⁰ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 49].

of the familial cases. He said this implied the severity of the cases was decreasing and, in addition to lethal cases, there were progressively more less severe cases.¹⁵⁴¹

1179. Professor Schwartz also referred to the statement in the report of Professors Kirk and Skinner that the fact that Sarah and Laura were said to have died in their sleep would make a CPVT presentation remarkably unlikely as this presentation has never been seen previously to manifest during sleep or to present in children under two years of age during any activity.¹⁵⁴² Professor Schwartz pointed out that for many years sudden death during sleep was regarded as not fitting with LQTS and very unlikely; and, it was only time – and the identification of LQT3 – that provided the evidence and the explanation for these rare phenotypes. He stated that to exclude something that might happen simply because it has not been seen in a small initial number of cases is naïve.¹⁵⁴³

1180. Professor Schwartz also referred to Professors Kirk and Skinner’s comment that the family, referred to in the Kato Article, represents a very uncommon family, and is the first to be reported. He stated that Professors Kirk and Skinner dismiss instances that are “the first to be reported” without acknowledging that this is exactly the natural history of rare diseases. He said that, initially, only the most severe cases were reported and later, as more diagnoses were made, one encounters not so severe cases and then families with an intermediate or mild phenotype.¹⁵⁴⁴

1181. Professor Schwartz’s conclusion was in the following terms:

I have no idea about whether Mrs. Kathleen Folbigg has killed her children or not and –even though this is not a nice thing to say –to a certain extent, I don’t really care. This is not for me to say. What is for me is to say is what –in my opinion –are the legitimate conclusions based on science and on what we know, as of today, in relationship to the consequences of mutations on a Calmodulin gene.

On this basis, the deaths of Laura and Sarah Follbig [sic] are fully compatible with their *CALM* mutation. There is not a single scientific element to prove the contrary.

If an infant or a child dies suddenly, the post-mortem is negative, and a *CALM* mutation is found, the diagnosis would be ‘sudden cardiac death due to a Calmodulin mutation’. End of story.¹⁵⁴⁵ (underlining in original)

The report of Professor Schwartz dated 22 December 2022

1182. In this report, Professor Schwartz made a number of comments on the evidence of Professors Toft Overgaard and Nyegaard given at the Inquiry on 15 November 2022.

1183. He stated that, in general, he agreed with their evidence, but made a number of comments which are relevant.

1184. Professor Schwartz noted Professor Toft Overgaard’s comment that “the more severe the effect [of the variant] on calcium binding is, the more likely it seems that it’s a severe Long QT phenotype.”¹⁵⁴⁶ Professor Schwartz stated that was true but the analysis assumes that there is no interference with the direct effect of each

¹⁵⁴¹ Exhibit 8-04, Report of Professor Peter Schwartz, Addendum (24 October 2022) [red pagination 38-9 to 38-12].

¹⁵⁴² Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 51].

¹⁵⁴³ Exhibit 8-04, Report of Professor Peter Schwartz, Addendum (24 October 2022) [red pagination 38-13].

¹⁵⁴⁴ Exhibit 8-04, Report of Professor Peter Schwartz, Addendum (24 October 2022) [red pagination 38-14].

¹⁵⁴⁵ Exhibit 8-04, Report of Professor Peter Schwartz, Addendum (24 October 2022) [red pagination 38-14].

¹⁵⁴⁶ Transcript of the 2022 Inquiry, 15 November 2022 T103.31-32 (Toft Overgaard).

variant. He stated that the clinical reality is much more complex. He said that the existence of modifier genes implies that, according to chance, one individual with a given variant will have a phenotype directly caused by that variant, whereas another individual (for example, a sibling or parent with the CALM variant) could also have an additional variant acting as a modifier gene which reduces (or increases) the arrhythmic risk caused by the CALM mutation.¹⁵⁴⁷

1185. Professor Schwartz stated that he disagreed¹⁵⁴⁸ with Professor Toft Overgaard's comment that, so far as he was aware, the variant was not particularly associated with sudden death in infancy and childhood, as against other age categories.¹⁵⁴⁹

1186. Professor Schwartz noted that the recent data from the ICalmR showed that all 25 cases of sudden death occurred before the age of 16, at a mean age of five years.¹⁵⁵⁰

1187. Professor Schwartz was asked about the implications, if any, of Professors Toft Overgaard and Nyegaard's evidence for his assessment of the possible consequences of the variant for Ms Folbigg and her daughters, Sarah and Laura.¹⁵⁵¹

1188. Professor Schwartz stated that his views had not much changed. He stated:

Two girls carry a Calmodulin mutation that, based on everything that has been shown and that is known about Calmodulin, is pathogenic and they die suddenly in infancy. With a negative postmortem, every competent cardiologist would make the diagnosis of "sudden death due to a Calmodulinopathy."¹⁵⁵²

1189. He pointed out that the ICalmR currently has data on almost 140 patients and almost each week receives a new one. He stated that there was nothing in the facts surrounding Ms Folbigg and the two girls that is in contrast with what has been observed in the cohort of patients with CALM mutations, namely: carriers who reach adulthood and generate offspring, having modest or no symptoms; infants with clinical patterns varying between LQTS and CPVT; sudden deaths while awake and while asleep. He stated that it did not, of course, prove that the CALM mutations have caused the two sudden deaths, but, by the same token, it proves that the CALM mutations could have caused them.¹⁵⁵³

The report of Professor Schwartz dated 24 January 2023

1190. This report dealt with the evidence of Dr Cala, Professor Cordner, Dr Orde and Professor Fleming, none of whom gave evidence in the area of Professor Schwartz's expertise. He described the report as "an informal review" (underlining in original).¹⁵⁵⁴

1191. The report criticises Dr Cala in what can only be described as intemperate terms.

¹⁵⁴⁷ Exhibit 8-05, Further Report of Professor Peter Schwartz (22 December 2022), in response to the evidence of Professors Toft Overgaard and Nyegaard [red pagination 44].

¹⁵⁴⁸ Exhibit 8-05, Further Report of Professor Peter Schwartz (22 December 2022), in response to the evidence of Professors Toft Overgaard and Nyegaard [red pagination 46].

¹⁵⁴⁹ Transcript of the 2022 Inquiry, 15 November 2022 T146.33-36 (Toft Overgaard).

¹⁵⁵⁰ Exhibit 8-05, Further Report of Professor Peter Schwartz (22 December 2022), in response to the evidence of Professors Toft Overgaard and Nyegaard [red pagination 46].

¹⁵⁵¹ Exhibit 8-05, Further Report of Professor Peter Schwartz (22 December 2022), in response to the evidence of Professors Toft Overgaard and Nyegaard [red pagination 47].

¹⁵⁵² Exhibit 8-05, Further Report of Professor Peter Schwartz (22 December 2022), in response to the evidence of Professors Toft Overgaard and Nyegaard [red pagination 47].

¹⁵⁵³ Exhibit 8-05, Further Report of Professor Peter Schwartz (22 December 2022), in response to the evidence of Professors Toft Overgaard and Nyegaard [red pagination 48].

¹⁵⁵⁴ Exhibit 8-06, Further Report of Professor Peter Schwartz (24 January 2023) [red pagination 53].

Professor Schwartz begins the report stating that when an invited reviewer “sends his/her review of a manuscript and there is clear evidence for glaring hostile bias, we simply disqualify the reviewer and ignore the comments and recommendations.”¹⁵⁵⁵

1192. In referring to Dr Cala’s comments on the Brohus Article, Professor Schwartz stated what Dr Cala had done was uncommon noting that, before entering into any serious analysis of the facts, he criticised even the title of the Brohus Article and questioned the possible motives behind the study they had performed and behind the opinions expressed. He stated that Dr Cala went so far as to imply that Europace was a disreputable scientific journal because it published the article. He stated that, further down in his opinion, Dr Cala “loses self-control and criticises even our language”. Professor Schwartz states in the report that he has “no interest of entering in a discussion with Dr Cala about these issues, and no desire to waste my time. He can keep his opinions.”¹⁵⁵⁶ He ends discussion of Dr Cala’s criticism of the Brohus Article with a quotation from Professor Peter Froggatt who, when commenting on the problems generated in SIDS research by the presence of investigators with quite different levels of scientific expertise, stated, “The theories of the accredited scientist and of the quack are alike to the eyes of the gullible beholders”.¹⁵⁵⁷ It is correct that Dr Cala does criticise the title of the Brohus Article and at least implicitly criticises the motivation behind it. It is only necessary at this stage to note, “This article is quite unique. I have never previously read an article in any reputable science or medical journal which names affected individuals in the manner taken in the Brohus Article”.¹⁵⁵⁸
1193. Ultimately, Dr Cala’s comments on the Brohus Article and Professor Schwartz’s report provide no assistance to me. In truth, they generate more heat than light. However, the intemperance of Professor Schwartz’s criticisms, as shown in that report, is something that needs to be considered to determine the overall reliability of his evidence. I deal with this below.

The report of Professor Schwartz dated 3 February 2023

1194. Once again, Professor Schwartz acknowledges that he was not requested to provide this report. However, he stated he believed some qualifications on the reports of Professor Wilde and Dr MacRae were necessary.¹⁵⁵⁹
1195. Professor Schwartz referred to Professor Wilde’s comment on Professors Toft Overgaard and Nyegaard response, in their initial report, to question 20 asked of them, “Are there examples of other families like the Folbigg family where people in the family are affected differently by the same mutation?” Professors Toft Overgaard and Nyegaard answered this question in the affirmative referring to a family where the CALM3-G114W variant was identified with a non-affected mother carrying the variant, while her two children experienced cardiac arrest and sudden cardiac death. Professor Wilde stated that what was not mentioned is that the mother was a mosaic from the variant which meant the variant is not present in the heart at all. Professor Wilde stated mosaicism has been shown to be very unlikely in the Folbigg family.¹⁵⁶⁰

¹⁵⁵⁵ Exhibit 8-06, Further Report of Professor Peter Schwartz (24 January 2023) [red pagination 54].

¹⁵⁵⁶ Exhibit 8-06, Further Report of Professor Peter Schwartz (24 January 2023) [red pagination 54].

¹⁵⁵⁷ P Froggatt, ‘A cardiac cause in cot death: a discarded hypothesis?’ (1977) 70 *Irish Medical Journal* 408-414.

¹⁵⁵⁸ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 51].

¹⁵⁵⁹ Exhibit 8-07, Further Report of Professor Peter Schwartz (3 February 2023) [red pagination 60].

¹⁵⁶⁰ Exhibit 8-07, Further Report of Professor Peter Schwartz (3 February 2023) [red pagination 60].

1196. Professor Schwartz commented that there was no need to invoke mosaicism to explain different phenotypes with the same mutation. He stated this is perfectly explained by the presence of modifier genes.¹⁵⁶¹
1197. In so far as Dr MacRae's report was concerned, Professor Schwartz referred to the comment that it was entirely possible that "the overall risk of having a cardiac arrhythmia can differ between two individuals even if they have the same calmodulin mutation...but to date [this] has not been convincingly demonstrated".¹⁵⁶² Professor Schwartz stated the statement is simply wrong. He stated the updated ICalmR, with data on 134 patients, had shown this to be entirely possible.¹⁵⁶³
1198. Professor Schwartz also referred to the statement by Dr MacRae that, in his opinion, there was no genetic, basic science or clinical evidence presented that would support the identified variants as causal in the death of the Folbigg children and that even if the CALM2 were pathogenic and causal, the *a priori* likelihood that all of the events in the family occurred by chance alone remained extremely low.¹⁵⁶⁴ Professor Schwartz referred to the Floyd Article, co-authored by Dr MacRae which in preprint stated, "A recent striking impact of genetic diagnosis in casting doubt on an infanticide conviction is just one example of this, where the map we use here predicts a high likelihood of pathogenicity for a CALM2 VUS found in the associated cardiac arrests".¹⁵⁶⁵ Professor Schwartz noted that the article referred to was the Brohus Article.¹⁵⁶⁶

The report of Professor Schwartz dated 20 February 2023

1199. I have set out the relevant portions of this report in so far as it concerns ICalmR. In the subsequent portion of his report, Professor Schwartz referred to the finding of Professor Skinner that during the recovery phase of an exercise stress test, Ms Folbigg had shown a marked prolongation of the QT interval. He stated this finding, in association with others such as syncope associated with physical or emotional stress, contributes towards a diagnosis of LQTS, thus its presence is very important. Professor Schwartz stated this is an indication that, besides aspects pointing toward CPVT, Ms Folbigg also manifests abnormalities typical of LQTS. He stated the only rational conclusion would be that Ms Folbigg's phenotype was exactly that of a CALM-LQTS/CPVT overlap.¹⁵⁶⁷
1200. In his conclusion, Professor Schwartz stated that "The presence of the Calmodulin mutation G114R is sufficient to explain the occurrence of sudden death, once other causes have been excluded, as clearly stated by the world leading authority in the field, Professor Peter Fleming".¹⁵⁶⁸ This is presumably a reference to the view expressed by Professor Fleming in his report that smothering is not an explicable cause of death for all four children. It is, of course, dependent on my conclusion as to whether that opinion is correct.
1201. Professor Schwartz also noted the significance, in his view, of the results of a recent

¹⁵⁶¹ Exhibit 8-07, Further Report of Professor Peter Schwartz (3 February 2023) [red pagination 60].

¹⁵⁶² Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 34].

¹⁵⁶³ Exhibit 8-07, Further Report of Professor Peter Schwartz (3 February 2023) [red pagination 62].

¹⁵⁶⁴ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 50].

¹⁵⁶⁵ Exhibit 15-17, Brendan J. Floyd et al, 'Proactive variant effect mapping to accelerate genetic diagnosis for pediatric cardiac arrest' 2022 *Preprints* [red pagination 217].

¹⁵⁶⁶ Exhibit 8-07, Further Report of Professor Peter Schwartz (3 February 2023) [red pagination 63].

¹⁵⁶⁷ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 82].

¹⁵⁶⁸ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 86].

review of the Folbigg genomes for possible modifier genes. This review, conducted by Professors Vinuesa and Cook (as described above at [1105]) at his suggestion, identified that all four children carried a REM2 variant, which Ms Folbigg did not. Professor Schwartz explained that this variant, which appears in 15-20% of the population, has been shown to increase calcium current and play a detrimental arrhythmogenic role in LQTS patients. He speculated that the combination of CALM2-G114R and this REM2 variant may account for the different phenotypes of Ms Folbigg and Sarah and Laura, and for the “mismatch” between the phenotype predicted by the Brohus article results and the death of the two girls while asleep. As noted above, in their oral evidence to the Inquiry, Professors Vinuesa and Cook noted that this presented a potential area for further study, but that it was premature to comment on whether REM2 was in fact a modifying variant in this context.¹⁵⁶⁹

1202. Professor Schwartz also concluded that the co-existence of a largely asymptomatic mother with infants who died suddenly, all carrying the same genetic variant, is not at all rare in diseases such as LQTS. He repeated that the explanation for the phenotypic difference, also referred to as variable expressivity, usually depends on the presence of modifier genes.¹⁵⁷⁰

The evidence of Professor Schwartz at the Inquiry

1203. I have already set out the evidence of Professor Schwartz concerning the ICalmR (see above at [1144]-[1148]). Subsequent to giving that evidence, he was asked whether he regarded it as dangerous to speak about whether the known phenotypes of Ms Folbigg, Sarah and Laura fit, or do not fit, with what was contained in the ICalmR. He stated there was nothing special about them except that two girls were found suddenly dead and they carry a calmodulin mutation, the same mutation found in the mother and, as far as he knew, based on the Professor Fleming’s report, there were no other signs of their cause of death. He stated under these circumstances anyone with experience in this disorder will assume that it is the genetic variant that has caused the death.¹⁵⁷¹ Ultimately, he stated that, when he said the variant was “sufficient to explain” the deaths of the two girls, that is not to say it “demonstrated that it caused the deaths”, but it unquestionably raises reasonable doubt.¹⁵⁷²
1204. Professor Schwartz was referred to his comments on the Kato Article, particularly that N138K had an impairing effect on the binding of calcium but potentiates potassium, which acted almost as a modifying gene influencing the clinical impact in a direction opposite to that expected, producing mild clinical phenotypes. He agreed that there was the same potential with the CALM2-G114R variant. He was asked whether he took that possibility into account in relation to the CALM2-G114R variant and whether it followed that it might be erroneous to conclude that Sarah and Laura died as a result of the variant. In response, he stated that he thought it was a very naïve approach to attempt to predict the phenotype simply based on the presence of a variant. He said in some cases it works and some it does not and that is common experience with LQTS over the last 50 years. He emphasised that he had no idea what the actual causes of death were for the girls but, in his opinion, the presence of the mutation was a very valid explanation. He said, absent a clear cause of death, then the presence of the mutation is a fully valid explanation and is one that should be medically accepted. He accepted that he had proceeded in reliance

¹⁵⁶⁹ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 84-85].

¹⁵⁷⁰ Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 86].

¹⁵⁷¹ Transcript of the 2022 Inquiry, 15 February 2023 T385.15-24 (Schwartz).

¹⁵⁷² Exhibit 8-08, Further Report of Professor Peter Schwartz (20 February 2023) [red pagination 87].

on Professor Fleming, among others, to say there is no other identifiable cause of death other than arising from the existence of this mutation.¹⁵⁷³

1205. It is unnecessary to deal further with the oral evidence of Professor Schwartz. However, it must be said, in some cases, his answers were non-responsive to the questions and in a number of cases, rather than directly responding, he tended to give lengthy answers referring back to the opinions he previously expressed rather than focusing on the question. I will deal with this in considering the reliability of the evidence given by Professor Schwartz.

The reports of Professors Kirk and Skinner and the evidence of Professor Kirk at the Inquiry

1206. Professors Kirk and Skinner provided a joint report to the Inquiry dated 31 October 2022, and two addenda, the first dated 1 November 2022 and the second dated 9 November 2022.
1207. In addition, Professor Kirk provided a separate report dated 15 January 2023 in response to the evidence of Professors Toft Overgaard and Nyegaard. Professor Kirk gave evidence at the Inquiry but Professor Skinner, unfortunately, and through no fault of his own, was unable to do so.
1208. Professor Skinner is a paediatric cardiologist and electrophysiologist at the Sydney Children's Hospital Network. He graduated in medicine in 1982, was made a fellow of the Royal Australian College of Paediatrics in 2002. He was the Honorary Professor of Paediatrics, Child and Youth Health at the University of Auckland, having been appointed to that position in 2016. Since 2008 he has been an Honorary Associate Professor at the University of Auckland.¹⁵⁷⁴
1209. Professor Kirk is a genetic pathologist, clinical geneticist and metabolic specialist. He is the Senior Staff Specialist (Clinical Genetics) at the Sydney Children's Hospital and the Senior Staff Specialist (Genetic Pathology) at NSW Health Pathology. He is the Conjoint Professor at the School of Women and Children's Health at the University of New South Wales, having held that position since 2017.¹⁵⁷⁵ Professor Kirk received a Member of the Order of Australia in January 2023 for significant service to genetic pathology and clinical genetics, and to medical research.¹⁵⁷⁶

The joint report of Professors Kirk and Skinner dated 31 October 2022

1210. At the outset of their report, Professors Kirk and Skinner discussed the ACMG Guidelines noting that classification system was under further development at the time of their report. I have covered most of what they set out in that area above. However, it should be pointed out that they stated that variants that have some evidence for pathogenicity, but insufficient to reach the 90% threshold, or for which there is conflicting evidence, are categorised as VUS. Emphasising the clinical purpose of the test, they stated that testing for VUS in a family member to see if they have a condition is not acceptable because there is a considerable chance

¹⁵⁷³ Transcript of the 2022 Inquiry, 15 February 2023 T386.43-388.39 (Schwartz).

¹⁵⁷⁴ Exhibit 2-Y, Report of Professor Jonathan Skinner (31 March 2019) [red pagination 5148-5149]; Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 47].

¹⁵⁷⁵ Exhibit 7-04, Report of Professor Edwin Kirk (15 January 2023), Curriculum Vitae of Professor Edwin Kirk [red pagination 74]; Transcript of the 2022 Inquiry, 16 February 2023 T402.18-21 (Kirk).

¹⁵⁷⁶ "Member (AM) in the General Division of the Order of Australia", The Governor-General of the Commonwealth of Australia: Australia Day 2023 Honours List (Web Page), 26 January 2023), <gg.gov.au/Australia-day-2023-honours-list>.

the variant has no connection with the disease. They pointed out clearly that VUS are not all equal; there are some for which there is significant evidence pointing to pathogenicity but not reaching the 90% threshold, others for which there is limited evidence which may be conflicting and others for which there is some evidence that they may be benign but not sufficient for classification as likely benign. They emphasised that a threshold of 90% confidence has been considered acceptable for medical decision making but it is not a legal standard.¹⁵⁷⁷

1211. Professors Kirk and Skinner stated their report describes the basis for their current classification of the CALM2-G114R variant based on their best assessment of the evidence available to date. They emphasised that it is possible that others could reach a different classification based on the same evidence or that new evidence may become available which would change their classification.¹⁵⁷⁸
1212. Professors Kirk and Skinner stated that when variants are highly lethal at a young age and have high penetrance, it follows that individuals with those variants do not usually survive to reproductive age. They stated the majority of cases of CPVT and LQTS presenting with cardiac arrest or sudden death in very young children have a variant which is present in the affected person, but not present in either parent – *de novo* variants. They referred to mosaicism as an exception.¹⁵⁷⁹
1213. Professors Kirk and Skinner stated that that meant, as there is no evidence that Ms Folbigg is mosaic of the CALM2-G114R variant found in Sarah and Laura, it is a matter of importance in classifying the variant. They stated the fact Ms Folbigg is alive and has not had a cardiac arrest reduces the likelihood that the variant is pathogenic.¹⁵⁸⁰
1214. Professors Kirk and Skinner stated that the only reason for thinking that the cause of death was an arrhythmia, as opposed to any other possible cause, was the finding of the CALM2-G114R variant in Sarah and Laura. They stated that fact cannot be used as evidence in classifying the variant because to do so would be to commit the logical fallacy of circular reasoning, explaining that involved reasoning from the fact that the children died because they had the variant, to the conclusion that the variant is pathogenic and then reasoning because the variant was pathogenic, the children died because they had it. I have already referred to the examination of Professors Vinuesa and Cook on this issue.¹⁵⁸¹
1215. Professors Kirk and Skinner stated that calmodulin gene mutations are a very rare cause of LQTS, and cases tend to be very severe. They stated that death during sleep due to calmodulin related LQTS has been described in children under two years of age, and when documented prior to death, the QT interval has been very long and T waves on the ECGs look severely abnormal.¹⁵⁸²
1216. Professors Kirk and Skinner referred to the fact that Professor Schwartz's letter to the 2019 Inquiry¹⁵⁸³ and the subsequent Brohus Article suggested that CPVT was not adequately considered in the previous Inquiry and the *in vitro* assessment

¹⁵⁷⁷ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 47-48].

¹⁵⁷⁸ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 48].

¹⁵⁷⁹ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 48].

¹⁵⁸⁰ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 49].

¹⁵⁸¹ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 50].

¹⁵⁸² Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 50].

¹⁵⁸³ Exhibit 2-BT, Letter from Professor Peter Schwartz to Professor Carola Vinuesa (20 June 2019).

performed later suggested that a CPVT type of presentation would be expected. They stated the fact that Sarah and Laura were said to have died during their sleep would make this presentation remarkably unlikely. They stated that CPVT, as far as they could find, had never been seen previously to manifest during sleep, or to present at this age (under two years of age) during any activity.¹⁵⁸⁴ As pointed out above, Professor Schwartz strongly disagreed with this analysis, describing it as “naïve” (see [1179] above).¹⁵⁸⁵ Professors Kirk and Skinner summarised data taken from the Brohus Article, the Crotti Article and the Kato Article. They stated it showed that calmodulin disease can be associated with sudden death during sleep in children less than two years of age, but suggested that if sudden death of a child less than two years of age is caused by a defective calmodulin gene, the clinical phenotype is LQTS, not CPVT and not VF.¹⁵⁸⁶ Professors Kirk and Skinner referred to the fact that the only ECG they were able to find was a single lead rhythm strip taken at the time of the sleep study on Laura when she was four months of age. Professor Skinner stated the measurements (which were normal) are not reliable and may report shorter values than the true value. He said the QTc could be longer, in other words, possibly consistent with some QT prolongation. Professor Skinner thus concluded that the ECG cannot be used to exclude LQTS in Laura, nor to diagnose it. He stated, however, it did not show the gross QT prolongation typical of a CALM LQTS associated with death in infancy.¹⁵⁸⁷

1217. Professors Kirk and Skinner stated that both LQTS and CPVT can present with recurrent loss of consciousness (syncope), or cardiac arrest and sudden death most typically, but not universally, during exercise or excitement. They referred to the fact that Ms Folbigg had cardiac investigations, including two exercise tests, which did not identify definitive abnormalities. They stated it could be argued that the presence of some ventricular ectopic beats in the ECG could represent features of CPVT, noting that Professor Wilde (who they described as an internationally respected authority on CPVT) stated the exercise test is compatible with a CPVT phenotype. However, they stated that CPVT would not fit with sudden death in children under the age of two years, particularly during sleep. They concluded that it was possible that Ms Folbigg had a partially concealed CPVT phenotype but it is also possible that she does not.¹⁵⁸⁸
1218. Professors Kirk and Skinner referred to the functional assays in the Brohus Article, described by Professor Toft Overgaard in his evidence. Whilst acknowledging the expertise of the scientists who performed the work, they stated it was important to note that these are single cell assays and the relationship of a finding in such an artificial system, so far from the complex physiological system of a complete human, must always be interpreted with caution. They stated that for a functional assay to be applied as a diagnostic test, it was necessary to have defined thresholds for calling the result abnormal and evidence regarding the probability of false positive results. They said, taking those issues into account, the ClinGen Group provided criteria for assessing the strength of evidence of functional data that had not been validated to a diagnostic standard. They noted the Group’s recommendations included consideration of the inclusion of benign as well as pathogenic variants. They stated that, while the calmodulin genes are generally intolerant of variation,

¹⁵⁸⁴ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 51].

¹⁵⁸⁵ Exhibit 8-04, Report of Professor Peter Schwartz, Addendum (24 October 2022) [red pagination 38-4].

¹⁵⁸⁶ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 51-52].

¹⁵⁸⁷ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 52-53].

¹⁵⁸⁸ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 53-54].

and there are comparatively few benign variants in the gene, they could not find evidence that the same type of studies had been performed on benign variants.¹⁵⁸⁹

1219. Professors Kirk and Skinner then considered the various categories in the ACMG Guidelines. They stated there were multiple lines of evidence supporting pathogenicity of the variant under the ACMG Guidelines for combining evidence. They stated that, if that was the totality of the evidence, it would reach the threshold for classification as likely pathogenic. They said, however, the key piece of information that raises doubt regarding the pathogenicity is that Ms Folbigg has the variant, is in her fifties and it is unclear if she is affected. They stated they had not identified any published descriptions of families in which an unaffected parent, with normal cardiac investigations, had a child who had sufficiently severe LQTS to cause death in infancy. Combining the BS2 criteria in the ACMG Guidelines (which is observed in a healthy adult individual for a dominant disorder with full penetrance expected at early age), they opined that the evidence in favour of pathogenicity results in a classification of the CALM2-G114R variant as a VUS. They stated, however, that an assessment that Ms Folbigg is definitely affected by calmodulin disease would mean that the variant would be classified as likely pathogenic. They emphasised again that their methodology may not be the appropriate standard to apply for legal decision making and that it is not making an assertion that the variant is benign or, of itself, a statement that the variant was not responsible for the deaths of Sarah and Laura. They stated, rather, it is an expression of uncertainty which could potentially be resolved, in either direction, by the accumulation of additional evidence.¹⁵⁹⁰
1220. Professors Kirk and Skinner were then posed the question, on the assumption that the variant was pathogenic, whether they could be confident it was not the cause of death for Sarah and Laura. They stated for the variant to be included as a possible cause of the two deaths, they would have to accept that Ms Folbigg does indeed have evidence of CALM disease in the form of a partially concealed CPVT phenotype; and, that either CPVT was indeed the cause of the two children's deaths, even though this has not been described before at this age, nor during sleep; or, that both children had severe LQTS whilst their mother had CPVT and no evidence of LQTS, despite having the same genetic variant.¹⁵⁹¹
1221. They stated that if they accepted that CPVT is inconsistent with death at this age, then both children would need to have had lethal LQTS causing their deaths, and be the first cases of death at 10 months and 18 months ever reported where the variant was neither *de novo*, nor passed on by a parental mosaic carrier, nor passed on by a parent with phenotypic evidence of LQTS.¹⁵⁹²
1222. Professors Kirk and Skinner referred to the Kato Article and noted it set the precedent that variable expression bordering on incomplete penetrance can, albeit to date in one unique family, occur with a LQTS phenotype. They stated that against this is the fact the paper did not demonstrate absence of phenotype. They stated the ECGs were not normal in N138K variant carriers, and that the paper was weakened by the absence of repeated ECGs and exercise testing data in borderline cases which would likely manifest the QT abnormalities more overtly. They noted

¹⁵⁸⁹ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 54].

¹⁵⁹⁰ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 56-57].

¹⁵⁹¹ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 57-58].

¹⁵⁹² Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 58].

that Ms Folbigg had had normal 12 lead ECGs and does not have the ECG features of LQTS, unlike the asymptomatic calmodulin variant carriers in the Kato Article.¹⁵⁹³

1223. In the first addendum to their report dated 1 November 2022, Professors Kirk and Skinner stated that, overall, in clinical series of children with myocarditis, death from heart rhythm disorders is uncommon and usually occurs in the context of a child who is very systemically unwell with florid features of viral disease. They stated, however, in those who are the sickest, who are generally systemically very unwell and require admission to hospital, cardiac arrest may occur in a large proportion. They stated that, although they were not aware of any evidence, it would seem likely that the combination of myocarditis with a calmodulinopathy would be dangerous. They stated that the authors of a case report where a three year old child presented with CPVT and where viral DNA was found in a cardiac biopsy, suggested myocarditis may have been a trigger for an arrhythmia, although this was very speculative.¹⁵⁹⁴
1224. In a further report dated 15 January 2023 Professor Kirk made some comments in response to the evidence of Professors Toft Overgaard and Nyegaard. He agreed that the ACMG Guidelines are intended for application in clinical diagnostic testing, and may or may not be relevant in a legal setting. He stated the standards for diagnostic testing are quite stringent, with good reason – relating to the history of misclassification of genetic variants, with potentially serious consequences for patients. However, he would take issue with Professor Nyegaard’s statement that the ACMG Guidelines are used for “searching for those variants that are already known to be pathogenic”.¹⁵⁹⁵ He stated that was incorrect and, in fact, the opposite was true. He stated that a complex classification system is not needed to determine whether a variant that is already known to be pathogenic is pathogenic, or whether a variant that is known to be benign is benign. He stated the ACMG Guidelines were developed with the sole aim of providing a consistent basis for classifying variants that do not yet have a firmly established status.¹⁵⁹⁶

Professor Kirk’s evidence at the Inquiry

1225. Professor Kirk stated that he had been involved in cardiac genetics for a long time. He stated that, from a research point of view, his research had not included direct research into cardiomyopathies or LQTS. He stated, in a clinical sense, he does see patients and although he is based at the Sydney Children’s Hospital as a clinical geneticist, he sees adults as well. He said he did see patients with cardiomyopathies and LQTS but not in very large numbers. He stated that, from a laboratory point of view, he has been involved in classifying and reporting cardiac genetic variants since around 2016. He stated he would not consider himself an expert specifically in calmodulin or calmodulinopathies.¹⁵⁹⁷
1226. In dealing with the ACMG Guidelines, Professor Kirk agreed there was a very

¹⁵⁹³ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 60].

¹⁵⁹⁴ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022), including answers to additional questions (1 November 2022) [red pagination 63-64]; Exhibit 15-89, Joseph Casadonte et al, ‘Risk Factors for Cardiac Arrest or Mechanical Circulatory Support in Children with Fulminant Myocarditis’ (2017) 38(1) *Pediatric Cardiology* 128-34; Exhibit 15-90, Randall Bryant et al, ‘Catecholaminergic Polymorphic Ventricular Tachycardia in a 3-Year-Old with Occult Myocarditis’ (2002) 25(10) *Journal of Pacing and Clinical Electrophysiology* 1520-1523.

¹⁵⁹⁵ Transcript of the 2022 Inquiry, 15 November 2022 T157.12-13 (Nyegaard).

¹⁵⁹⁶ Exhibit 7-03, Addendum to Report of Professors Edwin Kirk and Jonathan Skinner (9 November 2022) [red pagination 72].

¹⁵⁹⁷ Transcript of the 2022 Inquiry, 16 February 2023 T403.15-T404.11 (Kirk).

significant margin of error between what is on the borderline of likely pathogenic and VUS. He stated that is part of the reason that even by applying the same criteria, different experts using the same information may come up with a different answer. He agreed that there is still an element of judgment stating that it is not going to go away in the near future.¹⁵⁹⁸

1227. Professor Kirk was asked questions concerning Professor Watkins's report. He was referred to the following statement by Professor Watkins in his report:

"The genome sequencing was done to look for a possible genetic explanation for sudden death in the Folbigg infants. I believe that the *a priori* chance that a pathogenic or likely pathogenic variant would be identified in one of the small number of genes associated with sudden death under the age of two is low."¹⁵⁹⁹

Professor Kirk said he agreed with that comment. He stated he understood Professor Watkins to say that if you have a pathogenic or likely pathogenic variant in the context of sudden deaths, it is unlikely to be a coincidence. He accepted Professor Watkins does not engage in circular reasoning because he was not referring to pathogenicity but to the likelihood that it was causal if the variant was classified as pathogenic or likely pathogenic.¹⁶⁰⁰

1228. Professor Kirk was asked by me to assume that a person has died and a clinical cause of death cannot be identified but the person has a variant which has been classified as a VUS. He was asked, on that assumption, would he dismiss that variant, absent any other evidence, as a possible reason for the sudden death. He responded in the following terms:

Oh goodness, no, no. Uncertain means exactly that, it means we're uncertain and our degree of uncertainty, as I said before, varies. No; to classify a variant as a VUS is by no means to dismiss it as a possible cause."¹⁶⁰¹

1229. Professor Kirk stated there were two things that could move the classification of this variant. One, would be if there was a definitively affected person who had the same variant. He said he thought that would definitely "tip it towards or over the line to likely pathogenic". And the other would be if "we started getting more individuals in, as population databases grow, and it became apparent that the variant was more common than we would expect for a very rare pathogenic variant."¹⁶⁰²

1230. Professor Kirk was asked about the comment in Professor Watkins' report that, in a routine clinical setting, he would absolutely conclude that a variant in this gene with these characteristics (referring to the characteristics of the CALM2-G114R variant) was the likely explanation following a young sudden death with a negative autopsy.¹⁶⁰³ Professor Kirk stated he could not fully agree with that. He said there was room for uncertainty.¹⁶⁰⁴

1231. Professor Kirk agreed that the calmodulin genes are among the most highly constrained genes in the human genome. He agreed that there was potential that

¹⁵⁹⁸ Transcript of the 2022 Inquiry, 16 February 2023 T408.11-16 (Kirk).

¹⁵⁹⁹ Exhibit 14-10, Report of Professor Hugh Watkins (7 February 2023) including CV and letter of instruction (7 February 2023) [red pagination 322].

¹⁶⁰⁰ Transcript of the 2022 Inquiry, 16 February 2023 T409.31-44 (Kirk).

¹⁶⁰¹ Transcript of the 2022 Inquiry, 16 February 2023 T411.25-T412.4 (Kirk).

¹⁶⁰² Transcript of the 2022 Inquiry, 16 February 2023 T412.14-20 (Kirk).

¹⁶⁰³ Exhibit 14-10, Report of Professor Hugh Watkins (7 February 2023) [red pagination 322].

¹⁶⁰⁴ Transcript of the 2022 Inquiry, 16 February 2023 T414.36-45 (Kirk).

that might limit the utility of the ACMG Guidelines in the application to calmodulin variants generally. He stated a reasonable person could take that view.¹⁶⁰⁵

1232. Professor Kirk was asked whether the limited evidence available in the present case limited the efficacy of using the ACMG Guidelines in a meaningful way. He stated that was not the case because there are always some limitations on evidence available.¹⁶⁰⁶ Professor Kirk was referred to Dr MacRae's comment that it cannot be assumed that variants in the same allele in different calmodulin genes will produce the same phenotype and CALM1, 2 and 3 are not interchangeable. Professor Kirk stated the evidence that Dr MacRae presents relates to loss of function variants. He stated the present case concerns a change of function as the likely mechanism. He stated that he thought he would disagree with Dr MacRae and that it was likely that any one of those proteins with a similar change will have a similar effect. He stated there is clinical evidence for that, in that there are people with the same variant in different genes with the same phenotype.¹⁶⁰⁷
1233. Professor Kirk was referred to the preprint of the Floyd Article which predicted a high likelihood of pathogenicity for the CALM2-G114R variant (see [1036] above). He stated he did not consider that as reliable further evidence of pathogenicity. He stated that although we share a surprising amount of things with yeast, the growth of yeast is such a non-specific phenotype that he found it hard to place any real weight on it.¹⁶⁰⁸
1234. In dealing with his application of the BS2 criteria in the ACMG Guidelines (see [1219] above), he was asked if the family member was considered healthy for the application of this criteria purely on the basis of the absence of phenotype. He replied no, and thought more was necessary and they had more. He stated that, in this case, they had the cardiac investigations of Ms Folbigg. He stated, from the point of view of his classification of the variant, "what it hangs on is whether or not Kathleen Folbigg is affected by the relevant phenotype".¹⁶⁰⁹ He stated he was placing weight on the lack of clinical evidence and the interpretation of the majority of the cardiologists that the investigations are normal. He was asked that, if Ms Folbigg clearly had a CALM-associated phenotype, would that not just remove the criteria but be instead a criteria in favour of pathogenicity. He replied yes, "in the sense you'd get to the starting block".¹⁶¹⁰
1235. Professor Kirk agreed, for the purpose of applying the ACMG Guidelines, he had not had regard to the uncertainty raised by Professor Wilde's report, but Professor Kirk considered Ms Folbigg was healthy. He said it seemed to him there was not very much uncertainty.¹⁶¹¹
1236. Professor Kirk was asked what his view was as to whether or not it is likely that this variant would occasion the sudden death of two infants, not specifically the Folbigg children. He replied as follows:

So, we've seen there has been evidence presented that if the variant's pathogenic it's

¹⁶⁰⁵ Transcript of the 2022 Inquiry, 16 February 2023 T415.50-T416.33 (Kirk).

¹⁶⁰⁶ Transcript of the 2022 Inquiry, 16 February 2023 T418.19-26 (Kirk).

¹⁶⁰⁷ Transcript of the 2022 Inquiry, 16 February 2023 T418.19-423.44 (Kirk).

¹⁶⁰⁸ Transcript of the 2022 Inquiry, 16 February 2023 T426.14-39 (Kirk).

¹⁶⁰⁹ Transcript of the 2022 Inquiry, 16 February 2023 T428.45-T429.1 (Kirk).

¹⁶¹⁰ Transcript of the 2022 Inquiry, 16 February 2023 T429.34-39 (Kirk).

¹⁶¹¹ Transcript of the 2022 Inquiry, 16 February 2023 T430.5-35 (Kirk).

likely to be associated with a CPVT phenotype or with a mild Long QT. That's I think in the Brohus paper, and it's certainly what Professors Toft Overgaard and Nyegaard said. Mild Long QT would not normally be expected to cause two deaths at a very early age. I don't know how much weight you can place on that functional assessment though. I mean they could be wrong in the other direction. They could be under calling the severity of the variant. Look, I think it's possible that it could've caused the deaths. I think it's plausible that it could've caused the deaths. I don't have enough evidence on which I can say I think it's likely that it caused the deaths.¹⁶¹²

1237. Professor Kirk was then asked by me whether, on the material available to him, he could exclude as a reasonable possibility that the deaths of these two children resulted from them having the CALM mutation. He stated, "No".¹⁶¹³

1238. Professor Kirk was then referred to his joint report with Professor Skinner, which stated:

In order for the variant to be included as a possible cause of the two deaths, the following would have to be true:

3.1.1 We would have to accept that Kathleen Folbigg does indeed have evidence of CALM disease, in the form of a partially concealed CPVT phenotype.¹⁶¹⁴

1239. He stated he withdrew that because he thought it was a possible cause.¹⁶¹⁵

1240. Professor Kirk was then referred to the statement in his joint report with Professor Skinner that either CPVT was indeed the cause of the two children's deaths, or that both children had severe LQTS whilst their mother had CPVT and no evidence of LQTS. He agreed that he inferred from the ICalmR data that the only causes of death at that sort of age on that Registry are LQTS.¹⁶¹⁶ He was asked if that was a large enough dataset to draw a picture of what is reasonably possible as to the phenotype of the variant. He stated, "the range of phenotypes always expands, so you can't say from those sort of numbers what could possibly happen, you can only say what's been observed." He was asked then whether he would withdraw the comment he made and he stated he would maybe qualify it, based on what we currently know.¹⁶¹⁷

Professor Wilde

1241. Professor Wilde is the Professor in Cardiology at the Heart Centre, Department of Clinical and Experimental Cardiology, Academic Medical Centre, University of Amsterdam, Amsterdam. He is a Visiting Professor at Columbia University, Irving Medical Centre and Co-Chair of the Academic Cardiovascular Science Institute in Amsterdam. He is also the Professor in Cardiology at the University of Amsterdam and up to 2019, Head of the Department of Clinical and Experimental Cardiology at that University. Professor Wilde's main research topics was cardiac electrophysiology, inherited cardiac arrhythmias and sudden cardiac death, LQTS, Brugada Syndrome and cardiogenetics.¹⁶¹⁸

¹⁶¹² Transcript of the 2022 Inquiry, 16 February 2023 T436.5-17 (Kirk).

¹⁶¹³ Transcript of the 2022 Inquiry, 16 February 2023 T436.20-23 (Kirk).

¹⁶¹⁴ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 58].

¹⁶¹⁵ Transcript of the 2022 Inquiry, 16 February 2023 T436.27-36 (Kirk).

¹⁶¹⁶ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 58].

¹⁶¹⁷ Transcript of the 2022 Inquiry, 16 February 2023 T437.20-28 (Kirk).

¹⁶¹⁸ Exhibit 9-03, Further Report of Professor Arthur Wilde (24 January 2023), in response to the evidence of Professors Toft Overgaard and Nyegaard, including CV [red pagination 52].

1242. Professor Wilde provided three reports to the Inquiry, the first dated 24 October 2022,¹⁶¹⁹ together with an addendum of 9 November 2022.¹⁶²⁰ The second, dated 24 January 2023, in response to the evidence of Professors Toft Overgaard and Nyegaard,¹⁶²¹ and a third report dated 14 March 2023 arising out of certain questions asked of him during the course of his evidence at the Inquiry.¹⁶²²
1243. In his initial report, Professor Wilde expressed his opinion on the findings and conclusions in the Brohus Article in respect of the CALM2-G114R genetic variant.¹⁶²³
1244. Professor Wilde explained that it was important to mention that the CALM variants are associated with at least three phenotypes, all associated with premature sudden cardiac death. He stated each of those phenotypes had different clinical characteristics. He stated that another potential complicating factor is that there are three CALM genes but it seems that these genes are inter-exchangeable as they encode for identical proteins. He stated that, hence, a variant in either gene can lead to the same clinical syndrome, or the phenotype. Professor Wilde stated that the three phenotypes associated with pathogenic calmodulin variants are CPVT, LQTS and IVF. He stated, in order to understand the causes of the premature deaths of Sarah and Laura, it is important to try to understand what the actual phenotype is that is associated with this variant. He noted that in the two affected children, there is no sound clinical data available.¹⁶²⁴
1245. Professor Wilde stated it is mainly the severity of CALM-related LQTS and the circumstances of death (during sleep) that led him to think that, in the children, LQTS is clinically more likely than CPVT. He stated, however, that it should also be clear that a CPVT diagnosis cannot be dismissed because sudden death occurred during sleep. He referred to the information contained in the ICalmR to the effect that in 93% of the CALM-LQTS patients, it was proven the identified variants occurred *de novo*, whilst the remaining 7% was inherited from a mosaic parent. He stated that this indicated that the phenotype associated with a LQTS-linked CALM variant is extremely dangerous and “potentially not compatible with an uneventful life into adulthood”.¹⁶²⁵
1246. Professor Wilde stated that, with regard to CPVT, in general the phenotype seemed somewhat less severe. He stated, again with reference to the ICalmR, that almost 80% is based on a *de novo* variant and, in contrast with CALM-LQTS, CALM-CPVT patients were older at onset (median age 6 vs 1.5 years) and had fewer major arrhythmic events. Professor Wilde stated that, in contrast to CALM-LQTS, for CALM-CPVT some families have been described which also indicates a less severe phenotype because individuals apparently can survive into their reproductive age (without treatment).¹⁶²⁶
1247. Professor Wilde stated the only living individual carrying the CALM2-G114R variant is Ms Folbigg and she seems to lack a solid, malignant, LQTS or CPVT phenotype.

¹⁶¹⁹ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022).

¹⁶²⁰ Exhibit 9-02, Addendum to Report of Professor Arthur Wilde (9 November 2022).

¹⁶²¹ Exhibit 9-03, Further Report of Professor Arthur Wilde (24 January 2023), in response to the evidence of Professors Toft Overgaard and Nyegaard.

¹⁶²² Exhibit 9-04, Further Report of Professor Arthur Wilde (14 March 2023), in response to the request on 16 February 2023.

¹⁶²³ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 25-29].

¹⁶²⁴ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 25].

¹⁶²⁵ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 26].

¹⁶²⁶ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 26-27].

He referred to reports of syncopal events which Ms Folbigg suffered between ages 15 to 16, and age 50, noting that the described triggers included swimming (first syncopal event), during an argument and dancing. He also noted that since in prison, Ms Folbigg had often experienced panic attacks accompanied by “racing heart” and occasional occurrence of chest pain. He stated the description of the episodes are more likely based on vasovagal syncopes, noting in particular the long recovery time reported is not seen with cardiac arrhythmias with acute onset and acute termination. He stated that the episodes in her early life could be related to cardiac arrhythmias and the triggers are compatible with CPVT related triggers. He stated the lack of a very detailed description of the episode in the swimming pool is disturbing as this could be regarded as a critical event in her history.¹⁶²⁷

1248. Professor Wilde said LQTS seems virtually excluded in Ms Folbigg as there is no ECG with a sound QT prolongation present. He stated that CPVT, however, cannot be excluded.¹⁶²⁸
1249. Professor Wilde expressed the view that it is impossible to say whether or not Ms Folbigg suffers from an IVF phenotype because in order to conclude as such, an episode of ventricular fibrillation is mandatory.¹⁶²⁹
1250. Professor Wilde referred to the functional data reported in the Brohus Article and noted that the characteristics of the two variants, G114R and G114W, were largely comparable although for specific characteristics slightly different results were obtained. Professor Wilde stated that he tended to agree with the conclusion of the authors that the functional alterations are more likely to predict a clinical CPVT phenotype and less so, a clinical LQTS phenotype. He stated IVF as an option is speculative but cannot be excluded.¹⁶³⁰
1251. Professor Wilde noted that the two variants, G114R and G114W, were compared with the N98S variant which was identified in ten unrelated patients diagnosed with either LQTS, CPVT, a mixed phenotype, or suffering from sudden unexpected death. Professor Wilde stated that an important difference between the functional characteristics of the N98S variant compared to the variants positioned at 114 is the less “calcium-dependent inactivation” of the N98S variant, which is expected to lead to more QT prolongation and, in his opinion, an increased likelihood of sudden cardiac death at a very young age (and during sleep). He said he did not agree with the sentence in the Brohus Article, “The effect of the mutations are experimentally similar to the N985 variant, which has been associated with LQTS, CPVT, IVF, or a mixed phenotype.”¹⁶³¹
1252. In conclusion, Professor Wilde stated that as far as he was concerned, there was, to some degree, a mismatch between the functional alterations and the clinical findings in the carriers of the respective variants. He stated the authors’ conclusion that the most likely consequence of the aberrant functional findings of the CALM2-G114R variant is that CPVT is the most likely phenotype is in potential agreement with the clinical findings in respect of Ms Folbigg, but not with the circumstances and age of death of Sarah and Laura, who died during sleep and very young. He stated he considered IVF highly unlikely as the cause of death of the two girls.

¹⁶²⁷ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 27].

¹⁶²⁸ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 27].

¹⁶²⁹ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 28].

¹⁶³⁰ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 28].

¹⁶³¹ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 28].

He stated, based on the clinical data, he considered LQTS the only reasonable explanation, but LQTS as the diagnosis is not substantiated by the functional data and is not compatible with the findings in Ms Folbigg. Further, he added that the ECG of Laura did not seem to show an excessive QT prolongation. Professor Wilde thus stated that carriership of a CALM variant that does not lead to LQTS does not equal sudden cardiac death at a very young age. He repeated he was concerned about the discrepancy between the functional data and the clinical phenotype of Sarah and Laura and stated that he considered CPVT unlikely for a sudden death during sleep in children around the age of one.¹⁶³²

1253. Professor Wilde stated that the result of finding a rare CALM variant is of potential relevance for the unexplained deaths of Sarah and Laura and, almost by definition, one cannot exclude a causal role of it. However, he said it was hard to understand what the exact phenotype would have been.¹⁶³³
1254. Professor Wilde referred to the Kato Article which he stated was of importance because it was one of the first, if not the first paper, that showed CALM variants are not all so severe that they are essentially not compatible with life. He stated, however, that in the family described in the Kato Article, the QT was still abnormal in almost all members of the family, whereas in the case of Ms Folbigg, QT was well within the normal range, not borderline abnormal as in all patients in the Kato Article.¹⁶³⁴
1255. In the addendum to the report dated 9 November 2022, Professor Wilde commented on the question of whether the overall risk of having a cardiac arrhythmia can differ between two individuals, even if they have the same calmodulin mutation. He stated that the answer to that question is, in principle, yes. He said the risk of cardiac arrhythmias is related to the extent of the phenotype so, in general, with LQTS the risk to develop arrhythmias is directly related to the extent of the QT prolongation and in CPVT the risk is associated with the arrhythmia burden during the exercise test.¹⁶³⁵
1256. He stated, however, that for CALM-related LQTS, it is important to know that, based on the published literature, the phenotype is severe and with the exception of the family described in the Kato Article, the penetrance is 100%. He stated for CALM-related CPVT (and CALM-related IVF) this is less the case.¹⁶³⁶
1257. Professor Wilde was also asked whether myocarditis can cause a child's death, and whether a child with myocarditis has a greater risk of dying if they have a genetic mutation such as calmodulinopathy.¹⁶³⁷
1258. Professor Wilde stated that in the case of extensive myocarditis, the heart is susceptible to cardiac arrhythmias but whether the situation is different in a child with a pathogenic CALM variant cannot be more than just speculation.¹⁶³⁸
1259. In the addendum to his report, Professor Wilde also commented on the ICalmR.

¹⁶³² Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 29].

¹⁶³³ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 30].

¹⁶³⁴ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 32].

¹⁶³⁵ Exhibit 9-02, Report of Professor Arthur Wilde, Addendum (9 November 2022) [red pagination 37].

¹⁶³⁶ Exhibit 9-02, Report of Professor Arthur Wilde, Addendum (9 November 2022) [red pagination 37].

¹⁶³⁷ Exhibit 9-02, Report of Professor Arthur Wilde, Addendum (9 November 2022) [red pagination 37].

¹⁶³⁸ Exhibit 9-02, Report of Professor Arthur Wilde, Addendum (9 November 2022) [red pagination 37].

1260. Professor Wilde stated that the fact that Sarah and Laura died suddenly did not discriminate with certainty between the three phenotypes that are associated with CALM variants. He stated, however, the details of their death, that is, in this case, their age and circumstances, are of importance and are on a theoretical basis, in his view, most compatible with LQTS. He stated the argumentation underlying his conclusion in part rests on the data from the ICalmR indicating that CALM-associated LQTS variants are excessively malignant and not compatible with an almost uneventful life as evidenced in Ms Folbigg.¹⁶³⁹
1261. Professor Wilde stated that a second registry of potential importance is the “International CPVT Registry”. He stated that Registry hosts CPVT patients from around the world and has “reached the 1500 bar”. He said, from that database, he selected the patients who died or almost died suddenly under the age of six and, if available, looked at the circumstances of the death. Of the 16 patients who fulfilled the criteria, the youngest died at the age of three (all during exercise/emotion); six died at the age of four (three during exercise/emotion, and three during rest with some potential excitement in two cases); four at the age of five (two during exercise/emotion), and one at an unknown age. He stated that indicated that sudden cardiac death at a very young age is rare and, in general, the circumstances of the death are during exercise or with emotion.¹⁶⁴⁰
1262. Professor Wilde stated that an important limitation of any registry, including ICalmR and the International CPVT Registry, is potential inclusion bias. He stated that essentially means that inclusion is not controlled. He commented that, in general, it is fair to state that any registry will start with the inclusion of the most affected cases, underlying the fact that the vast majority of patients are patients with *de novo* variants and a severe phenotype. He stated that, in later years, families with a less severe phenotype may be added.¹⁶⁴¹
1263. Professor Wilde provided a further report dated 24 January 2023, in response to the evidence of Professors Toft Overgaard and Nyegaard. He stated he agreed with them on their criticism of the exclusive use of the ACMG Guidelines for classifying the CALM2-G114R variant. He repeated that he believed the variant was likely pathogenic, that is, potentially causing disease.¹⁶⁴²
1264. Professor Wilde also commented on what might be described as the style of the Brohus Article. He stated he agreed with Dr Cala that there were some elements that do not belong in a pure scientific paper, and stated that Dr Cala’s summarised, “This language is inappropriate in a ‘purely scientific’ article. It is a *mélange* of genetics, forensic pathology, some law but mixed with strong advocacy.”¹⁶⁴³ However, Professor Wilde explicitly stated that that is not to say that the Brohus Article contains debatable science.¹⁶⁴⁴
1265. Professor Wilde also commented on the preliminary conclusions reached by Professors Toft Overgaard and Nyegaard in relation to the question of whether

¹⁶³⁹ Exhibit 9-02, Report of Professor Arthur Wilde, Addendum (9 November 2022) [red pagination 38].

¹⁶⁴⁰ Exhibit 9-02, Report of Professor Arthur Wilde, Addendum (9 November 2022) [red pagination 38].

¹⁶⁴¹ Exhibit 9-02, Report of Professor Arthur Wilde, Addendum (9 November 2022) [red pagination 38-39].

¹⁶⁴² Exhibit 9-03, Further Report of Professor Arthur Wilde (24 January 2023) [red pagination 46].

¹⁶⁴³ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 52].

¹⁶⁴⁴ Exhibit 9-03, Further Report of Professor Arthur Wilde (24 January 2023) [red pagination 46].

the calmodulin variant impaired binding to the cardiac sodium channel.¹⁶⁴⁵ This is referred to earlier in this Report in the section headed “Mechanism of Disease” and in paragraphs [1030] and [1031] above. Professor Wilde stated that the current lack of functional data of the sodium channel characteristics makes it very difficult to speculate on the consequences for those carrying the CALM2-G114R variant. He stated that at the channel/cell level, the options are threefold: one, there are no consequences at all; two, there is a reduction of the sodium channel current; and, three, there is an increase in the amplitude of the late sodium current. So far as the second option was concerned, Professor Wilde stated that it potentially leads to Brugada Syndrome and, as exemplified in the presence of loss of function sodium channel variants in other patients, conduction abnormalities on the electrocardiogram. He stated the ECG of Ms Folbigg was normal and showed no signs of conduction abnormalities nor a hint of a Brugada pattern. He stated that the one lead ECG strip of Laura did not show conduction abnormalities, adding that this strip is well suited to make this statement. He qualified these remarks by noting that conduction abnormalities are not mandatory but frequently seen. In relation to the third option, he stated that it would lead to QT prolongation, in particular, during slow heart rates. He stated the information (QT prolongation) is not present in both children and it is also not seen in Ms Folbigg.¹⁶⁴⁶

1266. In relation to Brugada Syndrome, Professor Wilde stated since the initial description of the involvement of the sodium channel (SCN5A) in Brugada Syndrome, more than 20 genes had been linked to the syndrome and the vast majority of them are supposed to act through a reduction in sodium channel activity. He stated a rigorous analysis of all those associated by a ClinGen consortium downgraded all these genes, except SCN5A, to limited or even disputed evidence. He stated the implied ClinGen algorithm relied heavily on the ACMG Guidelines and it was appropriate to do so. He concluded:

For sure, based on the available clinical evidence, i.e., two nocturnal sudden deaths in young children and no visible phenotype...this association would not pass the ClinGen algorithm and the association CALM-Brugada syndrome would not be accepted by the scientific community at this point in time.¹⁶⁴⁷

1267. Professor Wilde also commented on the report of Professor Schwartz dated 8 November 2022 (see [1174]-[1181] above). Professor Wilde stated that based on the extended ICalmR data, he had still not changed his mind as to CPVT being the most likely phenotype associated with this variant, yet CPVT is unlikely for a sudden death during sleep in children around the age of 1. Explaining why the extended ICalmR data did not cause him to change his mind, Professor Wilde noted the LQTS variants remained highly malignant and the percentage of probands with a *de novo* LQTS-related CALM variant had decreased from 93% to 87%, and in 7% of the cases mosaicism is the cause of a discrepant phenotype between generations. He stated that left 7% familial cases and that is new information compared to the 2019 publication, where there were none. He stated he believed the family reported in the Kato Article forms part of the familial cases. However, he agreed that a further extension of the ICalmR might bring more insight.¹⁶⁴⁸

¹⁶⁴⁵ Exhibit 6-03, Addendum to Report of Professors Michael Toft Overgaard and Mette Nyegaard (12 November 2022) [red pagination 39].

¹⁶⁴⁶ Exhibit 9-03, Further Report of Professor Arthur Wilde (24 January 2023) [red pagination 48-49].

¹⁶⁴⁷ Exhibit 9-03, Further Report of Professor Arthur Wilde (24 January 2023) [red pagination 49].

¹⁶⁴⁸ Exhibit 9-03, Further Report of Professor Arthur Wilde (24 January 2023) [red pagination 50].

1268. In his further report dated 14 March 2023, Professor Wilde dealt with an episode suffered by Laura when she was not quite 12 months old. Evidence of this episode was given by Ms Karren Marie Hall (**Ms Hall**). I have not referred to this earlier in this Report, but it was adequately summarised by Professor Wilde in the following terms:

During a sleep of Laura, [Ms Hall] left for 2-3 minutes the room for a phone call and upon return Laura “did not look right. She was grey in appearance”. She continues, “I poked her to wake her up. She did not respond. I listened for breath and felt her chest. There was nothing.” Shortly after, after she was laid on the floor, she regained breathing, starting with a deep breath, followed by shallow breaths.¹⁶⁴⁹

1269. Professor Wilde stated it was difficult, if not impossible, to be sure about the nature of this event. He stated alternatives to the event include everything between a non-significant event to a potentially life-threatening event. He agreed with Professor Schwartz that it could not be excluded that it was a near lethal arrhythmia and mandated an extensive evaluation. He stated, “Why not even an ECG was made is a mystery to me.”¹⁶⁵⁰

1270. Ultimately, Professor Wilde stated the additional material did not change his original conclusion.¹⁶⁵¹

Professor Wilde’s evidence at the Inquiry

1271. In his evidence, Professor Wilde repeated his view that the variant was likely pathogenic. He stated he did not use the ACMG Guidelines because it was inappropriate for a single variant. He said according to the ACMG Guidelines, you need repeated findings for particular variants in order to be definite on the status of pathogenicity.¹⁶⁵²

1272. Professor Wilde was referred to Professors Toft Overgaard and Nyegaard’s opinion that the variant may impact on the function of the sodium channel. He stated the sodium channel was relevant because sudden death during sleep at whatever age is related to one of the sodium channel diseases, Brugada Syndrome. He stated the problem is that the data was very preliminary and there was no evidence the children had Brugada Syndrome. He also stated so far as the possibility that the variant could lead to an increase in the sodium channel function, which would lead to an LQTS phenotype, it was not what was seen either in Ms Folbigg, nor in Laura on the one ECG strip where one can judge the QT interval.¹⁶⁵³

1273. Professor Wilde was asked some questions regarding the single lead ECG taken on Laura.¹⁶⁵⁴ He stated it was reasonable to say there was not a very pronounced QT prolongation. He referred to his first report where he said, “The QTc interval cannot be judged accurately enough to exclude significant QTc prolongation which would be expected in the setting of a CALM associated LQTS”.¹⁶⁵⁵ In seeking to reconcile

¹⁶⁴⁹ Exhibit 9-04, Further Report of Professor Arthur Wilde (14 March 2023) [red pagination 55-56].

¹⁶⁵⁰ Exhibit 9-04, Further Report of Professor Arthur Wilde (14 March 2023) [red pagination 56].

¹⁶⁵¹ Exhibit 9-04, Further Report of Professor Arthur Wilde (14 March 2023) [red pagination 56].

¹⁶⁵² Transcript of the 2022 Inquiry, 16 February 2023 T446.42-47 (Wilde).

¹⁶⁵³ Transcript of the 2022 Inquiry, 16 February 2023 T447.19-T448.21 (Wilde).

¹⁶⁵⁴ Exhibit 2-AC, ECG Sheet of Laura Folbigg [red pagination 5332-5334].

¹⁶⁵⁵ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 26].

the evidence, he reviewed the ECG at the Inquiry and stated, it could be prolonged a little bit.¹⁶⁵⁶

1274. Professor Wilde was also asked about the fainting episode described by Ms Hall (see [1268] above). He said the problem, of course, was that it is a very incomplete story but potentially was compatible with severe cardiac arrhythmia that spontaneously terminates. He was asked whether someone could be “startled out of an arrhythmia” and he replied yes, and explained that if the arrhythmia stops and the circulation resumes, then that can start with a new breath. However, he stated his personal belief was that the colour of the patient is particularly important. He explained that during an arrhythmia you will be grey, white or pale and if the arrhythmia stops and circulation resumes there is usually a flush which is “a very red, red face. But that is not reported here.” He stated a grey appearance would be compatible with a cardiac arrest.¹⁶⁵⁷
1275. Professor Wilde explained why he excluded IVF as a relevant phenotype. He noted that IVF is extremely rare, if ever seen, in a young child of the ages of Sarah and Laura at their deaths, and he believed the reason is that, for IVF, the heart needs to be a certain size, and in very young children, the heart is obviously a smaller size. In relation to CPVT, he said his opinion was mainly based on the evidence from the Brohus Article of the functional data, the phenotype of Ms Folbigg and the absence of QT prolongation. He opined that the phenotype of Ms Folbigg, if anything, is more compatible with CPVT than with LQTS.¹⁶⁵⁸
1276. In relation to the LQTS phenotype, Professor Wilde referred to the update of the ICalM_R. He said that showed the number of *de novo* variants dropped from 93% to 87%, the remaining 7% mosaicism remained the same and, therefore, there was only a 6% chance that the variant associated with LQTS has reduced penetrance. He stated “that is not much different from the first report”.¹⁶⁵⁹
1277. Professor Wilde referred to three families in the updated data of the ICalM_R. He said one family was from the Kato Article where he had already pointed out that the QT was still prolonged in almost every individual with the penetrance remaining very high. He also referred to what he described as the second family in the ICalM_R showing reduced penetrance (the seventh family described by Professor Schwartz in his report of 20 February 2023 (see [1161] above)). Professor Wilde stated he did not have the details but it was still very unusual that you have a reduced penetrance or a very marked difference between the phenotype of two different individuals in the same family. In those circumstances, he continued to have the view that there was a mismatch of the type described in his first report.¹⁶⁶⁰
1278. Professor Wilde confirmed that he relied on the International CPVT Registry in maintaining that three years of age is the youngest ever recorded age of death from CPVT. He stated it was fair to do so because the International CPVT Registry already has 1,500 inclusions, stating it includes all the major centres in the world with interest in the disease. He accepted, however, there was a possibility that CPVT may cause death in children less than three years of age who might not meet the criteria for inclusion in the International CPVT Registry because there is insufficient

¹⁶⁵⁶ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 26].

¹⁶⁵⁷ Transcript of the 2022 Inquiry, 16 February 2023 T453.19-49 (Wilde).

¹⁶⁵⁸ Transcript of the 2022 Inquiry, 16 February 2023 T454.12-29 (Wilde).

¹⁶⁵⁹ Transcript of the 2022 Inquiry, 16 February 2023 T454.31-50 (Wilde).

¹⁶⁶⁰ Transcript of the 2022 Inquiry, 16 February 2023 T455.1-23 (Wilde).

information to confirm the cause of death. He also agreed that CPVT cannot be dismissed because the death occurred whilst asleep.¹⁶⁶¹

1279. Professor Wilde was asked whether he could reasonably exclude that the deaths of Sarah and Laura were caused by them carrying the CALM2-G114R variant. He stated that he thought there was a significant mismatch in what is shown as evidence for a pathogenic variant, particularly in the phenotype, and the circumstances of the age of the two children. He concluded, “Well, it is always possible but it is not very likely”.¹⁶⁶²
1280. Senior Counsel for Ms Folbigg asked Professor Wilde about the incident described by Ms Hall. He said it was new to him, he had not read it before, and from the way it was described, cardiac arrhythmia could not be excluded.¹⁶⁶³
1281. Counsel for the Director of Public Prosecutions asked Professor Wilde whether, on the basis of his experience and his review of the materials now available, he could exclude a reasonable possibility that Sarah and Laura died as a result of natural causes associated with the CALM2-G114R mutation. After saying that I had asked him a similar question, Professor Wilde repeated, “I think you cannot exclude it but I consider it unlikely and maybe even highly unlikely”.¹⁶⁶⁴
1282. As noted above at [1268]-[1270], Professor Wilde provided a supplementary report on 14 March 2023, after he had given evidence. He was presented with some additional material, but stated that it did not change his original opinion. However, he again stated that almost by definition, one cannot exclude the causal role for the pathogenic variant, describing the question as an “increasingly complex problem”.¹⁶⁶⁵

Dr MacRae

1283. Dr MacRae obtained his medical degree from the University of Edinburgh in 1985. He has a Doctorate in Philosophy in Human Molecular Genetics from the University of London, conferred in 2004. He is currently the Professor of Medicine and Cardiology at Harvard Medical School and an Associate Member of the Broad Institute of Harvard and the Massachusetts Institute of Technology. He described that Institute as a large institute that was founded over a decade ago to investigate the genomics, particularly human genomics, and the genomics of health and disease.¹⁶⁶⁶
1284. Dr MacRae stated that he was the Principal Faculty Member of the Harvard Stem Cell Institute and in addition to his appointment to the Brigham and Women’s Hospital at the Harvard Medical School, he has an active appointment at the Massachusetts General Hospital.¹⁶⁶⁷
1285. Dr MacRae stated that he worked in the genetics of human cardiac disease for almost 30 years. He said he worked across a fairly broad range of conditions including inherited cardiomyopathies, inherited arrhythmias and inherited vascular

¹⁶⁶¹ Transcript of the 2022 Inquiry, 16 February 2023 T456.4-44 (Wilde).

¹⁶⁶² Transcript of the 2022 Inquiry, 16 February 2023 T462.8-19 (Wilde).

¹⁶⁶³ Transcript of the 2022 Inquiry, 16 February 2023 T468.49-469.9 (Wilde).

¹⁶⁶⁴ Transcript of the 2022 Inquiry, 16 February 2023 T473.42-47 (Wilde).

¹⁶⁶⁵ Exhibit 9-04, Further Report of Professor Arthur Wilde (14 March 2023), in response to the request on 16 February 2023 [red pagination 56-57].

¹⁶⁶⁶ Transcript of the 2022 Inquiry, 17 February 2023 T473.27-46 (MacRae).

¹⁶⁶⁷ Transcript of the 2022 Inquiry, 17 February 2023 T473.48-T474.15 (MacRae).

disease. He stated that his expertise spans the range from clinical diagnostics to novel, experimental laboratory research. He stated that he had looked after patients with calmodulin variants, that he had studied the biology of calcium entry into the heart and the pathways that regulate it, from early development right the way through to adulthood.¹⁶⁶⁸

1286. Dr MacRae provided a report to the Inquiry dated 27 January 2023.¹⁶⁶⁹ He also gave evidence at the Inquiry.

The report of Dr MacRae dated 27 January 2023

1287. In dealing with the question of the role that calmodulin proteins play in regulating the effects of calcium on the heart, Dr MacRae pointed out that one of the ways in which scientists understand the particular roles proteins play is to see what happens when the protein is not present in the cell by reducing or eliminating its function. He stated, however, that for autosomal dominant diseases, where there is only one copy of the variant inherited, it is important to understand the function of each variant separately as functions may be gained as well as lost. Further, Dr MacRae stated that in the heart, as in all other cells, the precise final effects remain difficult to predict for an individual variant and so investigators have begun to map the functional effects of every single variant in key cardiac proteins to allow a granular picture of the role of the variation in the final function of each gene.¹⁶⁷⁰ Dr MacRae in his evidence at the Inquiry noted that one would have to postulate that the CALM2-G114R variant in the Folbigg family is autosomal dominant if you were trying to assume or prove pathogenicity, as there was only a single copy and it came from the maternal lineage.¹⁶⁷¹
1288. In his evidence at the Inquiry, Dr MacRae explained the concept of variant effect mapping. He said that one of the important aspects of trying to relate a genetic variant to disease is to anchor the disease to the gene in some rigorous and meaningful way. He stated it is normally done by looking to see if a particular set of variants in a gene, when transmitted to the next generation again and again, is sufficient and necessary to cause the disease. He stated that is generally called segregation.¹⁶⁷²
1289. Dr MacRae explained that segregation is something that takes a lot of time and energy on a per patient basis, because very many of the variants, particularly in conditions that are cardiac and are associated with risks of sudden death may not be easily passed on to multiple generations. He said investigators are often in a position of looking at new variants or variants that are only present in a few individuals and having to try and work out if this is causing the same abnormality in this particular family that was seen in the original families, to prove conclusively that the disease and the gene were related. He said that is time consuming on many levels and on an individual and their family, so investigators have begun to conduct representative assays measuring the function of a protein, and look in a dish at not just one or two variants at a time, but all of the variants in the entire sequence of that gene and rank

¹⁶⁶⁸ Transcript of the 2022 Inquiry, 17 February 2023 T474.20-T475.21 (MacRae).

¹⁶⁶⁹ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023).

¹⁶⁷⁰ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 32-33].

¹⁶⁷¹ Transcript of the 2022 Inquiry, 17 February 2023 T477.41-44 (MacRae).

¹⁶⁷² Transcript of the 2022 Inquiry, 17 February 2023 T478.8-17 (MacRae).

them in terms of their likelihood for causing a particular functional abnormality. He stated that is what is described as variant effect mapping.¹⁶⁷³

1290. Dr MacRae said that the goal would ultimately be, instead of having to study each variant separately, to go back and look at the in vitro evidence in multiple different assays for that variant causing any effect on any of the biology of the relevant protein. He stated this was in a very nascent stage. He explained it was worth remembering that a single gene can often cause multiple different diseases depending on the variant. He stated this was particularly the case for autosomal dominant disorders where typically, but not always, the mechanism is not the loss of the native function of the gene as much as it is the gain of another function, a new function, that leads to a perturbation of the physiology of the part of the heart or the vascular system.¹⁶⁷⁴
1291. Dr MacRae stated loss of function basically occurs when all of the activities of the gene are just “ablated”. However, he said typically what is found are that the types of variants associated with different diseases either are affecting one very small and precise function of the protein; or, they add a new function that makes the protein go to the wrong place or makes it interact differently with another protein; or, potentially it pulls even the normal copy of the protein out of the cell.¹⁶⁷⁵
1292. In answering the question of how calmodulin mutation might be expressed or operate, Dr MacRae stated that the calmodulin gene family is highly conserved across multiple species and all three genes present in humans encode identical amino acid sequences. However, he said that those different proteins were not interchangeable at a fundamental level, as might be anticipated from the fact that three such proteins are conserved through evolution. He stated the outcome of deleting CALM1 and CALM2, at least in the mouse, are quite different. He said, at present, it is not obvious how these differences between CALM genes arise.¹⁶⁷⁶
1293. Dr MacRae stated that it was likely that arrhythmia phenotypes with CALM gene variation are a consequence of ‘gain of function’, simply because of their patterns of inheritance. He said they may interfere with the baseline functions of calmodulin or may create completely new functions which are deleterious, but also unpredictable. He said the available data establishes that the specific outcome of any calmodulin mutation may vary depending on which calmodulin gene is affected and other broad genetic variations in the individual. He stated the data does not support the assertion that all calmodulin genes can be treated as a single interchangeable protein.¹⁶⁷⁷
1294. Dr MacRae stated that the range of potential clinical consequences of individual calmodulin variants are not readily predicted from existing data, partly as a consequence of the high level of pathogenicity for the vast majority of variants that have been rigorously associated with disease. He stated the most rigorous evidence so far, is almost completely confined to *de novo* variants, suggesting that variants in certain residues are strongly associated with potentially lethal arrhythmias early in

¹⁶⁷³ Transcript of the 2022 Inquiry, 17 February 2023 T478.25-42 (MacRae).

¹⁶⁷⁴ Transcript of the 2022 Inquiry, 17 February 2023 T478.42-T479.6 (MacRae).

¹⁶⁷⁵ Transcript of the 2022 Inquiry, 17 February 2023 T479.13-27 (MacRae).

¹⁶⁷⁶ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 33].

¹⁶⁷⁷ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 33-34].

life. He stated that the evidence that calmodulin variants can cause other disorders such as CPVT or adult-onset arrhythmias remains incomplete.¹⁶⁷⁸

1295. Dr MacRae stated it was entirely possible that the same calmodulin mutation can operate differently in different individuals. He stated, however, that to date that has not been convincingly demonstrated for the calmodulin mutations that result in cardiac arrhythmias. He said, when stated precisely, so far, those calmodulin mutations which are definitively associated with cardiac arrhythmias all appear to cause severe life threatening arrhythmias in childhood, though there are clearly a range of specific ages at which those arrhythmias occur.¹⁶⁷⁹
1296. He also stated it was entirely possible that individuals with the same calmodulin mutation may be affected in different ways, but to date that has not been convincingly demonstrated for the calmodulin variants that result in cardiac arrhythmias.¹⁶⁸⁰ Further, Dr MacRae stated it was possible because most, if not all, genetic variants seen in living individuals can be modified by the other copy of the same gene (from the other parent), by related genes, or by other pathways.¹⁶⁸¹
1297. Dr MacRae also stated that it was entirely possible that the overall risk of having a cardiac arrhythmia can differ between two individuals, even if they have the same calmodulin mutation. However, he repeated that, to date, that has not been convincingly demonstrated in calmodulin mutations that result in cardiac arrhythmias.¹⁶⁸²
1298. Dr MacRae stated there are only one or two families reported in the literature where multiple generations have evidence of the same calmodulin mutation. He stated the published data on these families does not independently support major differences in the calmodulin associated arrhythmia mechanisms or risks, but does not completely exclude it. He stated that the specific example cited for CALM and CPVT is the original family reported by Professor Nyegaard, the lead author of the article entitled, 'Mutations in Calmodulin Cause Ventricular Tachycardia and Sudden Cardiac Death' (**Nyegaard Article**).¹⁶⁸³ He stated that, in this family, the primary unbiased linkage analysis reveals two equally likely genetic locations on different chromosomes for the potential causal variant in this family, which as the authors note has a quite different phenotype than virtually all other calmodulin variants reported. He stated in those circumstances, the two locations are thus not only equally likely, but neither of these is definitive, so at the very least one would require another independent family of similar size with the same clinical features to validate the relationship between the CALM1 gene and the specific clinical features. He stated it is also difficult to use this data to attribute a high likelihood of a similar variant in CALM2 causing disease in another family.¹⁶⁸⁴
1299. Dr MacRae stated that the second multigenerational family is that described in the Kato Article demonstrating evidence of the CALM3 variant co-segregating with a less severe phenotype including consistent LQTS and premature sudden death in

¹⁶⁷⁸ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 34].

¹⁶⁷⁹ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 34].

¹⁶⁸⁰ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 34].

¹⁶⁸¹ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 34-35].

¹⁶⁸² Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 35].

¹⁶⁸³ Exhibit 15-31, Mette Nyegaard et al, 'Mutations in calmodulin cause ventricular tachycardia and sudden cardiac death' (2012) 91 (4) *American Journal of Human Genetics* 703-712.

¹⁶⁸⁴ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 35].

two of the 14 individuals. He pointed out that in this family a variant in CALM3 was identified on whole exome sequencing and was observed to be linked genetically to the LQTS phenotype, strongly suggesting the cause of the disease is close to CALM3, if not CALM3 itself.¹⁶⁸⁵

1300. Dr MacRae stated that it was certainly possible for myocarditis to cause a child's death. In dealing with the question of whether a child with myocarditis is at greater risk of dying if they have an arrhythmogenic genetic mutation such as a calmodulinopathy, he stated, in general he would favour the opinion that an arrhythmogenic pathogenic variant would make arrhythmic events more likely in the setting of myocarditis.¹⁶⁸⁶
1301. Dr MacRae described ICalmR as a vital resource which has been assembled to aid in the interpretation and understanding of variants in all three human calmodulin genes. He noted that it reported 74 individuals from 51 families.¹⁶⁸⁷
1302. Dr MacRae stated that there were excellent examples of the rigour attainable with multiple examples of the same pathogenic variant arising *de novo* with the same phenotype (early onset LQTS and life-threatening arrhythmia) in independent families. He stated the data strongly supports the core findings that a subset of variants in the calcium binding domains (EF-hands) of CALM1, CALM2 or CALM3 appear sufficient and necessary to cause severe LQTS, as reported in the Crotti Article. However, Dr MacRae stated that the evidence of associations of CALM1, 2 or 3 variants with CPVT is much less stringent, stating that there are fewer individuals reported despite the less stringent selection. He stated that most of the individuals, and all but one of the multigenerational families associated with non-LQTS phenotypes are conspicuously associated with variants in inter-EF hand linkers. He stated those findings, in the context of the other variants, do not fully support a causal link between CALM variants and less severe phenotypes.¹⁶⁸⁸
1303. Dr MacRae also stated that another notable finding was that reduced calcium affinity was associated with pathogenic variants in each of the CALM genes, but definitive experiments associating this observation with abnormal cardiomyocyte electrophysiology in a heterozygous context has been demonstrated for only a subset of these variants. He stated the calcium affinity remained an exciting candidate functional assay but would require considerable additional effort to enable quantitative mapping onto clinical mechanisms at the resolution necessary for predicting clinical phenotypes.¹⁶⁸⁹
1304. Dr MacRae thus stated that the data is extremely useful to define the current state of CALM variant evaluation, but the primary data has significant limitations. He stated the data presented is logically of limited or no utility for the interpretation of novel variants in CALM2 in SUDS.¹⁶⁹⁰
1305. Dr MacRae stated it was highly relevant to draw comparisons between the known phenotypes in the Folbigg family and those in reported CALM variant cases. He stated the data in the ICalmR strongly suggests that virtually all, if not all, of the

¹⁶⁸⁵ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 35].

¹⁶⁸⁶ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 36].

¹⁶⁸⁷ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 36].

¹⁶⁸⁸ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 36-37].

¹⁶⁸⁹ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 37].

¹⁶⁹⁰ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 37].

CALM variants observed to date which are definitively associated with arrhythmia arose *de novo* and were associated with severe LQTS. He stated this data raised considerable doubts with respect to the proposed pathogenicity of the CALM2-G114R variant given the clinical findings in Ms Folbigg, Sarah and Laura which, he said, as noted by Professors Skinner and Wilde, are not consistent with the LQTS observed in the definitive CALM-associated deaths. He stated that there was not any evidence of CPVT, but association between this arrhythmia and CALM variation is considerably less rigorous than that for LQTS.¹⁶⁹¹

1306. Dr MacRae described the Brohus Article as including a well-executed in vitro study of several aspects of the CALM2-G114R function and CALM2 wild type (or normal gene and protein sequence) function. He gave a number of reasons why it was not obvious as to how the information can predict a clinical phenotype. He stated that, without understanding the effect of the variant on a broad range of functions in the setting of wild type or normal protein in the relevant proportions, it is not even clear that there would be any correlation between calcium binding and arrhythmia risk in vivo. He stated that even if the CALM2-G114R variant had been studied in native proportions with normal protein, it is difficult to assume that this assay is representative of arrhythmia risk since there is little data of any CALM variants in a heterozygous context. He also stated that even when there is an apparently rigorous in vitro assay with a definitive pathogenic variant, it is typically necessary to see systematic segregation of the variant in an individual family for all but the most penetrant variants.¹⁶⁹²
1307. Dr MacRae stated that in that context there did not appear to be any systematic in vitro evidence to support the assertion that the CALM2-G114R variant had similar damaging effects to G114W and N98S variants. He stated there is data that these variants share effects on calcium binding in a heterologous expression system and on calmodulin interactions with Cav1.2 and the RYR2, but in an essentially 'homozygous' context, which would not allow one to make direct inferences on clinical pathogenicity in the heterozygous physiologic state.¹⁶⁹³
1308. Dr MacRae stated there was no objective evidence to date that the G114R variant causes CPVT, IVF or mild LQTS in any setting. He stated that the data that is presented suggests that, where ECGs were available, there was no evidence of either prolonged QT interval, nor of the abnormal repolarisation which can be more penetrant. He stated that death during sleep is, in general, inconsistent with typical CPVT presentations. He stated the only ECG available in the setting of an event is an agonal bradyarrhythmia, most consistent with asphyxia or hypoxia as a cause.¹⁶⁹⁴
1309. Dr MacRae stated there was no evidence linking Ms Folbigg's syncopal history to the CALM2-G114R variant which she carries, and her clinical evaluation to date reveals no evidence of LQTS or CPVT so it is unlikely the same CALM2-G114R variant would be associated with sudden death in two of her children. He stated it was not feasible to make a rigorous argument for incomplete penetrance in a specific case without first having evidence of the variant ever being causal in the family in which incomplete penetrance is proposed, or in any other family. He made a similar comment concerning variable expressivity.¹⁶⁹⁵

¹⁶⁹¹ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 37].

¹⁶⁹² Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 38-39].

¹⁶⁹³ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 39].

¹⁶⁹⁴ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 39].

¹⁶⁹⁵ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 40-41].

1310. Dr MacRae stated that the fact that the CALM2-G114R is outside the sequence-defined EF-hand motif does not lead to any inferences with regard to the pathogenicity or lack of pathogenicity of variants at this residue. He stated the calmodulin proteins are highly conserved and strongly suggest that the functions of calmodulin are not just encoded in the EF-hands.¹⁶⁹⁶
1311. Dr MacRae stated that there does not appear to be a reasonable possibility that the CALM2-G114R variant caused Sarah and Laura's death, given the medical and scientific data available. He stated that even if both their deaths were the result of a single shared genetic event, the overall likelihood of this occurrence, in addition to two other causally independent deaths in the same family, remains "several orders of magnitude less likely than the probability of a single shared genetic or external factor".¹⁶⁹⁷
1312. Dr MacRae noted that Professors Toft Overgaard and Nyegaard had added data on in vitro binding between the calmodulin variants and the IQ domain of the sodium channel. He stated that despite the "elegance" of the experimental findings, the limitations of this approach for predicting clinical events remained unaddressed.¹⁶⁹⁸
1313. Dr MacRae stated that a significant focus for the Inquiry is the identification and ranking of areas of uncertainty. He stated that perhaps the most notable feature of all human genetic analyses is the apparent certainty of the genetic findings, which is where a particular sequence is present or absent, and the apparent uncertainty of the clinical findings. He stated that it should be noted, firstly that everyone is likely to have several missense variants in different genes which would be classified as pathogenic or likely pathogenic, but their significance can only be defined by the consistent transmission of the genotype with the particular phenotype and this would ideally be in multiple independent instances. He stated this is necessary to avoid attributing causality to simple correlation. Second, clinical findings are often quite specific and when individually rare events occur in a single family, the likelihood that they are manifestations of the same underlying cause is substantially increased.¹⁶⁹⁹
1314. He stated that it is therefore vital in the first instance to separate analysis of genotype from phenotype. He stated it was important to avoid the circular logic of an uncertain phenotype reinforcing an uncertain genotype or vice versa. Dr MacRae stated that the initial abnormal phenotypes around which the Inquiry is based were: first, unexpected sudden death in four siblings; second, a single agonal electrocardiogram from one sibling; third, acquired bilateral hypoxic/anoxic brain injury in one sibling; and, fourth, histological evidence of myocarditis in one sibling.¹⁷⁰⁰
1315. Dr MacRae stated that in this setting a general estimate of the likelihood of all four siblings having died from independent causes is so unlikely as to be virtually impossible. He stated that simple probability estimates thus suggests the events are unlikely to be independent and infers either a shared genetic cause or a shared extrinsic, or environmental, cause.¹⁷⁰¹

¹⁶⁹⁶ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 41].

¹⁶⁹⁷ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 42-43].

¹⁶⁹⁸ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 46].

¹⁶⁹⁹ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 46-47].

¹⁷⁰⁰ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 47].

¹⁷⁰¹ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 47-48].

1316. Dr MacRae stated that, in summary, in his opinion, there is no genetic, basic science or clinical evidence presented that would support the identified variants as causal in the deaths of the Folbigg children. Even if the CALM2-G114R variant was pathogenic and causal (which he said is not likely), the *a priori* likelihood that all of the events in the family occurred by chance alone remains extremely low. He stated the highly unusual concurrence of four very similar sudden deaths in a single family strongly suggests an undetected inherited disorder (now less likely due to the extensive genomic assessment) or a shared extrinsic mechanism as the cause for these unfortunate events.¹⁷⁰²

Dr MacRae's evidence at the Inquiry

1317. In his evidence at the Inquiry, it was suggested to Dr MacRae that he put his conclusion quite unequivocally, “there is no evidence”. He responded there was no extant evidence that would support the conclusion that the CALM2-G114R was causal in the deaths of Sarah and Laura. He said there is evidence that the calmodulin gene is important in different forms of sudden death in young children. He noted there is evidence that the calmodulin variants that were present in two of the children have some in vitro effects, but none of that is linked to any clinical pathogenicity.¹⁷⁰³
1318. After giving his explanation of variant mapping, Dr MacRae gave evidence that he is currently the recipient of a US National Institute of Health grant to pursue work in that area. He explained that he was working on a particular piece of the grant which was the reconstitution of variants in an actual whole organism in a way that replicates the genetics of humans in order to act as the final arbiter in terms of understanding how each of those assays relate to a cardiac phenotype. He stated that he was working with three other groups who were doing deep mutational scanning of genes that caused vascular disease, genes that cause arrhythmias or heart muscle disease, and his expertise was in following up in animal models at a very high-throughput. He followed up each of these diseases in a Zebrafish model, which he described as a very efficient way of looking at heart function.¹⁷⁰⁴
1319. Dr MacRae was referred to the part of his report dealing with variant effect mapping to the preprint of the Floyd Article, of which he was co-author. He said he was involved in evaluating the variants to understand which ones are “extremes or essentially in the middle”. He stated what the authors were trying to do was to select the variants that would be modelled in an animal model because they would best represent the spectrum of what was happening in calmodulin. He stated that the calmodulin genes have essentially identical proteins for all three genes in humans. He stated they have probably quite different functions, although they overlap in many ways for certain functions, but the reality is, at a variant effect mapping level, one can study the function of all three genes with a single set of experiments. He agreed that the final published form of the Floyd Article expressed his views.¹⁷⁰⁵
1320. Dr MacRae was referred to the opening paragraph of the published Floyd Article and agreed that it was reporting on actual clinical cases in which the variant mapping described had been used in the context of clinical decision making.¹⁷⁰⁶

¹⁷⁰² Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 50].

¹⁷⁰³ Transcript of the 2022 Inquiry, 17 February 2023 T477.3-21 (MacRae).

¹⁷⁰⁴ Transcript of the 2022 Inquiry, 17 February 2023 T480.3-18 (MacRae).

¹⁷⁰⁵ Transcript of the 2022 Inquiry, 17 February 2023 T480.37-T481.40 (MacRae).

¹⁷⁰⁶ Transcript of the 2022 Inquiry, 17 February 2023 T481.46-T482.19 (MacRae).

1321. He was also referred to the statement in the second paragraph:

“In 3 paediatric cardiac arrest cases with VUS in 1 of the 3 genes encoding the CALM (calmodulin) protein, we incorporated data from a previously published proactive variant effect map based on calmodulin yeast fitness complementarity.”¹⁷⁰⁷

Dr MacRae stated none of the three paediatric cardiac arrest cases were his patients. He also agreed the previously published proactive variant effect map was a map published in a 2017 paper authored by Jochen Weile et al, ‘A Framework for Exhaustively Mapping Functional Missense Variants’ (**Weile Article**).¹⁷⁰⁸ He was referred to the statement in the article, “Such maps can accurately identify functionality of a clinical variant in advance of that variant’s first clinical presentation.”¹⁷⁰⁹ He stated he agreed with that comment, in principle, acknowledging that there are very few cases where that can be said to have been done in a systematic way, largely because of the lack of clinical information and the lack of patient-mechanistic information.¹⁷¹⁰

1322. Dr MacRae was referred to that portion of the Weile Article headed, “Variant impact maps for five additional disease-implicated genes”, in particular the statements:

Having validated the framework, we sought to map functional variation for disease-relevant genes...and CALM1, CALM2, and CALM3, associated with cardiac arrhythmias (long QT syndrome (Crotti et al, 2015) and catecholaminergic polymorphic ventricular tachycardia (Nyegaard et al, 2012)). Because the three calmodulin genes encode the same polypeptide sequence, performing DMS for CALM1 also provided maps for CALM2 and CALM3.”¹⁷¹¹

1323. Dr MacRae was asked in that context whether he agreed that CALM1, 2 and 3 are associated with LQTS. He stated that there was definitely data which would implicate a series of *de novo* mutations in at least two of those genes with LQTS. He stated the data for all three are not completely perfect but he thought it was not an unreasonable supposition. He said “probably the best data are for CALM2 and CALM3”.¹⁷¹²

1324. He was asked then if he agreed that CALM1, 2 and 3 genes are associated with CPVT and he stated he thought the case was much more tenuous, although he acknowledged that there is some early evidence that they may be.¹⁷¹³

1325. Dr MacRae was referred to the description in the Weile Article that the three calmodulin genes encode the same polypeptide sequence and referred to his comment in his report that there were different outcomes for deleting CALM1, 2 and 3 in mice. He agreed that that was loss-of-function modelling and was asked whether he was aware of any loss-of-function CALM variants identified in humans. He stated the pathogenic variants described in humans are loss-of-function or

¹⁷⁰⁷ Exhibit 15-257, Brendan Floyd et al, ‘Proactive Variant Effect Mapping Aids Diagnosis in Pediatric Cardiac Arrest’ (2023) *Circulation: Genome and Precision Medicine* (forthcoming) [red pagination 3589].

¹⁷⁰⁸ Exhibit 15-173, Jochen Weile et al, ‘A Framework for Exhaustively Mapping Functional Missense Variants’ (2017) 13(12) *Molecular Systems Biology* 1-17.

¹⁷⁰⁹ Exhibit 15-173, Jochen Weile et al, ‘A Framework for Exhaustively Mapping Functional Missense Variants’ (2017) 13(12) *Molecular Systems Biology* 1 [red pagination 2711].

¹⁷¹⁰ Transcript of the 2022 Inquiry, 17 February 2023 T482.31-T483.40 (MacRae).

¹⁷¹¹ Exhibit 15-173, Jochen Weile et al, ‘A Framework for Exhaustively Mapping Functional Missense Variants’ (2017) 13(12) *Molecular Systems Biology* 1, 5 [red pagination 2715].

¹⁷¹² Transcript of the 2022 Inquiry, 17 February 2023 T484.3-22 (MacRae).

¹⁷¹³ Transcript of the 2022 Inquiry, 17 February 2023 T484.24-27 (MacRae).

gain-of-function. He said the point he sought to make was that the functions of the calmodulin genes do not perfectly overlap, so it is essentially a logical fallacy to make assumptions when there is direct evidence to the contrary that they actually all behave the same. He said they behave the same in a map for yeast function, but you have to take the yeast function and understand how it relates to the biology of calmodulin 1, 2 and 3 separately in humans. Dr MacRae, however, agreed that there was a definitive possibility that there were variants that lead the gene to gain the same function when they are present.¹⁷¹⁴

1326. Dr MacRae stated that he thought there was very good data that would pass any set threshold of rigour that *de novo* mutations in calmodulin cause an early onset severe LQTS. He said there was no comparable evidence linking CPVT to calmodulin variants.¹⁷¹⁵
1327. He agreed a *de novo* variant in any one of the three CALM genes is capable of causing or resulting in the patient having LQTS. In relation to CPVT, he was referred to the Nyegaard Article.¹⁷¹⁶ He stated that he did not dispute the methodology used in the article and, although the conclusions may be correct, to properly verify them, a fair degree of further information would be needed. He agreed that, in the absence of further evidence, there was at least a possibility of the CALM gene variants causing CPVT.¹⁷¹⁷
1328. He was then referred to the Floyd Article and to the evidence of Professors Toft Overgaard and Nyegaard that the variant effect map reported in that paper might be a good predictor of pathogenicity, but not necessarily a good predictor of whether or not a variant is benign. He stated he thought that was a very reasonable characterisation.¹⁷¹⁸
1329. Dr MacRae was then asked by me to clarify his position. He agreed that the area of science involved was a very fast-moving one and it was generally true there is always an area for a significant degree of disagreement amongst persons specialising in the area. He agreed that he took no issue at all with the technical work completed by Professors Toft Overgaard and Nyegaard or, for that matter, by Professors Vinuesa and Cook. He stated that the analysis of the genome and the analysis of the phenotype of the physiology of the variants in vitro is not in dispute. He stated the difficulty is that the technically correct in vitro information does not inform at all the clinical evaluation of these variants, in its current state, although it may do so in the future. He said “people are confounding in vitro pathogenicity for a calcium assay or for a yeast fitness assay with clinical pathogenicity for a specific phenotype”.¹⁷¹⁹ He was then asked these questions and gave these answers:

Q. Now, in that context what appears to me to be the issue, and I may be wrong, is that you say that the evidence is not enough firstly to say with certainty that the girls died from a disease associated with those genetic mutations, is that correct?

A. That is correct.

Q. Other people have said, no one has said it's a matter of certainty, but other experts,

¹⁷¹⁴ Transcript of the 2022 Inquiry, 17 February 2023 T484.42-T486.17 (MacRae).

¹⁷¹⁵ Transcript of the 2022 Inquiry, 17 February 2023 T487.39-50 (MacRae).

¹⁷¹⁶ Exhibit 15-31, Mette Nyegaard et al, 'Mutations in calmodulin cause ventricular tachycardia and sudden cardiac death' (2012) 91 (4) *American Journal of Human Genetics* 703-712.

¹⁷¹⁷ Transcript of the 2022 Inquiry, 17 February 2023 T492.7-18 (MacRae).

¹⁷¹⁸ Transcript of the 2022 Inquiry, 17 February 2023 T495.16-3 (MacRae).

¹⁷¹⁹ Transcript of the 2022 Inquiry, 17 February 2023 T496.14-45 (MacRae).

including Professor Toft Overgaard, Professor Schwartz for example, have said that it is a possibility. Professor Schwartz quite strongly I should add. Now, in that context, this isn't a Court, it's an Inquiry which is why I can ask you in this way, in that context could you accept that having regard to the technical work, if I can call it that without any disrespect, which is being done, there is at the present time, because that's when I've got to decide this issue, a possibility that these girls died as a result of a disease associated with this mutation?

A. So, I was asked the question originally, did I think it was a reasonable possibility, and I would simply say, I think it's a possibility but I don't think any of the evidence suggests that it's a reasonable possibility.¹⁷²⁰

...

Q. Professor Watkins I thought drew the distinction very well, there's a matter of interpretation of the data, but there is a matter of judgment ultimately about what you draw from it, and -I don't want to -I'm not trying to force you to change your views but what I am saying is, do you accept that as a matter of judgment people with expertise in this field could form a view that the evidence provides a little more certainty than it does in your opinion? That's really I think the nub of it.

A. So I understand completely the conundrum, and I'm trying to convey with the right level of nuance exactly what the basis of my opinions are.

Q. I understand that.

A. So, if you'll bear with me for a couple of minutes, but--

Q. Yes, sure.

A. --the fundamental problem is the in vitro data as presented are technically outstanding but there is no relationship whatsoever, I'm being quite concrete about that, none whatsoever to the clinical situation, or even to the in vivo situation where you have a copy of the variant in association with maybe five copies of the normal wild-type sequence. And so it's actually an incredibly interesting problem to understand how those could relate, but we know already that going from a single copy of the variant to a half variant, half normal in a cell typically is associated with dramatic changes in the outcomes, and this has been seen many, many times. So that basically says I believe all the work that has been done, I think it may prove in the future - for example, were these assays shown in a heterozygous form to predict a particular set of phenotypes in multiple instances in an animal model -it is completely conceivable that there could be a type correlation. But at the moment, there is no evidence one way or the other.¹⁷²¹

...

Q. I understand that. It is that absence which leads you to reject that it is a reasonable possibility?

A. That and a couple of other facts that Professor Watkins alluded to in his report. One is -so you have essentially a phenotype which is not Long QT Syndrome, not CPVT, it's unfortunately sudden unexplained death at large, that's in four children. You have an uncertain relationship between the genes in general and that phenotype. You have at least two children who did not have or carry the genotype, whose deaths you still have to explain. So in a probabilistic manner, all I'm trying to do is say--

Q. Professor, part of my task is to have to weigh those factors, of the other two children.

A. Yes.

Q. That is my job. What I'm asking you about is looked at in isolation and assume -let's be blunt about it -a death from natural causes. Do you accept -I think you accept, as you said, it's a possibility that the mutation caused the death -but do you accept, looking at

¹⁷²⁰ Transcript of the 2022 Inquiry, 17 February 2023 T497.3-20 (MacRae).

¹⁷²¹ Transcript of the 2022 Inquiry, 17 February 2023 T497.32-T498.9 (MacRae).

it in isolation and in the absence of any other explanation, it would be open to a person of skill and experience to form the view that there was a reasonable possibility that the deaths were caused as a result of that genetic mutation?

A. I think it is certainly possible that somebody could make that conclusion. They would have to subsume a weak phenotypic gene - gene-phenotype relationship, an incomplete in vitro to clinical-type relationship, and the relatively low probability - even assuming that both of the girls died from a single variant - that two other children would have died of a related - in a related way phenotypically in the same family. So I'm not saying there's no rationale probabilistically for a genetic cause; I'm not saying there is no rationale probabilistically for an environmental or extrinsic cause. What I am saying is it is very difficult coming into this *a priori* to suddenly make the case, having never seen any evidence to that effect before, that these two variants in this family with a relatively uniform set of unfortunate deaths in the children, this is the explanation for two of them but the other two have died from a completely unrelated phenomenon. It is just probabilistically unlikely because of the way that these things are - tend to occur in families. So the fundamental premise of genetics is that because things occur in the same family, it is likely - because unusual events occur in the same family, it is likely that they share an aetiology and so the basic plausibility of this way upstream of whether or not this particular calmodulin variant can or may ever or has done, cause a sudden death in a young child. There are multiple stats upstream of that that have to be analysed before you get to the point where you're starting to make a partial association with incomplete penetrance plus in vitro data that do not necessarily reflect the clinical outcome suddenly changing that probability. That's all I'm really saying. I am not saying that there's--¹⁷²²

...

Q. [Reading from Professor MacRae's Report] "Indeed, as noted, even if both Sarah and Laura's deaths were the result of a single shared genetic event, the overall likelihood of this occurrence in addition to two other causally independent deaths in the same family remains several orders of magnitude less likely than the probability of a single shared genetic or external factor." I think his Honour asked this but I wanted to be clear about the answer: If you assume that the girls had no brothers and were the only two children to die in this family, would that change your assessment?

A. Then it would be quite difficult to be completely sure one way or the other, but it would certainly - from the human genetic standpoint, it would certainly be a more reasonable possibility, yes. Although it still requires you to create a new phenotype associated with this particular gene and to make pathogenicity inferences that are not yet fully developed, but it's totally reasonable.¹⁷²³

1330. Dr MacRae subsequently in his examination was referred to his statement:

In this setting, a general estimate of the likelihood of all four siblings having died from independent causes is so unlikely as to be virtually impossible... Simple probability estimates thus suggests that the events are unlikely to be independent and infers either a shared genetic cause or a shared extrinsic (or environmental) cause.¹⁷²⁴

He agreed on the hypothesis that CALM2-G114R was responsible for the deaths of the two children, there were effectively three independent events because the mutation was a single event. He agreed that his hypothesis presumes separate causes for the deaths of the two Folbigg boys stating the relative likelihood of that is really quite low compared with either a shared genetic event or a shared environmental event. He stated he was familiar with Meadow's Law and asked if he could distinguish his reasoning from that reasoning. He stated there was "no

¹⁷²² Transcript of the 2022 Inquiry, 17 February 2023 T499.1-45 (MacRae).

¹⁷²³ Transcript of the 2022 Inquiry, 17 February 2023 T500.18-29 (MacRae).

¹⁷²⁴ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 47].

difference in the reasoning, it's simply that probabilities are probabilities". He stated, "the overall probability of seeing all four [deaths] in a single family suggests a shared influence – it doesn't exclude other possibilities. You're just looking at relative likelihoods, that's all."¹⁷²⁵

1331. Dr MacRae was then referred to Professor Watkins' report where he stated, "...In a routine clinical setting, I would absolutely conclude that a variant in this gene with these characteristics was the likely explanation following a young sudden death with a negative autopsy."¹⁷²⁶ Dr MacRae stated that was a perfectly valid conclusion for a single young sudden death. However, he qualified that statement with, "Well, we're not talking about one, we're talking about multiple".¹⁷²⁷
1332. At the conclusion of his examination by Counsel Assisting, he was asked the following questions which were referred to by Counsel Assisting in their written closing submissions:

Q. Can I just ask you, Professor, a couple of things about what you say of the probabilities at page 47 and 48? That's the last paragraph of 47 going onto 48. The probabilities you're measuring is the likelihood of the children dying from a single unifying cause as distinct from discrete causes. Is that correct?

A. That's correct.

Q. Underpinning that is a number of assumptions. I'm just talking generally, not necessarily by reference to this case. If you have two children with a particular condition which the other two children don't have, that markedly impacts the probabilities. Just a matter of logic it does, doesn't it?

A. Yes, absolutely. It reduces them by a factor of about 10 to the minus 4, yeah.

Q. If you add to that - and I'm just asking you to assume this - two children have one condition, another child has a separate and distinct condition and dies from something that can be identified, that lessens the probabilities even further, does it not?

A. Absolutely, yes.

Q. The probabilities could also be affected by the different age the children died, and I'm talking in particular now in relation to one child dying totally in infancy, one dying with a condition after eight months, and the other two dying later. That affects the validity of the probability theory, doesn't it?

A. It does to some extent. I mean, if you look at the population data which the initial probabilities are based, there's definitely a tail in that probability curve after the age of 12 to 16 months. And then it drops off more steeply after the age of ten. But you're 100% right, yes.

Q. That, I want to suggest to you, is the difficulty with probability theory. It's used - and I say this with respect - really on this basis: you can't say with a degree of certainty that you're satisfied that any of these deaths were caused by an identifiable cause. Then you go back to the probability theory and say, it must be a unifying cause. That's where I have some difficulty, Professor, I'm afraid.

A. No, I'm actually not saying that it must be, I'm just saying that the relative probabilities favoured - I'm not saying there's no chance at all. Quite the opposite, I'm agreeing with you quite clearly that there are nuances to the probabilistic analysis, but they can be estimated. And the - if you think about the relative probabilities of a shared genetic cause, 1 in 16 is the estimate for a shared genetic cause. And the estimate for

¹⁷²⁵ Transcript of the 2022 Inquiry, 17 February 2023 T504.18-T505.17 (MacRae).

¹⁷²⁶ Exhibit 14-10, Report of Professor Hugh Watkins (7 February 2023) [red pagination 322].

¹⁷²⁷ Transcript of the 2022 Inquiry, 17 February 2023 T505.22-41 (MacRae).

any of the others, just even *a priori* single sudden death unexplained is, from Australian data, about 1 in 3,133 hundred. So, the relative probabilities start to become really quite significant, but I agree with you completely, the absolutes are very difficult to estimate.”¹⁷²⁸

Dr Abrams

1333. Dr Abrams is the Associate Professor in Paediatrics at the Harvard Medical School. He obtained his degree in Medicine in 1994 from St Mary’s Hospital Medical School, Imperial College, London and became a member of the Royal College of Physicians in Paediatrics in 1998. In 2008, he was conferred a Doctorate in Medicine in Cardiac Electrophysiology. He is also the Co-Director of the Centre for Cardiovascular Genetics at Boston Children’s Hospital, the Centre which he helped to found. He stated the current focus of the Centre’s work is CPVT, calmodulin mediated disorders and arrhythmogenic and restrictive cardiomyopathy. He stated he was not personally involved in laboratory based research.¹⁷²⁹
1334. Dr Abrams stated that for many years he has managed patients with both LQTS and CPVT. He stated a lot of patients have both these diagnoses. He stated these clinical phenotypes are well known and, as of late, they have seen an increasing number of patients who have variants in the calmodulin genes associated with one or either of those two.¹⁷³⁰

Dr Abrams’ report dated 27 January 2023

1335. Dr Abrams referred to the 2019 publication by the ICalM_R which reported the clinical and genetic findings in 74 patients. He observed that the vast majority of variants (80%) were located in either EF-hands 3 or 4, the high-affinity calcium binding sites in the C-terminal of the protein. He stated an association between variant location and phenotype was identified with variants in the EF-hand 4 identified in the majority of LQTS cases, whereas variants identified in CPVT cases were in EF-hand 3 or the region between EF-hands 1 and 2 (interlinker 1-2). He stated that CALM-mediated arrhythmias have been associated with variants in all three genes.¹⁷³¹
1336. Dr Abrams referred to the concepts of variable penetrance and expressivity and stated that, increasingly, variants in genes associated with various cardiovascular genetic disorders are identified in individuals where the primary indication for testing was not based on the presence of a cardiac disorder. He stated the evaluation of individuals with pathogenic or likely pathogenic variants identified in this manner, has shown variants classified as likely pathogenic or pathogenic may not be associated with any phenotype, despite the fact the same variants are clearly disease-causing in other individuals and families. He stated that that reinforced the need to robustly link genetic findings with a concordant phenotype to infer causality, ideally within a familial context.¹⁷³²
1337. Dr Abrams stated that, due to the high rate of *de novo* disease with typically a single

¹⁷²⁸ Transcript of the 2022 Inquiry, 17 February 2023 T514.42-T515.35 (MacRae).

¹⁷²⁹ Exhibit 34-04, Report of Dr Dominic Abrams (27 January 2023) [red pagination 156-195]; Transcript of the 2022 Inquiry, 22 February 2023 T575.27-T576.37 (Abrams).

¹⁷³⁰ Transcript of the 2022 Inquiry, 22 February 2023 T576.40-45 (Abrams).

¹⁷³¹ Exhibit 34-04, Report of Dr Dominic Abrams (27 January 2023) [red pagination 128-129].

¹⁷³² Exhibit 34-04, Report of Dr Dominic Abrams (27 January 2023) [red pagination 130-131].

affected individual any one family, determination of variable expressivity by the same variant is very challenging.¹⁷³³

1338. Dr Abrams said myocarditis is a well-recognised cause of death in children and may be sudden (presumed arrhythmic resulting from acute inflammation) or relate to severe, refractory heart failure. He stated that:

Any acute myocardial stressor associated with inflammation and oedema such as myocarditis, could potentially affect cardiac repolarisation and prolong the QT interval, however the association of myocarditis and inherited arrhythmia syndromes such as LQTS has not described (sic).¹⁷³⁴

1339. He stated, however, myocardial inflammation is increasingly recognised as an integral component in various arrhythmogenic cardiomyopathies.¹⁷³⁵

1340. Dr Abrams stated that the variant identified in the Folbigg family, CALM2-G114R, has not been reported to date in either the ICalM or any other publication. He added that the specific variant has not been identified in gnomAD. He referred to the classification of CALM2-G114R using the ACMG Guidelines. He noted it had been discussed in great detail by Professors Kirk and Skinner and stated his personal interpretation of the variant is that it is best judged as a VUS. He essentially adopted the reasoning of Professors Kirk and Skinner in forming this view.¹⁷³⁶

1341. Dr Abrams stated that the G114 residue is in the interlinker region of EF-hands 3 and 4. He stated it is not therefore located in a region critical to calcium binding, where the majority of disease-causing variants have been identified. However, he stated the interlinker 3-4 region may play an important role in protein function, but stated the specifics of that are outside his area of expertise.¹⁷³⁷

1342. Dr Abrams stated that there appeared to be no clinical or electrocardiographic evidence of LQTS in either Ms Folbigg or Laura, although the corrected QT interval cannot be accurately measured in Laura's case. He stated that in no member of the family has ventricular fibrillation been documented, on which a diagnosis of familial IVF would rely. He also stated, although the history and clinical findings in Ms Folbigg may represent CPVT, they may also simply be normal findings unrelated to any genetic arrhythmic disorder. He stated he would not make a diagnosis of CPVT in Ms Folbigg's case without other more compelling clinical evidence. He stated her symptoms and clinical findings are not uncommon within the general population, and therefore could simply be vasovagal syncope with an exercise test within the realms of normality, given her age. Dr Abrams agreed with Professor Wilde that the ages of Sarah and Laura at the time of their deaths, and circumstances surrounding their deaths would be very atypical in CPVT. He stated that, unlike LQTS, CPVT appears not to manifest until the ages of three or four, for reasons not well understood. He stated he had never seen a case, nor was he aware of cases, with symptomatic presentation at less than two years of age. He stated he would not consider sudden death alone a phenotype, in the absence of other clinical findings.¹⁷³⁸

1343. Dr Abrams pointed out that the ACMG Guidelines, in the PS3 criteria, include

¹⁷³³ Exhibit 34-04, Report of Dr Dominic Abrams (27 January 2023) [red pagination 131].

¹⁷³⁴ Exhibit 34-04, Report of Dr Dominic Abrams (27 January 2023) [red pagination 133].

¹⁷³⁵ Exhibit 34-04, Report of Dr Dominic Abrams (27 January 2023) [red pagination 133].

¹⁷³⁶ Exhibit 34-04, Report of Dr Dominic Abrams (27 January 2023) [red pagination 134].

¹⁷³⁷ Exhibit 34-04, Report of Dr Dominic Abrams (27 January 2023) [red pagination 135].

¹⁷³⁸ Exhibit 34-04, Report of Dr Dominic Abrams (27 January 2023) [red pagination 138-139].

functional data as a ‘strong’ criteria in making the case for variant pathogenicity. However, he noted the limitation of experimental models in accurately reflecting the function of a single gene product removed from the complex environment of human cardiomyocyte biology is acknowledged by the ICalmR in the 2019 paper. He noted that the study in the Brohus Article, to assess the effects of CALM2-G114R, was conducted in HEK293 cells as opposed to patient-derived induced pluripotent stem cells, and so would be subject to the limitations described in the ICalmR paper. He stated that, primarily, he believed it was important that in vitro functional data was concordant with the clinical findings. He stated that the findings suggest the potential for discordance between in vitro analysis and in vivo, clinical findings, stressing the need to interpret such results with caution.¹⁷³⁹

1344. In dealing with the question of whether there is a reasonable possibility, based on available medical and scientific information, that Sarah and/or Laura’s death was caused by fatal cardiac arrhythmias attributable to the CALM2-G114R variant, Dr Abrams first noted that, based on the knowledge acquired to date around calmodulinopathy, the majority of deaths in early life relate to LQTS. He stated there is no clinical evidence supporting a diagnosis of LQTS in either Sarah or Laura, although cardiac investigations were insufficient to make or refute the diagnosis. He noted that Ms Folbigg, who has the same variant, does not have LQTS, suggesting this phenotype is not evident in their family. He said he would be very cautious about interpreting in vitro data in isolation and without concordant evidence of clinical disease.¹⁷⁴⁰
1345. He stated the mechanism of death could only be conclusively determined by recording the heart rhythm at the time. He stated, therefore, that whilst a cardiac arrhythmia related to the calmodulin variant cannot be definitively excluded, he believed the likelihood that this was responsible for the deaths of Sarah and Laura was low.¹⁷⁴¹
1346. Dr Abrams stated the lack of a definitive phenotype in any member of the Folbigg family with the CALM2-G114R variant made it difficult to conclude with any confidence that this family is affected by an inherited arrhythmia syndrome. He stated it was possible, but unlikely to his mind, that Ms Folbigg has a very mild form of CPVT and her two children died at a very young age during sleep, from either CPVT or another condition associated with calmodulin. He stated:

In this family, as in all families with genetic cardiovascular disorders, the presence of a variant alone cannot be immediately assumed to be disease-causing and would rely on detailed clinical and genetic evaluation of the individual and family members to determine causality.¹⁷⁴²

Dr Abrams’ evidence at the Inquiry

1347. Dr Abrams confirmed that he continued to hold the view he expressed in his report. He was referred to the fact that he said he could not exclude the possibility that a cardiac arrhythmia related to calmodulin caused the deaths of Sarah and Laura. He was asked, accepting that he said the likelihood of this is low and the possibility unlikely, would he nevertheless characterise that possibility as reasonable. He stated that he thought it was possible. He said it was an assumption that could be

¹⁷³⁹ Exhibit 34-04, Report of Dr Dominic Abrams (27 January 2023) [red pagination 140-141].

¹⁷⁴⁰ Exhibit 34-04, Report of Dr Dominic Abrams (27 January 2023) [red pagination 144].

¹⁷⁴¹ Exhibit 34-04, Report of Dr Dominic Abrams (27 January 2023) [red pagination 144].

¹⁷⁴² Exhibit 34-04, Report of Dr Dominic Abrams (27 January 2023) [red pagination 146].

made based on the identification of a variant in calmodulin in a deceased individual, based on everything we know about the gene, the pathogenicity of variants in that gene and the associated phenotypes which have a very high risk of life-threatening ventricular arrhythmias. He opined that, in that situation it is a reasonable assumption, but it would be necessary to explore the wider family further and identify other members who may or may not have the variant, which in this case would be the mother of the two girls, and evaluate her. He stated that based on the fact that Ms Folbigg does not have a significant or definitive phenotype associated with many of the conditions that we know to date have been described as caused by calmodulin variants, that shifts weight away from this being a pathogenic variant that is responsible for an arrhythmic death of the two young girls.¹⁷⁴³

1348. As with some of the other experts who gave evidence, Dr Abrams was referred to Professor Watkins' comment:

Looking at the three reports [those of Professors Schwartz, Wilde and Dr MacRae], what I see is that reasonable, thoughtful and authoritative experts are all looking at the same data but are drawing different inferences. This is because there is substantial uncertainty and so judgment, rather than interpretation of indisputable fact, is needed to reach a conclusion.¹⁷⁴⁴

1349. Dr Abrams stated he agreed with those comments. He said there is uncertainty in the situation as there are many other situations like it where there is a genetic finding in a family with minimal clinical evidence of a condition and two instances of sudden death so, therefore, judgment is required to determine what was the cause of the deaths in the two individuals and to what degree that can be attributed to the variant in question.¹⁷⁴⁵
1350. Dr Abrams agreed that, in applying supporting evidence of pathogenicity, when he referred to the functional assays that were supportive of a damaging effect on the gene, he was referring to those that were reported in the Brohus Article. He was asked whether he took into account the further assays that were conducted at the end of 2022 by Professor Toft Overgaard in respect of the punitive benign variant I10T. He acknowledged that it was outside of his area of expertise, but he thought that it was very difficult to reproduce in particular assays exactly what happens in the human heart. He said he was saying it with no disrespect to the quality of the science at all and the variant has obviously been shown to be deleterious in those assays, but how it is applied is an area that could again fall into the judgment with different individuals coming down to different opinions. Dr Abrams repeated his view that the assays provided only supporting evidence because they were expressed in isolation without a wild type variant. He referred again to the ICalmR paper which stated that such assays are prone to error because they do not replicate exactly the human heart and that is why people have moved towards more looking at induced pluripotent stem cell cardiomyo science to try and replicate human cardiac physiology more accurately.¹⁷⁴⁶
1351. Dr Abrams stated he would defer to Professor Toft Overgaard with respect to the significance of the location of G114R. He was also asked whether he was familiar with the recently reported deep mutational scanning model that Dr MacRae was involved with and that he was aware that that predicted CALM2-G114R to be

¹⁷⁴³ Transcript of the 2022 Inquiry, 22 February 2023 T579.8-24 (Abrams).

¹⁷⁴⁴ Exhibit 14-10, Report of Professor Hugh Watkins (7 February 2023) [red pagination 322].

¹⁷⁴⁵ Transcript of the 2022 Inquiry, 22 February 2023 T579.37-T580.7 (Abrams).

¹⁷⁴⁶ Transcript of the 2022 Inquiry, 22 February 2023 T582.22-T583.8 (Abrams).

pathogenic. He was asked why he did not give weight to the results of that model and stated that it was a very new technique that is yet to be validated further and examines yeast, not humans. He stated he felt he did not have enough experience to use it at this time.¹⁷⁴⁷

1352. Dr Abrams was asked whether there was any substantial doubt in his area of speciality that CPVT is an established phenotype of CALM variants. He stated he thought the experience was still very small because the number of patients with CPVT are less than those with LQTS. However, he stated he had seen patients presenting with a clear clinical phenotype of CPVT, who ultimately were found to have a *de novo* variant in one of the calmodulin genes. He stated, to his mind, that would be good evidence for support it being a form of CPVT, but whether it is similar or differs to the classic form of CPVT, which is associated with the ryanodine receptor, he thought time would tell as experience in more patients with calmodulin variants was obtained. He stated he did not feel comfortable making a diagnosis of CPVT clinically in Ms Folbigg saying it was not excluded, but it was unlikely. Subsequently, he stated that he thought on the information available, to date, it can be excluded. In his final answer in relation to the ACMG Guidelines, Dr Abrams stated that he felt that, at the moment, the CALM2-G114R variant is a VUS, that could change with further information. He said it is certainly towards the higher end of the range and many people would argue that it is a likely pathogenic variant based on the constraints of calmodulin, as he thought Professor Watkins did. He said he would not necessarily argue with that strongly either way. He opined that it is definitely something that is suspicious and would require much further investigation, and those investigations often take time to identify specific features that would help to determine the causality of a variant in a specific gene.¹⁷⁴⁸
1353. Dr Abrams said that, in forming his views, he did not take into account the deaths of Caleb and Patrick in any great detail. He explained his assessment was very much focused on the role of the calmodulin variant but obviously it is important to know the family as a whole to factor those in. He stated that from the calmodulin perspective it is very difficult to say this is the cause of everything because there are two individuals who do not carry the variant. However, he stated the fact that the calmodulin variant would not explain all four deaths had not influenced his conclusion that the calmodulin variant was not likely to be responsible for the deaths of the girls.¹⁷⁴⁹

Genetic experts who did not give evidence at the Inquiry

Professor Pascale Guicheney

1354. Professor Guicheney is a Professor in the Faculty of Medicine at the Sorbonne Université in Paris. She has been a Research Director working in the field of genetics of cardiac arrhythmias and sudden infant death since 1990. After receiving a Doctorate of Science in Molecular and Cellular Pharmacology at University Pierre and Marie Curie in Paris, she obtained a Certificate of Higher Studies in Human Genetics at University René Descartes, and worked in the field of genetics of ventricular arrhythmias and muscular dystrophies.¹⁷⁵⁰

¹⁷⁴⁷ Transcript of the 2022 Inquiry, 22 February 2023 T585.1-31 (Abrams).

¹⁷⁴⁸ Transcript of the 2022 Inquiry, 22 February 2023 T586.9-591.11 (Abrams).

¹⁷⁴⁹ Transcript of the 2022 Inquiry, 22 February 2023 T597.7-26 (Abrams).

¹⁷⁵⁰ Exhibit 17-03, Report of Report of Professor Pascale Guicheney (9 November 2022) [red pagination 11].

1355. Professor Guicheney stated a CALM variant does not need to be *de novo* to be pathogenic. She referred to the Kato Article, of which she was co-author, pointing out that, in the family investigated in that article, there were 15 carriers or obligate carriers of the variant, two members of the second generation remained asymptomatic at adult age without any treatment, whilst three others remained asymptomatic but had been treated since the ages of 18, 5 and 1.¹⁷⁵¹
1356. Professor Guicheney said that, without any doubt Ms Folbigg is symptomatic. She stated the syncope's and loss of consciousness that she experienced in different contexts such as swimming, anxiety, not only when she was young but also at adult age, are due to cardiac arrhythmias.¹⁷⁵²
1357. Professor Guicheney stated that children with CALM variants tend to experience cardiac events, fainting, syncope or even sudden death due to ventricular fibrillation more frequently than adults.¹⁷⁵³ She referred to two recent studies which she said supported these propositions.¹⁷⁵⁴

Professor Hugh Watkins

1358. Professor Watkins since 2016 has been the Radcliffe Professor of Medicine, at the University of Oxford and Honorary Consultant in Cardiology at the John Radcliffe Hospital, Oxford. Since 2012, he has been the Head of the Radcliffe Department of Medicine, University of Oxford, prior to which he was the Head of the Department of Cardiovascular Medicine at the University of Oxford.¹⁷⁵⁵
1359. Professor Watkins reviewed the Brohus Article and the reports of Professor Schwartz dated 24 October 2022, 8 November 2022, 22 December 2022 and 24 January 2023. He also reviewed the reports of Professor Wilde dated 24 October 2022, 9 November 2022 and an undated further report. Finally, he reviewed the report of Dr MacRae dated 27 January 2023.¹⁷⁵⁶
1360. Professor Watkins stated looking at these reports what he saw is that reasonable, thoughtful and authoritative experts are all looking at the same data but drawing different inferences. He stated this is because there is substantial uncertainty and so judgment, rather than interpretation of indisputable fact, is needed to reach a conclusion. He stated that, personally, the inferences he drew align best with those reached by Professor Schwartz. He stated, however, "it is not the case there are specific interpretations put on the data by Professors Wilde and MacRae I can definitively refute – rather, they make some judgement calls which I do not share".¹⁷⁵⁷
1361. Professor Watkins stated that the main arguments he would make are first, the following factors make the variant more than a VUS:

- (1) the extreme conservation and constraint of the CALM genes;

¹⁷⁵¹ Exhibit 17-03, Report of Report of Professor Pascale Guicheney (9 November 2022) [red pagination 12].

¹⁷⁵² Exhibit 17-03, Report of Report of Professor Pascale Guicheney (9 November 2022) [red pagination 12].

¹⁷⁵³ Exhibit 17-03, Report of Report of Professor Pascale Guicheney (9 November 2022) [red pagination 13].

¹⁷⁵⁴ Exhibit 15-120, Antoine Leenhardt et al, 'Catecholaminergic Polymorphic Ventricular Tachycardia' (2012) 5(5) *Circulation: Arrhythmia and Electrophysiology* 1044-1052; Exhibit 15-121, Antoine Leenhardt et al, 'Catecholaminergic Polymorphic Ventricular Tachycardia in Children: A 7-year follow-up of 21 patients' (1995) 91(5) *Circulation* 1512-1519.

¹⁷⁵⁵ Exhibit 14-10, Report of Professor Hugh Watkins (7 February 2023) [red pagination 324-326].

¹⁷⁵⁶ Exhibit 14-10, Report of Professor Hugh Watkins (7 February 2023) [red pagination 321].

¹⁷⁵⁷ Exhibit 14-10, Report of Professor Hugh Watkins (7 February 2023) [red pagination 322].

- (2) That it affects the same residue as a known pathogenic variant; and
 - (3) that sophisticated functional assays show clear, relevant abnormalities with many similarities (though some differences) with those seen in confirmed pathogenic variants.¹⁷⁵⁸
1362. However, he stated that there is not enough data to confirm it is pathogenic because it has not been seen in multiple affected individuals, did not arise *de novo*, and has not been shown to segregate with disease in a large family.¹⁷⁵⁹
1363. Secondly, he stated the genome sequencing was done to look for a possible genetic explanation for sudden death in the Folbigg infants. He stated he believed that an *a priori* chance that a pathogenic or likely pathogenic variant would be identified in one of the small number of genes associated with sudden death under the age of two was low. He stated that in a routine clinical setting, he would “absolutely conclude that a variant in this gene with these characteristics was the likely explanation following a young sudden death with a negative autopsy”. He stated that he therefore agreed with Professor Schwartz that it is completely plausible that a pathogenic variant in CALM2 could produce sudden death from a syndrome that does not comply with standard expectations. He stated his interpretation of all of this was that it is certainly plausible but not, in the current state of knowledge, provable that the CALM2-G114R variant was responsible for the sudden deaths of Sarah and Laura.¹⁷⁶⁰
1364. He emphasised that his conclusion regarding the possibility of a natural cause of the deaths of Sarah and Laura does not address the fact that there were two other unexplained deaths. He stated he had not taken that information into account in his interpretation of the CALM2-G114R variant.¹⁷⁶¹ In that regard, he stated the scope of his analysis differs substantially from that of Dr MacRae, and that difference likely explains why his report draws more clear-cut conclusions concerning the role of this variant.¹⁷⁶²

Conclusion as to the genetic evidence

1365. Counsel Assisting submitted that the expert evidence established that there was a reasonable possibility that the CALM2-G114R variant was responsible for the deaths of Sarah and Laura. They contended that, with one exception, all of the genetic experts accepted this proposition, stating that the experts were more evenly divided on the issue of whether the variant was likely to have caused their deaths. They contended, however, that it was unnecessary for me to form a view as to whether or not it was likely, as distinct from being a reasonable possibility.¹⁷⁶³
1366. The submissions on behalf of Ms Folbigg also contended that it was a reasonable possibility that the variant was responsible for Sarah and Laura’s deaths.¹⁷⁶⁴
1367. The submissions on behalf of the Director of Public Prosecutions stated that the Director did not wish to be heard against Counsel Assisting’s submissions on this

¹⁷⁵⁸ Exhibit 14-10, Report of Professor Hugh Watkins (7 February 2023) [red pagination 322].

¹⁷⁵⁹ Exhibit 14-10, Report of Professor Hugh Watkins (7 February 2023) [red pagination 322].

¹⁷⁶⁰ Exhibit 14-10, Report of Professor Hugh Watkins (7 February 2023) [red pagination 322-323].

¹⁷⁶¹ Exhibit 14-10, Report of Professor Hugh Watkins (7 February 2023) [red pagination 323].

¹⁷⁶² Exhibit 14-10, Report of Professor Hugh Watkins (7 February 2023) [red pagination 323].

¹⁷⁶³ Counsel Assisting’s Written Closing Submissions (4 April 2023) 73 [269]-[270].

¹⁷⁶⁴ Written Closing Submissions on behalf of Ms Folbigg (18 April 2023) 155 [339].

issue, subject to the contention that Professor Wilde did not accept that it was a reasonable possibility. It was submitted on behalf of the Director, however, that did not in any material way detract from the submissions more generally.¹⁷⁶⁵

1368. Mr Folbigg, whilst contending that the evidence at the Inquiry did not raise a reasonable doubt as to Ms Folbigg's guilt, did not seem to challenge the proposition that there was a reasonable possibility that the CALM2-G114R variant was the cause of the deaths of Sarah and Laura.¹⁷⁶⁶
1369. By way of introduction, it should be noted that, following receipt of the Crotti Article, the Inquirer at the 2019 Inquiry altered his opinion and concluded that there was a reasonable possibility that the CALM2-G114R variant was causative of the deaths of Sarah and Laura (see [919]-[920] above).¹⁷⁶⁷
1370. It may fairly be said that the experts who were research based had a far greater degree of confidence that the CALM2-G114R variant was a reasonably possible cause of death than the clinicians who gave evidence. Nonetheless, with the exception of Dr MacRae and possibly Professor Wilde, the latter group accepted it was a reasonable possibility that the deaths of Sarah and Laura were a result of them carrying the variant. It should be noted that Professor Schwartz (with whom Professor Watkins agreed) straddled between the research and the clinical side, and expressed the strong view that there was a reasonable possibility that the variant was the cause of death.
1371. Prior to dealing with the ultimate conclusions of each of the experts, I should say that I accept each of them sought to express their views impartially and on matters falling within their respective areas of expertise. I have dealt with the evidence of Professor Vinuesa at [1052]-[1076] above. The only other expert in respect of whom I had concerns as to his impartiality was Professor Schwartz. Professor Schwartz was undoubtedly firm in his views and, it may be said, dismissive of contrary opinions. However, his evidence, relating to the development of the ICalmR and the manner in which entries were made, was not disputed and provided empirical support for his conclusions. I accept that, ultimately, he sought to give his evidence fairly and impartially and the conclusion in his report (which I have set out at [1181]) fairly reflected his considered opinion.
1372. Professors Toft Overgaard and Nyegaard were most impressive witnesses. As I have pointed out at [1027], they expressed the view that calmodulinopathy emerges as a reasonable explanation for a natural cause of death. Professor Toft Overgaard went further in his evidence stating that it was a likely cause of death.
1373. It must be accepted that Professors Toft Overgaard and Nyegaard's opinions were based on their functional assays, all of which pointed to pathogenicity. As was stated by a number of the experts, there is a difficulty in transposing the assay results into the clinical scenarios. Professor Toft Overgaard accepted that it was not possible to make predictions as to the likely phenotypes from the assay results, but he accepted Professor Wilde's comment that there was a difference between the phenotype that is produced for the Folbigg family – being the deaths of two infants at 10 months and 12 months, while asleep – and what the functional assays predicted – namely, CPVT or possibly LQTS. Professor Toft Overgaard acknowledged that it

¹⁷⁶⁵ Written Closing Submissions on behalf of the Director of Public Prosecutions (19 April 2023) 3 [12].

¹⁷⁶⁶ Written Closing Submissions on behalf of Mr Folbigg (19 April 2023) 1 [4].

¹⁷⁶⁷ 2019 Inquiry Report, Addendum [49]-[53].

had not been observed before. Nevertheless, he adhered to his opinion. Professor Nyegaard agreed with him.¹⁷⁶⁸

1374. An important consideration for some of these experts was the fact that Ms Folbigg remains alive and well, notwithstanding that she carries the variant.¹⁷⁶⁹ As I pointed out at [1023], Professors Toft Overgaard and Nyegaard considered that this was due to variable expressivity, stating that the multiple syncope that Ms Folbigg had experienced suggests that the CALM2-G114R variant has variable expressivity.¹⁷⁷⁰
1375. Professors Toft Overgaard and Nyegaard disagreed that it was appropriate to use the ACMG Guidelines stating they were developed in clinical settings to determine appropriate clinical action.¹⁷⁷¹
1376. I have set out their evidence in detail above. Suffice to say that their opinion was that the variant was likely pathogenic, and at least a reasonably possible cause of the deaths of the children.
1377. I have set out the final conclusions of Professors Vinuesa, Cook and Dr Arsov at [1100]-[1102]. It may be said that they were all firmly of the view that there was a reasonable possibility that the CALM2-G114R variant was a likely cause of the deaths of the two children.
1378. As Counsel Assisting pointed out, Professor Vinuesa considered that, when presented with two sudden unexpected deaths in a family carrying a novel variant in a gene that does not tolerate substitution, shown to be damaging to the protein function in assays, and where the phenotypic spectrum for other gene variants includes sudden cardiac death, the “logical conclusion” is that the variant was causative.¹⁷⁷² Her reference to the other genetic variants is the reference to the entries in the ICalmR concerning the other CALM genes (see [1155]-[1164] above).
1379. Professor Vinuesa also rejected the proposition that the deaths of Sarah and Laura could not be attributed to the CALM2-G114R variant, because of the “mismatch” referred to by Professor Wilde (see [1252]) between the functional alterations and the clinical findings, describing that criticism as speculative. She accepted that the single cell assays did not readily translate to a predictable phenotype. What she did state, however, was that the assays demonstrated that the mutation was damaging, concluding that the possibility was quite large that it crosses a phenotype in the spectrum of calmodulinopathies (see [1130] above).¹⁷⁷³
1380. In dealing with the ACMG Guidelines, Professor Vinuesa stated that her current view was that she would be happy to state that the variant was between pathogenic and likely pathogenic. She agreed, however, that the Guidelines were mainly designed for a clinical setting.¹⁷⁷⁴ Ultimately, she agreed with Professor Watkins that there was not enough data to confirm that the variant was pathogenic, and that

¹⁷⁶⁸ Transcript of the 2022 Inquiry, 15 November 2022 T144.23-37 (Toft Overgaard); T145.35-47 (Nyegaard).

¹⁷⁶⁹ Exhibit 2-Z, Joint report of the Sydney genetics team (29 March 2019) [red pagination 5208]; Exhibit 4, Transcript of the 2019 Inquiry, 15 April 2019 T474.15-36 [red pagination 480].

¹⁷⁷⁰ Exhibit 6-02, Report of Professors Michael Toft Overgaard and Mette Nyegaard (18 October 2022) [red pagination 17-19].

¹⁷⁷¹ Exhibit 6-03, Addendum to Report of Professors Michael Toft Overgaard and Mette Nyegaard (12 November 2022) [red pagination 44].

¹⁷⁷² Counsel Assisting’s Written Closing Submissions (4 April 2023) 140 [494].

¹⁷⁷³ Transcript of the 2022 Inquiry, 15 February 2023 T344.19-23 (Vinuesa).

¹⁷⁷⁴ Transcript of the 2022 Inquiry, 14 February 2023 T305.1-32 (Vinuesa).

it was plausible, but not provable that the variant was responsible for the sudden deaths.¹⁷⁷⁵

1381. I have summarised the evidence of Professor Cook and Dr Arsov above. Suffice to say that, similar to Professor Vinuesa, they adhered to their view that there was at least a reasonable possibility that the variant was responsible for the deaths of Sarah and Laura.
1382. Professor Schwartz was also firmly of the view that there was a reasonable possibility that the deaths of Sarah and Laura could be attributed to the CALM2-G114R variant. I have set out his conclusions in his report of 8 November 2022 (see [1181]) and his conclusions during his evidence (at [1204]).
1383. What is also important in the evidence of Professor Schwartz are his comments regarding the updated information reported to the ICalmR, which he stated indicates that a progressive picture is emerging, pointing to the fact that in more and more cases, it appeared that the phenotype was blunted (see [1176]).¹⁷⁷⁶ Professor Schwartz stated that this demonstrated that the reasoning of Professors Kirk and Skinner needed qualification (see [1177]-[1180] above).
1384. It is not necessary for me to resolve whether Professor Schwartz is correct in that conclusion. However, it should be noted that Professor Skinner was not available to comment on the conclusion reached by Professor Schwartz, whilst Professor Kirk, who did give evidence at the Inquiry, accepted that it was a reasonable possibility that the CALM2-G114R variant was the cause of death of Sarah and Laura.
1385. Professors Skinner and Kirk in their report dated 31 October 2022 applied the ACMG Guidelines, determining that the variant was a VUS. I have set out their conclusions on this issue at [1210]. I have also set out the reasoning which led them, at least impliedly, to the conclusion that it was unlikely that the deaths of Sarah and Laura were caused by the variant (see [1214]-[1216]).
1386. However, Professor Kirk, at the Inquiry, acknowledged that it was possible that the variant caused the deaths, and it was plausible that it could have caused the deaths, but he did not have enough evidence to say that it was likely that it caused the deaths.¹⁷⁷⁷ In that context, he withdrew the comment in his joint report with Professor Skinner dated 31 October 2022 that, in order for the variant to be included as a possible cause of the two deaths, they would have to accept that Ms Folbigg does indeed have evidence of CALM disease in the form of a partially concealed CPVT phenotype.¹⁷⁷⁸
1387. Thus, contrary to his initial joint report, Professor Kirk was clearly of the view that the variant was a possible cause of the deaths of Sarah and Laura.
1388. As I have stated at [1263], Professor Wilde's view was that the variant was likely pathogenic. He was also at pains to emphasise that the causal role of the variant in the deaths could not be excluded. The principal reason for his doubt that the variant was a possible cause of death for Sarah and Laura was what he described as the "mismatch" between the functional alterations and the clinical findings in the

¹⁷⁷⁵ Transcript of the 2022 Inquiry, 15 February 2023 T344.46-T345.1 (Vinuesa).

¹⁷⁷⁶ Exhibit 8-04, Report of Professor Peter Schwartz (24 October 2022) [red pagination 38-5].

¹⁷⁷⁷ Transcript of the 2022 Inquiry, 16 February 2023 T436.13-16 (Kirk).

¹⁷⁷⁸ Exhibit 7-03, Report of Professors Edwin Kirk and Jonathan Skinner (31 October 2022) [red pagination 58].

carriers of the respective variants and the possibility that the variant caused the children's deaths was not compatible with an almost uneventful life, as evidenced in Ms Folbigg (see [1252]-[1260] above).¹⁷⁷⁹

1389. It is difficult to determine whether or not Professor Wilde considered that it was a reasonable possibility that the variant was the cause of the deaths of Sarah and Laura. In his answer to a question asked by me, he stated the following:

Yeah, well, in what I wrote I think there is a significant mismatch in what is shown as evidence for a pathogenic variant, particularly to the phenotype and the circumstances and the age of that of the two children. To me that is -well, it is always possible but it is not very likely.¹⁷⁸⁰

1390. In answering the same question asked of him by Counsel for the Director of Public Prosecutions, he stated "I think you cannot exclude it but I consider it unlikely, and maybe even highly unlikely."¹⁷⁸¹

1391. As I pointed out, in the further report that Professor Wilde provided subsequent to giving evidence, he reiterated that a causal role cannot be excluded.¹⁷⁸²

1392. It seems to me that, ultimately, Professor Wilde, whilst having significant doubts as to the variant being the possible cause of the deaths of Sarah and Laura, was not prepared to dismiss the possibility or regard it as pure speculation.

1393. As I indicated, Dr Abrams, in his report, adopted the reasoning of Professors Kirk and Skinner, in concluding that the variant would be classified as a VUS under the ACMG Guidelines. He emphasised his concerns in interpreting the in vitro data in isolation, without concordant evidence of clinical disease. He stated in his report (see [1345]) that whilst cardiac arrhythmia relating to the calmodulin variant cannot be definitively excluded, he believed that the likelihood that this was responsible for the deaths of Sarah and Laura was low.¹⁷⁸³

1394. I have set out his conclusion at [1346]. That conclusion must be read in the context of his concluding remarks of his report, namely, that the presence of the variant alone cannot be immediately assumed to be disease-causing, and it would be necessary to rely on detailed clinical and genetic evaluation of the individual and family members to determine causality.¹⁷⁸⁴

1395. Counsel Assisting in their written submissions characterised Dr Abrams' view as "on the cusp" of reasonable possibility.¹⁷⁸⁵

1396. I would rather say that he concluded that it was possible but uncertain in the absence of further investigation that the variant caused the deaths of Sarah and Laura. In that context, as I have pointed out at [1349], he agreed with Professor Watkins' comments that it is a matter of judgement, adding that there is uncertainty in this situation as there are in many other situations where we have a genetic

¹⁷⁷⁹ Exhibit 9-02, Report of Professor Arthur Wilde (24 October 2022) [red pagination 26, 29].

¹⁷⁸⁰ Transcript of the 2022 Inquiry, 16 February 2023 T462.16-19 (Wilde).

¹⁷⁸¹ Transcript of the 2022 Inquiry, 16 February 2023 T461.46-47 (Wilde).

¹⁷⁸² Exhibit 9-04, Further Report of Professor Arthur Wilde (14 March 2023) [red pagination 56].

¹⁷⁸³ Exhibit 34-04, Report of Dr Dominic Abrams (27 January 2023) [red pagination 144].

¹⁷⁸⁴ Exhibit 34-04, Report of Dr Dominic Abrams (27 January 2023) [ed pagination 146].

¹⁷⁸⁵ Counsel Assisting's Written Closing Submissions (4 April 2023) 146 [511].

finding in a family with minimal clinical evidence of a condition and two instances of sudden death.

1397. Counsel Assisting submitted that Dr MacRae was the only expert in the field who expressed the view that the variant was not a reasonably possible cause of the deaths of the two girls. There are a number of things to note about his evidence.
1398. First, he stated that there was no genetic, basic science, or clinical evidence that would support the identified variant as the cause of death for Sarah and Laura.¹⁷⁸⁶ Insofar as the genetic and basic science is concerned, that view is contrary to the view of those experts who identified the variant as pathogenic, or likely pathogenic; and, for that matter, contrary to the evidence of Professor Kirk, who stated that the variant would be classified as a VUS, using the ACMG Guidelines, whilst emphasising that of itself did not mean it should be dismissed as a possible cause of death (see [1219]-[1220] and [1228] above).
1399. Further, it should be noted that, on 27 February 2023, CALM1, CALM2 and CALM3 variants were added to the ACMG Secondary Findings List. The ACMG recommends that clinical laboratories, in addition to reporting findings relating to why individuals were undergoing sequencing analysis, should also report findings in respect of variants of genes in the Secondary Findings List. The statement of the ACMG set out the following reasons for the inclusion of the CALM genes:

Genes related to cardiovascular phenotypes

Recommended for addition to the SF v3.2 list: *CALM1*, *CALM2*, and *CALM3*

Cardiovascular genes have been represented on the SF list since its inception because of the morbidity and mortality of heart failure and sudden cardiac death, which can both be treated or prevented with well-established interventions.

For version 3.2, 3 additional genes (*CALM1*, *CALM2*, and *CALM3*) were reviewed. These genes cause predisposition to LQTS, and the available evidence supports a similar or greater risk of morbidity and mortality compared with other sudden cardiac death genes that are already included in the previous versions of the SF list. The 3 calmodulin genes (*CALM1*, *CALM2*, and *CALM3*) are located on different chromosomes, but they encode identical 149 amino acid proteins. All 3 were previously classified by ClinGen as having definitive evidence for LQTS with atypical features such as presentation in infancy or early childhood and with functional heart block and severe QT prolongation.¹⁷⁸⁷

1400. Second, Dr MacRae stated that even if CALM2 was pathogenic and causal (which he stated was not likely), then the a priori likelihood that all of the events in the family occurred by chance was extremely low.¹⁷⁸⁸
1401. Counsel Assisting pointed out that the probabilities relied upon by Dr MacRae related to the probability that the children died from a single unifying cause. The difficulty with this reasoning, as Counsel Assisting pointed out was, as Dr MacRae accepted, it was no different to Meadow's Law (see [1330]).¹⁷⁸⁹ Dr MacRae was asked a series of questions, at the conclusion of his evidence, which are referred to

¹⁷⁸⁶ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 50].

¹⁷⁸⁷ Exhibit 15-268, David T Miller et al, 'ACMG SF v3.2 list for reporting of secondary findings in clinical exome and genome sequencing: A policy statement of the American College of Medical Genetics and Genomics (ACMG)' [2003] *Genetics in Medicine: An Official Journal of the ACMG* 100866 [red pagination 3814]; Exhibit 15-269, 'ACMG adds three new genes to secondary findings list' genomeweb (online, 6 July 2023) [red pagination 3819].

¹⁷⁸⁸ Exhibit 34-03, Report of Dr Calum MacRae (27 January 2023) [red pagination 50].

¹⁷⁸⁹ Transcript of the 2022 Inquiry, 17 February 2023 T505.6-20 (MacRae).

at [1332].¹⁷⁹⁰ His answers illustrate the difficulty in applying a probabilistic analysis once the hypothesis of a single unifying cause is excluded.

1402. Third, Dr MacRae was prepared to accept that “a single young sudden death” with a negative autopsy could have been caused by the variant.¹⁷⁹¹ He was not asked whether he accepted the possibility in the case of young sudden deaths of two children having the same variant.
1403. Fourth, Dr MacRae was referred to the Weile Article and to the passage to which I have referred at [1322]. He stated that it was not an unreasonable suggestion that CALM2 mutations can be associated with LQTS, although the case of an association with CPVT was much more tenuous, but there may be some early evidence of such an association.¹⁷⁹²
1404. If in fact Dr MacRae was expressing the view that it was not a reasonable possibility that the deaths of Sarah and Laura were as a result of the variant, that would appear to conflict with the views of the other experts who gave evidence. However, it is not clear that, if the deaths of Sarah and Laura were looked at in isolation, he would still be of that opinion. In answer to a question that I asked of him, as to whether in isolation it would be open to a person of skill and experience to form the view that there was a reasonable possibility that the deaths were caused by that variant, he stated that it was perfectly possible that someone could reach that conclusion (see [1329] above).¹⁷⁹³
1405. Having regard to the limited reasoning contained in the report of Professor Guicheney¹⁷⁹⁴ and the relatively limited material with which she was briefed in comparison to other experts who assisted the Inquiry, I do not find her report of any real assistance in addition to what has been provided by others.
1406. There is finally the report of Professor Watkins. I have set out the substance of his report at [1358]-[1364]. He accepted that in this area there was a substantial degree of uncertainty so it comes down to a matter of judgement rather than interpretation. For the reasons set out in his report, he agreed with Professor Schwartz. Ultimately, his conclusion was that it was plausible, but not provable, that the CALM2-G114R variant caused the deaths of Sarah and Laura.¹⁷⁹⁵
1407. The approach of Professor Watkins is of assistance because it emphasises that, in this area, it is impossible to make definitive assertions. However, what is clear is that, in varying degrees, most of the experts, with the possible exception of Dr MacRae, were unprepared to state categorically that it was not a reasonable possibility that the deaths of Sarah and Laura were caused by the CALM2-G114R variant. There is a degree of variation in the opinions of the experts, possibly due, as Professor Watkins stated, to the necessity of making judgement in an area of considerable uncertainty.
1408. In circumstances where the difference of opinion is between highly qualified experts in a particular field of science, the observations of Gaudron J in *Velevski*

¹⁷⁹⁰ Transcript of the 2022 Inquiry, 17 February 2023 T514.42-T515.37 (MacRae).

¹⁷⁹¹ Transcript of the 2022 Inquiry, 17 February 2023 T505.22-38 (MacRae).

¹⁷⁹² Transcript of the 2022 Inquiry, 17 February 2023 T484.24-35 (MacRae).

¹⁷⁹³ Transcript of the 2022 Inquiry, 17 February 2023 T499.15-45 (MacRae).

¹⁷⁹⁴ Exhibit 17-03, Report of Professor Pascale Guicheney (9 November 2022).

¹⁷⁹⁵ Exhibit 14-10, Report of Professor Hugh Watkins (7 February 2023) [red pagination 322-323].

v The Queen [2002] HCA 4; 212 CLR 124; 76 ALJR 402; 187 ALR 233 at [85] (citing from the judgment of Gibbs CJ and Mason J in *Chamberlain v The Queen* (No 2) (1984) 153 CLR 521 at 558) are apposite:

If the conflicting evidence of experts is not based on matters or assumptions with respect to matters upon which the jury can reach its own conclusions but, instead, is evidence of “opinion on matters of science within disciplines of which each [is] a master, and at a level of difficulty and sophistication above that at which a juror...might by reasoning from general scientific knowledge subject the opinions to wholly effective critical evaluation”, a jury cannot, by reference solely to that evidence, resolve that conflict in a manner “which would eliminate reasonable doubt.”

1409. Nonetheless, the evidence enables me to be comfortably satisfied that there was a reasonable possibility that the deaths of Sarah and Laura resulted from their carriage of the CALM2-G114R variant.

Section 3

Evidence as to the possible causes
of Patrick's ALTE and death

3

Section 3 – Evidence as to the possible causes of Patrick’s ALTE and death

1410. Evidence on these issues was given by Dr Ryan and Professor Peter Fleming (**Professor Fleming**).
1411. Dr Ryan gave evidence at the 2019 Inquiry. I have set out her evidence at the 2019 Inquiry at [655]-[672]. Her evidence at that Inquiry was somewhat at variance with that of Associate Professor Fahey (see [673]-[688] above). Associate Professor Fahey was not called to give evidence to this Inquiry. Nonetheless, I have taken his evidence into account in considering, overall, the evidence relating to Patrick’s ALTE and death.
1412. As I pointed out at [925] the Inquirer at the 2019 Inquiry was critical of Dr Ryan’s evidence, in particular, her failure to accept that Patrick was healthy and developing normally prior to the ALTE, and that he was hypoxic on arrival at the hospital in part because an oximetry probe can misread blood oxygen levels. The Inquirer stated that Dr Ryan’s position added to his overall impression that she was unprepared to give reasonable consideration to the factual evidence that was available.¹⁷⁹⁶
1413. I deal with the Inquirer’s criticisms at [1491]-[1496] below. Suffice to say, contrary to the view taken by the Inquirer at the 2019 Inquiry, Dr Ryan impressed me as a witness who was giving her evidence honestly and impartially with regard to the Expert Code of Conduct.
1414. Further, it should be noted that, notwithstanding his criticism of Dr Ryan, the Inquirer concluded that on the available medical evidence it was possible that the cause of Patrick’s death was a seizure or similar event relating to encephalopathy in his brain (see [927] above).

The report of Dr Ryan dated 23 September 2022

1415. In her report, Dr Ryan adhered to the view that she expressed in her evidence before the 2019 Inquiry that aspects of Patrick’s course were atypical of that expected in a child subjected to a single, discrete inflicted injury at the age of five months. She said some aspects of his clinical course were more consistent with an undiagnosed (presumably genetic) neurodegenerative disorder. She stated that was clearly recognised contemporaneously – the paediatric neurologist caring for Patrick, Dr Wilkinson, repeatedly undertook additional testing for metabolic and genetic conditions causative of neurodegenerative disorders. She stated that the testing available in 1990 was very limited, and it was not at that time unusual for a diagnosis to prove elusive. She pointed out that genetic testing is very often non-diagnostic in infants with presumed genetic conditions, and that the cause of such conditions remains obscure in a significant proportion of cases even when all available testing is undertaken.¹⁷⁹⁷
1416. Dr Ryan repeated her views that it was unknown whether Patrick was hypoxic on presentation at the Emergency Department on 18 October 1990. She stated that by this she meant that hypoxia is identified on blood gas testing. She stated that Patrick never underwent blood gas testing, hence hypoxia was neither proven nor excluded. She accepted he was found to have a low oxygen saturation level on presentation

¹⁷⁹⁶ 2019 Inquiry Report, ch 5 [313].

¹⁷⁹⁷ Exhibit 12-02, Report of Dr Monique Ryan (23 September 2022) [red pagination 12-13].

to the Emergency Department, but stated that low oxygen saturations measured percutaneously do not necessarily equate with hypoxia. She repeated her opinion expressed in the 2019 Inquiry (see [657]-[658] above) that while it was possible that Patrick had had a single hypoxic-ischaemic episode on 18 October 1990, there are a number of findings which suggested that Patrick's course was not due to such an episode.¹⁷⁹⁸

1417. Dr Ryan said she remained of the opinion, which she held at the 2019 Inquiry, that there were aspects of the history in the case which were unusual or inconsistent with Patrick's course having related to a single hypoxic-ischaemic insult inflicted on 18 October 1990. She noted that when Patrick was brought to hospital following the ALTE, he was hypothermic and tachycardic, but he seemed to respond to oxygen. She noted he did not require intubation or inotropic medications, so clearly his condition had improved very significantly from when he was first found by his parents. She stated that initially his neurological examination was only mildly abnormal, and his initial EEG and head ultrasound were normal. Dr Ryan noted that Patrick had glycosuria – sugar in his urine – which can reflect a recent stressful event. She stated that the few blood tests which were done did not show evidence of end-organ damage – the hepatic, renal and haematological abnormalities expected after a significant hypoxic-ischaemic insult. She stated that, had he been subjected to a severe hypoxic-ischaemic insult at home, for example by smothering, it would be expected that he would be persistently unresponsive, that he would not feed well, and that he would have had evidence of hypoxic injury to the kidneys, liver, heart and bone marrow.¹⁷⁹⁹
1418. In relation to Patrick's death, Dr Ryan noted his autopsy showed marked atrophy and cystic degeneration of both occipital lobes, with additional foci of abnormal white matter in both occipital, left frontal and both parietal lobes. She stated those changes were potentially consistent with old strokes (previous hypoxic-ischaemic injury). She also noted that Patrick was admitted to hospital on multiple occasions and on no occasion was he reported to have shown any obvious evidence of inflicted injury.¹⁸⁰⁰
1419. Dr Ryan noted that Associate Professor Fahey had felt that Patrick was hypoxic at the time he presented to the Emergency Department on 18 October 1990. She noted he based this opinion on the fact that Patrick was seen to respond to oxygen, and that his autopsy pathology was interpreted as showing ischaemic changes. She said she could not agree with this premise repeating that Patrick did not undergo blood gas testing and cannot, therefore, be said with certainty to have been hypoxic at presentation. She stated the response to oxygen was a subjective report. She also stated the autopsy changes may or may not have been due to a hypoxic-ischaemic injury and, even if they were, could have reflected an injury sustained at some other point, i.e. during the prolonged seizures seen in the days after 18 October 1990.¹⁸⁰¹
1420. Dr Ryan stated she believed it was possible that Patrick had an undiagnosed neurogenetic disorder which resulted in a refractory seizure disorder, movement disorder with fluctuating tone and oculogyric crises, fluctuating visual loss and severe developmental delay. She emphasised again that, had Patrick suffered a hypoxic-ischaemic brain injury on 18 October 1990 – sufficiently severe to have

¹⁷⁹⁸ Exhibit 12-02, Report of Dr Monique Ryan (23 September 2022) [red pagination 13].

¹⁷⁹⁹ Exhibit 12-02, Report of Dr Monique Ryan (23 September 2022) [red pagination 14].

¹⁸⁰⁰ Exhibit 12-02, Report of Dr Monique Ryan (23 September 2022) [red pagination 15].

¹⁸⁰¹ Exhibit 12-02, Report of Dr Monique Ryan (23 September 2022) [red pagination 15].

subsequently resulted in a refractory seizure disorder, cortical visual loss, severe developmental delay and the abnormalities seen on his imaging and autopsy examination – she would have expected that he would have been more unwell at the time of initial presentation, would not have responded so quickly to resuscitation by the ambulance officers and Emergency Department, and would have had more objective evidence of injury to other end-organs such as the liver, kidneys, the heart and the bone marrow.¹⁸⁰²

1421. Dr Ryan said the circumstances of Patrick’s death are consistent with SUDEP. She stated that SUDEP is defined as a sudden, unexpected, non-traumatic, non-drowning death in an individual with epilepsy which may be witnessed or unwitnessed, in which the post-mortem examination does not reveal an anatomical or toxicological cause of death. She stated that SUDEP is more common in patients with generalized seizure disorders and in those with poorly-controlled epilepsy. She stated most SUDEPs are unwitnessed, with the deceased often found in bed.¹⁸⁰³

Dr Ryan’s evidence at the Inquiry

1422. At the Inquiry, Dr Ryan described herself as a clinician involved in acute and out-patient care of thousands of children with paediatric neurological conditions, including acute care of children with hypoxic, ischaemic and other brain injuries. She stated she would look after children from the time they presented until the time that they graduated to adult care, usually some time between 16 and 18 years of age, or unless they died earlier from complications of their condition.¹⁸⁰⁴
1423. Dr Ryan repeated the view expressed in her report that Patrick’s ALTE was less likely to have resulted from hypoxic-ischaemic brain injury rather than another neurological condition. She stated it was more likely than not that he had an as yet uncharacterised epileptic encephalopathy that resulted in progressive neurological dysfunction and in his death. She stated she did not exclude the possibility that Patrick sustained hypoxic-ischaemic brain injury on 18 October 1990, but repeated that she did not think his course was consistent with what one would expect with a child who had such a discrete event and developed persistent neurological disease as a result. She repeated her view that Patrick’s death was more likely than not to be related to a seizure and thus consistent with SUDEP. She stated that, at that time, he had an uncontrolled seizure disorder and was refractory to medication, so it was more likely than not that that was what caused his death.¹⁸⁰⁵
1424. Dr Ryan explained that the reason that she drew attention to the fact that Patrick had torticollis and persistent back-arching (something for which she was criticised by the 2019 Inquirer) was that it was a bit unusual. She stated the reason she drew attention to them was that, in isolation, you might not read too much into them but in a child presenting with an undiagnosed or atypical neurological condition, torticollis and persistent back-arching could be suggestive of a specific diagnosis.¹⁸⁰⁶
1425. Dr Ryan was referred to the notes of the attending paediatrician on Patrick’s admission which stated, “at 4.30, mum heard him gasping. Was blue around the

¹⁸⁰² Exhibit 12-02, Report of Dr Monique Ryan (23 September 2022) [red pagination 16].

¹⁸⁰³ Exhibit 12-02, Report of Dr Monique Ryan (23 September 2022) [red pagination 18].

¹⁸⁰⁴ Transcript of the 2022 Inquiry, 21 February 2023 T549.40-T550.8-14 (Ryan).

¹⁸⁰⁵ Transcript of the 2022 Inquiry, 21 February 2023 T551.10-48 (Ryan).

¹⁸⁰⁶ Transcript of the 2022 Inquiry, 21 February 2023 T552.11-17 (Ryan).

lips.”¹⁸⁰⁷ Dr Ryan stated that indicated that either Patrick was not breathing, although she noted that it appears that he was breathing shallowly and breathing but making some respiratory effort, but it is not normal. As a result, he had perioral cyanosis, which means he was blue around the lips. She stated it meant that his respiratory effort was abnormal. She stated he could have been hypoxic at that point but a diagnosis of hypoxia is usually contingent on a measurement of the blood oxygen level; but if someone is clearly cyanotic then they are more probably more likely than not to have been somewhat hypoxic.¹⁸⁰⁸

1426. Dr Ryan stated that it was interesting that the blood oxygen measurement via an oximetry meter was 88% “in room air”. She stated that if Patrick was critically unwell, one would have expected that he would not have been “in room air”, and they would have been administering oxygen at that point. She stated that it appears that once they picked up on that low blood oxygen they administered oxygen via a Hudson mask, so Patrick was quite unwell at that point but not critically so. Dr Ryan said that if a child was critically unwell, not breathing effectively or needing active resuscitation, you would usually provide oxygen. She stated you would regularly obtain a blood gas measurement on presentation, which requires an arterial blood stab. She said that this is undertaken to ascertain how unwell the child was, and a significant amount of information is obtained from that measurement. She noted it was not done in Patrick’s case, and the fact that it was not done suggests that the baby was not felt to be critically unwell. She agreed that if the reading of 88% was verified by a blood gas, that would show that Patrick was at this point “somewhat probably hypoxic”. Dr Ryan was then asked if the 88% blood oxygen was confirmed, would that change her view as to whether this was likely a hypoxic insult. She stated it would not significantly change her mind at that point of time. She explained that the blood oxygen just reflects the effectiveness of oxygen exchange at that point in time, so it would not change her opinion.¹⁸⁰⁹
1427. Dr Ryan referred to the note recorded on Patrick’s presentation that he was “responding only to painful stimuli”.¹⁸¹⁰ She stated that was really reflective of Patrick not being very well, but not being in a coma. She was then referred to the note, “after about 15 mins became much more alert and pink in air”.¹⁸¹¹ She stated that indicated Patrick had recovered pretty quickly and even after 15 minutes he was looking reasonably well. She qualified this because of the arching of the back, which she said was not a normal pattern of movement for a small baby, and although the note said he always does this, it is a bit unusual and somewhat concerning.¹⁸¹²
1428. Dr Ryan was then asked to express, in her own words, the features of Patrick’s initial presentation that she considers are inconsistent with what one would expect following a hypoxic-ischaemic insult sufficient to cause brain injury:

Well, usually if a baby’s had a severe brain injury related to breathing problems, what we call a hypoxic ischaemic brain injury, first, for it to be severe enough to cause the subsequent problems that Patrick experienced, I would’ve expected that he wouldn’t have recovered as quickly as he did from that insult. The fact that within 15 minutes he was more responsive and he was behaving more normally, would be inconsistent

¹⁸⁰⁷ Exhibit 2-AL, Neurology tender bundle (vol. 2) [red pagination 6181].

¹⁸⁰⁸ Transcript of the 2022 Inquiry, 21 February 2023 T553.38-T554.3 (Ryan).

¹⁸⁰⁹ Transcript of the 2022 Inquiry, 21 February 2023 T554.21-T555.38 (Ryan).

¹⁸¹⁰ Exhibit 2-AL, Neurology tender bundle (vol. 2) [red pagination 6182].

¹⁸¹¹ Exhibit 2-AL, Neurology tender bundle (vol. 2) [red pagination 6182].

¹⁸¹² Transcript of the 2022 Inquiry, 21 February 2023 T556.4-39 (Ryan).

with a severe hypoxic brain injury. Also, things like his breathing pattern and his heart rate returned to normal. Usually if a baby's had a severe hypoxic ischaemic brain injury, they'll need significant resuscitation, often ventilation, they'll need oxygen supplied on an ongoing basis. Then what we start to see is we'll see things like abnormal blood tests, so a level of low blood oxygen sufficient to cause a significant brain injury, what usually causes injury to other end organs as well. The liver, the kidneys and the heart were usually both signs of having had a hypoxic injury as well and that would be reflected on by chemistry but also on things like abnormally low blood pressures and things like that. So, the blood tests and things that were done initially, which were limited, were relatively benign and it appeared that the baby picked up pretty quickly, to the extent that it was possible to transfer him to a normal ward, he wasn't sent to intensive care and he didn't require significant resuscitation at that point. All of which really argues against an acute severe hypoxic ischaemic brain injury at that time. It just - it doesn't fall together, just it's not how these things present and progress.¹⁸¹³

1429. Dr Ryan also noted that, later in the day, Patrick underwent an EEG which was normal. She stated if you had a significant hypoxic-ischaemic brain injury it would be very unusual to expect the baby to have a normal EEG at that time. She said that the other measures that were taken at the time showed his blood sugar was normal, stating that generally any significant stress to the body will result in elevation of the blood sugar, which was not identified when Patrick was brought to the hospital. She noted that when he was brought to hospital, he did have some sugar in his urine, which could reflect a brief hypoxic-ischaemic insult or a significant stress or a seizure. She stated, however, that whatever it was, it was not sufficient to result in persistent elevation of the blood sugar for any period of time, because it was normal when he got to the Emergency Department. She stated all this argues against a severe hypoxic-ischaemic brain injury. She repeated what she said in her report, that the tests that were undertaken after Patrick presented showed no evidence of liver injury, kidney injury or bone marrow injury which you would normally expect to see in someone who had a significant hypoxic insult.¹⁸¹⁴

1430. Dr Ryan was asked whether she was aware of any cases in which an infant or child who suffers a hypoxic brain injury initially recovers well and appears normal and then declines in the 12-48 hour period afterwards. She stated that sometimes when very small babies at birth have had a hypoxic-ischaemic brain injury, they can look relatively normal before apparent deterioration related to brain swelling. She said, however, when you examine the child, you can identify neurological abnormalities.¹⁸¹⁵

1431. Dr Ryan was then referred to the Constantinou Article, relied on by Associate Professor Fahey in his evidence at the 2019 Inquiry (see [679] and [686] above). She agreed the article described 14 infants between 1982 and 1985 between three and 26 weeks of age who presented with severe hypoxic episodes as a result of what was described then as near miss SIDS. Dr Ryan was referred to the statement in the article that:

All subjects fulfilled the accepted criteria for the diagnosis of near miss SIDS. They had been found pale, cyanosed, limp or not breathing, and had required vigorous stimulation or cardiopulmonary resuscitation because death was thought to be imminent.¹⁸¹⁶

1432. Dr Ryan was asked whether Patrick fell into this category. She stated it was a bit

¹⁸¹³ Transcript of the 2022 Inquiry, 21 February 2023 T557.8-30 (Ryan).

¹⁸¹⁴ Transcript of the 2022 Inquiry, 21 February 2023 T557.42-T558.38 (Ryan).

¹⁸¹⁵ Transcript of the 2022 Inquiry, 21 February 2023 T559.36-T560.3 (Ryan).

¹⁸¹⁶ Exhibit 15-267, J E C Constantinou et al, 'Hypoxic-ischaemic encephalopathy after near miss sudden infant death syndrome' (1989) *Archives of Disease in Childhood* 703 [red pagination 3807].

hard to say as she was not aware, until the day she gave evidence at the Inquiry, that Mr Folbigg felt the need to give him, what was essentially like mouth-to-mouth resuscitation, saying she supposed you could call that pulmonary resuscitation.¹⁸¹⁷

1433. Dr Ryan was then referred to the statement in the Constantinou Article that evidence of a hypoxic insult during admission consisted of metabolic acidosis or cardiovascular instability, acute renal failure, ischaemic colitis and deep coma or convulsions.¹⁸¹⁸ She stated that metabolic acidosis, if present, would have been identified on the blood gas, which was not undertaken. None of the other matters referred to were present when Patrick was admitted to hospital. She stated that Patrick would not have qualified under the article's definition as a severe hypoxic-ischaemic near miss SIDS.¹⁸¹⁹

1434. Dr Ryan was referred to the comment on the second page of the Constantinou Article that:

After resuscitation at home all seven who lived had established spontaneous respirations by the time that they arrived in the hospital emergency department. Resuscitation had consisted of vigorous stimulation, mouth to mouth resuscitation or cardiac massage.¹⁸²⁰

1435. She agreed that was conceivably consistent with what Mr Folbigg had described.¹⁸²¹

1436. Dr Ryan was then referred to the statement in the article that in two infants acute neurological dysfunction was the only evidence of an hypoxic injury.¹⁸²² She agreed that the inference there is that for the purpose of the study the earlier definition of deep coma and convulsions was considered enough to diagnose hypoxic injury. She noted that, in her view, it was not enough to diagnose hypoxic injury. She stated deep coma is a clinical description that the child is comatose but you cannot extrapolate from that as to the cause, whether it was hypoxic-ischaemic brain injury, or something else.¹⁸²³

1437. Dr Ryan was then referred to the statement in the Constantinou Article that:

Five of the cases showed a biphasic evolution of neurologic dysfunction characterised by an initial period of near normality and subsequent neurological deterioration. These five infants were conscious and rousable within one hour of resuscitation. They were awake, alert and active, or irritable or lethargic with only minor abnormalities of tone and deep tendon reflexes...This striking interval of near normality continued until the onset of seizures from 2-51 hours... after the event.¹⁸²⁴

1438. Dr Ryan was asked to what extent that was consistent with Patrick's course, and

¹⁸¹⁷ Transcript of the 2022 Inquiry, 21 February 2023 T560.24-37 (Ryan).

¹⁸¹⁸ Exhibit 15-267, J E C Constantiou et al, 'Hypoxic-ischaemic encephalopathy after near miss sudden infant death syndrome' (1989) *Archives of Disease in Childhood* 703 [red pagination 3807].

¹⁸¹⁹ Transcript of the 2022 Inquiry, 21 February 2023 T560.46-T561.26 (Ryan).

¹⁸²⁰ Exhibit 15-267, J E C Constantiou et al, 'Hypoxic-ischaemic encephalopathy after near miss sudden infant death syndrome' (1989) *Archives of Disease in Childhood* 703 [red pagination 3808].

¹⁸²¹ Transcript of the 2022 Inquiry, 21 February 2023 T561.32-39 (Ryan).

¹⁸²² Exhibit 15-267, J E C Constantiou et al, 'Hypoxic-ischaemic encephalopathy after near miss sudden infant death syndrome' (1989) *Archives of Disease in Childhood* 703 [red pagination 3808].

¹⁸²³ Transcript of the 2022 Inquiry, 21 February 2023 T561.41-T562.14 (Ryan).

¹⁸²⁴ Exhibit 15-267, J E C Constantiou et al, 'Hypoxic-ischaemic encephalopathy after near miss sudden infant death syndrome' (1989) *Archives of Disease in Childhood* 703 [red pagination 3808-3809].

stated he was initially quite unwell and he had a period of what seemed like near normality and then a neurological deterioration, so it was consistent.¹⁸²⁵

1439. Dr Ryan was then referred to the statement that every one of the seven infants that lived went on to fall into a deep coma.¹⁸²⁶ She stated that was not consistent with Patrick's presentation. She noted Associate Professor Fahey "put a lot of store" in this paper but to her the course of the infants described is really unusual and most atypical, which is not consistent with what Patrick had, stating that was why she discounted it when she prepared her original reports. She stated Patrick was not terribly unwell in extremis at the time of presentation, with an apparently normal sort of period and then going into a deep coma, noting that "that just wasn't what he did at all". She stated it was probably worth noting that the paper was 34 years old, and in those succeeding years she was not aware of any reports of anything such as that sort of clinical scenario. She stated that she did not think, with passage of time, people have recognised this as a clinical phenomenon. She said she had checked to see if there were any other more recent publications reporting similar phenomenon.¹⁸²⁷
1440. Dr Ryan agreed that another feature of the Constantinou Article was that in all the infants who lived, some degree of cortical blindness was noted. She stated that if there is a very significant severe global brain injury – with all parts of the brain being affected by severe hypoxic-ischaemia, consistent with what is described in the children who were all extremely unwell at presentation, went through a period of coma, then cortical blindness, which reflects an injury to the parts of the brain that subserve vision – it would be common. However, she noted that it was not in isolation. It is in association with other neurological deficits, reflecting very severe neurological injuries which were not seen in Patrick.¹⁸²⁸
1441. Dr Ryan was asked, assuming that Patrick's initial presentation on 18 October 1990 was a seizure, whether the difference between that initial presentation and the subsequent seizures cause her to doubt whether or not this was an undiagnosed neurogenetic disorder. She said it would not, as children with neurogenetic disorders, including infantile epileptic encephalopathy, can have more than one seizure type.¹⁸²⁹
1442. In relation to Patrick's ALTE, Dr Ryan was asked whether it was possible to survive hypoxia, sufficient to occasion hypoxic-ischaemic injury without requiring resuscitation. She stated it would be possible but, had the hypoxic-ischaemic insult been significant enough to cause significant brain damage, then the baby would require resuscitation and would need more help than Patrick required.¹⁸³⁰
1443. In dealing with SUDEP, Dr Ryan stated that infantile encephalopathies are associated with significant mortality, at least 15% in the first year of life and often those deaths occur in the context of an epileptic seizure, or something else that might be occasioned by an epileptic seizure. Dr Ryan was then asked whether, in her view, the whole exome sequencing that occurred excluded the possibility of a

¹⁸²⁵ Transcript of the 2022 Inquiry, 21 February 2023 T562.35-46 (Ryan).

¹⁸²⁶ Exhibit 15-267, J E C Constantiou et al, 'Hypoxic-ischaemic encephalopathy after near miss sudden infant death syndrome' (1989) *Archives of Disease in Childhood* 703 [red pagination 3809].

¹⁸²⁷ Transcript of the 2022 Inquiry, 21 February 2023 T562.48-563.33 (Ryan).

¹⁸²⁸ Transcript of the 2022 Inquiry, 21 February 2023 T563.35-T564.8 (Ryan).

¹⁸²⁹ Transcript of the 2022 Inquiry, 21 February 2023 T564.49-565.6 (Ryan).

¹⁸³⁰ Transcript of the 2022 Inquiry, 21 February 2023 T565.20-32 (Ryan).

genetic cause for Patrick's disorder. She stated that whole genome sequencing, or whole exome sequencing, is applied to babies with undiagnosed severe progressive neurological disorders, where a diagnosis is consistently found in about 33% of cases. She stated that was "a lot better than it was in 1990 where these techniques weren't available at all". However, it still speaks of the fact that in the majority of cases, a cause is not found, even though there is a degree of confidence that it is a genetic disorder of some kind. She stated that the fact that a definitive abnormality was not found on Patrick's genetic testing did not lead her to draw the inference that it was not a genetic disorder.¹⁸³¹

1444. Dr Ryan was referred to Dr Cala's report where he stated:-

The brain was retained and sent for neuropathological examination which disclosed very extensive hypoxic brain damage. Brain examination showed no features of an underlying metabolic encephalopathy or any other abnormality of brain development where epilepsy may be a feature.¹⁸³²

Dr Ryan said she disagreed with that. She stated there were hundreds of different metabolic encephalopathies, so different metabolic conditions can affect the way that the brain functions, and they have their own patterns of associated neuroradiological changes. She stated that they can look exactly like stroke-like episodes but she did not think it was reasonable to say that he had no features of anything that could be consistent with metabolic encephalopathy, because the neuropathological changes were not that specific.¹⁸³³

1445. At the conclusion of her examination by Counsel Assisting, Dr Ryan was asked these questions and gave these answers:

Q. My last question, Doctor, in your evidence at the last Inquiry you had said - this is at transcript 605 - 'Everyone agrees a brain injury was sustained at that time; 18 October.' Can I ask what you meant by brain injury in that context?

A. I think it was pretty clear that something happened on 18 October that was fairly profound, and that before that date Patrick Folbigg was felt to be - was felt to be essentially normal. There are a couple of things about him that were perhaps a little unusual, but he was felt to be normal. And subsequent to that date he was not neurologically normal. He very quickly evolved a refractory seizure disorder, fluctuating visual loss and developmental delay. So there had to have been some sort of brain injury at or around 18 October. The question is exactly what that was. I don't feel that his presentation at that time, and his subsequent course were consistent with him having experienced a severe - or profound, it would have to be - profound hypoxic-ischaemic brain injury on that date, that then accounted for his subsequent seizure disorder and developmental delay. But I think that it's more likely that he had an underlying condition that first manifested on that date, that first manifested severely enough that it was recognisable that he had a problem, and more likely than not, you know, with something like a seizure that - on the early morning of 18 October caused his presentation.

Q. Is Patrick's course, including his death, consistent or inconsistent with other cases that you've had over the course of your career?

A. Unfortunately, Patrick's course is consistent with other cases that I've seen in the past, which is the - you know, you have a baby who's felt to be normal in the first few months of life. They present with - often with a severe seizure, sometimes a really prolonged seizure, or a first seizure; and then after that fairly rapidly there's a change

¹⁸³¹ Transcript of the 2022 Inquiry, 21 February 2023 T565.44-566.30 (Ryan).

¹⁸³² Exhibit 13-04, Supplementary Report of Dr Allan Cala, including CV and a table of articles referred to therein (13 December 2022) [red pagination 55].

¹⁸³³ Transcript of the 2022 Inquiry, 21 February 2023 T569.19-41 (Ryan).

with an evolution, development of an increasingly often refractory seizure disorder, which is associated with development of permanent - usually neurological - deficits, which is accompanied by a failure to make normal developmental gains. So evolving developmental delay. And unfortunately in such cases babies often do really poorly. And unfortunately they often succumb to those illnesses. So it is something – it's a clinical presentation I've seen many times in my career. It's easier when you make a diagnosis, and you can understand why it's happened, and you explain that to the parents, and have some expectation of how things are going to progress. It's always harder when you're unable to make a definitive diagnosis.¹⁸³⁴

1446. In examination by Senior Counsel for Dr Cala, Dr Ryan was referred to the letter written by Dr Kan to Doctors Bishop and Singh-Khaira on 24 June 1991 which I have set out at [93] above. She was referred, in particular, to the second sentence in that letter:

The major changes in this extensively sectioned brain are old infarcts and gliosis mostly in the form of old laminar necrosis which, in keeping with the macroscopic finding, is most severe in the parieto-occipital area.¹⁸³⁵

1447. Dr Ryan was asked whether that description is consistent with hypoxic brain injury. She stated it could be but it would be most unusual to have hypoxic-ischaemic brain injury that just affected the parieto-occipital region. She said, either it would be global, so the whole brain was affected, or if it was acute and severe it would affect the basal ganglia and the thalami. She noted there was no great mention made of those parts of the brain in the post-mortem so presumably they were not felt to be abnormal.¹⁸³⁶

Professor Fleming

1448. Professor Fleming, at the time of his report dated 11 October 2022, was employed as Professor of Infant Health and Development Physiology at the University of Bristol, United Kingdom, and as Consultant Paediatrician to the University Hospital, Bristol.¹⁸³⁷

1449. In 1984, along with his colleague Professor Berry, Professor Fleming established the Avon Mortality Study which collected detailed information on all infant deaths in the Avon County area surrounding Bristol from 1984 until the establishment of the Statutory Child Death Review Programme in 2008. Professor Fleming stated that the approach taken at the Avon Mortality Study formed the basis of the mandatory national child death review process in England under the terms of the 2004 Children Act, and was implemented in 2008. He stated that, since 2008, the research team that he established at the University of Bristol has been very closely involved in the investigation and collection of detailed data on all child deaths in the Southwest of England. He stated that since 2018 he had been a member of the core Project Operational Group and Chair of the Professional Advisory Group to the National Child Mortality Database which is funded by National Health Service in England and is run by the University's research team.¹⁸³⁸

1450. Professor Fleming described himself as a Paediatric Intensivist. He was asked what

¹⁸³⁴ Transcript of the 2022 Inquiry, 21 February 2023 T571.19-T572.6 (Ryan).

¹⁸³⁵ Exhibit 2-H, Forensic pathology tender bundle, Letter from Dr Alex Kan to Dr Jan Bishop and Dr Singh-Khaira (24 June 1991) [red pagination 3559].

¹⁸³⁶ Transcript of the 2022 Inquiry, 21 February 2023 T572.12-38 (Ryan).

¹⁸³⁷ Exhibit 11-02, Report of Professor Peter Fleming (11 October 2022) [red pagination 9].

¹⁸³⁸ Exhibit 11-02, Report of Professor Peter Fleming (11 October 2022) [red pagination 9].

that involved, and he indicated that he was appointed as a Consultant Paediatrician in 1982 and was Head of Paediatric Intensive Care at Bristol Children's Hospital from 1982 to 1996. He stated that, as part of his responsibility in that role, he was involved in very many of the resuscitations of children brought in having been found apparently dead in the community, and he spent a lot of time working with those children and their families.¹⁸³⁹

Professor Fleming's report dated 11 October 2022, the executive summary of the report dated 3 November 2022 and his evidence at the Inquiry

1451. Professor Fleming was asked by those representing Ms Folbigg to answer a number of specific questions. It may be said that his report did not respond to those questions but rather expressed views on the causes of death of each of the children and the possibility of them being suffocated without leaving any trace. No objection was taken to the report or to Professor Fleming giving this evidence. Further, the evidence Professor Fleming gave concerning Patrick's ALTE and death was within his area of expertise and of considerable assistance.
1452. Professor Fleming was asked to review Chapter 4 of the 2019 Inquiry Report and, in particular, whether the summary of SIDS was accurate as at 2019.
1453. In answering this question, Professor Fleming commented that if unexpected and unexplained infant death is a clinical phenomenon based on observations rather than a single underlying condition, it is entirely inappropriate to consider excluding deaths within the first month unless there is clear evidence that such deaths represent a different group of conditions to those responsible for the deaths of slightly older infants. He said, on the basis of knowledge as at 2019, such a distinction would not be appropriate. After reviewing a number of studies, he stated he believed it was highly likely that further pathogenic gene abnormalities, such as the abnormality reported in the Brohus Article, would be identified as significant potential contributors to the occurrence of more than one unexpected and unexplained death in a particular family.¹⁸⁴⁰
1454. Professor Fleming was next asked to assume each of the children died from particular causes and, in light of that assumption, what role did SIDS risk factors have to play in the deaths of all four children.¹⁸⁴¹
1455. Accepting that SIDS is a diagnosis of exclusion, in the sense that it can only be made if after proper investigation there is no identifiable cause of death, it is difficult to see the relevance that the role of SIDS factors had to play in the deaths of the four children, in view of the assumption Professor Fleming was asked to make. That was evidently Professor Fleming's view. In his evidence to the Inquiry, he was asked why he had commented on the potential causes of the children's deaths in circumstances where he had not been asked to do so. He stated that the question he was asked to deal with was related to SIDS risk factors and making those assumptions about the cause of death. He stated he was not willing to make assumptions about a cause of death without explaining why he came to his conclusion.¹⁸⁴²
1456. In relation to Caleb, Professor Fleming stated in his report that neither the

¹⁸³⁹ Transcript of the 2022 Inquiry, 21 February 2023 T531.28-43 (Fleming).

¹⁸⁴⁰ Exhibit 11-02, Report of Professor Peter Fleming (11 October 2022) [red pagination 18-23].

¹⁸⁴¹ Exhibit 11-02, Report of Professor Peter Fleming (11 October 2022) [red pagination 25].

¹⁸⁴² Transcript of the 2022 Inquiry, 21 February 2023 T533.4-20 (Fleming).

clinical history nor detailed pathology examination of Caleb established a clear and sufficient explanation for his death, which thus remained unexpected and unexplained. He stated the possibility of a mild to moderate degree of upper airway obstruction as a consequence of laryngomalacia cannot be excluded as a potential contributory factor to the unexpected and unexplained death of Caleb. He stated the finding of pulmonary haemosiderin is related to the presence of blood in the airways at some stage but, as was pointed out in the 2019 Inquiry, he stated this is not a finding that has been significantly associated with imposed upper airways obstruction.¹⁸⁴³

1457. At the Inquiry, he agreed that, in relation to laryngomalacia, because the post-mortem did not include a histological examination of the larynx, the diagnosis cannot be excluded and it cannot be taken any further than that. He agreed that, in the absence of any examination of the larynx on post-mortem, he did not raise it as any more than a possibility.¹⁸⁴⁴
1458. In relation to Patrick, Professor Fleming stated that the clinical history was suggestive of Patrick having suffered an encephalopathic disorder leading to intractable seizures. Referring to Patrick's ALTE, he stated a careful review of the history of the event shows a history that is not suggestive of an episode of imposed upper airway obstruction, but rather a period of relative hypoventilation, possibly related to a seizure, with a rapid improvement in his condition with the administration of oxygen.¹⁸⁴⁵
1459. Professor Fleming stated that in any child who has suffered a significant hypoxic-ischaemic insult continued metabolism by the vital organs (notably the heart and brain) in the absence of adequate oxygen leads to anaerobic metabolism with an inevitable rise in the blood level of lactic acid which is produced by anaerobic metabolism of glucose. He stated the lack of any elevation of blood lactate level in Patrick at the time of his hospital admission is strong evidence that the initial episode was not a severe hypoxic-ischaemic insult.¹⁸⁴⁶
1460. Professor Fleming stated that hypoxic-ischaemic episodes may be caused by a wide range of conditions, including accidental or deliberate obstruction of the airway. He stated the clinical picture described by Dr Dezordi (see [64] above) was not suggestive of this possibility and the rapidity with which Patrick regained consciousness and became responsive is again not suggestive of an acute and severe hypoxic-ischaemic insult. He stated it was unfortunate that no measurement was made of the blood gases at the time of Patrick's admission in October 1990.¹⁸⁴⁷
1461. Professor Fleming noted that the presence of a high urinary sugar level on arrival at hospital, in the absence of a raised blood sugar level, is not easily explicable and certainly is not suggestive of the predictable consequences of an episode of acute hypoxic-ischaemic injury. He stated that, in circumstances of acute stress, such as may accompany a hypoxic-ischaemic insult or a seizure, the body responds by increasing the output of adrenaline and noradrenaline leading to a marked rise in blood glucose level which in turn may lead to a rise in urinary glucose. However, he said the presence of a high urinary glucose level in the absence of a high blood

¹⁸⁴³ Exhibit 11-02, Report of Professor Peter Fleming (11 October 2022) [red pagination 25-26].

¹⁸⁴⁴ Transcript of the 2022 Inquiry, 21 February 2023 T533.30-534.2 (Fleming).

¹⁸⁴⁵ Exhibit 11-02, Report of Professor Peter Fleming, including CV (11 October 2022) [red pagination 26-27].

¹⁸⁴⁶ Exhibit 11-02, Report of Professor Peter Fleming, including CV (11 October 2022) [red pagination 27-28].

¹⁸⁴⁷ Exhibit 11-02, Report of Professor Peter Fleming, including CV (11 October 2022) [red pagination 28].

glucose level is not a feature of a hypoxic-ischaemic insult, in which both are elevated. Rather, he suggested that the presence of a normal blood glucose level in the presence of a high urinary glucose level is suggestive that an episode has occurred that elevated the blood glucose, for example a seizure, leading to a rise in urinary glucose level, but this was followed by an increased rate of metabolism of glucose so that the blood glucose level fell. He stated the brain preferentially utilises glucose as an energy source, and brain glucose consumption rises significantly during and immediately after a seizure. He stated that if this increased brain glucose consumption occurred at a time of absence or severely limited availability of oxygen there would inevitably be a rise in blood lactate level. He stated that an absence of a rise in blood lactate level in Patrick was evidence that his neurological abnormality at the time of presentation was very unlikely to have been caused by an acute hypoxic-ischaemic episode, such as airway obstruction.¹⁸⁴⁸

1462. Professor Fleming stated that the clinical picture presented by Patrick in the few days after his initial hospital admission, the sequential changes in the EEG and CT scans and his subsequent severe, although variable neuro-developmental impairment in which visual impairment was a prominent feature, are much more strongly suggestive of an underlying progressive encephalopathic process rather than of the consequences of a single, relatively brief period of hypoxic-ischaemic injury on the day of admission. He stated that in his experience as a paediatric intensivist, who has been involved in the investigation of very large numbers of children presenting with ALTEs in early infancy, the degree of acidosis, particularly the lactic acid elevation at the time of presentation, is a reliable indicator of the severity and duration of the preceding hypoxic-ischaemic episode. He stated that in the absence of a significant acidosis or elevation of blood lactate, he had never seen a child go on to develop significant neuro-developmental adverse consequences, unless they had an underlying potentially contributory neuro-developmental abnormality or other metabolic disorder.¹⁸⁴⁹
1463. Professor Fleming also commented that the lack of any significant identified abnormality in the basal ganglia or thalami at post-mortem and the presence of wide-spread old infarction and gliosis in the parieto-occipital area are more suggestive of a progressive neuro-developmental disorder than of a single significant originating episode of hypoxic-ischaemic injury. He stated that in acute episodes of hypoxic-ischaemic injury, of relatively brief duration but marked severity in newborn infants, the areas of the brain which are most likely to be injured are those with the highest metabolic rate and the highest density of neuronal activity such as the basal ganglia and the thalami. He stated that although most of the published information on this subject relates to newborn infants, there is no evidence of which he was aware that the pattern of damage seen from severe acute hypoxic-ischaemic injury is significantly different in older infants.¹⁸⁵⁰
1464. In those circumstances, Professor Fleming stated he agreed with Dr Ryan that the features seen in Patrick were more suggestive of an underlying condition rather than a hypoxic-ischaemic injury.¹⁸⁵¹
1465. In dealing with that portion of the report at the Inquiry, Professor Fleming was

¹⁸⁴⁸ Exhibit 11-02, Report of Professor Peter Fleming, including CV (11 October 2022) [red pagination 28-29].

¹⁸⁴⁹ Exhibit 11-02, Report of Professor Peter Fleming, including CV (11 October 2022) [red pagination 29-30].

¹⁸⁵⁰ Exhibit 11-02, Report of Professor Peter Fleming, including CV (11 October 2022) [red pagination 30].

¹⁸⁵¹ Exhibit 11-02, Report of Professor Peter Fleming, including CV (11 October 2022) [red pagination 30].

asked by Counsel Assisting whether he agreed that Patrick could be described as a healthy and normally developing baby prior to the ALTE. He stated that he had not been reported to have suffered from any identified significant problems, so that was his understanding.¹⁸⁵²

1466. Professor Fleming agreed that the fact that no resuscitation was required was relevant in forming his view about the possibility that hypoxic-ischaemic injury was sustained. He stated if a child has suffered such an injury to the brain that they develop cortical blindness and all the other neurological problems that Patrick had, the initial incident must have been very severe. He referred to the fact that at the time of Patrick's presentation he was noted to be blue but he was breathing. He was struggling, but was breathing. He stated if you had a sufficiently severe brain injury to lead to permanent long-term serious neurological consequences, that is extremely surprising because the effect of the severe shortage of oxygen and blood circulation to the brain, is that many vital functions, particularly breathing, stop and without resuscitation, the child would have died. He said by contrast Patrick did not need resuscitation, he was given mouth-to-mouth, according to his father, but was breathing at the time.¹⁸⁵³
1467. Professor Fleming was asked whether the description of Patrick on presentation, as being blue requiring the administration of oxygen, accorded with describing Patrick as hypoxic on presentation. In response, he stated that when a person becomes short of oxygen, the body shifts the blood and oxygen supply that is available to the two most important organs, the brain and the heart. He said everything else can be shut off, but the brain and the heart have to continue to be supplied with oxygen and circulation in order to survive. He explained that the fact that somebody is blue does not mean that their brain is short of oxygen, it means that their skin is short of oxygen and the body is likely to be using as much of the available oxygen as possible to keep the brain and the heart going. He said that if you recover quickly or your colour improves with just the administration of oxygen, that is evidence against a very severe shortage of oxygen to the brain. He stated shortage of oxygen to the brain leads to a loss of consciousness, a loss of responsiveness and eventually, a cessation of breathing. He stated Patrick was short of oxygen, but it was not sufficient to have caused brain injury because of the rapidity with which he responded to just being given oxygen.¹⁸⁵⁴
1468. Professor Fleming was referred to the comment in his report that "according to the handwritten notes made by Dr Dezordi... the blood sample taken at the time of admission did not show increased blood lactate level." He agreed that that was based on what was said in a handwritten "Interim Discharge Letter" by Dr Dezordi that "Serum: lactate, etc, 'all normal'".¹⁸⁵⁵ He stated he assumed that was a reference to a blood sample or test administered at the time of admission.¹⁸⁵⁶
1469. Professor Fleming was then referred to the laboratory results. He agreed that the tests taken on 18 October 1990 made no reference to extra blood tests for lactate and stated that, insofar as the blood test on 20 October 1990 indicated a blood lactate level of 1.6, that does not tell you anything about the position as it had been

¹⁸⁵² Transcript of the 2022 Inquiry, 21 February 2023 T534.30-34 (Fleming).

¹⁸⁵³ Transcript of the 2022 Inquiry, 21 February 2023 T534.41-535.5 (Fleming).

¹⁸⁵⁴ Transcript of the 2022 Inquiry, 21 February 2023 T535.13-33 (Fleming).

¹⁸⁵⁵ Exhibit 2-H, Forensic pathology tender bundle, Interim discharge letter dated 29 October 1990 [red pagination 3594].

¹⁸⁵⁶ Transcript of the 2022 Inquiry, 21 February 2023 T537.3-5 (Fleming).

on 18 October 1990. He was asked, in those circumstances, if there was no evidence of a blood lactate level as at 18 October 1990 on admission, whether that made his evidence on that subject “in a sense neutral”. He agreed that if there was no lactate measure done at the beginning, then “that particular argument cannot fly”. He stated that what he could say though was that there was no evidence of renal impairment or kidney damage. He stated that if Patrick had a hypoxic-ischaemic episode sufficient to cause brain damage, there is always damage to the kidneys as well because the body will sacrifice the kidneys to save the brain and the heart. He said the absence of evidence of any renal impairment is a different issue to that concerning the blood lactate levels at the time of presentation.¹⁸⁵⁷

1470. Professor Fleming was asked if the presence of elevated urinary glucose level, in the absence of high blood glucose level, excluded the possibility of an acute ischaemic injury. He opined that it made it extremely unlikely. He stated that when you have an acute hypoxic-ischaemic injury the blood sugar rises, it goes very high to start with as it is a stress reaction. He stated that in the absence of oxygen, which is what occurs in a hypoxic-ischaemic injury, the brain cannot utilise much of that glucose. It utilises some of it and converts it to lactic acid, to lactate, but it cannot utilise much of it, and therefore the sugar level stays very high. Typically, in a child who had an acute hypoxic-ischaemic injury, the blood sugar level is very high. Professor Fleming stated that if on the other hand, the initial episode is a seizure or a fit, and there is a continued supply of oxygen to the brain, the brain will metabolise glucose at a vastly accelerated rate compared to normal because of the seizure. He stated the seizure activity is utilising a lot of glucose. He stated it is the primary substrate utilised in seizure activity in the brain. He stated therefore that even though the initial stress may have led to a rise in blood sugar, some of which may have escaped into the urine which is why there would be glucose in the urine, if the glucose in the blood is being utilised by the brain first, it means the brain is not hypoxic because the brain cannot utilise much glucose when it is hypoxic. Further, he stated that it explains why there are falling levels of glucose in the blood despite some evidence that it was previously high and there was presence of glucose in the urine.¹⁸⁵⁸
1471. Professor Fleming was also asked what Patrick’s rate of recovery indicated one way or the other about the likelihood of a hypoxic-ischaemic injury having been sustained. Professor Fleming stated that he recovered very quickly within a very short period of time and was feeding again. He stated if one suffered sufficient hypoxic-ischaemic injury to cause permanent brain damage, they do not start feeding. He stated that is one of the very characteristic features of hypoxic-ischaemic injury in young children, namely that feeding is one of the most difficult things to recommence following the event.¹⁸⁵⁹
1472. Professor Fleming was referred to the fact that the sixth reason he gave for his view that Patrick’s ALTE did not result from a hypoxic-ischaemic injury was by reference to the post-mortem histology report (see [93] above). Professor Fleming stated the report showed evidence of old infarction glyosis and laminar necrosis in the parieto occipital area. He stated the laminar necrosis is a characteristic finding in the relatively superficial part of the cerebral cortex and characteristically it is seen

¹⁸⁵⁷ Transcript of the 2022 Inquiry, 21 February 2023 T538.5-25 (Fleming).

¹⁸⁵⁸ Transcript of the 2022 Inquiry, 21 February 2023 T538.27-539.6 (Fleming).

¹⁸⁵⁹ Transcript of the 2022 Inquiry, 21 February 2023 T539.18-27 (Fleming).

after severe hypoglycaemia, which is a shortage of blood glucose. He stated it may also occur in children who have had prolonged and severe seizure activity.¹⁸⁶⁰

1473. Professor Fleming also stated that the typical brain histological findings after a single severe initial episode of hypoxic-ischaemic injury, is damage to the basal ganglia and the thalami, which were not noted to be abnormal, and in the CT scan which was also not shown to be abnormal. He stated those were features which are not typical of a child who suffered damage from a single past episode. He noted, in the opinion of the author of the report, Dr Kan, that it appeared more likely to be the result of an episode of cardiorespiratory arrest. Professor Fleming stated that was a mistake. Patrick had not had a period of cardiorespiratory arrest. He stated if Patrick had, the findings would have been different. He stated that reflected the improvement in the understanding of brain histopathology over the past 30 years.¹⁸⁶¹ It should be noted that apart from criticism of Dr Kan's ultimate view, Dr Ryan agreed with Professor Fleming on this issue.
1474. Professor Fleming accepted he did not exclude the possibility of a hypoxic-ischaemic injury.¹⁸⁶²
1475. Professor Fleming was asked whether he agreed with Dr Cala that the brain examination showed no features of an underlying metabolic encephalopathy. He said the examination was far more suggestive of that than of an acute hypoxic-ischaemic episode.¹⁸⁶³
1476. Professor Fleming was referred to the fact that the EEG administered on the day of Patrick's admission on 18 October 1990 was reported as being normal. He stated that he agreed with Dr Ryan that if Patrick had sustained a severe hypoxic-ischaemic insult on the morning of 18 October 1990, it was difficult to imagine the EEG would have been entirely normal.¹⁸⁶⁴
1477. So far as Sarah was concerned, in his report Professor Fleming pointed out there was no clear and sufficient explanation for her death. He said, as in the case of Caleb and Patrick, there were no findings at post-mortem to suggest the possibility of imposed airway obstruction as a cause or contributory factor. He stated that the post-mortem report confirms there was no evidence of any injury to the internal surfaces of her lips or the surface of her tongue.¹⁸⁶⁵
1478. In relation to Laura, Professor Fleming stated acute myocarditis is a well-recognised cause of sudden unexpected death in infants and young children. He stated the clinical picture of a child who is mildly unwell with an apparently trivial upper respiratory infection who then suddenly dies, and in whom acute myocarditis is found at post-mortem examination, whilst rare, is one that he had seen on several occasions as part of his work for the National Child Mortality Database.¹⁸⁶⁶
1479. In answer to a question posed by Counsel Assisting the Inquiry, Professor Fleming

¹⁸⁶⁰ Transcript of the 2022 Inquiry, 21 February 2023 T539.47-T540.13 (Fleming).

¹⁸⁶¹ Transcript of the 2022 Inquiry, 21 February 2023 T540.16-26 (Fleming).

¹⁸⁶² Transcript of the 2022 Inquiry, 21 February 2023 T540.34-36 (Fleming).

¹⁸⁶³ Transcript of the 2022 Inquiry, 21 February 2023 T540.38-47 (Fleming).

¹⁸⁶⁴ Transcript of the 2022 Inquiry, 21 February 2023 T541.27-33 (Fleming).

¹⁸⁶⁵ Exhibit 11-02, Report of Professor Peter Fleming, including CV (11 October 2022) [red pagination 31].

¹⁸⁶⁶ Exhibit 11-02, Report of Professor Peter Fleming, including CV (11 October 2022) [red pagination 31-32].

stated that in interpreting the slides showing Laura's myocarditis he would defer to expert histopathologists. He stated, however, that his understanding was that there was an agreement among histopathologists that there was a degree of viral or probably viral myocarditis. He stated the severity is assessed differently among pathologists, but nevertheless, he had not seen a report by any of them that there was no evidence of myocarditis. He said acute myocarditis meant it had "not been there long". He stated that a description of the myocarditis as being patchy and mild did not affect what he said about the possibility of myocarditis as a cause of death. He said that the degree of myocarditis as assessed histologically is not a good indicator as to whether it will trigger an acute cardiac arrhythmia, an abnormality of cardiac conduction.¹⁸⁶⁷ In answer to a question from Senior Counsel for Dr Cala, Professor Fleming stated that that view was supported by one journal article in his report but otherwise on his personal experience. He emphasised again, it was not his job to interpret the difference between pathologists.¹⁸⁶⁸ He also stated that if what is being considered is an acute arrhythmic death which is very different to a cardiac failure death, it "doesn't require much virus to affect the conduction system, and cause an acute arrhythmic death".¹⁸⁶⁹

1480. Professor Fleming also dealt with the question of suffocation in his report. He stated that, in the 1990s, he worked in collaboration with two other medical practitioners who, together with their local police force, operated a service involving covert video surveillance of infants and parents under suspicion that episodes of apparently stopping breathing or other apparent life-threatening episodes during sleep may have been caused by parental intervention. He stated he was never directly involved in the covert video surveillance himself, but he had the opportunity of reviewing the video recordings from several of the children in whom it was shown the life threatening incidents had been imposed by their parents. He stated that on reviewing these recordings it was very clear that, even young infants whose airway was occluded by a hand or soft fabric, responded rapidly and vigorously. He stated in most cases when the episodes were interrupted (within 20-30 seconds) there was temporary visible evidence of discolouration of the face. He stated he found it surprising that if the obstruction continued for much longer and was of sufficient duration to kill the child there would be no evidence whatsoever at post-mortem of any injury or discolouration to the facial tissues.¹⁸⁷⁰
1481. Professor Fleming acknowledged all the experts at the trial and at the 2019 Inquiry noted that it was possible to suffocate a young infant by obstructing the upper airways without leaving any marks that might indicate that this has occurred. He stated this assertion is very commonly made by experts when an externally applied upper airway obstruction is suspected as a potential cause of death of an infant or a young child, but the evidence on which this assumption is based is very hard to identify. He stated he could find no published evidence to confirm or refute this assertion.¹⁸⁷¹
1482. In answer to questions asked by Counsel Assisting, Professor Fleming stated he found it almost inconceivable that one could suffocate a child with eruptive front teeth without damaging the inside of the mouth. He said the inside of the mouth is

¹⁸⁶⁷ Transcript of the 2022 Inquiry, 21 February 2023 T541.35-T542.8 (Fleming).

¹⁸⁶⁸ Transcript of the 2022 Inquiry, 21 February 2023 T541.41-42 (Fleming).

¹⁸⁶⁹ Transcript of the 2022 Inquiry, 21 February 2023 T546.6-9 (Fleming).

¹⁸⁷⁰ Exhibit 11-02, Report of Professor Peter Fleming, including CV (11 October 2022) [red pagination 32-33].

¹⁸⁷¹ Exhibit 11-02, Report of Professor Peter Fleming, including CV (11 October 2022) [red pagination 33-34].

often damaged by trying to resuscitate them. He was asked if it depended on the method of suffocation and he stated that anything that pushes the lip onto the teeth and anything that disrupts the upper airway would risk damaging the inside of the lip. He stated it was very clear that even with very young babies where the airway is obstructed even for a few seconds, the child wriggles and struggles extremely vigorously.¹⁸⁷²

1483. Professor Fleming was referred to an article by MP Samuels et al, entitled “Fourteen cases of imposed upper airway obstruction” (1992).¹⁸⁷³ He agreed that that article demonstrated that what the paediatricians observed before they referred the cases to the covert surveillance teams was that, aside from one of the eight patients with the petechial haemorrhage, seven of the eight did not display sufficient observable damage for the paediatricians to consider they had sufficient evidence to confront a parent on the topic of suffocation. He agreed that was correct. He was asked whether that provided some support for the view that suffocation of young infants can occur without leaving physical signs or damage. In response, he stated the children did not die. He referred to the statement in the article that, where the episodes were recorded of airway obstruction, there was evidence of changing colour and minor injury to the face, which was visible in several of them immediately afterwards. After referring to that, he again said because they did not die, their circulation continued throughout the period. He stated that if there is a discolouration and damage to the tissues and the circulation stops, then the colour does not return.¹⁸⁷⁴
1484. Professor Fleming was referred to the statement in his report that he accepted that it may be possible in infants in the first weeks from birth to be smothered without leaving evidence but would find it hard to accept that three children aged eight, ten and 19 months would have had no physical findings to suggest smothering identified at post-mortem. He said that was predominantly based on the presence of erupted anterior teeth but also the vigour with which children fight to protect their airways, which was seen in the covert videos. He stated he would personally find it almost impossible to believe that a child, with erupted anterior teeth who is having their airway obstructed by something put over their face, would not fight vigorously and injure the inside of their lip. He was then asked, excluding the possibility of a fit of rage, whether Patrick could have been smothered without there being any overt signs. In effect, Professor Fleming declined to answer that question because, in his view, the physical evidence at the time excluded airway obstruction as a cause of the episode. He was asked the same question in relation to Sarah and Laura and stated that he always hesitated to say that something is impossible but he would “find it very, very hard to accept that that could happen”. He said he would be even more surprised if one person managed to smother three children without leaving a trace, stating that he would find it extraordinary as “that person must have skills that most paediatric anaesthetists don’t have in terms of protecting the airway”.¹⁸⁷⁵
1485. Professor Fleming was asked whether he was an outlier in the area. He responded that neither at the trial nor at the 2019 Inquiry was a paediatric intensivist asked that question. He stated, “I may be an outlier but I think without being immodest, I

¹⁸⁷² Transcript of the 2022 Inquiry, 21 February 2023 T522.11-T523.10 (Fleming).

¹⁸⁷³ Exhibit 15-18(h), MP Samuels et al, ‘Fourteen cases of imposed upper airway obstruction’ (1992) 67 *Archives of Disease in Childhood* 162-170.

¹⁸⁷⁴ Transcript of the 2022 Inquiry, 21 February 2023 T523.38-T524.47 (Fleming).

¹⁸⁷⁵ Transcript of the 2022 Inquiry, 21 February 2023 T525.13-T526.33 (Fleming).

have a greater experience of those areas than the experts who gave evidence at the trial or the previous Inquiry.”¹⁸⁷⁶

1486. Professor Fleming was referred to the third edition of Saukko and Knight’s book entitled *Knight’s Forensic Pathology* (3rd edition, 2004).¹⁸⁷⁷ He stated he was not familiar with the text. He agreed with the comment contained in it that “in relation to infants... it is essential to appreciate that smothering, whether intentional or accidental, is both rare and difficult to prove”. He also said he agreed with the comment, “The so-called classic signs of asphyxia (i.e. facial congestion, facial and conjunctival petechiae), for what they are worth, are rarely present in proven suffocation”. He stated he strongly agreed with the comment “as intrathoracic petechiae are common in undoubted ‘cot deaths’, these signs cannot therefore be accepted in isolation as evidence of suffocation”.¹⁸⁷⁸
1487. Professor Fleming agreed that in his report he placed particular emphasis on injury to the insides of either the upper or lower lips or tongue which relates to the presence of erupted teeth. He was asked whether that depends on the nature or method of suffocation and said he did not know nor did anyone else because the studies cannot be done.¹⁸⁷⁹
1488. Senior Counsel for Dr Cala referred to Professor Fleming’s evidence that he found it hard to say how children, at the ages of Sarah and Laura at the time of their deaths, could be smothered without there being any evidence. Professor Fleming was asked if he was aware that, for example, in plastic bag suffocation, unless the bag is present there is generally no forensic evidence of the suffocation. He said that depends on the age of the infant. Subsequently, he was asked whether he agreed with the statement that the plastic bag suffocation can be rapid and leave no signs whatsoever. He stated he believed that was correct. He said he had never seen it in an older child but he had seen it in young infants who accidentally had plastic bags over their face.¹⁸⁸⁰

Conclusion on the ALTE and death of Patrick

1489. It should be noted that at the trial, the neurological evidence was given principally by Dr Wilkinson. I have summarised his evidence at [66], [69], [73]-[74]. As I have pointed out, Dr Wilkinson expressed the view, first that an absolute explanation for the brain damage suffered by Patrick, as a result of the ALTE, was not found; and, second that the damage was consistent with Patrick having suffered a catastrophic asphyxiating event of an unknown kind, and that such damage can cause seizures to develop within a few days (see [73]-[74]). He also excluded viral encephalitis as the cause of death.¹⁸⁸¹
1490. Dr Wilkinson did not give evidence at the at the 2019 Inquiry. Evidence was given by Dr Ryan and Associate Professor Fahey.
1491. As I previously indicated, the Inquirer at the 2019 Inquiry preferred the evidence of

¹⁸⁷⁶ Transcript of the 2022 Inquiry, 21 February 2023 T527.1-8 (Fleming).

¹⁸⁷⁷ Exhibit 15-127, Pekka Saukko and Bernard Knight, *Knight’s Forensic Pathology* (CRC Press, 3rd ed, 2004) 358, 360.

¹⁸⁷⁸ Transcript of the 2022 Inquiry, 21 February 2023 T528.29-529.45 (Fleming).

¹⁸⁷⁹ Transcript of the 2022 Inquiry, 21 February 2023 T530.33-41 (Fleming).

¹⁸⁸⁰ Transcript of the 2022 Inquiry, 21 February 2023 T543.17-42 (Fleming).

¹⁸⁸¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 10 April 2003 T509.4-55 T509.57-T510.25 [red pagination 2313].

Associate Professor Fahey to Dr Ryan as to the possible cause of Patrick's ALTE.¹⁸⁸² That led the Inquirer to effectively reject, as a reasonable possibility, any cause of Patrick's ALTE other than asphyxiation. It is not my task to determine whether it was open to the Inquirer to reject the evidence of Dr Ryan in such absolute terms. However, as I have reached a contrary conclusion, it is necessary to say something about his reasoning.

1492. I have set out the reasoning of the 2019 Inquirer at [922]-[927].
1493. The first reason was that Associate Professor Fahey and Dr Wilkinson had the qualifications and experience to give evidence on the matter.¹⁸⁸³ It must be said that so did Dr Ryan, who was at least as well qualified as the other two experts.
1494. The second reason was that Dr Wilkinson's evidence was tested at trial.¹⁸⁸⁴ I have summarised the evidence above. It cannot be said that there was a serious challenge to his evidence.
1495. The third reason was Dr Ryan's reliance on previous back and neck arching and torticollis in support of her opinion.¹⁸⁸⁵ I have set out her evidence on this issue to the 2019 Inquiry at [666]. The possible qualification to the proposition that Patrick was a healthy baby before the ALTE hardly warrants a total rejection of her evidence. In my opinion, it does not show that Dr Ryan was "inexplicably unprepared" to give serious consideration to the consensus of other medical opinions which are inconsistent with her own, or accept the weight of records and evidence indicating that Patrick was healthy and developing normally prior to the ALTE.
1496. Finally, whilst there were certainly reasons for differences of opinion on the question of whether, in the absence of a blood gas measurement, it could be said that Patrick was hypoxic, Dr Ryan's approach that a blood gas measurement was necessary does not in my opinion warrant the comment that Dr Ryan was unprepared to give reasonable consideration to the factual evidence that was available. As she explained in her current report (see [1416]), she accepted that Patrick had a low oxygen saturation level on presentation, but stated that low oxygen saturations measured percutaneously do not necessarily equate with hypoxia.¹⁸⁸⁶
1497. I have set out Dr Ryan's report and evidence to this Inquiry at [1415]-[1447]. Her conclusion that Patrick's presentation at the time of the ALTE was atypical of a hypoxic-ischaemic brain injury or that Patrick suffered such an injury on 18 October 1990 was supported by the evidence of Professor Fleming (see [1458]-[1473]).¹⁸⁸⁷ I find their evidence cogent and convincing.
1498. I had some concerns that Associate Professor Fahey was not called to give evidence at the Inquiry. However, I have taken his evidence into account.
1499. Associate Professor Fahey correctly pointed out that the genome testing on Patrick excluded any recognised condition associated with genetic epilepsy,

¹⁸⁸² 2019 Inquiry Report, ch 5 [310].

¹⁸⁸³ 2019 Inquiry Report, ch 5 [311].

¹⁸⁸⁴ 2019 Inquiry Report, ch 5 [311].

¹⁸⁸⁵ 2019 Inquiry Report, ch 5 [312]-[313].

¹⁸⁸⁶ Exhibit 12-02, Report of Dr Monique Ryan (23 September 2022) [red pagination 13].

¹⁸⁸⁷ Transcript of the 2022 Inquiry, 21 February 2023 T551.36-39 (Ryan); 21 February 2023 T534.17-23 (Fleming).

encephalopathy, cardiac arrhythmias, or sudden death.¹⁸⁸⁸ However, he noted in his report to the 2019 Inquiry that whole exome and whole genome sequencing was able to give an explanation for epileptic encephalopathies between 28% and 67% of cases,¹⁸⁸⁹ whilst Dr Ryan in her report stated that genetic testing was unable to identify the cause of presumed infantile degenerative neurogenetic disorders in as many as two thirds of the cases.¹⁸⁹⁰ It follows that on either view, it could not be suggested that the genetic evidence excluded all unknown neurogenetic conditions.

1500. Second, Associate Professor Fahey recognised that there were certain features of Patrick’s presentation, which were atypical of a hypoxic-ischaemic event. He referred, in what he described as outstanding issues, to the fact that Patrick had a period where the medical and nursing staff felt that he was “alert and responsive” and “able to feed”, compared to the evolution of EEGs and CT scans over days, and the clinical evolution over the period culminating in Patrick’s death.¹⁸⁹¹
1501. In reaching his conclusion that the presentation was consistent with Patrick suffering a single hypoxic-ischaemic event, Associate Professor Fahey placed heavy reliance on the Constantinou Article (see [679] and [686]). Dr Ryan dealt with this paper in her evidence to the Inquiry indicating that what occurred with the infants who were the subject of the study was not consistent with Patrick’s presentation, and that apart from the one report, which was 34 years old, she was not aware of anything like that sort of clinical scenario.¹⁸⁹²
1502. In the circumstances, I accept the evidence of Dr Ryan and Professor Fleming that Patrick’s presentation was atypical for a single hypoxic-ischaemic event significant enough to cause the observed brain damage. That evidence was not inconsistent with the evidence of Associate Professor Fahey (see [1500]). I accept the evidence of Dr Ryan and Professor Fleming that it was unlikely that Patrick’s ALTE was the result of a single hypoxic-ischaemic event as distinct from an unknown neurogenetic disorder. However, it should be noted that neither Dr Ryan nor Professor Fleming excluded the possibility that Patrick’s ALTE was caused by a single hypoxic-ischaemic event on 18 October 1990.¹⁸⁹³
1503. Further, Counsel Assisting correctly pointed out that none of the experts excluded the possibility the Patrick’s death was the result of his epileptic disorder. I have set out the opinion of Dr Ryan on this issue at [1423]-[1441].
1504. It should finally be noted that Dr Cala had a different view to that reached by Professor Fleming and Dr Ryan, relying in particular on Dr Kan’s report (see [1504] below). Dr Kan’s report was dealt with by each of Dr Ryan and Professor Fleming who concluded that his report did not affect their views (see [1446]-[1447] and [1473]). As Dr Cala properly conceded, he would defer to the opinion of a paediatric neurologist (see [1590]).¹⁸⁹⁴ In those circumstances, it is unnecessary to take this matter further.
1505. In conclusion, I am satisfied on this evidence that, although it remains a reasonable

¹⁸⁸⁸ Exhibit 2-AK, Report of Associate Professor Michael Fahey (30 March 2019) [red pagination 5690].

¹⁸⁸⁹ Exhibit 2-AK, Report of Associate Professor Michael Fahey (30 March 2019) [red pagination 5682].

¹⁸⁹⁰ Exhibit 12-02, Report of Dr Monique Ryan (23 September 2022) [red pagination 13].

¹⁸⁹¹ Exhibit 2-AK, Report of Associate Professor Michael Fahey (30 March 2019) [red pagination 5690].

¹⁸⁹² Transcript of the 2022 Inquiry, 21 February 2023 T563.13-25 (Ryan).

¹⁸⁹³ Transcript of the 2022 Inquiry, 21 February 2023 T551.14-22 (Ryan); T540.34-36 (Fleming).

¹⁸⁹⁴ Transcript of the 2022 Inquiry, 23 February 2023 T657.25-29 (Cala).

possibility that Patrick's ALTE was caused by a single hypoxic-ischaemic event such as smothering, the evidence of Dr Ryan and Professor Fleming satisfies me that it was more likely than not that it was caused by an unknown neurogenetic disorder. It is also a reasonable possibility that Patrick's death can be characterised as what Dr Ryan described as a SUDEP (a sudden unexpected non-traumatic and non-drowning death in an individual with epilepsy).¹⁸⁹⁵ It should finally be noted that the 2019 Inquirer found that it was possible that the cause of death was a seizure or similar event relating to the encephalopathy in his brain.

¹⁸⁹⁵ Exhibit 12-02, Report of Dr Monique Ryan (23 September 2022) [red pagination 13].

Section 4

The evidence of the
pathologists at the Inquiry

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Section 4 – The evidence of the pathologists at the Inquiry

a. Professor Cordner

1506. Professor Cordner gave very detailed evidence at the 2019 Inquiry (see [520]-[560] above). I set out his qualifications in that section of the report and I will not repeat them.
1507. Professor Cordner adhered to what he had said in his 2015 report and his evidence at the 2019 Inquiry. His reports and his evidence before the Inquiry basically related to two matters. First, the statistics on intentional death by smothering which he had derived from a literature review conducted by the Librarian of the Victorian Institute of Forensic Medicine. Second, the extent of Laura’s myocarditis at the time of her death.

i. The reports of Professor Cordner

1508. Professor Cordner provided a report on 1 March 2022.¹⁸⁹⁶ Although it was tendered at the Inquiry, the matters raised in it were dealt with in more detail in his subsequent reports. It is unnecessary to say anything further about it. Professor Cordner prepared a supplementary report on 13 December 2022.¹⁸⁹⁷ It was revised to make some corrections by a report on 22 February 2023¹⁸⁹⁸ and further amendments were made in a report dated 24 February 2023, following the request by Counsel Assisting during the course of Professor Cordner’s evidence.¹⁸⁹⁹ I will deal only with the last report.
1509. Professor Cordner referred to the discovery of the CALM2-G114R variant in Sarah and Laura. He stated that would seem to alter the way in which the deaths of the Folbigg children need to be considered as there is now a new and specifically identified, potentially fatal entity of a genetic kind which affects the heart, and possibly adversely interacted with an upper respiratory tract infection, to account for Sarah’s death; and, the same new entity to add to the myocarditis (with which the entity is very likely to interact adversely) to account for Laura’s death.¹⁹⁰⁰ Professor Cordner is not an expert in genetics and this conclusion rises and falls with the strength of the genetic evidence.
1510. Professor Cordner noted it was impossible for anyone to prove as a fact that the four Folbigg children were not smothered. He suggested that the only clues about the alleged smotherings were provided by the Prosecutor at the trial relating to the intensity with which they were carried out. He referred to the fact that the Prosecutor described this intensity as follows:
- (i) the mother “intended to kill them during a flash of anger, resentment and hatred against her children, or alternatively...she deliberately sought to render them unconscious in an attempt to put them to sleep”.

¹⁸⁹⁶ Exhibit 13-02, Report of Professor Stephen Cordner (1 March 2022).

¹⁸⁹⁷ Exhibit 13-02A, Supplementary Report of Professor Stephen Cordner dated 13 December 2022.

¹⁸⁹⁸ Exhibit 13-02B, Supplementary Report of Professor Stephen Cordner dated 13 December 2022, with corrections as at 22 February 2023.

¹⁸⁹⁹ Exhibit 13-02C, Supplementary Report of Professor Stephen Cordner dated 13 December 2022, with corrections as at 22 February 2023 and further amendments following request on 24 February 2023.

¹⁹⁰⁰ Exhibit 13-02C, Supplementary Report of Professor Stephen Cordner dated 13 December 2022, with corrections as at 22 February 2023 and further amendments following request on 24 February 2023 [red pagination 13-142].

- (ii) “This accused snapped when she wanted sleep and couldn’t cope with their crying or whingeing”.
- (iii) In relation to Sarah, while referring to a diary entry about Sarah, “that’s only consistent in our submission with one interpretation and that is that night she, yet again, lost her cool. She lost her cool with Sarah because she wanted Sarah to shut up and she wouldn’t, so she made sure she shut up by smothering her”.
- (iv) In his final address, “What we suggest is that she became enraged, she became consumed with stress, hatred, resentment, anger and suddenly smothered her children to death”.¹⁹⁰¹

1511. Professor Cordner stated these descriptions do not conjure up images of gentle episodes of placing a pillow over the face of the children “to ease their passing”. He stated the actions described would be expected to leave some injuries in at least some of the children, especially as they were replicated five times in four children; and, at least Laura, and probably also Sarah, had teeth; and, the medical evidence indicates that 70 seconds of considerably forceful airways obstruction is required before electroencephalographic changes, probably associated with unconsciousness, occurred.¹⁹⁰² He added that the lack of injury in the mouth is a particularly significant factor against the conclusion of smothering in the case of Laura, since she had a number of teeth which would have been expected to result in injury to the mouth if the lips had been compressed against them.¹⁹⁰³
1512. Professor Cordner stated that, with the possible exception of Caleb, these smothering actions would have taken place against resistance from the children which would have been quite significant.¹⁹⁰⁴
1513. Professor Cordner stated that an issue which he believed was central to a proper understanding of the deaths of the Folbigg children is, “What is the frequency of the signs of smothering in children under 2 years?”. In that context, the literature review referred to above was conducted and various statistics were produced from that review.¹⁹⁰⁵
1514. Following that literature review, Professor Cordner first produced a table which showed the presence of petechial haemorrhages, facial injuries and evidence as to CPR in 21 case reports of intentional smothering distilled from a review of the literature from 2000 to 2022. He stated that the table includes cases where there is no mention of the presence or absence of petechiae. He stated, in other words, of the 21 cases, there were seven cases where petechiae were present, seven cases where they were absent and, in the remaining seven cases, it was not known whether petechiae were present or absent, as their presence or absence is not mentioned in the case report.¹⁹⁰⁶

¹⁹⁰¹ Exhibit 13-02C, Supplementary Report of Professor Stephen Cordner dated 13 December 2022, with corrections as at 22 February 2023 and further amendments following request on 24 February 2023 [red pagination 13-143-13-144].

¹⁹⁰² Exhibit 13-02C, Supplementary Report of Professor Stephen Cordner dated 13 December 2022, with corrections as at 22 February 2023 and further amendments following request on 24 February 2023 [red pagination 13-144].

¹⁹⁰³ Exhibit 13-02C, Supplementary Report of Professor Stephen Cordner dated 13 December 2022, with corrections as at 22 February 2023 and further amendments following request on 24 February 2023 [red pagination 13-140].

¹⁹⁰⁴ Exhibit 13-02C, Supplementary Report of Professor Stephen Cordner dated 13 December 2022, with corrections as at 22 February 2023 and further amendments following request on 24 February 2023 [red pagination 13-144].

¹⁹⁰⁵ Exhibit 13-02C, Supplementary Report of Professor Stephen Cordner dated 13 December 2022, with corrections as at 22 February 2023 and further amendments following request on 24 February 2023 [red pagination 13-146].

¹⁹⁰⁶ Exhibit 13-02C, Supplementary Report of Professor Stephen Cordner dated 13 December 2022, with corrections as at 22 February 2023 and further amendments following request on 24 February 2023 [red pagination 13-153].

1515. Professor Cordner then produced a further table where the presence or absence of petechiae was known. He acknowledged the numbers were not large but they were sufficient in his view for Saukko and Knight to revise their comment that petechiae are rarely present in smothering cases.¹⁹⁰⁷ He stated the numbers show that in around half of the published cases of fatal and intentional smothering, where there is knowledge of their presence or absence, petechiae (in 7 of 14 cases) and/or facial injuries (in 8 of 15 cases) are present. He stated of the seven with petechial haemorrhages, three had injuries, and in three there were no injuries; and in the remaining case it was unknown if there were injuries or not. He stated of the eight with facial injuries, three had petechiae, three had no petechiae identified, and in two petechiae were not mentioned as present or not.¹⁹⁰⁸
1516. Professor Cordner then sought to carry out research in children under two years of age who died in Victoria from 2000-2019 and whose deaths occurred in circumstances where external obstruction to the airways may have occurred. Once again, it is unnecessary to set out his methodology in detail but he stated that the inference from the data was that, while petechial haemorrhages and facial injuries occur in infants who have died in circumstances of accidental airways obstruction, in unsafe sleeping environments, and in circumstances where nothing untoward seems to have occurred, they occur in a smaller proportion of cases compared to cases regarded as being the result of intentional smothering.
1517. Professor Cordner stated that the conclusion he drew from the pattern of the Folbigg deaths – namely, that there were no petechial haemorrhages and no injuries in four children under the age of two years who died over a ten year period – does not, from a forensic pathology point of view, support the claim that they were smothered. He said this was for two reasons. First, the evidence from the literature is that, in deaths of children up to the age of two regarded as being the result of intentional smothering, around half the deaths have petechial haemorrhages of one or more of the conjunctivae, eyelids and face, and around half have facial injuries. He stated this is to be compared with the Folbigg children where none had petechial haemorrhages and none (or one) had facial injuries.¹⁹⁰⁹
1518. Second, among the 21 intentional smothering deaths, there were three cases where there was no information about the presence or absence of petechiae or facial injuries. He said, excluding those cases there are 18 cases left, two of which contained information about the presence or absence of petechiae alone, but no information about injuries; and, in four cases there was information about the presence or absence of injuries alone but not information about petechiae; whilst, in 12 cases there was information about both. Professor Cordner stated, in answer to a claim that suffocation is very easy to perform on a young child or a baby, without leaving any signs, this data would produce the following response: in 11 of 18 or 61% of cases of fatal intentional smothering, including six cases without information about the presence or absence of one or other finding, there were petechial haemorrhages or facial injuries or both. In three quarters of the cases of

¹⁹⁰⁷ Exhibit 15-127, Pekka Saukko and Bernard Knight, *Knight's Forensic Pathology* (CRC Press, 3rd ed, 2004) [red pagination 1983-1984].

¹⁹⁰⁸ Exhibit 13-02C, Supplementary Report of Professor Stephen Cordner dated 13 December 2022, with corrections as at 22 February 2023 and further amendments following request on 24 February 2023 [red pagination 13-154].

¹⁹⁰⁹ Exhibit 13-02C, Supplementary Report of Professor Stephen Cordner dated 13 December 2022, with corrections as at 22 February 2023 and further amendments following request on 24 February 2023 [red pagination 13-157 to 13-158].

fatal intentional smothering there were petechial haemorrhages or facial injuries or both.¹⁹¹⁰

1519. Professor Cordner acknowledged that that analysis is not of sufficient scale for statistical analysis. However, he asserted that case reports sit above expert opinion evidence and within the case reports the conclusion that the cause of death was intentional smothering was a conclusion of the medical examiner or pathologist often based on confessions, and in some cases on court verdicts.¹⁹¹¹
1520. Professor Cordner concluded that if the claim is that a child under two can be smothered without signs of injury or petechial haemorrhages, then the material in his report suggests that this is possible, but is more likely that in a single case there would be either one or both of these signs. If the claim is that four children under the age of two can be smothered, for there to be no signs of injury or petechial haemorrhages in any of them, then Professor Cordner opined that the material in his report suggests that while that is just possible it is highly likely that in one, two, three or all four cases there will be either or both signs.¹⁹¹²

ii. Professor Cordner's evidence at the Inquiry

1521. Professor Cordner agreed with Counsel Assisting that intentional smothering can leave no signs. He said, however, he regarded his statistical analysis as strengthening the weight he had already given to what he had described as a significant negative finding, namely the lack of facial injuries, on the four Folbigg children.¹⁹¹³
1522. Professor Cordner was asked whether he would describe Laura's myocarditis as florid. He was referred to his 2015 report where he said he did not think it was patchy and mild but better described as widespread and at least moderate in degree.¹⁹¹⁴ He stated he could not recall whether he used the word "florid" but he would not "run away from it". He said it was "widespread and moderate, so it's obvious. It hits you in the eye." He was referred to the fact that in his conclusion in the 2015 report, he referred to the myocarditis as at least of moderate severity and agreed that that was different to describing it as florid.¹⁹¹⁵
1523. Professor Cordner was asked by Counsel Assisting whether the slides he inspected at the Institute of Forensic Medicine were the same slides that Dr Cala looked at for the purposes of the post-mortem and he said almost certainly not. He said that was for two reasons. First, the Institute of Forensic Medicine probably cut another set for him and stained them again so they were freshly stained so that they looked as good as possible. Second, as this was a major investigation, he imagined the slides were shared with other pathologists in the Institute and perhaps beyond.¹⁹¹⁶
1524. He was asked by Counsel Assisting whether the fact that he and Dr Cala observed

¹⁹¹⁰ Exhibit 13-02C, Supplementary Report of Professor Stephen Cordner dated 13 December 2022, with corrections as at 22 February 2023 and further amendments following request on 24 February 2023 [red pagination 13-159]; Transcript of the 2022 Inquiry, 22 February 2023 T624.49-T625.1 (Cordner).

¹⁹¹¹ Exhibit 13-02C, Supplementary Report of Professor Stephen Cordner dated 13 December 2022, with corrections as at 22 February 2023 and further amendments following request on 24 February 2023 [red pagination 13-159].

¹⁹¹² Exhibit 13-02C, Supplementary Report of Professor Stephen Cordner dated 13 December 2022, with corrections as at 22 February 2023 and further amendments following request on 24 February 2023 [red pagination 13-164].

¹⁹¹³ Transcript of the 2022 Inquiry, 22 February 2023 T624.49-T625.18 (Cordner).

¹⁹¹⁴ Exhibit 2-C, Report of Professor Stephen Cordner (undated) [red pagination 303].

¹⁹¹⁵ Transcript of the 2022 Inquiry, 22 February 2023 T625.37-627.2 (Cordner).

¹⁹¹⁶ Transcript of the 2022 Inquiry, 22 February 2023 T627.12-628.1 (Cordner).

different slides could potentially be the reason for their disagreement. He said it could be a contributor. It was suggested to him that, if he accepted that the difference between him and Dr Cala could relate to the difference in the slides, his view may well have been different if he had seen what Dr Cala saw at autopsy. He said he thought he and Dr Cala agreed that there was myocarditis in every slide and Dr Cala might be saying that it was of a lesser degree than he thought, and the fact that they were looking at different slides is a possible reason contributing to that difference.¹⁹¹⁷

1525. Professor Cordner was asked why he sent the slides to Dr Orde. He said Dr Orde was interested to have a look as he had been asked his opinion about the case by a television program.¹⁹¹⁸
1526. Professor Cordner was then asked about the Brohus Article and in particular its description of Laura's myocarditis as florid. It was queried whether this information was supplied by him, and he replied that he was not saying the description did not come from him, but he did not have any direct memory of it. He was asked whether he recalled Professor Vinuesa requesting that he review the manuscript and said he did not recall critically reviewing the whole article.¹⁹¹⁹ In cross-examination by Senior Counsel for Dr Cala, Professor Cordner stated that the pictures in the Brohus Article were reasonably representative of what he saw on the slides he viewed. He also agreed that on those pictures there was evidence of cell damage, myocyte necrosis. He was then asked that if it was the case that four of the seven slides seen by Dr Cala did not have any evidence of myocyte necrosis, would that suggest that the slides he was looking at were somewhat different. He responded, "No, absolutely". He was asked whether it was the case that, when new slides were cut from a particular tissue block which are very thin, it would be reasonable to assume that they would be close and similar to the previous slides that were cut. He said, "Well, that's the basic assumption, but we all know they're at least five to seven microns removed, and quite often more." He once again agreed that that could explain why he and Dr Cala took a slightly different view about the severity of the myocarditis.¹⁹²⁰
1527. Professor Cordner agreed that he could not tell whether the slides he looked at were located near the conduction system of the heart. He also agreed that myocarditis is reasonably common as an incidental finding of the cause of death.¹⁹²¹
1528. In dealing with smothering, Professor Cordner was referred by Senior Counsel for Dr Cala to the fourth edition of Saukko and Knight's book, *Knight's Forensic Pathology* (2016), and to what the authors described as the classic signs of smothering.¹⁹²² He agreed the first one identified was petechial haemorrhages, the second was congestion and oedema (the latter of which Professor Cordner did not agree with), and the third was cyanosis. He was asked about the fourth sign which was the engorgement of the right heart and fluidity of the blood and responded, "Well, that's a word classic as in antiquity". However, he agreed that they were the four classic signs that the authors were referring to.¹⁹²³

¹⁹¹⁷ Transcript of the 2022 Inquiry, 22 February 2023 T628.13-T628.27 (Cordner).

¹⁹¹⁸ Transcript of the 2022 Inquiry, 22 February 2023 T629.25-29 (Cordner).

¹⁹¹⁹ Transcript of the 2022 Inquiry, 22 February 2023 T632.11-18 (Cordner).

¹⁹²⁰ Transcript of the 2022 Inquiry, 22 February 2023 T635.28-T636.13 (Cordner).

¹⁹²¹ Transcript of the 2022 Inquiry, 22 February 2023 T636.28-42 (Cordner).

¹⁹²² Exhibit 15-127A, Pekka Saukko and Bernard Knight, *Knight's Forensic Pathology* (CRC Press, 4th ed, 2016) ch 14.

¹⁹²³ Transcript of the 2022 Inquiry, 24 February 2023 T729.38-T730.24 (Cordner).

1529. Professor Cordner agreed that he investigated only one of the four classic signs, petechial haemorrhages, and that the authors did not identify facial injuries as one of the classic signs.¹⁹²⁴
1530. It was suggested to Professor Cordner that one of the problems with facial injuries as a sign of smothering, was that the pathologist may not know when looking at the injuries whether they bear any connection to the actual smothering and he agreed that could be a problem. He agreed they could predate the event of smothering by hours and they could have been caused by things such as resuscitation. In those circumstances, he agreed that facial injuries could have the potential to mislead a pathologist.¹⁹²⁵
1531. In relation to his literature review and statistics, Professor Cordner agreed that he only included cases where intentional smothering had been established to the satisfaction of the authors of the articles on which he relied to reach his conclusion. He also agreed that it only included those cases where the articles reviewed expressly referred to the presence or absence of either petechiae or facial injuries. He agreed that it meant he excluded from his pool of cases any cases of intentional smothering if the journal article did not refer to the presence or absence of petechiae or facial injuries, stating that was because there was no way of knowing whether they were present or not because it was not mentioned. He stated he did not consider putting those cases in the denominator for his statistics because he did not think they were relevant to the analysis he was undertaking. Professor Cordner stated he was not prepared to take an educated guess that if petechiae was present it would have been referred to. He could not say how many cases of intentional smothering he excluded from his review, based on the fact that the reports did not expressly refer to facial trauma or conjunctival petechiae. He also agreed that, by limiting his search to only intentional smothering, he excluded an unknown number of deaths where the evidence was insufficient to establish intentional smothering. It was suggested to him that his conclusions were skewed by selection bias and he agreed. He also agreed the literature search did not include the term “suffocation”.¹⁹²⁶
1532. Professor Cordner was asked whether in cases of suffocation, for example, using plastic, it was unlikely that there would be petechial haemorrhages. He replied that that would be the case and that suffocation includes other sorts of deaths. He accepted that the literature review would have been strengthened if he had included the word “suffocation”, because there would have been a lot more cases. He was asked whether he left it out because he was concerned it would skew the results and he said, “No, I just didn’t use it”. He said he was so focused on smothering, and that is what this matter has been all about.¹⁹²⁷

b. Dr Matthew Orde

1533. Dr Orde is a Specialist Forensic Pathologist. He holds the degree of Bachelor of Medicine and Bachelor of Surgery from the University of Dundee, Scotland. He is a Fellow of the Royal College of Pathologists of Australasia, a Fellow of the Royal College of Pathologists of Great Britain and Northern Ireland and a Member of the Faculty of Forensic and Legal Medicine of the Royal College of Physicians of

¹⁹²⁴ Transcript of the 2022 Inquiry, 24 February 2023 T730.32-44 (Cordner).

¹⁹²⁵ Transcript of the 2022 Inquiry, 24 February 2023 T730.50-T731.14 (Cordner).

¹⁹²⁶ Transcript of the 2022 Inquiry, 24 February 2023 T736.15-T737.9 (Cordner).

¹⁹²⁷ Transcript of the 2022 Inquiry, 24 February 2023 T738.1-17 (Cordner).

London. He has a Postgraduate Diploma in Law from the College of Law, London and a Postgraduate Diploma in Legal Skills from the Inns of Court School of Law, London.¹⁹²⁸

1534. Dr Orde supplied two reports to the Inquiry. The first was dated 21 December 2022¹⁹²⁹ and the second was dated 12 January 2023.¹⁹³⁰

i. Report of Dr Orde dated 21 December 2022

1535. Dr Orde in his report made a number of comments about the conduct of the trial which, with respect, seemed more to be based on his legal qualifications rather than his qualifications and work as a forensic pathologist. Whether they are correct or not, in my opinion, they are not properly a matter for expert evidence. Dr Orde's report, however, is of relevance on the question of smothering and on Laura's myocarditis.
1536. In his report, Dr Orde stated that post-mortem observations which have been described in association with asphyxiation by way of smothering included bruises and grazes around the mouth, chin and nose, bruising of the buccal (inner) aspects of the lips and cheeks, particularly in individuals with teeth, and laceration of the frenula of the lips. He stated, depending upon the level of application of the compressive force, congestion of the facial features and petechial haemorrhages within the skin of the face may also be identified. He stated, however, the literature from numerous sources suggest that some forms of 'asphyxia' are recognised to leave either minimal or no sign at autopsy. He stated (referring to the investigation in which Professor Fleming was involved (see [1480]-[1484] above)) that video evidence has shown that even young children react to an attempt at smothering by struggling violently. He stated, somewhat self-evidently, that in addition to the degree of resistance put up by the victim of an attempted smothering incident, the degree of force used by the assailant and the specific mechanism of the attempted smothering would be significant factors as to whether or not the victim would likely sustain detectable injuries.¹⁹³¹
1537. In relation to Laura, Dr Orde stated that myocarditis of the degree that appeared to have been present in Laura's heart at the time of her death provides a very compelling potential cause of her death. He stated that authoritative published literature indicates that myocarditis can result in abrupt onset disturbance of the cardiac rhythm (arrhythmias), with the associated risk of a sudden cardiac arrest.¹⁹³²

ii. The report of Dr Orde dated 12 January 2023

1538. In his second report, Dr Orde referred to the fact that he had the opportunity to personally review microscopic tissue sections prepared from Laura's heart. He stated he recalled that he was provided with several slides for examination in around March 2018. He stated he believed they were sent to him by Professor Cordner, and as such it seemed likely the slides he received would have been the very same seven sections which were examined by Professor Cordner. He stated he did not know whether the slides, which he examined, were the same slides which had originally

¹⁹²⁸ Exhibit 13-05, Report of Dr Matthew Orde (21 December 2022) [red pagination 70].

¹⁹²⁹ Exhibit 13-05, Report of Dr Matthew Orde (21 December 2022) including CV and letter of instruction dated 24 October 2022.

¹⁹³⁰ Exhibit 13-06, Supplementary Report of Dr Matthew Orde (12 January 2023).

¹⁹³¹ Exhibit 13-05, Report of Dr Matthew Orde (21 December 2022) [red pagination 97-98].

¹⁹³² Exhibit 13-05, Report of Dr Matthew Orde (21 December 2022) [red pagination 103].

been examined by Dr Cala, or whether they may have been ‘re-cuts’ from the same tissue paraffin wax blocks.¹⁹³³

1539. Dr Orde said his recollection of carefully assessing the microscopic tissue sections of Laura’s heart was that this was an unequivocal case of potentially significant lymphocytic myocarditis, with clearly identifiable associated myocyte damage. He stated the degree and extent of cardiac inflammation associated with this disease, together with the presence of identifiable damage to heart muscle cells, would in his opinion provide a highly plausible explanation for her death, either independently or in combination with other factors.¹⁹³⁴

iii. Dr Orde’s evidence at the Inquiry

1540. Dr Orde was referred to the reference in his reports to photographs of the microscopic tissue sections of Laura’s heart contained in Professor Cordner’s report and set out again in the Brohus Article. He was asked whether he regarded photomicrographs as equivalent to inspecting slides for the purposes of forming a view as to the presence and extent of myocarditis. He stated, “No. The photomicrographs provide a quite localised snapshot, and it’s all down to the issue of sampling.” He stated the photomicrographs only give you a small view, but he recalled looking at the slides himself and said he believed they were likely to be the same as examined by Professor Cordner. He said he placed primary weight on what he saw when he inspected the slides, forming quite a strong opinion, but what he could say was that the photomicrographs “really support that opinion”.¹⁹³⁵
1541. Dr Orde agreed, however, that he had no way of determining whether the slides he saw were the same ones as seen by Professor Cordner, as distinct from being newly cut slides cut from the paraffin blocks.¹⁹³⁶
1542. Dr Orde agreed the way he chose to describe the myocarditis was “moderate... with some areas of lesser inflammation and some with more”. He said his recollection was that there were features of myocarditis present in each and every section of the heart tissue he examined.¹⁹³⁷
1543. Dr Orde was referred to the statement in his first report that the myocarditis appeared to be quite florid and widespread. He was asked whether he stood by that opinion and stated he did with a proviso that those terms do not indicate any specific degree of pathological reliability. He said they are not intended to be objectively quantitative. He stated that the use of the word “florid” was to try and convey to the reader that the appearances in the microscope slides were to his eye quite striking and readily apparent, as being those of myocarditis of a degree of severity, which he thought would undoubtedly have posed a risk of sudden death. He was referred to the statement in his second report that the myocarditis was patchy and variable and asked whether he regarded the description “widespread” as different. He said it was a matter of semantics, and emphasised that he had not quantified using any scoring protocol for the amount, degree and extent of the inflammation present.¹⁹³⁸

¹⁹³³ Exhibit 13-06, Supplementary Report of Dr Matthew Orde (13 January 2023) [red pagination 124].

¹⁹³⁴ Exhibit 13-06, Supplementary Report of Dr Matthew Orde (13 January 2023) [red pagination 126-127].

¹⁹³⁵ Transcript of the 2022 Inquiry, 22 February 2023 T605.22-45 (Orde).

¹⁹³⁶ Transcript of the 2022 Inquiry, 22 February 2023 T607.3-11 (Orde).

¹⁹³⁷ Transcript of the 2022 Inquiry, 22 February 2023 T607.29-35 (Orde).

¹⁹³⁸ Transcript of the 2022 Inquiry, 22 February 2023 T607.43-T608.19 (Orde).

1544. Dr Orde was referred to the following description of the myocarditis by Dr Cala:

What I say is that in areas of examination of the heart, in particular the left ventricle, the inflammatory infiltrate was light and patchy, in other words, it was small in amount, a small number of lymphocytes aggregated around the cardiac cells but it was accentuated in areas as I have described it, in portions to the middle of the left ventricle to put it up to moderate, to put it up maximally to moderate intensity.¹⁹³⁹

1545. Dr Orde said, on the whole, he thought the terms that Dr Cala used were reasonable. He said, from the perspective of a forensic pathologist, the question is whether the extent of myocarditis is enough to potentially account for a death. He was referred to his ultimate conclusion and particularly the use of the words “in combination with other factors” (see [1539] above) and emphasised:

What we can't say as forensic pathologists by just looking at the slides is that that is definitely the cause of death because of course we don't know what else may have gone on. And in these deaths here, I guess the clear issue before us now is was smothering an issue, and that's not really something that we can explore easily...¹⁹⁴⁰

1546. In relation to smothering, Dr Orde was referred to the statement in his report that it was a common understanding that asphyxial deaths can occur without identifiable evidence at autopsy and was asked, in the circumstances, whether the absence of any identified injury in the facial regions was a negative finding. He said it was. He said he was aware of the repeated reference in the literature to the alleged fact that children can be smothered without evidence being visible at autopsy and that is “often accepted as gospel”, but said the evidence base for it is quite weak although there are certainly cases which indicate that asphyxia can be a factor. Dr Orde said certainly it is possible but looking at the different ages of the children, and that Sarah and Laura had teeth at the time, which would provide a hard under surface if the lips were pressed against them, that would increase the probability of injury. He stated there was also some evidence to suggest that children, when asphyxiation is attempted, vigorously struggle. He stated, applying these data items to this discussion, he thought that the negative finding in these cases, which was that there were no signs of forcible smothering, was quite persuasive evidence that smothering did not occur, at least in the older of the two children.¹⁹⁴¹

1547. It was suggested to Dr Orde that insofar as he regarded the absence of any identifiable injury to the facial region as a negative finding, that necessarily involved making assumptions about the method or mechanism of asphyxia which would be expected to leave some form of physical trace. He responded that “Only in as much as the converse would also apply”. He said that, “if I am to accept the premise that smothering can occur without leaving signs of injury, that also imbues into the conversation the means by which that alleged smothering would have occurred”. He said it was “exactly the same in the converse that the absence of injuries, perhaps, also suggests that smothering didn't occur, but, again, it's dependent upon the specific circumstances”. He said that either way he did not think the evidence was conclusive, and that given the very limited amount of evidence data points available in these deaths, this is one more little bit of information which maybe persuades him that smothering did not occur, rather than did occur, but he was not suggesting at all that it could be said with certainty.¹⁹⁴²

¹⁹³⁹ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T198.17-22 [red pagination 201].

¹⁹⁴⁰ Transcript of the 2022 Inquiry, 22 February 2023 T609.37-T610.31 (Orde).

¹⁹⁴¹ Transcript of the 2022 Inquiry, 22 February 2023 T610.43-T611.18 (Orde).

¹⁹⁴² Transcript of the 2022 Inquiry, 22 February 2023 T613.29-43 (Orde).

1548. Dr Orde was asked by Senior Counsel for Dr Cala whether he believed the slides he saw were consistent with the images in the Brohus Article, and he replied he did not think they were and that the images in that article probably identified and depicted areas of more intense inflammation. He said what he did recall was that the myocytolysis (cell death) was actually quite easy to see, it was unequivocally present and, with cases of really subtle myocarditis, which may just be an incidental finding, the question is, did this really provide a cause of death. Dr Orde noted that on those occasions, it is difficult to identify features of myocyte damage or damage to the heart muscles themselves. He said, however, in this case, the finding was quite clear cut and readily apparent in at least some of the slides. He said he could not say whether that observation encompassed all the slides.¹⁹⁴³
1549. Dr Orde agreed with Senior Counsel for Dr Cala that myocarditis often appears as an incidental finding observed at autopsy and not the cause of death. He said that forensic pathologists look for features of the disease that suggest that myocarditis is a potential cause of death, and then it involves weighing that up against other potential factors which may have caused the death.¹⁹⁴⁴
1550. Dr Orde agreed that, in terms of visual representations of Laura's tissue, over the past five years all he had seen was the Brohus Article and Professor Cordner's report. He was asked whether he would accept that his memory of the slides may have been affected by the fact he only saw those images over the past five years. He stated he did not think that necessarily follows. He could recall "being quite impressed... as to the degree and extent of inflammation", and feeling that these appearances provide a very compelling potential cause of death. He stated he relied upon that memory much more than the images that he had seen in the Brohus Article and in Professor Cordner's report.¹⁹⁴⁵

c. Professor Hilton

1551. Professor Hilton gave evidence at the trial (see [104], [410]-[428] above) and at the 2019 Inquiry (see [587]-[600] above). For the purpose of this Inquiry, he swore an affidavit dated 26 July 2022.
1552. In that affidavit he stated that at the 2019 Inquiry he was only aware of the existence of the CALM2-G114R variant in Sarah and Laura. He said he was supplied with the Brohus Article on 27 June 2022.¹⁹⁴⁶
1553. Professor Hilton expressed the view that the presence of infection in both Sarah and Laura at the time of their deaths – Sarah with evidence of upper and lower respiratory infection, and Laura with myocarditis – provides compelling evidence that this triggered the [lethal] arrhythmia in both girls. He stated infection is a well-known trigger for people who have inherited cardiac disease.¹⁹⁴⁷
1554. Professor Hilton stated that he excluded intentional smothering as a cause of death for Caleb, Patrick, Sarah and Laura for the following reasons:

¹⁹⁴³ Transcript of the 2022 Inquiry, 22 February 2023 T615.38-T616.9 (Orde).

¹⁹⁴⁴ Transcript of the 2022 Inquiry, 22 February 2023 T617.25-33 (Orde)

¹⁹⁴⁵ Transcript of the 2022 Inquiry, 22 February 2023 T618.21-35 (Orde).

¹⁹⁴⁶ Exhibit 13-03, Affidavit of Professor John Hilton (26 July 2022) [red pagination 18].

¹⁹⁴⁷ Exhibit 13-03, Affidavit of Professor John Hilton (26 July 2022) [red pagination 18].

- (a) There were no signs of smothering that would indicate such an event occurring.
- (b) Caleb's diagnosis of SIDS was reasonable. There were no signs of smothering on Caleb.
- (c) Patrick's diagnosis of epilepsy is an identifiable natural cause of death. There were no signs of smothering on Patrick.
- (d) Sarah now has a genetic basis for her death. There were no signs of smothering on Sarah.
- (e) Laura now has a genetic basis for her death. Laura had florid myocarditis observable at autopsy, which should have been the diagnosis found at autopsy.
- (f) In Laura's case, she had a mouth full of well-formed teeth. She was a toddler and her reaction to a smothering event would have been unpredictable, therefore making it highly probable that physical signs would have been present. There were no signs of smothering on Laura.
- (g) The prosecution claimed that Ms Folbigg smothered all four children in a fit of rage. No signs of smothering on the children is inconsistent with this uncontrolled type of behaviour. One would expect to see signs of smothering in at least some of the children.¹⁹⁴⁸

1555. Sadly, Professor Hilton died before the hearings at the Inquiry.

d. Professor Duflou

1556. Professor Duflou gave evidence at the 2019 Inquiry. I have summarised his report given for the purpose of that Inquiry and his evidence at [561]-[586] above. His qualifications are set out at paragraph [561] above.
1557. Professor Duflou provided two short reports to this Inquiry, one dated 9 February 2022¹⁹⁴⁹ and the other dated 10 February 2023.¹⁹⁵⁰ He was not called to give evidence at the Inquiry.
1558. In his report dated 9 February 2022, he stated he maintained the general opinions expressed in his report and evidence given at the 2019 Inquiry.¹⁹⁵¹
1559. In that report, he referred to the Brohus Article, and expressed the view, based on that article, that "the identified gene variant was considered both pathogenic and capable of causing sudden cardiac death".¹⁹⁵²
1560. Professor Duflou referred to the fact that, in the case of Sarah, at the time of autopsy, a relatively minor degree of inflammation involving the upper and lower respiratory tract was identified; while Laura was found to have extensive myocarditis. He stated the presence of infections is well known to precipitate arrhythmia and sudden death in various forms of inherited cardiac disease. He stated in both the cases of Sarah and Laura, it was entirely possible that the presence of these inflammatory processes provided a trigger for cardiac arrhythmia brought on by this defective

¹⁹⁴⁸ Exhibit 13-03, Affidavit of Professor John Hilton (26 July 2022) [red pagination 20-21].

¹⁹⁴⁹ Exhibit 13-01, Report of Professor Johan Duflou (9 February 2022).

¹⁹⁵⁰ Exhibit 13-01A, Further Report of Professor Johan Duflou, including CV (10 February 2023).

¹⁹⁵¹ Exhibit 13-01, Report of Professor Johan Duflou (9 February 2022) [red pagination 1].

¹⁹⁵² Exhibit 13-01, Report of Professor Johan Duflou (9 February 2022) [red pagination 1].

gene. He stated that, in his opinion, there is now strong evidence supporting his previous opinion that the deaths of Sarah and Laura are likely natural deaths. Additionally, he opined that there are further indications on a molecular genetic level that these children were prone to death from cardiac arrhythmia, with or without the contribution by infectious conditions in both girls.¹⁹⁵³

1561. In his report of 10 February 2023, Professor Duflou stated he had inspected re-cut slides of heart tissue of Laura at the Forensic Medicine and Coroner's Court Complex at Lidcombe. He stated that seven microscopy slides were provided. He stated that all sections appeared to be of the left ventricular myocardium, five of them likely being left ventricular free wall, while the other two likely interventricular septum.¹⁹⁵⁴
1562. Professor Duflou stated that all sections showed myocarditis. He stated there was focal necrosis of myocytes in association with the infiltrate but no evidence of fibrosis or myocardial infarction. He said there was no obvious vasculitis, no disarray and myocytes otherwise appeared histologically normal.¹⁹⁵⁵
1563. Professor Duflou said that he made a diagnosis of myocarditis to a very high level of certainty. He stated the pathological features are most likely those of viral myocarditis, although other causes such as bacteria and other micro-organisms are unable to be absolutely excluded on the basis of histologic appearances alone. He stated the appearances of the microscopy slides correspond with those he recalled from his previous examination of the microscopy slides of Laura. Professor Duflou stated it remained his opinion that that Laura had myocarditis of a severity which would readily be capable of causing death and that, based on microscopy, myocarditis can reasonably be given as the cause of death in this case.¹⁹⁵⁶

e. Dr Cala

1564. Dr Cala carried out the post-mortem examination of Laura (see [125]-[130] above). As I indicated, following that autopsy he agitated for the deaths of the four children to be investigated as a single unit and assisted Police in their enquiries (see [387]-[391] above). He gave evidence at the trial (see [392]-[408] above). He gave two reports to the 2019 Inquiry and gave evidence to that Inquiry. I have summarised those reports and his evidence (at [601]-[635] above). He provided two reports to this Inquiry, one dated 13 December 2022¹⁹⁵⁷ and the other dated 21 February 2023.¹⁹⁵⁸ He also gave evidence at the Inquiry.

i. Dr Cala's Report of 13 December 2022

1565. At the outset of his report, Dr Cala noted that a number of sudden infant deaths in one family without satisfactory explanation is a very rare event, especially in a modern society, such as 21st Century Australia. He said he remained of the view that a forensic pathologist must consider autopsy findings in the context of the deceased's family history and the known circumstances surrounding their death. He stated in respect of the Folbigg children, he was of the view that any

¹⁹⁵³ Exhibit 13-01, Report of Professor Johan Duflou (9 February 2022) [red pagination 1-2].

¹⁹⁵⁴ Exhibit 13-01A, Further Report of Professor Johan Duflou, including CV (10 February 2023) [red pagination 2-1 to 2-2].

¹⁹⁵⁵ Exhibit 13-01A, Further Report of Professor Johan Duflou, including CV (10 February 2023) [red pagination 2-2].

¹⁹⁵⁶ Exhibit 13-01A, Further Report of Professor Johan Duflou, including CV (10 February 2023) [red pagination 2-2].

¹⁹⁵⁷ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022).

¹⁹⁵⁸ Exhibit 13-04A, Further Supplementary Report of Dr Allan Cala (21 February 2023).

forensic pathologist's opinion on the case must take into account the extremely rare circumstance of all four children having died in circumstances where the pathological findings on autopsy do not singly or collectively explain their deaths. He stated, however, that he was not a geneticist or cardiologist, nor has he ever received training in genetic pathology or specialist cardiology.¹⁹⁵⁹

1566. Notwithstanding this, Dr Cala criticised certain aspects of the Brohus Article. His first criticism was the fact that the title of the Brohus Article ("Infanticide vs. inherited cardiac arrhythmias") was a most unusual one for a scientific journal. He stated that it suggests that the choice for the cause of death is down to one of two entities – either it is infanticide or an inherited cardiac arrhythmia, and no other. He stated that is not a way that a forensic pathologist approaches determination of cause of death. He stated a forensic pathologist should always approach any case with an open mind and not have any preformed views or prejudices.¹⁹⁶⁰
1567. The second criticism he made was that it was quite unusual for a scientific paper to identify the case being considered. He stated he had never previously read an article in any reputable scientific or medical journal where the names of the affected individuals were referred to in the manner adopted in the Brohus Article.¹⁹⁶¹
1568. Dr Cala referred to the comment in the Brohus Article that Ms Folbigg was found guilty notwithstanding there was no history of abuse, no physical signs of smothering, no obvious motive, no eyewitnesses and no admission of guilt.¹⁹⁶² He stated that, in his view, physical signs of smothering particularly in very young children would be expected to be nil. He said, in his experience, a perpetrator who commits an act of smothering on an infant usually performs it solo and by its very design there are no eye-witnesses.¹⁹⁶³
1569. Dr Cala's third criticism related to the comment "Child 1 (male) died at 19 days having been diagnosed with 'laryngomalacia'."¹⁹⁶⁴ He stated that, in his view, that tends to bias the reader in favour of a natural cause of death from laryngomalacia. He stated being diagnosed with laryngomalacia was completely different from dying from it. He stated further in the material he read in relation to Caleb, there was no mention anywhere that he had become increasingly short of breath with increasing stridor in the hours prior to his sudden death, as would be expected to occur if laryngomalacia was of such severity that it caused his death.¹⁹⁶⁵
1570. His fourth criticism related to the following comment concerning Patrick, "Child 2 (male) died at 8 months from asphyxia due to airway obstruction in turn due to epileptic fits from an encephalopathic disorder of unknown cause associated with blindness."¹⁹⁶⁶ Dr Cala stated that was, strictly speaking, incorrect. He stated that Patrick had been overall a well infant until he was aged 4.5 months, when he was

¹⁹⁵⁹ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 49-50].

¹⁹⁶⁰ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 50-51].

¹⁹⁶¹ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 51]; referring to Exhibit 15-02, Malene Brohus et al, 'Infanticide vs inherited cardiac arrhythmias' (2020) 23 *Europace* 442 [red pagination 12].

¹⁹⁶² Exhibit 15-02, Malene Brohus et al, 'Infanticide vs inherited cardiac arrhythmias' (2020) 23 *Europace* 442 [red pagination 12].

¹⁹⁶³ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 52].

¹⁹⁶⁴ Exhibit 15-02, Malene Brohus et al, 'Infanticide vs inherited cardiac arrhythmias' (2020) 23 *Europace* 442 [red pagination 12].

¹⁹⁶⁵ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 53].

¹⁹⁶⁶ Exhibit 15-02, Malene Brohus et al, 'Infanticide vs inherited cardiac arrhythmias' (2020) 23 *Europace* 442 [red pagination 12].

apparently found unresponsive in his cot by Ms Folbigg. He stated that the brain was retained and sent for neuropathological examination which disclosed very extensive hypoxic brain damage. He stated that the brain examination showed no features of an underlying metabolic encephalopathy or of any other abnormality of brain development where epilepsy may be a feature.¹⁹⁶⁷

1571. Dr Cala's fifth criticism was that the Brohus Article incorrectly stated that Laura was treated with pseudoephedrine.¹⁹⁶⁸ Dr Cala was correct in stating that Laura had not been treated in this way.

1572. His sixth criticism was a statement that Laura was found to have florid myocarditis.¹⁹⁶⁹ He stated that the amount of myocarditis was not, in his opinion, sufficient for a description of "florid". He stated that "florid", in pathology jargon, describes a "full blown", "overwhelming" or "very severe" case, which in his opinion it was not. He stated that the description appeared to be based on four cardiac photomicrographs provided by Professor Cordner. He stated that those photomicrographs only show the most severe areas of myocarditis and that they were not standard or representative sections.¹⁹⁷⁰

1573. Dr Cala's seventh criticism related to the following statement in the article:

The children's various conditions suggested that if there was a single underlying natural cause it was likely to have a spectrum of clinical manifestations and lethal triggers. Inherited arrhythmogenic disorders capable of causing sudden cardiac death (SCD) fit this profile and may first manifest as SUD [sudden unexplained death].¹⁹⁷¹

1574. Dr Cala expressed the view that the statement is speculative and not persuasive. He stated the varied circumstances of each of the infants' deaths makes the suggestion that that was the single underlying natural cause of death even more speculative.¹⁹⁷²

1575. His eighth criticism related to comments in the Brohus Article concerning the ECG recordings taken on the children.¹⁹⁷³ It is not entirely clear, with respect, precisely what the criticism amounts to. In any event, as has been shown, the Inquiry has received expert evidence from cardiologists as to the ECGs undertaken. As Dr Cala fairly acknowledged, he did not have this expertise.¹⁹⁷⁴

1576. Dr Cala's ninth criticism related to comments in the Brohus Article concerning Ms Folbigg's history of syncope.¹⁹⁷⁵ He stated that, in his view, this sheds no light on an underlying cause or causes of transient loss of consciousness by Ms Folbigg. He stated that cardiac investigations on Ms Folbigg were performed but these revealed

¹⁹⁶⁷ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 54].

¹⁹⁶⁸ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 55]; referring to Exhibit 15-02, Malene Brohus et al, 'Infanticide vs inherited cardiac arrhythmias' (2020) 23 *Europace* 442, 449 [red pagination 12, 19].

¹⁹⁶⁹ Exhibit 15-02, Malene Brohus et al, 'Infanticide vs inherited cardiac arrhythmias' (2020) 23 *Europace* 442 [red pagination 12].

¹⁹⁷⁰ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 56].

¹⁹⁷¹ Exhibit 15-02, Malene Brohus et al, 'Infanticide vs inherited cardiac arrhythmias' (2020) 23 *Europace* 443 [red pagination 13].

¹⁹⁷² Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 56-57].

¹⁹⁷³ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 58]; referring to Exhibit 15-02, Malene Brohus et al, 'Infanticide vs inherited cardiac arrhythmias' (2020) 23 *Europace* 443-444 [red pagination 13-14].

¹⁹⁷⁴ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 50].

¹⁹⁷⁵ Exhibit 15-02, Malene Brohus et al, 'Infanticide vs inherited cardiac arrhythmias' (2020) 23 *Europace* 444 [red pagination 14].

no underlying pathological cause. The cause or causes for these brief losses of consciousness may have been from something as mild as “fainting”.¹⁹⁷⁶

1577. In his tenth criticism of the Brohus Article, Dr Cala accepted that it did appear that Sarah and Laura inherited an abnormal gene from their mother. He noted that the Brohus Article stated that it was only predicted that the variant may be arrhythmogenic.¹⁹⁷⁷ He stated that he understood from this that the gene variation has not been proved to be arrhythmogenic and so it cannot be said with any certainty that it causes any symptoms in a person with that variation.¹⁹⁷⁸ That, of course, is not the test which I have to apply.
1578. Dr Cala also stated that it was highly speculative that Patrick had no underlying encephalopathic abnormality other than the effects of global hypoxic brain damage brought on by the ALTE.¹⁹⁷⁹
1579. In those circumstances, Dr Cala expressed his disagreement with the conclusion in the Brohus Article. He stated that the normal functional calmodulin variant is only predicted to cause a number of cardiac arrhythmias with no proof that the variant actually did cause cardiac arrhythmias. He stated that the authors of the Brohus Article may have been susceptible to confirmation (cognitive) bias, which he noted is the tendency to search for, interpret, favour and recall information in a way that confirms or supports one’s prior beliefs or values. Those remarks, of course, must be considered in light of the detailed evidence given to the Inquiry.¹⁹⁸⁰ It is sufficient to note at this stage that Professor Wilde, an eminent cardiologist, was critical of some of the style of the Brohus Article but expressly accepted the science which underpinned it.¹⁹⁸¹
1580. In dealing with the report of Professor Duflou dated 9 February 2022, Dr Cala agreed that the presence of infections may, in theory, precipitate a cardiac arrhythmia and possibly sudden death. He stated it depended on the degree of infection. He stated it was his view, especially in the case of Laura, that the infection was mild and played no role in her death. He referred to the fact that on the day before her death, she was filmed happily playing by a swimming pool.¹⁹⁸²
1581. Dr Cala also criticised the conclusion reached by Professor Hilton, namely that Patrick “died or the indications are that...[he] died as part of an epileptic-type illness whatever form that epilepsy takes, [which] is a well-known cause of death”.¹⁹⁸³ Dr Cala stated there was no evidence to suggest that Patrick died of an epileptic seizure. He stated he was not witnessed to be having a seizure at the time he was apparently found by Ms Folbigg. He stated given his history of seizures after his ALTE, which were actually improving, it has been assumed by a number of parties

¹⁹⁷⁶ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 58].

¹⁹⁷⁷ Exhibit 15-02, Malene Brohus et al, ‘Infanticide vs inherited cardiac arrhythmias’ (2020) 23 *Europace* 447-448 [red pagination 17-18].

¹⁹⁷⁸ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 59].

¹⁹⁷⁹ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 59]; referring to Exhibit 15-02, Malene Brohus et al, ‘Infanticide vs inherited cardiac arrhythmias’ (2020) 23 *Europace* 449 [red pagination 19].

¹⁹⁸⁰ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 60].

¹⁹⁸¹ Exhibit 9-04, Further Report of Professor Arthur Wilde (14 March 2023), in response to the request on 16 February 2023 [red pagination 53].

¹⁹⁸² Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 61]; referring to Exhibit 2-E, Tab K, Original footage depicting Laura Folbigg in a swimming pool on 28 February 1999.

¹⁹⁸³ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T164.14-20 (Hilton) [red pagination 167].

that Patrick must have had a seizure around the time he was found, but this may not be the case.¹⁹⁸⁴

1582. Dr Cala also expressed the view in his report that there were some subtle, but nevertheless concerning physical signs at autopsy and at scenes that, without firm proof, nevertheless raise the possibility of inflicted asphyxiation. He relied in this regard on the fact that Caleb had a small amount of blood and froth around his mouth when discovered which he stated was an unusual finding. In relation to Patrick, he stated that although the autopsy did not remark on it, a letter from Dr Wilkinson to Dr Marley dated 21 February 1991 mentions “an initial post mortem examination showed some minor petechial haemorrhages, which really could have been agonal, and were not indicative of a cause for his death”.¹⁹⁸⁵ He said, unfortunately, there was no photographic evidence of these “minor petechial haemorrhages”. In relation to Laura, Dr Cala stated the scene where she was found was of concern. He stated that the P79A mentions “small dark stains on the pillow of Laura’s bed with a screening test positive for blood”. He noted that CPR was not performed by Ms Folbigg on Laura’s bed.¹⁹⁸⁶
1583. Dr Cala also disagreed generally with Professor Fleming’s opinions. He acknowledged that Professor Fleming was a highly experienced paediatrician and researcher in the areas of sudden death in infancy and children. He stated, however, that Professor Fleming does not have any forensic pathology expertise. He said his focus was on natural causes of death, rather than weighing up different possible causes of death which is quintessentially the role of a forensic pathologist.¹⁹⁸⁷

ii. Dr Cala’s Report of 21 February 2023

1584. In his second report dated 21 February 2023, Dr Cala stated that on 18 January 2023 he attended the Forensic Medicine and Coroner’s Court Complex in Lidcombe to review recut slides of Laura’s heart tissue. He reviewed seven heart slides (presumably the same ones as reviewed by Professor Duflou). He stated that on 13 February 2023, he located at Forensic Medicine Newcastle, 6 slides made from Laura Folbigg’s heart tissue. He stated, to the best of his recollection, these slides were not the original slides that he viewed in 1999, but rather were 6 ‘recuts’ made from the tissue blocks which were made in 1999 containing samples of Laura’s heart.¹⁹⁸⁸ His ultimate conclusion, from this review, was that his opinion remained that Laura’s heart, in particular the left ventricle, showed a mild form of inflammation, many parts of which were light and patchy. In some areas, there was a worsening of that inflammation to a moderate level of inflammation. At its most severe, the myocarditis was moderate in intensity.¹⁹⁸⁹

¹⁹⁸⁴ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 63].

¹⁹⁸⁵ Exhibit 2-H, Forensic Pathology Tender Bundle, Letter from Dr Wilkinson to Dr Marley dated 21 February 1991 [red pagination 3557].

¹⁹⁸⁶ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 64].

¹⁹⁸⁷ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 68].

¹⁹⁸⁸ Exhibit 13-04A, Further Supplementary Report of Dr Allan Cala (21 February 2023) [red pagination 69-16 to 69-17].

¹⁹⁸⁹ Exhibit 13-04A, Further Supplementary Report of Dr Allan Cala (21 February 2023) [red pagination 69-20].

iii. Dr Cala's Evidence at the Inquiry

1585. Counsel Assisting referred to Dr Cala's evidence at the 2019 Inquiry that, in carrying out the post-mortem of Laura, he was looking very hard for any evidence of any facial injuries and asked why that was the case. Dr Cala responded that he sought to be detailed and thorough in the assessment of the child and to see whether trauma might have played some role in her sudden death. Dr Cala was also referred to that portion of his report of 26 November 2018, where he dealt with the question of smothering (see [615]-[616] above). He agreed that death by smothering is obviously not something which can be the subject of experimentation, and that this has real implications for what can be determined as to the extent to which smothering may leave no trace.¹⁹⁹⁰ In relation to Professor Cordner's report, in particular his literature review, Dr Cala stated that the number of cases in that series was quite low and only included cases of intentional smothering. He stated that accidental and other cases of smothering, where it is unknown as to whether there was intent or not are excluded and he did not know how many cases would be in either of those groups. He stated, although there were approximately 20 cases in Professor Cordner's literature review, which is a good figure, it may in fact, if the accidental and other cases of smothering were included, be much larger and the conclusions drawn may be somewhat different.¹⁹⁹¹

1586. Dr Cala referred to Professor Fleming's report and in particular to his comment:¹⁹⁹²

I find it very hard to accept however, that three children aged 8, 10 and 19 months, [so he says] were allegedly suffocated in fits of rage by their mother and despite the presence of erupted anterior teeth in one and possibly all three of the children there were no physical findings to suggest smothering identified at post-mortem.¹⁹⁹³

1587. Dr Cala stated he would not find it unusual or difficult to accept that there would be no injuries in those circumstances. He stated he accepted that the older the child, with larger individual and more fulsome teeth, it would perhaps be less likely, but he had "seen many children in that situation [accidental smothering] and looked very hard for injuries and found none". He said he would not alter his views if they were smothered in a fit of rage. He stated the younger the child, the more likely that he would expect to find no injuries.¹⁹⁹⁴

1588. Dr Cala was referred to the difference in his evidence in the trial where he said smothering would take at least 20 to 30 seconds or possibly even longer, depending on the amount of struggling that the child performed during the act, and his agreement with the evidence of Professor Cordner at the 2019 Inquiry that it would take about 60 to 70 seconds. He was asked if his opinion changed between the time he gave evidence at the trial and at the 2019 Inquiry. He said it had not. He stated he adhered to what he agreed with at the 2019 Inquiry and his evidence at the trial was an estimate of sorts which may well be incorrect.¹⁹⁹⁵

1589. Dr Cala was also asked what portion of Dr Kan's report supported his view that his examination of Patrick's brain showed very extensive hypoxic brain damage.

¹⁹⁹⁰ Transcript of the 2022 Inquiry, 23 February 2023 T647.17-T649.37 (Cala).

¹⁹⁹¹ Transcript of the 2022 Inquiry, 23 February 2023 T650.44-T651.5 (Cala).

¹⁹⁹² Transcript of the 2022 Inquiry, 23 February 2023 T653.23-29 (Cala).

¹⁹⁹³ Exhibit 11-02, Report of Professor Peter Fleming (11 October 2022) [red pagination 34].

¹⁹⁹⁴ Transcript of the 2022 Inquiry, 23 February 2023 T653.31-T654.20 (Cala).

¹⁹⁹⁵ Transcript of the 2022 Inquiry, 23 February 2023 T654.45-T655.26 (Cala).

He referred in particular to the second sentence of that report (see [93] above), stating that the major findings after examination of the brain were areas of ischaemic necrosis or infarction with gliosis or scarring. He stated the scarring is a consequence of damage to the brain, irrespective of what is the cause of that damage. He referred to the comment by Dr Kan that he excluded Canavan's disease and to his statement "the distribution of the lesions is unusual for herpes simplex encephalitis and they certainly appear far more likely to be the result of the episode of cardio-respiratory arrest this baby suffered at about 5 months of age". He said that that showed that Dr Kan was dating all the changes that he found from a period when Patrick was 5 months old.¹⁹⁹⁶

1590. Dr Cala stated that was a basis for his comment in his report that the "brain examination showed no features of an underlying metabolic encephalopathic or of any other abnormality of brain development where epilepsy may be a feature".¹⁹⁹⁷ He said he did not think it was beyond his expertise to make these comments. He stated, however, that he would defer to a paediatric neurologist with respect to clinical assessment and clinical judgment.¹⁹⁹⁸
1591. He was also asked whether there was any particular relevance from the perspective of myocarditis, with a conduction system being in the left ventricle. He stated that the start of the conduction system is actually in the right atrium, and that was not sampled.¹⁹⁹⁹
1592. I deal with the competing evidence of the forensic pathologists in my conclusions on the question of smothering and the possibility of myocarditis being a cause and contributor to Laura's death see [1851]-[1858] and [1593]-[1612] below.

¹⁹⁹⁶ Transcript of the 2022 Inquiry, 23 February 2023 T655.42-T657.1 (Cala).

¹⁹⁹⁷ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 55].

¹⁹⁹⁸ Transcript of the 2022 Inquiry, 23 February 2023 T657.9-29 (Cala).

¹⁹⁹⁹ Transcript of the 2022 Inquiry, 23 February 2023 T659.49-T660.2 (Cala).

Section 5

Was Laura's myocarditis a possible cause of her death?

5

Section 5 – Was Laura’s myocarditis a possible cause of her death?

1593. It should be noted at the outset, that the 2019 Inquirer found there was a reasonable possibility that the myocarditis, discovered at the autopsy and subsequent examination of Laura’s heart tissue, was a reasonable cause of her death.
1594. As Counsel Assisting pointed out in their written submissions, each of Professors Cordner, Hilton, Duflou and Dr Orde expressed the view that myocarditis was a possible cause of the death.²⁰⁰⁰
1595. Professor Cordner expressed the view at the 2019 Inquiry that he did not regard the myocarditis as what Dr Cala described as “patchy and mild”, and thought it was better described as widespread and at least moderate in degree. He pointed to statistics which he said showed sudden and unexpected death is not at all unusual in a population of infants and toddlers dying from myocarditis. He stated that most forensic pathologists would be comfortable describing the death of Laura as being due to myocarditis²⁰⁰¹ (see [533]-[537]). In his oral evidence at the 2019 Inquiry, he adhered to that view.
1596. Professor Cordner did not depart from this view at the present Inquiry. He stated that one of the reasons that he and Dr Cala came to a different view may have been that the particular slides they reviewed were cut from the tissue blocks at different times.²⁰⁰² The slides that Professor Cordner inspected for the purpose of his reports and evidence were recut from seven tissue blocks of Laura’s heart in 2014 or 2015. Professor Cordner sent these slides to Dr Orde.²⁰⁰³
1597. In his report to the 2019 Inquiry, Professor Duflou expressed the view that there was, without doubt, myocarditis of a severity which can readily cause sudden unexpected death²⁰⁰⁴ (see [569] above). It is not clear which set of slides he considered in making that observation.
1598. In his report to this Inquiry, Professor Duflou referred to his inspection of recut slides of the heart tissue of Laura on 9 February 2023. These slides were also inspected by Dr Cala. Professor Duflou stated that all the slides that he inspected showed myocarditis. He stated he would make a diagnosis of myocarditis to a very high degree of certainty.²⁰⁰⁵
1599. Professor Hilton gave evidence at the trial, provided a report to the 2019 Inquiry and gave evidence to that Inquiry. At the trial, Professor Hilton said Laura was suffering from myocarditis of an intensity, a severity and a distribution that could have caused death, although he accepted the finding of myocarditis did not exclude suffocation as a potential cause²⁰⁰⁶ (see [424]-[426] above).
1600. In his report to the 2019 Inquiry, Professor Hilton stated that Laura died with and probably because of florid myocarditis.²⁰⁰⁷ He was present at the autopsy and said

²⁰⁰⁰ Counsel Assisting’s Written Closing Submissions (4 April 2023) 70 [254] - 72 [265].

²⁰⁰¹ Exhibit 2-Q, Report of Professor Cordner (undated) [red pagination 4246-4250].

²⁰⁰² Transcript of the 2022 Inquiry, 22 February 2023 T628.13-27 (Cordner).

²⁰⁰³ Transcript of the 2022 Inquiry, 22 February 2023 T629.14-36 (Cordner).

²⁰⁰⁴ Exhibit 13-01A, Further Report of Professor Johan Duflou (10 February 2023) [red pagination 2-2].

²⁰⁰⁵ Exhibit 13-01A, Further Report of Professor Johan Duflou (10 February 2023) [red pagination 2-1 to 2-2].

²⁰⁰⁶ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 24 April 2003 T907.32-T908.13 [red pagination 2711-2712].

²⁰⁰⁷ Exhibit 2-O, Report of Professor John Hilton (22 January 2019) [red pagination 4147].

that if he had been responsible for writing the autopsy report, he would have written the cause of death as myocarditis while noting that it was a fourth child death in the family²⁰⁰⁸ (see [589] above).

1601. In his evidence to that Inquiry, Professor Hilton stated he agreed with Professor Cordner, although he stated he did not regard Dr Cala's conclusion that the cause of death was undetermined as unreasonable (see [595] above).
1602. In an affidavit sworn for the purpose of this Inquiry, Professor Hilton adhered to the views he had previously expressed.²⁰⁰⁹
1603. Dr Orde prepared two reports and gave evidence at the present Inquiry. In his first report dated 21 December 2022, he stated that myocarditis that appeared to be present in Laura's heart at the time of her death provided a very compelling cause of her death²⁰¹⁰ (see [1537] above).
1604. In his second report dated 12 January 2023, Dr Orde confirmed that the slides he examined were those he received from Professor Cordner in March 2018. I have set out his opinion at [1538]-[1539]. He considered myocarditis was a highly plausible explanation for her death.²⁰¹¹
1605. In his evidence to the Inquiry, Dr Orde stated that the way he chose to describe the myocarditis was moderate with some areas of lesser inflammation, and some with more. He stated that when he used the word "florid" in his report, he was seeking to convey that the appearance to the naked eye was quite striking and was of a degree of severity which would undoubtedly pose a risk of sudden death. However, he stated he did not believe the slides he saw were consistent with the microphotographs in the Brohus Article.²⁰¹²
1606. Dr Cala was the only pathologist who gave evidence and made reports to the 2019 Inquiry and this Inquiry who rejected myocarditis as a possible cause of Laura's death. I have set out his evidence at the trial at [395]-[396] above, where he stated that, having regard to the fact that a video showed Laura in apparently normal health the day before she died, he did not believe it was a reasonable possibility that she died from myocarditis. As noted at [395] above, Dr Cala described the inflammation that he observed at autopsy as "quite patchy" and "rather mild".²⁰¹³
1607. In his report of 26 November 2018, Dr Cala adhered to the views he expressed at the trial (see [608]-[609]). In his evidence at the 2019 Inquiry, he accepted that in his report he stated that the myocarditis was "light and patchy", which was inconsistent with what he said in the autopsy report. He agreed it was inconsistent, stating that myocarditis was described as moderate in the autopsy report. He accepted he could not categorically exclude myocarditis as a cause of Laura's death (see [628] above).²⁰¹⁴
1608. In his report for this Inquiry, Dr Cala stated that his opinion remained that the left

²⁰⁰⁸ Exhibit 2-P, Affidavit of Professor John Hilton (13 November 2018) [red pagination 4170].

²⁰⁰⁹ Exhibit 13-03, Affidavit of Professor John Hilton (26 July 2022).

²⁰¹⁰ Exhibit 13-05, Report of Dr Matthew Orde (21 December 2022) [red pagination 103].

²⁰¹¹ Exhibit 13-06, Supplementary Report of Dr Matthew Orde (12 January 2023) [red pagination 127].

²⁰¹² Transcript of the 2022 Inquiry, 22 February 2023 T605.38-T608.3 (Orde).

²⁰¹³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2003 T760.16-55 [red pagination 2564].

²⁰¹⁴ Exhibit 4, Transcript of the 2019 Inquiry, 20 March 2019 T198.7-204.15 (Cala)

ventricle of Laura's heart showed a mild form of inflammation, many parts of which were light and patchy, and in some areas there was a worsening to a moderate level of inflammation. He adhered to his view that the infection was mild and played no role in her death (see [1580] above).²⁰¹⁵

1609. Dr Cala's view was inconsistent with the other pathologists that gave evidence on this issue at the 2019 Inquiry and at this Inquiry. Further, it seems to me that his opinion on this, and on other matters where he was critical of the views of other experts, and for that matter the Brohus Article, was heavily influenced by the fact that he regarded it as inherently unlikely that four children in one family could die from natural causes. This is evident from his correspondence with Detective Ryan following the death of Laura to which I have referred at [387]-[391]. It was also evident from his statement at the outset of his 26 November 2018 report, "[i]t is simply remarkable and unthinkable that the four Folbigg children lived their entire lives in Australia...and all are now deceased"²⁰¹⁶ and in his remarks of 13 December 2022 to which I have referred to at [1565]. Further, even Dr Cala ultimately accepted that he could not categorically exclude myocarditis as a possible cause of Laura's death.
1610. Dr Cala's evidence, both at the trial and before this Inquiry, was subject to sustained criticism by Ms Folbigg in her written submissions. It is unnecessary for me to deal with these criticisms in detail. However, I must emphasise that although I have rejected Dr Cala's opinion to the extent he excluded myocarditis as a possible cause of Laura's death, that is because of the preponderance of evidence to the contrary. It is not because I do not accept that Dr Cala, in this Inquiry, or for that matter at the trial and the 2019 Inquiry, was expressing anything other than a genuinely held belief based on his expertise. I do think, however, that his evidence was influenced by his firm conviction that the children did not die of natural causes.
1611. For completeness, it should be noted that at the trial, two pathologists, Professor Berry (at least considering Laura's death in isolation) and Professor Byard, expressed the view that myocarditis was a possible cause of Laura's death (see [343] and [370] above). Further, a cardiologist, Dr Jones, stated that considering the death of Laura in isolation from the standpoint of a paediatric cardiologist, he had no difficulty in attributing her death to myocarditis (see [448] above). By contrast, another cardiologist, Dr Bailey, expressed the view that Laura's myocarditis was probably related to a viral infection she had at the time and was unlikely to have accounted for her death. He stated this would apply whether Laura's myocarditis was described as mild or moderate (see [443]-[444] above).
1612. In these circumstances, notwithstanding the evidence of Dr Cala, I am of the view that myocarditis was a reasonably possible cause of Laura's death.

²⁰¹⁵ Exhibit 13-04, Supplementary Report of Dr Allan Cala (13 December 2022) [red pagination 69-20].

²⁰¹⁶ Exhibit 2-M, Report of Dr Allan Cala (26 November 2018) [red pagination 4094].

Section 6

The Psychiatric and Psychological Evidence
Relating to the Diaries

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Section 6 – The Psychiatric and Psychological Evidence Relating to the Diaries

a. Background

1613. Ms Folbigg’s diaries played a vital role in the Crown case at trial. As Counsel Assisting the Inquiry pointed out, it was contended that the diary entries showed Ms Folbigg’s:²⁰¹⁷

- (1) involvement in the deaths of her children;
- (2) attempts to deal with her guilt about her involvement in their deaths;
- (3) belief that she had “grown and matured” from what happened to the first three children and determination that it not happen again with Laura;
- (4) frustrations with parenthood, as Laura got older; and
- (5) feelings that Laura was a better baby than the others, particularly Sarah, and that therefore Laura would survive, because Laura did not “press her buttons” in the same way that Sarah had.²⁰¹⁸

1614. Ms Folbigg did not give evidence at the trial. I have summarised the evidence given by her on the diaries in her ERISP (at [218]-[312] above). Annexure 3 to this Report contains details of her evidence given in respect of the diaries at the 2019 Inquiry.

b. Psychiatric and Psychological Evidence prepared in connection with the trial and sentencing proceedings

1615. Three expert psychiatrists provided evidence for the purpose of Ms Folbigg’s sentencing hearing. In considering their reports, it is important to bear in mind that they proceeded on the assumption that Ms Folbigg was guilty of the offences for which she had been convicted.

Dr Michael Giuffrida

1616. Dr Giuffrida was retained by Ms Folbigg’s representatives and provided a report dated 27 August 2003.²⁰¹⁹ He referred to what he described as a brief mental state examination on 22 May 2003:

Remarkably calm and detached and able to speak at length without distress at any point, strikes me as being affectless in this situation. Spoke clearly and coherently – without any hint of thought disorder, delusional ideas or particular preoccupation other than details of her offences. I found her remarkably lacking in the expression of grief in relation to these.²⁰²⁰

1617. Dr Giuffrida stated that his earliest impression was that Ms Folbigg “suffered no psychiatric disorder” and there was “nothing to indicate any underlying personality

²⁰¹⁷ Exhibit 2-F, Complete set of transcripts of evidence given at the 2003 trial, 1 April 2003 T47-48 (Crown Prosecutor) [red pagination 1851-1852].

²⁰¹⁸ Counsel Assisting’s Written Closing Submissions (4 April 2023) 166 [588a-e].

²⁰¹⁹ Exhibit 2-BD, Report of Dr Michael Giuffrida (27 August 2003) [red pagination 7611-7634].

²⁰²⁰ Exhibit 2-BD, Report of Dr Michael Giuffrida (27 August 2003) [red pagination 7613].

disorder apart, of course, from the apparent detachment regarding the death of her children.”²⁰²¹

1618. Dr Giuffrida indicated that he spoke with Ms Folbigg over two sessions, each of about two hours in duration. It is unnecessary to record the history that he took. It is to be noted however that he stated Ms Folbigg told him that after Laura’s death she felt “totally desolate”, saying that “Laura’s life had allowed her to gain a glimpse of a better future which had now been dashed.” Dr Giuffrida stated that at this point of the interview that Ms Folbigg was “tearful”, and this “came across as being quite genuine.”²⁰²²
1619. Dealing with the diaries, Dr Giuffrida stated his general impression was that, having read all of the material, Ms Folbigg was, at the time that she wrote these diaries, “a greatly tormented and indeed exceedingly disturbed woman.” He stated “there is throughout the diaries a prevailing theme of intensely depressed mood, expressions of worthlessness and low self-esteem and repeated references to feelings of rejection and abandonment by her husband, Craig, and her family and friends.” He stated it was clear from the extracts of her diaries tendered by the Crown at the trial that “she suffered intense feelings of shame and guilt in relation to the death of the children.”²⁰²³
1620. Dr Giuffrida said that he “could find no clear evidence of psychotic illness” in Ms Folbigg. However, on the other hand, there was a “history of pervasive depression throughout her marriage” which was described in her history to him and strongly confirmed by numerous references to her “depressive mood, feelings of failure, shame, guilt and loss of self-esteem and a profound sense of worthlessness in her diaries.” He stated that “although the episodes of depression were pervasive, they certainly appeared to become more intense and long-lasting after the death of each child and probably [represented] Ms Folbigg’s particular expression of grief and bereavement.” He stated it would seem fairly clear, from the history that Ms Folbigg gave him and the evidence from the diaries, that “Ms Folbigg completely failed to experience any true sense of bonding or attachment to her children”, although it seemed to him that there were “repeated despairing attempts to find what she refers to as her maternal instinct.” He expressed the view that “her state of depression was serious enough and persistent enough to have strongly contributed to a state of mind that led to her killing her children.”²⁰²⁴

Dr Bruce Westmore

1621. Dr Westmore was retained by Ms Folbigg’s representatives and provided a report dated 16 June 2003.²⁰²⁵ In his report, he pointed out that Ms Folbigg acknowledged that she was not at times coping with the children but denied being angry with them, as distinct from being angry with their father.²⁰²⁶
1622. Dr Westmore expressed the view that Ms Folbigg did “not suffer from a psychotic illness nor is there a history consistent with the diagnosis of Munchausen’s

²⁰²¹ Exhibit 2-BD, Report of Dr Michael Giuffrida (27 August 2003) [red pagination 7613].

²⁰²² Exhibit 2-BD, Report of Dr Michael Giuffrida (27 August 2003) [red pagination 7620].

²⁰²³ Exhibit 2-BD, Report of Dr Michael Giuffrida (27 August 2003) [red pagination 7629].

²⁰²⁴ Exhibit 2-BD, Report of Dr Michael Giuffrida (27 August 2003) [red pagination 7630-31].

²⁰²⁵ Exhibit 2-BB, Report of Dr Bruce Westmore (16 June 2003) [red pagination 7586-7592].

²⁰²⁶ Exhibit 2-BB, Report of Dr Bruce Westmore (16 June 2003) [red pagination 7590].

syndrome by proxy.” He stated though “[i]t would be reasonable to assume however that she suffers from a severe personality disorder with anger and impulse control being central difficulties.”²⁰²⁷

1623. Dr Westmore stated that during his contact with her he “always felt she was a very controlled woman, probably over controlled in view of the serious circumstances in which [he] was assessing her.” He stated that “she rarely showed emotional distress or, indeed, any emotional response, this despite the very traumatic nature of the charges against her and later the outcome of the court case.” He stated that individuals who are over controlled may be prone to episodes of extreme angry outbursts and that it was possible Ms Folbigg “has personality characteristics of this type.”²⁰²⁸
1624. Dr Westmore said that “[u]nfortunately, the discharging of her emotions through the diaries was insufficient to contain her emotions or prevent her acting aggressively.”²⁰²⁹

Dr Yvonne Skinner

1625. Dr Skinner was retained by the Crown and provided a report dated 22 January 2003.²⁰³⁰
1626. Dr Skinner stated she read the diary notes provided to her by the Crown. She stated she did not find any evidence of formal thought disorder or cognitive dysfunction. She stated she did not find anything in the written material to suggest that Ms Folbigg might have been suffering a significant depressive disorder.²⁰³¹

Rozalinda Garbutt

1627. Ms Garbutt prepared a report dated 11 October 1999²⁰³² at the request of Detective Ryan, in connection with the trial, not the sentencing hearing. At the time, she was a Police Psychologist with the NSW Police Service, a position she had held since 1995.²⁰³³
1628. Ms Garbutt summarised her conclusions in the following terms:

My opinion is dependent upon the elimination of natural causes to explain the death of the four Folbigg children. If natural causes are eliminated then in my opinion Kathleen Folbigg became angry and frustrated with her children’s crying and need for constant attention to a point where it overwhelmed her and she lost control and consciously ended the lives of each child.²⁰³⁴

1629. In reaching that opinion, she relied, among other things, on a quote by Dr Linda Norton, Forensic Pathologist, “There are some who say one infant death is SIDS, two leaves a big question mark and with three you yell murder.”²⁰³⁵ Ms Garbutt then

²⁰²⁷ Exhibit 2-BB, Report of Dr Bruce Westmore (16 June 2003) [red pagination 7591].

²⁰²⁸ Exhibit 2-BB, Report of Dr Bruce Westmore (16 June 2003) [red pagination 7591].

²⁰²⁹ Exhibit 2-BB, Report of Dr Bruce Westmore (16 June 2003) [red pagination 7591].

²⁰³⁰ Exhibit 2-BC, Report of Dr Yvonne Skinner (22 January 2003) [red pagination 7593-7610].

²⁰³¹ Exhibit 2-BC, Report of Dr Yvonne Skinner (22 January 2003) [red pagination 7601].

²⁰³² Exhibit 23-01, Report of Rozalinda Garbutt (4 February 2000) [red pagination 1-12].

²⁰³³ Exhibit 23-01, Report of Rozalinda Garbutt (4 February 2000) [red pagination 1].

²⁰³⁴ Exhibit 23-01, Report of Rozalinda Garbutt (4 February 2000) [red pagination 1].

²⁰³⁵ Exhibit 23-01, Report of Rozalinda Garbutt (4 February 2000) [red pagination 7].

relied on various diary entries to support her conclusion,²⁰³⁶ stating that from viewing the diaries, transcripts and facts surrounding the deaths, deliberate homicide is a more plausible explanation for the deaths of the four children. She stated that “[m]ost significantly, Kathleen takes responsibility for the deaths of her children not because she could not stop the deaths (through natural causes) but due to her ‘losing control’ she consciously ended her children’s lives.”²⁰³⁷

1630. No reliance was placed on Ms Garbutt’s report at the trial or at the 2019 Inquiry. Its only relevance is a reference made to it by Mr Sheehan in his report and evidence to the Inquiry.²⁰³⁸

c. Psychiatric and Psychological Evidence at the 2019 Inquiry

1631. Dr Michael Diamond, a specialist psychologist engaged by Ms Folbigg’s representatives, examined Ms Folbigg on 25 and 27 March 2019 and prepared a report dated 16 April 2019 which was tendered at the 2019 Inquiry.²⁰³⁹
1632. In dealing with Dr Westmore’s report, Dr Diamond said that his reading of that report was that if “one suspends any view as to whether or not Ms Folbigg did murder her children, her answers to direct questions about her diary entries, dealing with her feelings of anger and her expectations of parenthood, she gave credible and consistent answers that would not necessarily be consistent with an admission or acknowledgment that she had killed her children.” He stated Dr Westmore’s opinions and conclusions are “difficult to consider because they are all based on the acceptance of the verdicts following the trial.”²⁰⁴⁰
1633. Dr Diamond also noted that Dr Giuffrida “specifically addressed the content of the diaries but once again with the perspective that the verdict represented what she had done.” He noted that Dr Giuffrida “expressed strong opinions about Ms Folbigg being unable to bond with her children.” He stated that he was concerned that those views, and the views expressed subsequently in the remainder of the report, were “much influenced by the acceptance that Ms Folbigg killed her children...”²⁰⁴¹
1634. Dr Diamond said his “assessment of Ms Folbigg [was] that she has features that were consistent with those seen in abused children and are described diagnostically as features consistent with a diagnosis of Complex Posttraumatic Stress Disorder.” He said that in his opinion the significant and persuasive psychiatric diagnosis is that of Complex Posttraumatic Stress Disorder. He stated that if one understands and appreciates the extent to which this has shaped her life then one can understand that the diary entries need to be assessed in the context of the existence of this diagnosis and the deep seated psychological subjective experiences of Ms Folbigg.²⁰⁴²
1635. Dr Diamond stated that his view was that “it is possible and even likely that Ms Folbigg was writing personal entries to herself, in much the same way as she has

²⁰³⁶ Exhibit 23-01, Report of Rozalinda Garbutt (4 February 2000) [red pagination 8-11].

²⁰³⁷ Exhibit 23-01, Report of Rozalinda Garbutt (4 February 2000) [red pagination 12].

²⁰³⁸ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 61]; Transcript of the 2022 Inquiry, 23 February 2023 T675.44-T676.16 (Sheehan).

²⁰³⁹ Exhibit 2-BA, Redacted report of Dr Michael Diamond (16 April 2019) [red pagination 7528-7585].

²⁰⁴⁰ Exhibit 2-BA, Redacted report of Dr Michael Diamond (16 April 2019) [red pagination 7558].

²⁰⁴¹ Exhibit 2-BA, Redacted report of Dr Michael Diamond (16 April 2019) [red pagination 7560-7562].

²⁰⁴² Exhibit 2-BA, Redacted report of Dr Michael Diamond (16 April 2019) [red pagination 7566-7568].

made diary entries for a large part of her life so that her private thoughts and feelings were articulated in terms of self-blame, assuming responsibility for the deaths of her children and talking about her feelings and general actions in self-deprecatory ways.”²⁰⁴³

d. The Psychiatric and Psychological Evidence at this Inquiry

Admissibility

1636. It is important to bear in mind the basis on which the evidence was tendered. It was not to interpret the diary entries. Rather, it was to deal with the question as to whether, to the extent they could be construed as admissions, their reliability as such was affected by the psychiatric or psychological state of Ms Folbigg, at the time she made the entries, which were relied on by the Crown and for that matter at the 2019 Inquiry.
1637. Counsel Assisting submitted that at least the evidence of the two psychiatrists, Dr Kerri Eagle and Dr Yumna Dhansay, and a psychologist, Mr Patrick Sheehan, engaged by the Inquiry (whose evidence is outlined below at [1703]-[1834]) would be admissible in criminal proceedings against Ms Folbigg. Counsel Assisting referred to various authorities which they submitted supported that submission. Counsel Assisting referred to *Murphy v The Queen* (1989) 167 CLR 94 in which the majority of the High Court found that the trial judge had erred in rejecting the evidence of a psychiatrist that one of the accused was of limited intellectual capacity, and confessional material adduced through a police record of interview was dangerous and uncertain. Mason CJ and Toohey J stated (at 112) that the expert has produced a report “which he was equipped to prepare by reason of his training and which was relevant to the issue whether [the particular accused] had given the answers attributed to him.”²⁰⁴⁴
1638. Brennan J dissented on this issue. His Honour stated (at 121) that “unless it was shown that the general expertise of a well-qualified psychologist enables him to say whether a subject understands particular words and phrases or enables him to assert the unlikelihood of the subject’s use of particular words and phrases, the opinion evidence... was inadmissible.” His Honour stated that link in the chain was missing.²⁰⁴⁵
1639. Deane J agreed generally with Mason CJ and Toohey J. His Honour stated (at 125-126) that if the accused’s “extraordinarily low levels of intellectual function” and “linguistic ability” were “relevant to the question to be decided by the jury”, then an expert could “properly give evidence” regarding these issues.²⁰⁴⁶
1640. Dawson J rejected the evidence on the basis that it was evidence on a matter of common understanding.²⁰⁴⁷
1641. Counsel Assisting also referred to two Victorian decisions. In *Weaven v The Queen* [2018] VSCA 127, Priest JA, with whom the other members of the Court agreed, stating at [49] that “there is nothing radical or unusual about seeking to adduce

²⁰⁴³ Exhibit 2-BA, Redacted report of Dr Michael Diamond (16 April 2019) [red pagination 7569].

²⁰⁴⁴ *Murphy v The Queen* (1989) 167 CLR 94 at 112 (Mason CJ and Toohey J).

²⁰⁴⁵ *Murphy v The Queen* (1989) 167 CLR 94 at 121 (Brennan J).

²⁰⁴⁶ *Murphy v The Queen* (1989) 167 CLR 94 at 125-126 (Deane J).

²⁰⁴⁷ *Murphy v The Queen* (1989) 167 CLR 94 at 131 (Dawson J).

evidence of a psychological opinion... seeking to explain why a person may have answered... questions in a particular way.”²⁰⁴⁸ Priest JA referred, in turn, to *R v Whitbread* (1995) 78 A Crim R 452 where it was held the trial judge had erred in rejecting the evidence of a clinical psychologist showing that lies relied on by the Crown could have been the result of a psychological state resulting from stress.²⁰⁴⁹

1642. The written submissions on behalf of the Director of Public Prosecutions emphasised that the expert witnesses that gave evidence at the Inquiry were not purporting to express any opinion as to what was in fact meant by Ms Folbigg when the diary entries were made, but rather gave evidence on the basis that the question as to whether any diary entries were admissions, of Ms Folbigg harming her children, was a question of fact to be determined by me.²⁰⁵⁰
1643. The submissions on behalf of the Director emphasised that in conducting the Inquiry I am not bound by the rules of evidence and that, in those circumstances, it is unnecessary and potentially distracting for the Inquiry to consider and make findings of the notional and hypothetical admissibility of this evidence pursuant to the *Evidence Act 1995* (NSW).²⁰⁵¹ Further, the submissions emphasised the inquisitorial function, which is designed to be free from the rules of evidence, is entirely different to the accusatorial and adversarial context of criminal trials.²⁰⁵² The submissions on behalf of the Director also pointed to the fact that the expert witnesses were provided with a very large volume of materials from wide and various sources, and permitted to confer amongst themselves.²⁰⁵³ Further, it was submitted that if the rules of evidence were to be applied, greater care and scrutiny would have been required in identifying what materials should have been made available.²⁰⁵⁴
1644. The cases relied on by Counsel Assisting to which I have referred were not cases to which the provisions of the *Evidence Act 1995* (Cth) or the *Evidence Act 1995* (NSW) applied. Any question of admissibility of the material in a hypothetical criminal trial would depend on the application of ss 56, 79, 80 and possibly ss 85 and 108C of the *Evidence Act 1995* (NSW). Further, it would be at least necessary to consider whether the manner in which it was adduced would be rejected in the exercise of the Court’s discretion under s 135 of the *Evidence Act 1995* (NSW). It is unnecessary to deal with these questions.
1645. What is critical, for the purpose of the Inquiry, is first whether the evidence is relevant and second whether it is based on the experts’ specialised skill and knowledge. I am satisfied that those requirements have been met. I am satisfied that the expert evidence is relevant to whether the reliability of the admissions contained in the diary entries was affected by the psychiatric or psychological state of Ms Folbigg, at the time she made the entries.
1646. Further, consistent with the submissions of both Counsel Assisting and the Director of Public Prosecutions, I have not taken into account any evidence in which the psychological or psychiatric witnesses purport to express a view as to the meaning

²⁰⁴⁸ *Weaven v The Queen* [2018] VSCA 127 at [49] (Priest JA).

²⁰⁴⁹ *R v Whitbread* (1995) 78 A Crim R 452.

²⁰⁵⁰ Written Closing Submissions on behalf of the Director of Public Prosecutions (19 April 2023) 4 [15b].

²⁰⁵¹ Written Closing Submissions on behalf of the Director of Public Prosecutions (19 April 2023) 5 [16a].

²⁰⁵² Written Closing Submissions on behalf of the Director of Public Prosecutions (19 April 2023) 5 [16b].

²⁰⁵³ Written Closing Submissions on behalf of the Director of Public Prosecutions (19 April 2023) 5 [16c].

²⁰⁵⁴ Written Closing Submissions on behalf of the Director of Public Prosecutions (19 April 2023) 5-6 [16e].

of particular diary entries, rather than providing assistance on the question of the reliability of any admissions which have been made. Finally, it must be emphasised that the conclusion on the question of whether the diaries contain admissions of guilt and the reliability of such admissions is mine, not that of any of the experts.

The experts who did not give evidence at the Inquiry

Dr Joanna Garstang

1647. Dr Garstang was requested to prepare a report at the suggestion of the Australian Academy of Science.
1648. Dr Garstang is a Consultant Community Paediatrician with the Birmingham Community Healthcare NHS Trust. She is also the Designated Doctor for Child Death on the Birmingham and Solihull Integrated Care Board and a Visiting Senior Lecturer in Child Protection at the University of Birmingham. She has no psychological or psychiatric qualifications.²⁰⁵⁵
1649. Dr Garstang stated in her report that she had undertaken PhD research into expressions of guilt and self-blame in the context of grief associated with sudden infant death. Her report in the main contained extracts from various papers dealing with the issue. She stated “[m]y review of the literature would suggest that there are no clear predisposing factors that increase a mother’s likelihood to blame themselves or express guilt following a sudden unexpected infant or child death. Expressions of guilt and self-blame are extremely common following sudden child death and can be considered part of a typical grief process.” She stated that such expressions “may be even more common in grieving parents with co-existing mental health difficulties such as anxiety and depression.”²⁰⁵⁶
1650. Following objection by Senior Counsel for the Director of Public Prosecutions, I ruled the balance of her report, which contained her comments on Ms Folbigg’s diaries, was inadmissible. I indicated to Counsel Assisting she could ask Dr Garstang questions relating to whether the expressions of guilt or self-blame contained in Ms Folbigg’s diaries were consistent with her observed experience. Ultimately, and with respect I think sensibly, Counsel Assisting did not avail herself of that opportunity.²⁰⁵⁷

Dr Sharmila Betts

1651. Dr Betts, a clinical psychologist engaged by Ms Folbigg’s representatives, prepared a report dated 13 April 2021.²⁰⁵⁸ Dr Betts was awarded a Masters Degree in Psychology in 1986 and a PhD on her thesis, ‘A Critical Analysis of Medical Opinion Evidence in Child Homicide cases’ in 2013. She practices clinical psychology in Sydney.²⁰⁵⁹
1652. Dr Betts’ report was written in response to two questions posed by the Director of the University of Newcastle Legal Centre:

²⁰⁵⁵ Exhibit 33-02, Report of Dr Joanna Garstang including CV and a table of articles referred to therein (1 February 2023) [red pagination 7].

²⁰⁵⁶ Exhibit 33-02, Report of Dr Joanna Garstang dated 1 February 2023 including CV and a table of articles referred to therein (1 February 2023) [red pagination 22].

²⁰⁵⁷ Transcript of the 2022 Inquiry, 23 February 2023 T642.38-44 (Bathurst).

²⁰⁵⁸ Exhibit 24-01, Updated Report of Dr Sharmila Betts, including CV (13 April 2021) [red pagination 1-20].

²⁰⁵⁹ Exhibit 24-01, Updated Report of Dr Sharmila Betts, including CV (13 April 2021) [red pagination 17].

- (1) Whether the diary entries made by Ms Folbigg indicate or show any admissions of guilt as to her harming her children; and
 - (2) Whether she was able to give an opinion as to Ms Folbigg's mental state over the period of years she made the diaries from the diary entries themselves.
1653. Dr Betts pointed out that "studies of maternal postpartum functioning indicate that it is a time of considerable vulnerability and adjustment." She stated that the "transition from pregnancy to motherhood can be associated with maternal insecurity, uncertainty and instability, which, in turn, can contribute to symptoms of tension, anxiety and distress."²⁰⁶⁰
1654. Dr Betts stated that "[a]n understanding of normative parental responses to SUUDI [Sudden Unexpected and Unexplained Death in Infancy] is necessary for an evaluation of Ms Folbigg's psychological state, as evident in her diaries." She stated that there was "an extensive literature on the negative psychological sequelae on parents who experience SUUDI." She observed that "[t]raumatic deaths in general are associated with complicated mourning and post-traumatic reactions." She stated that "when psychological distress immediately after death persisted at 8 months post-death, the grief experienced was likely to become chronic." She stated that the "lack of definitive medical explanation for the catastrophic event appears to be associated with greater maternal distress and self-blame, compared to other forms of infant death." She stated that "the added complication of sudden infant death is that the parent, usually the mother, discovers the deceased or dying infant." She stated this "exacerbates the typical shock, numbness and denial evident after the sudden loss of an infant."²⁰⁶¹
1655. The next section of Dr Betts' report recorded the diary entries and their meaning. Dr Betts quite properly did not seek to interpret any particular entries in the diaries. She stated that the diaries "describe depressive symptoms, including insomnia, lack of motivation, dysthymia and inability to enjoy previously pleasurable activities." She stated there is "recurrent self-blame and an intractable belief that she had somehow been the cause of the infants' deaths without actual confessions that she had harmed them." She stated that it was possible that, "in the absence of an unequivocal medical cause of death, Ms Folbigg assumed that there is a causal connection between her negative feelings and behaviour ... about which she expresses guilt, and the infants' deaths." She stated that "[i]n many ways, Ms Folbigg's thoughts about herself conform to research findings regarding difficulties with self-efficacy for mothers in general, and more specifically traumatically bereaved mothers."²⁰⁶²
1656. The next portion of Dr Betts' report deals with the prosecution's interpretation of the diary entries. This seems to me to fall outside her expertise, and I place no reliance on it.
1657. In her conclusion, Dr Betts states that Ms Folbigg's mental state at the time of writing her diaries was consistent with psychological literature on mothers who experience SUUDI and non-bereaved mothers. She stated that "[e]ven when a child has not been harmed or died suddenly, mothers tend to blame themselves for the

²⁰⁶⁰ Exhibit 24-01, Updated Report of Dr Sharmila Betts, including CV (13 April 2021) [red pagination 3].

²⁰⁶¹ Exhibit 24-01, Updated Report of Dr Sharmila Betts, including CV (13 April 2021) [red pagination 5-6].

²⁰⁶² Exhibit 24-01, Updated Report of Dr Sharmila Betts, including CV (13 April 2021) [red pagination 8-9].

state of their infant and their own challenges in adjusting to motherhood.” She stated “[i]n this sense, Ms Folbigg is no different to many mothers.”²⁰⁶³

Professor James Pennebaker

1658. Professor Pennebaker prepared a report dated 5 July 2021 at the request of Ms Folbigg’s representatives. Professor Pennebaker is the Regents Centennial Professor of Liberal Arts and Psychology at the University of Texas. He performed what he described as a text analysis of Ms Folbigg’s diaries based on a “computerized text analysis system.”²⁰⁶⁴
1659. The computer model was not provided, and Professor Pennebaker was not requested to give oral evidence. I have placed no reliance on Professor Pennebaker’s report.

Dr Richard Furst

1660. Dr Furst is a forensic psychiatrist who provided a report at the request of Ms Folbigg’s legal representatives on 21 July 2021. The report of Dr Furst contains a summary of a number of the diary entries, his interpretation of them and speculation as to matters outside his area of expertise.
1661. Ultimately, he concludes with very little analysis that the summary of Ms Folbigg’s psychiatric condition contained in the remarks on sentence by Justice Barr was “consistent with the available psychiatric evidence/opinion and the extensive diary entries, all of which point towards Ms Folbigg being a woman with emotional deficits, especially difficulties in relation to forming close loving bonds, insecurity, anxiety and tendencies towards depression.”²⁰⁶⁵ His final remark was that “[a]lthough not yet genetically tested, she is likely to have inherited vulnerability towards emotional deficits, possibly linked to the MAO-A gene, from one or both parents, with this mechanism accounting for her tendency to lose control emotionally when provoked, including when she found herself overwhelmed and largely isolated as an inadequate mother.”²⁰⁶⁶ With respect to Dr Furst, there was absolutely no basis for that comment, and it was outside his area of expertise.
1662. I find that Dr Furst’s report is of no assistance to the Inquiry.

Associate Professor Janine Stevenson

1663. Associate Professor Stevenson is a Psychiatrist of many years’ experience with a Masters Degree and PhD from the University of Sydney. She works in the domain of adult and old age psychiatry.²⁰⁶⁷ Associate Professor Stevenson prepared two reports at the request from Ms Folbigg’s representatives.
1664. In her first report dated 3 September 2021, Associate Professor Stevenson attempts to interpret the meaning of Ms Folbigg’s diaries having regard to her expertise.²⁰⁶⁸ It goes beyond the use that can be made of the expert psychiatrist evidence which, as I have indicated above, is whether Ms Folbigg’s psychological or psychiatric state makes entries in her diaries which could be construed as admissions unreliable.

²⁰⁶³ Exhibit 24-01, Updated Report of Dr Sharmila Betts, including CV (13 April 2021) [red pagination 15-16].

²⁰⁶⁴ Exhibit 25-01, Report of Professor James Pennebaker, including CV (5 July 2021).

²⁰⁶⁵ Exhibit 26-01, Report of Dr Richard Furst (21 July 2021) [red pagination 19].

²⁰⁶⁶ Exhibit 26-01, Report of Dr Richard Furst (21 July 2021) [red pagination 19].

²⁰⁶⁷ Exhibit 27-01, Report of Associate Professor Janine Stevenson (3 September 2021) [red pagination 1, 23].

²⁰⁶⁸ Exhibit 27-01, Report of Associate Professor Janine Stevenson (3 September 2021).

1665. In Associate Professor Stevenson's second report, dated 28 September 2022, she sets out her qualifications which are extensive.²⁰⁶⁹ She states that in preparing the report, she relied on her 40 years of experience working with survivors of childhood trauma and her "research into journal writing by 43 of 54 clients undergoing psychotherapy who at the time were diagnosed as having borderline personality disorder, but who would now be understood as having complex post-traumatic stress disorder."²⁰⁷⁰ She stated that she was the author of a chapter named "The Journal as a Transitional Object" in a book titled 'The Self in Conversation', ANZAP Books, Sydney, Australia.²⁰⁷¹
1666. Associate Professor Stevenson also stated she undertook a one hour interview with Ms Folbigg, "discussing her experiences during the 10 year period during which she wrote in her journals, her state of mind at that time and clarifying the context and content of some of her entries."²⁰⁷²
1667. Associate Professor Stevenson stated that many of her patients over the years either kept journals or other written material which helped them to integrate their thoughts and feelings. She said the "common thread seemed to be difficulty working out or explaining their emotions so they wrote or painted what was in their heads at the time." She stated that some of the comments made by the subject of her research "began in adolescence as a way of keeping part of themselves private; for perusal not interpretation; as part of them; someone they talked to; loved and hated at the same time; often written in the middle of the night or before retiring to lessen anxiety; helped them to internalise and integrate; it is owned- not this thought or that thought but my thought; soothing; to work out how they feel." She stated Ms Folbigg mentioned all these characteristics of her journals.²⁰⁷³
1668. In the conclusion of her report, she stated "[o]bviously, we cannot know what Kathleen meant when she wrote those words, only she can really know." She stated, it is not for us to put our "possibly erroneous" meaning to those words. She stated that Ms Folbigg's comments about and in her journal were very much in keeping with the 43 subjects of her research, who described their writings "as a way to work out their feelings, emotional musings, not factual accounts, definitely not for interpretation." She stated that Ms Folbigg "used her journals to talk to her herself, question herself. It was not a chronological account of her life."²⁰⁷⁴
1669. Counsel Assisting submitted that Associate Professor Stevenson provides useful information to assist in understanding the nature of a diary and demonstrating the manner and extent to which Ms Folbigg used her diaries. Counsel Assisting also submitted that the statement by Associate Professor Stevenson to the effect that a third party could not interpret the diaries should be treated with caution.²⁰⁷⁵ I would go further. It is necessary for this Inquiry to interpret them. The psychiatric and psychological evidence is rather limited to the reliability of the entries said to constitute admissions. Nevertheless, I accept that Associate Professor Stevenson's

²⁰⁶⁹ Exhibit 27-01, Report of Associate Professor Janine Stevenson (3 September 2021) [red pagination 23].

²⁰⁷⁰ Exhibit 27-02, Report of Associate Professor Janine Stevenson, including CV (28 September 2022) [red pagination 18].

²⁰⁷¹ Exhibit 27-02, Report of Associate Professor Janine Stevenson, including CV (28 September 2022) [red pagination 18].

²⁰⁷² Exhibit 27-02, Report of Associate Professor Janine Stevenson, including CV (28 September 2022) [red pagination 18].

²⁰⁷³ Exhibit 27-02, Report of Associate Professor Janine Stevenson, including CV (28 September 2022) para 4 [red pagination 19].

²⁰⁷⁴ Exhibit 27-02, Report of Associate Professor Janine Stevenson, including CV (28 September 2022) para 13 [red pagination 20].

²⁰⁷⁵ Counsel Assisting's Written Closing Submissions (4 April 2023) 230 [853]-[854].

evidence provides relevant information as to the nature of a diary as a text, which goes to context and is of assistance in considering whether the diaries contain admissions and if so their reliability.

Dr Kamal Touma

1670. Dr Touma is an Analytical Psychotherapist in private practice in Sydney. He is a registered Medical Practitioner, holding a Master of Medicine in Psychotherapy, an Honorary Medical Officer in the Department of Psychotherapy at Westmead Hospital, and a Faculty member of the Sydney University Master of Medicine (Psychotherapy) Program.²⁰⁷⁶
1671. Dr Touma, who prepared his report at the request of Ms Folbigg's legal representatives, stated he first read Ms Folbigg's diaries, then met her "on five occasions for full sessions of Analytical Psychotherapy in a bid to reach a better psychodynamic understanding".²⁰⁷⁷
1672. Dr Touma stated that at first, Ms Folbigg presented as distant and rather disconnected from emotions. He stated that during the first sessions they had, she barely talked about her children or her feelings. He stated that "[t]he whole experience was split off from her consciousness." Dr Touma stated he suspected that could be the case, from reading her diaries. He stated that the interview confirmed to him that Ms Folbigg presented the "hallmarks of early developmental trauma and parental failure."²⁰⁷⁸
1673. Dr Touma described the two forms of dissociation, accepted in Analytical Psychotherapy: primary and secondary dissociation. Referring to a publication by Russell Meares, *A Dissociation Model of Borderline Personality Disorder* (2012), Dr Touma stated that in the case of primary dissociation, "the traumatic system is pre-reflective and cannot be accessed by episodic memory." He stated that it relates to the "failure of emergence of self / 'inadequate provision of the "sociogenic" component necessary to (maturation)."²⁰⁷⁹
1674. Dr Touma noted that, according to Meares, secondary dissociation arises out of primary dissociation. He stated that in the case of secondary dissociation, what he described as "compartmentalisation" is achieved by "neuroinhibitory mechanisms ... to reduce the high arousal characteristic of primary dissociation / leading to a separation of elements of experience from the rest of consciousness."²⁰⁸⁰
1675. Dr Touma stated that "Ms Folbigg, during infancy and childhood, experienced two psychological insults." First, she experienced what he described as "traumatic uncoupling" when losing her mother at eighteen months of age, and second, what he described as the "caregiving failure." He stated that Ms Folbigg's childhood,

²⁰⁷⁶ Exhibit 29-01, Report of Dr Kamal Touma dated 13 September 2021, including CV and audio recordings of Analytical Psychotherapy sessions with Kathleen Folbigg [red pagination 17-18].

²⁰⁷⁷ Exhibit 29-01, Report of Dr Kamal Touma dated 13 September 2021, including CV and audio recordings of Analytical Psychotherapy sessions with Kathleen Folbigg [red pagination 1].

²⁰⁷⁸ Exhibit 29-01, Report of Dr Kamal Touma dated 13 September 2021, including CV and audio recordings of Analytical Psychotherapy sessions with Kathleen Folbigg [red pagination 2].

²⁰⁷⁹ Exhibit 29-01, Report of Dr Kamal Touma dated 13 September 2021, including CV and audio recordings of Analytical Psychotherapy sessions with Kathleen Folbigg [red pagination 3]; referring to R Meares, *A Dissociation Model of Borderline Personality Disorder* (2012, W.W. Norton, New York) 63.

²⁰⁸⁰ Exhibit 29-01, Report of Dr Kamal Touma dated 13 September 2021, including CV and audio recordings of Analytical Psychotherapy sessions with Kathleen Folbigg [red pagination 3]; referring to R Meares, *A Dissociation Model of Borderline Personality Disorder* (2012, W.W. Norton, New York) 63.

“rather than fostering healing from the initial or primary traumatic experiences managed to reinforce it and consolidate a state of repetitive secondary dissociation or a dissociative state leading to a permanent state of dissociated feelings.” He stated that in the case of Kathleen, “the painful aloneness of being dissociated with and from her feelings is illustrated by this simple heart-breaking entry in her diary” the day her daughter Sarah died: “Sarah left us. 1am.”²⁰⁸¹

1676. Dr Touma stated that the world of Analytical Psychotherapy is familiar with the notion of diaries. He referred to work done by Associate Professor Stevenson, whose two reports were tendered before me. He stated that Dr Stevenson understood a diary as “fulfilling the role of what Winnicott described as a ‘Transitional Object’ or an object with a ‘Transitional Function’.” He explained these concepts by stating that initially, “the infant and the mother are experienced as one in the child’s mind. The individuation and the awareness of the child that he/she is a separate entity from the mother is around the age of four.” He stated that the transition from unity to duality is at times difficult for the child, especially during the mother’s absences from sight even for a short time. He stated that in most circumstances, a child often constantly carries an object, a rug, or a soft toy, which Winnicott described as a “Transitional Object.” He stated that it was called transitional because its existence in the child’s life is transitional. He said in the case of Ms Folbigg, he came to the conclusion the diary was fulfilling unconsciously the function of a transitional object and to a certain extent consciously the function of Self-Object, a “relationship with a person, object or place ... that have a function of soothing, generating a sense of wellbeing.” He said Ms Folbigg told him she felt like writing in her diary mostly when anxious, needing soothing or reassurance. He stated her “preoccupation to stay desirable for her husband not to desert her as well as repetitive themes of broken friendships reflects her primary trauma of being ‘abandoned’ by her mother.”²⁰⁸²
1677. Dr Touma noted that in her diaries, Ms Folbigg described herself as a terrible person and mother. He stated that in Psychology such statements are described as “Negative Attributes of Self.” He said they can be so severe as to be akin to self-hatred. He stated that “although frequently observed, their genesis is less well understood. They are mostly noticed in sufferers of early trauma and neglect.”²⁰⁸³
1678. After reviewing some diary entries, and taking into account his sessions with Ms Folbigg, he concluded that Ms Folbigg suffers from “negative attributes of self.” He stated that “[m]emories from the past are always bad” and that Ms Folbigg “doesn’t have it in herself to register or recall good memories.” He stated that “[t]aking her statements about mothering and deserving that her children leave her for truth is believing a traumatic system of description of self that has nothing to do with reality”.²⁰⁸⁴ Dr Touma stated “her responses to viewing old videos of her children and her associative narrative about them” all point to Ms Folbigg being a “very good mother.”²⁰⁸⁵ He stated, in conclusion, that from his readings of the diaries and conversations with Ms Folbigg, “what may have been ‘implicating’ in her diary are in

²⁰⁸¹ Exhibit 29-01, Report of Dr Kamal Touma dated 13 September 2021, including CV and audio recordings of Analytical Psychotherapy sessions with Kathleen Folbigg [red pagination 3-5].

²⁰⁸² Exhibit 29-01, Report of Dr Kamal Touma dated 13 September 2021, including CV and audio recordings of Analytical Psychotherapy sessions with Kathleen Folbigg [red pagination 6-7].

²⁰⁸³ Exhibit 29-01, Report of Dr Kamal Touma dated 13 September 2021, including CV and audio recordings of Analytical Psychotherapy sessions with Kathleen Folbigg [red pagination 8].

²⁰⁸⁴ Exhibit 29-01, Report of Dr Kamal Touma dated 13 September 2021, including CV and audio recordings of Analytical Psychotherapy sessions with Kathleen Folbigg [red pagination 8].

²⁰⁸⁵ Exhibit 29-01, Report of Dr Kamal Touma dated 13 September 2021, including CV and audio recordings of Analytical Psychotherapy sessions with Kathleen Folbigg [red pagination 11].

fact nothing but secondary to a distorted reality due to her spiritual belief acting to punish her for her negative attributes of self.”²⁰⁸⁶

1679. Dr Touma distinguished diary entries in which Ms Folbigg described herself as a terrible mother for her first three babies to diary entries concerning Laura while she was alive (see the entries of 28 April 1997, 26 June 1997 and 25 August 1997 in Annexure 3, p 149, 183 and 193).²⁰⁸⁷
1680. He described the different reaction Ms Folbigg had in what he describes as a linear conversation, usually questions or answers or statements which were devoid of feelings. The form of conversation used in his therapy sessions with Ms Folbigg was the Conversational Model of Psychotherapy, which led to what he described as “associative” narrative by Ms Folbigg. He stated that in those sessions, Ms Folbigg “talked about her four children with liveliness, relating her minute observations of the four of them and the future she imagined for each one of them.” He stated this was in contrast to “her constant refusal or incapacity to talk about them when in a different state of mind,” which he describes as “the mind of constant dissociation and compartmentalisation.” He said that this traumatic state of mind “becomes dominant at moments of threat and anxieties which one would expect when Ms Folbigg was interviewed by police or during court proceedings.”²⁰⁸⁸
1681. At the conclusion of his report, Dr Touma posed the question that, “[i]f Ms Folbigg suffers from dissociation, why would one not imagine that she may have killed her children in severe dissociative, fugue like states?”²⁰⁸⁹ He stated that although it was theoretically possible, it is extremely unlikely. He stated for that to happen the dissociative phenomena would be at another level of severity which he did not observe with Ms Folbigg.²⁰⁹⁰
1682. As Counsel Assisting pointed out in their written submissions, Dr Touma took recording of his sessions with Ms Folbigg, three of which were tendered in evidence.²⁰⁹¹ These recordings were included in the brief to expert psychiatrists and psychologists engaged by the Inquiry who did not have the opportunity to interview Ms Folbigg.
1683. Counsel Assisting submitted that Dr Touma’s evidence is of assistance in the Inquiry in understanding:
- (1) Ms Folbigg’s demeanour, insofar as it has been suggested that she is cold, callous, or insensitive (whether in her expressions in the diaries or otherwise);
 - (2) the factual context surrounding Ms Folbigg’s use of her diaries; and

²⁰⁸⁶ Exhibit 29-01, Report of Dr Kamal Touma dated 13 September 2021, including CV and audio recordings of Analytical Psychotherapy sessions with Kathleen Folbigg [red pagination 13].

²⁰⁸⁷ Exhibit 29-01, Report of Dr Kamal Touma dated 13 September 2021, including CV and audio recordings of Analytical Psychotherapy sessions with Kathleen Folbigg [red pagination 13].

²⁰⁸⁸ Exhibit 29-01, Report of Dr Kamal Touma dated 13 September 2021, including CV and audio recordings of Analytical Psychotherapy sessions with Kathleen Folbigg [red pagination 14].

²⁰⁸⁹ Exhibit 29-01, Report of Dr Kamal Touma dated 13 September 2021, including CV and audio recordings of Analytical Psychotherapy sessions with Kathleen Folbigg [red pagination 14].

²⁰⁹⁰ Exhibit 29-01, Report of Dr Kamal Touma dated 13 September 2021, including CV and audio recordings of Analytical Psychotherapy sessions with Kathleen Folbigg [red pagination 15].

²⁰⁹¹ Counsel Assisting’s Written Closing Submissions (4 April 2023) 232[863]; Exhibit 29-01, Report of Dr Kamal Touma (13 September 2021) (Electronic Materials): “Fond memories of kids and liveliness”; “The nosy mother and foster child”; “What do your children look like.”

- (3) aspects of Ms Folbigg’s mental state (namely, the “negative attributes of self”) reflected in her diaries in expressions of self-criticism or self-blame.²⁰⁹²

1684. I agree that Dr Touma’s evidence is of assistance in explaining the psychological motivation for the diary entries and the expressions of self-criticism and self-blame contained in them. However, the critical question is whether Ms Folbigg’s psychological and psychiatric state at the time she wrote the entries in the diaries which seemed to constitute admissions, made any said admissions unreliable. That was the matter directly addressed by the three experts who gave oral evidence to the Inquiry: Dr Eagle, Dr Dhansay, and Mr Sheehan.

Professor Anthony Korner

1685. Professor Korner prepared a report dated 5 September 2022 at the request of Ms Folbigg’s representatives.²⁰⁹³ He is a Clinical Associate Professor in Psychiatry at the University of Sydney and since 2016, has been the Director of the Westmead Psychotherapy Program. He stated that the latter role encompassed also being the Director of the Master of Medicine (Trauma-Informed Psychotherapy) Degree and associated degrees. He is currently Chairperson of NSW State Committee for the Faculty of Psychotherapy within the Royal Australian and New Zealand College of Psychiatry. He stated he has published over 50 publications in his field.²⁰⁹⁴

1686. In his report, Professor Korner explained that analytical psychotherapy is a recognised field of study in clinical practice both internationally and in Australia. He stated there are a number of training programs and numerous scientific journals in the field, and that “its clinical significance extends into general psychiatry practice where psychodynamic formulation is an important part of standard clinical practice.”²⁰⁹⁵

1687. Professor Korner also helpfully described the Conversational Model. He stated, from his observation, having read Dr Touma’s report and listened to several excerpts from the interviews he conducted with Ms Folbigg, that Dr Touma used analytical psychotherapy in an appropriate way and used the “Conversational Model” in an appropriate fashion.²⁰⁹⁶

1688. This evidence dispels any doubts that may have otherwise existed that Dr Touma, in carrying out his assessment of Ms Folbigg, applied his expertise in a recognised area of psychotherapy.

Dr Katie Seidler

1689. Dr Seidler is a Clinical and Forensic Psychologist with a PhD in the area of culture and interpersonal crime and a Masters Degree in Clinical Psychology.

1690. At the request of Ms Folbigg’s legal representatives, Dr Seidler prepared two reports, the first dated 23 February 2022 and the second dated 26 October 2022. She was provided with the diaries and the reports of Dr Sharmila Betts, Dr

²⁰⁹² Counsel Assisting’s Written Closing Submissions (4 April 2023) 232 [864].

²⁰⁹³ Exhibit 31-02, Report of Professor Anthony Korner, including CV (5 September 2022).

²⁰⁹⁴ Exhibit 31-02, Report of Professor Anthony Korner, including CV (5 September 2022) [red pagination 8-9].

²⁰⁹⁵ Exhibit 31-02, Report of Professor Anthony Korner, including CV (5 September 2022) [red pagination 9-10].

²⁰⁹⁶ Exhibit 31-02, Report of Professor Anthony Korner, including CV (5 September 2022) [red pagination 10-11].

a. Dr Seidler's report dated 23 February 2022

1691. A great deal of this report of Dr Seidler is, in effect, an interpretation of the diaries. Thus, she states that there is nothing in any of the journals or diaries of Ms Folbigg that she had read that “could be interpreted, directly or indirectly, as a confession of murder.”²⁰⁹⁷ Whether that is correct or not, is not a matter for psychiatric or psychological evidence and I have not taken that evidence into account. Further, although I will not outline them, there are a number of other expressions of opinion which rely not on Dr Seidler’s area of expertise but rather her interpretation of various diary entries. It is unnecessary to deal with them. Suffice to say, the only portions of this report of Dr Seidler which I have taken into account are those set out below.
1692. Dr Seidler was asked how Ms Folbigg’s description in her diaries of “it was me, not them” and “I am responsible” could be explained. She stated it was her understanding that Ms Folbigg had a history of “significant trauma, loss and abuse, as a result of which she developed into a vulnerable person, with low self-esteem, poor perceived self-efficacy and a tendency to depression and self-blame.” She said the comments by Ms Folbigg were her attempt to “make sense of her experience of further loss and trauma through the deaths of her children.” She stated, specifically, she interpreted this as Ms Folbigg “blaming herself for the children’s death due to what she perceives as being her inadequate mothering.” She referred to the fact that there were numerous references in Ms Folbigg’s writings to concerns that she is not good enough or will not measure up as a mother. She stated that those comments fit with Ms Folbigg’s “apparent perception that in being inadequate and insufficient as a mother, she is responsible for her children’s death”, or as she comments, “her children’s decision to leave her and reject her as their mother.”²⁰⁹⁸
1693. Dr Seidler also helpfully described attachment theory in the same manner as described by Dr Touma. She stated that “[e]motional detachment is not a necessary or sufficient precursor to murder.”²⁰⁹⁹ She also commented on whether there was anything abnormal about a woman obsessing about her weight and looks. She stated that “[s]adly, women having insecurities in relation to their physical appearance is not uncommon, especially for women whose self-esteem and sense of self-worth is otherwise damaged and vulnerable”.²¹⁰⁰ She stated that “[t]his, in no way, has any relationship with an intent to or capacity to commit murder.”²¹⁰¹

b. Dr Seidler's report dated 26 October 2022

1694. Dr Seidler prepared this report following an interview with Ms Folbigg on 12 September 2022 over a period of three hours and forty-five minutes. She took a comprehensive history from Ms Folbigg which, as Counsel Assisting pointed out, was relied upon to a significant extent by the two psychiatrists who gave evidence at the Inquiry, Dr Eagle and Dr Dhansay.

²⁰⁹⁷ Exhibit 30-01, Report of Dr Katie Seidler (23 February 2022) [red pagination 11].

²⁰⁹⁸ Exhibit 30-01, Report of Dr Katie Seidler (23 February 2022) [red pagination 11].

²⁰⁹⁹ Exhibit 30-01, Report of Dr Katie Seidler (23 February 2022) [red pagination 16-17].

²¹⁰⁰ Exhibit 30-01, Report of Dr Katie Seidler (23 February 2022) [red pagination 18].

²¹⁰¹ Exhibit 30-01, Report of Dr Katie Seidler (23 February 2022) [red pagination 18].

1695. Dr Seidler stated that Ms Folbigg has had a difficult life. Her father murdered her mother when she was an infant and possibly in front of her, after which she was taken into care. Dr Seidler stated “Ms Folbigg recognises that she was lucky to be taken into a family that cared for her throughout the developmental period.” She stated, however, “there were a raft of risks in this home that contributed to Ms Folbigg coming through the developmental transition as a vulnerable child, with poor self-esteem, a deferential manner and a number of mental health problems and personality weaknesses.” Dr Seidler stated specifically, her “attachments to her adopted parents was poor, especially her mother, who was seemingly rejecting, dismissing and erratic in her attention to Ms Folbigg.”²¹⁰²
1696. Dr Seidler opined that as a result of her childhood experiences, “Ms Folbigg described growing up to believe she should be seen and not heard, in addition to believing that she was unwanted and unloved.” Dr Seidler stated “Ms Folbigg described the onset of dissociation in childhood, such that she learned to disconnect from feelings that were painful or overwhelming in order to cope with her experiences.”²¹⁰³
1697. Dr Seidler stated that Ms Folbigg spoke about her children fondly and reflectively and also impressed as someone with insight and reflective capacity. She stated there was “no evidence of anger, aggression, violence or dyscontrol in Ms Folbigg’s history nor any evidence of distortion in Ms Folbigg’s thinking about her children or about her experience of parenting that raises concern... about vengeful, angry and hateful thinking about her children... that would raise concern about the potential for lethal violence.”²¹⁰⁴
1698. Dr Seidler stated that in sum, “Ms Folbigg’s account is of someone who has experienced profound and significant trauma over multiple occasions and in such a way that is uncommon to say the least”.²¹⁰⁵ Dr Seidler stated that given Ms Folbigg’s reported experiences, in addition to her account of how these traumas impacted on her, her symptom experience and functioning is coherent, cogent, and consistent.
1699. Dr Seidler stated that interviewing Ms Folbigg solidified her opinion that “Ms Folbigg is a survivor of profound trauma that has had a serious impact on the developmental trajectory, including Ms Folbigg’s mental health, the formation of her personality, and her underlying ability to cope emotionally and to function in relationships.” Dr Seidler stated there was no doubt that Ms Folbigg responded to the deaths of her children “in ways that most people would find difficult to understand.” She stated, however, that it was her opinion that “these behaviours can be explained by her trauma history, her mental health and most particularly, her experiences of dissociative episodes and symptomatology.”²¹⁰⁶
1700. Dr Seidler also made certain comments about the conduct of the trial. These seem to be outside her area of expertise, and I have not taken them into account.

The experts who did give evidence at the Inquiry

1701. As I have indicated, two psychiatrists, Dr Kerri Eagle and Dr Yumna Dhansay,

²¹⁰² Exhibit 30-03, Report of Dr Katie Seidler (26 October 2022) [red pagination 68-69].

²¹⁰³ Exhibit 30-03, Report of Dr Katie Seidler (26 October 2022) [red pagination 69].

²¹⁰⁴ Exhibit 30-03, Report of Dr Katie Seidler (26 October 2022) [red pagination 70].

²¹⁰⁵ Exhibit 30-01, Report of Dr Katie Seidler (23 February 2022) [red pagination 70].

²¹⁰⁶ Exhibit 30-03, Report of Dr Katie Seidler (26 October 2022) [red pagination 71-72].

provided reports at the request of the Inquiry and gave oral evidence at the hearing. Mr Patrick Sheehan, psychologist, also provided a report and gave oral evidence.

1702. None of these experts had the opportunity of interviewing Ms Folbigg and placed reliance on reports of those who had interviewed her. No suggestion was made by anyone who appeared at the Inquiry that it was inappropriate for the reports to be given in those circumstances.

Dr Kerri Eagle

a. Dr Kerri Eagle's Report dated 10 January 2023

1703. Dr Eagle is a Consultant Forensic Psychiatrist. She is the Clinical Director of the Community Forensic Mental Health Service and conducts private practice in Sydney. She is a Fellow of the Royal Australian and New Zealand College of Psychiatrists. She is a Former Chair of the NSW Forensic Subcommittee for the Royal Australian and New Zealand College of Psychiatrists and a Former Member of that body's Clinical Governance and Risk Committee.²¹⁰⁷
1704. For the purpose of preparing her report,²¹⁰⁸ Dr Eagle was provided (inter alia) with the reports of all the psychiatric and psychological experts who gave evidence at the sentencing proceedings, as well as the report of Dr Diamond, who gave evidence at the 2019 Inquiry (see [1631]-[1635] above).
1705. In addition, Dr Eagle was provided with records of interview conducted by Dr Touma with Ms Folbigg, video recordings of portions of Ms Folbigg's ERISP, and an edited transcript of that interview.
1706. Dr Eagle also noted that the three experts who gave evidence in this area before the Inquiry, Dr Dhansay, Mr Sheehan, and herself, were invited to collaborate or consult with each other. She stated in that context, she attended a teleconference with Mr Sheehan on 16 December 2022 for the purpose of sharing preliminary views. She also stated that Dr Dhansay undertook a comprehensive literature review of the perinatal literature and shared 28 peer reviewed articles she had identified as relevant to the topic. Dr Eagle stated she had also conducted a search of peer reviewed literature and did not identify any further significant articles that would have bearing on the relevant topics. She also stated that on 3 January 2023, Dr Dhansay, Mr Sheehan and herself attended an audio-visual link (AVL) conference during which they discussed in general terms their diagnostic formulation/impressions, their opinions in relation to the issues in question and any gaps or areas of significant difference in their opinions.²¹⁰⁹
1707. Dr Eagle said at the outset of her report, there were "inherent limitations in any retrospective psychiatric assessment of a person's presentation, mental state and the presence or absence of mental illness." She noted that Ms Folbigg had not agreed to a clinical assessment and that increases the limitations as the information available and relied upon is "not able to be placed into context by Ms Folbigg, and her mental state has not been personally observed." She stated the opinions in her report are "based on various sources of information, including

²¹⁰⁷ Exhibit 20-02, Report of Dr Kerri Eagle including a table of articles referred to therein (dated 10 January 2023) [red pagination 75-76].

²¹⁰⁸ Exhibit 20-02, Report of Dr Kerri Eagle including a table of articles referred to therein (dated 10 January 2023) [red pagination 32-83].

²¹⁰⁹ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 33-34].

clinical reports, primary sources of information such as diary records, transcripts of evidence, a police interview, surveillance transcripts and medical records”, noting that information had been sourced in a different context and for different purposes. She also stated the documentation of clinical and personal information can also be influenced by several factors including “the context within which it was obtained, the interviewer’s own impressions, the organisation or prioritisation of information according to the purpose for which it was obtained and differences in expertise and perspective.”²¹¹⁰

1708. In dealing with Ms Folbigg’s psychiatric history, Dr Eagle referred to information Ms Folbigg had provided to Dr Giuffrida and to Dr Diamond which I have set out at [1616]-[1620] and [1631]-[1635] above. She also referred to Ms Folbigg’s Justice Health clinical records from 17 October 2011 to 9 June 2022.²¹¹¹
1709. Dr Eagle then summarised Ms Folbigg’s personal history,²¹¹² based again on what Ms Folbigg told Dr Diamond, in particular, but also Dr Westmore and Dr Giuffrida. The clinical history given by Dr Eagle is consistent with that given to the psychiatrists who had interviewed Ms Folbigg from the time of imprisonment up to the time Dr Eagle’s report was prepared.
1710. Dr Eagle also extensively reviewed the diaries and summarised various answers given by Ms Folbigg in the ERISP.
1711. Dr Eagle also summarised the various opinions of Ms Folbigg’s mental state expressed by those psychiatrists who had reviewed her including those who provided reports to the present Inquiry but did not give evidence.
1712. Dr Eagle also had regard to the evidence given by Ms Folbigg at the 2019 Inquiry, in respect of which she had the transcript and audio.
1713. In giving what Dr Eagle described as a “Diagnostic Formulation”, she stated that “Ms Folbigg appears to have had a major depressive disorder characterised by relapses of moderate to severe depressive episodes with likely onset from early adulthood or late adolescence”.²¹¹³ Dr Eagle noted that she had reported periods of low mood in the context of her diary entries. She noted that Ms Folbigg had described “discrete periods of severe mood disturbance to Dr Giuffrida that involved a pervasively depressed mood, themes of failure, guilt, shame and low self esteem in her thought processes, feelings of worthlessness, changes in weight and appetite, anhedonia, reduced energy and social withdrawal”.²¹¹⁴ Dr Eagle noted that Ms Folbigg had described discrete periods of severe mood disturbance to Dr Diamond involving, among other things, emotional detachment. She also referred to the fact that Ms Folbigg also described to Dr Touma periods of depression, in the context of grief for her children.²¹¹⁵
1714. Dr Eagle noted Ms Folbigg described and displayed signs and symptoms of maternal grief following the death of her children. She was reported to display emotional distress at the time of her children’s deaths and during their funerals.

²¹¹⁰ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 34].

²¹¹¹ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 36].

²¹¹² Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 37-41].

²¹¹³ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 65].

²¹¹⁴ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 65].

²¹¹⁵ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 65].

Dr Eagle stated that the “[g]rief and unbearable distress at the loss of her children can be observed during Ms Folbigg’s interview with police, during her evidence in the [2019] Inquiry, and during her clinical interviews with Dr Giuffrida, Dr Diamond, Dr Seidler, Dr Touma and Dr Betts.”²¹¹⁶ She noted that Ms Folbigg has reported “deliberately controlling/avoiding her feelings and attempting to function normally to distract herself from her distressing and unbearable emotions”.²¹¹⁷ Dr Eagle said Ms Folbigg had “typical cognitions, evident in her diary entries and in her account of her thought processes, described by grieving parents including feelings of self blame, excessive guilt, low self worth, preoccupation with the circumstances of the children’s death and trying to find meaning, emotional numbness and avoidance of reminders”.²¹¹⁸ She noted that Ms Folbigg has also displayed feeling detached from others, and had difficulties with trust.²¹¹⁹

1715. Dr Eagle noted that Ms Folbigg has been diagnosed with complex post-traumatic stress disorder (PTSD). She stated that complex PTSD was a relatively recent condition that is described in persons who have experienced prolonged and repeated trauma. She stated the diagnosis is not included in the fifth revision of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) but was included in the 11th revision of the International Classification of Diseases (ICD-11).²¹²⁰ Dr Eagle stated “complex PTSD recognises the potential for more persistent and pervasive impacts from repeated exposure to trauma.”²¹²¹
1716. Dr Eagle stated Ms Folbigg would not, in her view, satisfy criteria for a borderline, antisocial or other personality disorder on the information available. She noted Ms Folbigg was able to engage in appropriate interpersonal interactions with others and has not engaged in repeated behaviours over her lifetime that show a disregard for the law or social norms.²¹²²
1717. Dr Eagle expressed the view that Ms Folbigg’s diaries reflect, from a psychiatric perspective, “the unstructured internal dialogue of a mother that is consistent with a process of maternal grief, depression and also some of the typical cognitions associated with motherhood.” She stated the cognitions demonstrated in the diaries include guilt, shame, and responsibility for her children’s deaths; feeling a “terrible” and “cruel” mother; being a “failure”; feeling “frustrated”, “short-tempered” and angry; attempting to find meaning and significance from her children’s deaths and difficulties with trust. She stated all of these are consistent with the literature and typical of the psychiatric understanding of maternal grief. Dr Eagle stated that noting that admissions are ultimately a question of fact, in her opinion “there is nothing contained in the diaries from a psychiatric perspective that would clearly indicate, in of itself, an admission, including an admission by Ms Folbigg as to harming her children.”²¹²³
1718. Dr Eagle dealt with the question of whether she was able to express her opinions without an interview with Ms Folbigg. She stated that it was “always preferable, from

²¹¹⁶ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 65].

²¹¹⁷ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 65].

²¹¹⁸ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 65].

²¹¹⁹ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 65].

²¹²⁰ World Health Organization, International statistical classification of diseases and related health problems (11th ed.) (Web Page, 2019) <<https://icd.who.int/>>.

²¹²¹ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 66].

²¹²² Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 67].

²¹²³ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 67].

a psychiatric perspective, to have the opportunity to conduct a clinical assessment in any psychiatric evaluation” as it “provides an opportunity to personally observe an individual’s presentation, communication, affect, cognition and functioning.” She stated that nonetheless, Ms Folbigg had been interviewed by a number of different professionals over several years and “there are consistent themes that can be identified.” She stated that the audio recordings of Ms Folbigg’s sessions with Dr Touma provided “valuable insights into her mental state, even in the absence of video.” She also stated that even if Ms Folbigg did participate in a clinical evaluation, there would remain limitations in her ability to recall events and symptoms that occurred almost two decades ago. She said, subject to those limitations, she is able to provide an answer to the questions asked of her. She said the information she relied on was predominantly the psychiatric and psychological reports, the diary entries, the ERISP and Ms Folbigg’s answers in examination and cross-examination during the 2019 Inquiry.²¹²⁴

1719. Dr Eagle described Ms Folbigg’s presentation as “complex.” She noted Ms Folbigg appeared to be clearly experiencing grief and bereavement following the death of each of her children. She said that is reflected in Ms Folbigg’s diary entries, her description of her thought processes during the ERISP, her evidence during the 2019 Inquiry and in the account of her mental state at the time provided to Dr Diamond and Dr Seidler. Dr Eagle noted that Ms Folbigg “described feeling that she was a failure as a mother”; “described feeling responsible for her children’s deaths”; “attempted to find meaning in her children’s deaths and drew on her spiritual beliefs”; “displayed harsh self criticism as a mother”; described herself as a “terrible” and “cruel” mother; and displayed “the excessive guilt typical in grief.” She said Ms Folbigg described periods of frustration, being short-tempered and angry. She said Ms Folbigg described and displayed “periods of intense distress, interspersed with a deliberate attempt to detach herself from unbearable emotions.” She said Ms Folbigg described feelings of loss of control during subsequent pregnancies and displayed interpersonal sensitivity in her relationships. She said Ms Folbigg described jealousy, and difficulties with trusting others.²¹²⁵
1720. Dr Eagle, in her report, made some comments on the nature of a diary, referring in particular to the reports of Associate Professor Stevenson and Dr Touma. I have referred to this evidence above at [1663]-[1669] and [1670]-[1684] and will not repeat it. However, Dr Eagle expressed the view that Ms Folbigg’s diaries appeared to have been used generally as a “coping mechanism for emotional distress throughout her life and in the context of her grief for her children, as a transitional object.” She stated it was well understood in psychiatry and psychology, particularly in the context of cognitive behaviour therapy, that “although thoughts influence feelings which can influence behaviours, thoughts are not facts and emotions are not intentions.” She stated that grief, depression, stressful situations, and negative emotional states can produce powerful cognitive distortions which do not reflect intentions, and are not based in fact. For instance, inappropriate and excessive guilt is a common and well understood symptom of grief, depression, anxiety and other mental health conditions but does not necessarily indicate wrongdoing.²¹²⁶
1721. Dr Eagle stated that the diary entries, in her view, “clearly reflected the process of grief and bereavement experienced by Ms Folbigg after the loss of her children.”

²¹²⁴ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 67-68].

²¹²⁵ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 69].

²¹²⁶ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 71].

She stated that “some of the features of postpartum adjustment that have found to be consistent with bereaved mothers and non-bereaved mothers in the literature include:²¹²⁷

- (1) inappropriate guilt/shame;²¹²⁸
- (2) excessive sense of responsibility;²¹²⁹
- (3) feeling like a terrible mother;²¹³⁰
- (4) low self worth/self esteem – feeling a failure;²¹³¹
- (5) powerless/loss of control;²¹³²
- (6) role confusion/anger;²¹³³
- (7) remaining connected to their child/finding meaning in their loss;²¹³⁴
- (8) positive thinking towards death/hope and solace;²¹³⁵
- (9) interpersonal sensitivity;²¹³⁶ and
- (10) dissociative experiences.²¹³⁷

1722. In that context, Dr Eagle reached the following conclusion:

Ms Folbigg’s diary entries need to be interpreted in light of her maternal grief and depressive cognitions. As discussed above, the diary entries reflect typical cognitions of a grieving mother experiencing periods of more severe depressive mood states. The themes that have been extracted from the diary entries, for the purpose of the police interview and [2019] Inquiry, need to be considered in the context of Ms Folbigg’s grief and depressive illness. When considered in that context, the cognitions and themes demonstrated by Ms Folbigg in her diaries including, for instance (but not limited to): guilt, shame and responsibility for her children’s deaths; feeling a “terrible” and “cruel” mother; being a “failure”; feeling “frustrated,” “short-tempered” and angry; feeling interpersonally sensitive and struggling with her relationships; jealousy; loss of control; loss self worth/ self esteem/self doubt; attempting to find meaning and significance from her children’s deaths; and difficulties with trust, it is apparent that these entries are consistent with the expected and documented thought processes of a person experiencing maternal grief and depressive symptoms. On that basis, from

²¹²⁷ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 71-72].

²¹²⁸ Exhibit 35-06, Patricia Wonch Hill et al, ‘The loss of self: The effect of miscarriage, stillbirth, and child death on maternal self-esteem’ (2017) 41(4) *Death Studies* 226- 235 [red pagination 80].

²¹²⁹ Exhibit 35-08, Georgia Constantinou, Sharon Varela and Beryl Buckby, ‘Reviewing the experiences of maternal guilt – the “Motherhood Myth” influence’ (2021) 42(4-6) *Health Care for Women International* 852-876.

²¹³⁰ Exhibit 35-14, Peter Barr and Joanne Cacciatore, ‘Problematic emotions and maternal grief’ [2007-2008] 56(4) *Omega* 331-348.

²¹³¹ Exhibit 35-06, Patricia Wonch Hill et al, ‘The loss of self: The effect of miscarriage, stillbirth, and child death on maternal self-esteem’ (2017) 41(4) *Death Studies* 226- 235.

²¹³² Exhibit 35-14, Peter Barr and Joanne Cacciatore, ‘Problematic emotions and maternal grief’ [2007-2008] 56(4) *Omega* 331-348.

²¹³³ Exhibit 35-15, Richard Goldstein et al, ‘The grief of mothers after the sudden unexpected death of their infants’ (2018) 141(5) *Pediatrics* 1-9.

²¹³⁴ Exhibit 35-10, Prachi Simran Vig et al, ‘Parental bereavement - the impact of death of neonates and children under 12 years on personhood of parents: a systematic scoping review’ (2021) 20(1) *BMC Palliative Care* 1-136 [red pagination 137].

²¹³⁵ Exhibit 35-10, Prachi Simran Vig et al, ‘Parental bereavement - the impact of death of neonates and children under 12 years on personhood of parents: a systematic scoping review’ (2021) 20(1) *BMC Palliative Care* 1-136 [red pagination 138].

²¹³⁶ Exhibit 35-04, Siobhan Murphy, Mark Shevlin and Ask Elklit, ‘Psychological consequences of pregnancy loss and infant death in a sample of bereaved parents’ (2014) 19(1) *Journal of Loss and Trauma: International Perspectives on Stress and Coping* 56-69 [red pagination 51].

²¹³⁷ Exhibit 35-04, Siobhan Murphy, Mark Shevlin and Ask Elklit, ‘Psychological consequences of pregnancy loss and infant death in a sample of bereaved parents’ (2014) 19(1) *Journal of Loss and Trauma: International Perspectives on Stress and Coping* 56-69 [red pagination 60].

a psychiatric perspective, any interpretation of the entries as reflecting admissions of guilt as to harming her children, would be highly unreliable.²¹³⁸

1723. Dr Eagle also stated that Dr Touma’s formulation of Ms Folbigg’s emotional coping style and Ms Folbigg’s presentation were consistent with her “experience and knowledge of the impact of repeated trauma.” Dr Eagle stated that unfortunately, “individuals who are emotionally detached, due to trauma or otherwise, can appear ‘emotionless’ and ‘cold’ when in fact their emotions are so unbearable, that they are unable to tolerate them.”²¹³⁹

b. Dr Eagle’s Evidence at the Inquiry

1724. Dr Eagle emphasised in her oral evidence that she did not get the opportunity to personally assess Ms Folbigg so she had to “rely on the individuals who did assess Ms Folbigg, and their documentation or account of that interview and, to some degree... their impressions of [Ms Folbigg’s] mental state.” She stated the “process” she undertook in reviewing the expert reports of psychiatrists and psychologists who had interviewed Ms Folbigg was to “look for the overriding consistencies between the experts about features of, for instance, [Ms Folbigg’s] descriptions and her mental state and how and to what extent they are consistent with [her] understanding of certain mental health conditions and experiences.” Dr Eagle stated beyond that, her opinions are her own.²¹⁴⁰
1725. Dr Eagle agreed that not conducting an interview had some impact on diagnostic formulation but to the extent a retrospective diagnosis was sought, there would be limitations on Ms Folbigg’s ability to express her mental state at the time she wrote the diaries. She stated it was “one of the factors that mitigates the absence of a diagnostic interview.” She said the other “mitigating effect” was the “psychiatric evidence and psychological evidence that was already available.” She described it as an “unusual amount of information”, although provided in a “specific context.” She said she was at least able to “hear and observe, at least in the police interview”, Ms Folbigg’s “mental state and the way she described her symptoms and her... account of her thoughts and processes at the time.”²¹⁴¹
1726. Dr Eagle was asked whether a foundational assumption in her report was that Ms Folbigg’s diary entries record or otherwise reflect her thought processes. She stated she did not believe it was as “straightforward as that.” She said “the diaries just reflect... a stream of consciousness type of thought, which may or may not be fragmented or unfragmented”, and which was influenced by Ms Folbigg’s “fluctuating emotional state at the time” and was “largely determined by what her subjective intention was at the time of writing it.”²¹⁴²
1727. Dr Eagle expressed the view that it was within her area of expertise to express an opinion as to whether Ms Folbigg does or does not have a mental health or psychiatric condition. She agreed it was within her area of expertise to express an opinion about the potential effect, in a causative sense, of her mental health conditions on the content of her diaries and whether the diary entries are consistent

²¹³⁸ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 72].

²¹³⁹ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 72-73].

²¹⁴⁰ Transcript of the 2022 Inquiry, 23 February 2023 T704.26-36 (Eagle).

²¹⁴¹ Transcript of the 2022 Inquiry, 23 February 2023 T704.38-705.14 (Eagle).

²¹⁴² Transcript of the 2022 Inquiry, 23 February 2023 T705.16-27 (Eagle).

or not with the features of the mental health conditions with which she diagnosed Ms Folbigg.²¹⁴³

1728. Dr Eagle was also asked whether she considered it was within her area of expertise to express a view as to whether the statements in the diaries would be reliable as admissions by Ms Folbigg as to having harmed her children. She said they were not, from a psychiatric perspective, at least, explaining that a psychiatrist is not able to give an expert opinion on what is a matter of fact but can “give information about the impact of someone’s mental state and mental health conditions, in terms of providing some insight as to whether something could reliably be interpreted one way or another as actual evidence of someone’s thought process at the time or someone’s intention or someone’s motive or whether someone did something”.²¹⁴⁴ She stated that was the “limit” of her expertise, noting that, “ultimately, it’s up to a Court to determine whether something is, as a matter of fact, an admission or not.”²¹⁴⁵
1729. Dr Eagle stated that her report was made with the knowledge of Ms Folbigg’s convictions, but the opinions expressed were not made with any assumption as to innocence or guilt.²¹⁴⁶
1730. Dr Eagle was asked to explain what she meant in the statement of her report that “any interpretation of the entries as reflecting admissions of guilt as to harming her children, would be highly unreliable”²¹⁴⁷ (see [1722] above). She stated that what she meant is that “from a psychiatric perspective, the nature of Ms Folbigg’s diaries in and of themselves were unreliable as a reflection of any motivation or intention, because of the purpose for which they were written, the way in which they were written, [and] the fact that they were influenced heavily by her emotional state.” She stated that in addition to that, in her opinion, Ms Folbigg “was experiencing a number of mental health conditions that would have been operating on her mental state.” She stated that Ms Folbigg was “experiencing maternal grief following the loss of her children, and we know that there are certain cognitive distortions, common feelings and common emotions that are associated with maternal grief that can influence a person’s perspective of what may or may not have happened and how they may or may not have been responsible”.²¹⁴⁸
1731. Dr Eagle stated that “a diary, in and of itself, is written for a number of subjective potential purposes.” She stated that diaries are “generally written for the purpose of... [recording] someone’s thoughts or emotions, or as a therapeutic tool to cope with stress.” She stated that “[i]n Ms Folbigg’s case, she has given evidence that they were written for the purpose of recording her emotions as a coping mechanism, and they certainly appear to be, given their presentation as a sort of fragmented and disorganised contemporaneous account over time, to have been used as a way of just recording fluctuating emotional states rather than any specific sort of fact or chronological organised account.”²¹⁴⁹

²¹⁴³ Transcript of the 2022 Inquiry, 23 February 2023 T706.18-32 (Eagle).

²¹⁴⁴ Transcript of the 2022 Inquiry, 23 February 2023 T706.49-T707.10 (Eagle).

²¹⁴⁵ Transcript of the 2022 Inquiry, 23 February 2023 T706.44-707.12 (Eagle).

²¹⁴⁶ Transcript of the 2022 Inquiry, 23 February 2023 T707.14-22 (Eagle).

²¹⁴⁷ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 72].

²¹⁴⁸ Transcript of the 2022 Inquiry, 23 February 2023 T707.42-708.4 (Eagle).

²¹⁴⁹ Transcript of the 2022 Inquiry, 23 February 2023 T708.9-19 (Eagle).

1732. Dr Eagle agreed that grief may be experienced whether a child died of natural causes or whether the parent played an active role in their death.²¹⁵⁰
1733. Dr Eagle was referred to Mr Sheehan's comment in his report that "Ms Folbigg appeared to be functioning in the community prior to her arrest, and these are the domains by which the degree of impact of disorders, such as depression, are often measured." Dr Eagle responded that she thought there was evidence that Ms Folbigg "wasn't functioning for periods of time." She noted that Ms Folbigg was described as "socially isolating" and described as "gaining weight, being pervasively depressed, and her thought processes in her diary reflected those emotional states to a large degree." She said she thought Ms Folbigg had "periods of depression following the death of her children" but seemed to recover "for periods of time... where she felt things were going well", pointing in particular to the "death of her third child and the birth of her fourth child."²¹⁵¹
1734. Dr Eagle agreed that the emotional thought or feeling that Ms Folbigg was a failure as a mother was a symptom of grief and bereavement, as was feeling responsible for her children's death. She also agreed that periods of frustration, short-temper and anger is also a symptom of grief and bereavement, as was intense distress and detachment from unbearable emotions, feelings of loss of control, jealousy and difficulty trusting others.²¹⁵²
1735. Dr Eagle confirmed that, as stated in her report, it was her experience that "individuals who are emotionally detached due to trauma can appear 'emotionless' and 'cold' when, in fact, their emotions are so unbearable they are unable to tolerate them."²¹⁵³ She stated she expressed this view based on her clinical and forensic experience. She stated that "mental health clinicians and lots of individuals, family members, friends... can often misinterpret somebody who controls their emotions, because they are unable to bear to express them, and it's a defence mechanism to control the emotions as opposed to display them." She stated it was a "well recognised emotional coping mechanism and it is particularly the case when people have experienced trauma, because they have less ability to tolerate emotional responses, but, unfortunately... in some cases, [such people] can appear cold" and as though they are not "experiencing the emotions, but, in fact, they are definitely experiencing those emotions... [t]hey just can't bear to express them in a normal way."²¹⁵⁴
1736. Dr Eagle was referred to the opinion of Dr Westmore to the effect that, "individuals who are over controlled may be prone to episodes of extreme angry outbursts"²¹⁵⁵ and that it was "possible Ms Folbigg has personality characteristics of this type"²¹⁵⁶ (see [1623] above). Dr Eagle stated she would not make that link and pointed out that Dr Westmore's report was written "for the purposes of sentencing on the assumption that [Ms Folbigg] had been convicted and was guilty." Dr Eagle said the association was not one that she had "known to be considered significant."²¹⁵⁷

²¹⁵⁰ Transcript of the 2022 Inquiry, 23 February 2023 T709.16-18 (Eagle).

²¹⁵¹ Transcript of the 2022 Inquiry, 23 February 2023 T711.8-26 (Eagle).

²¹⁵² Transcript of the 2022 Inquiry, 23 February 2023 T717.3-24 (Eagle).

²¹⁵³ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 72-73].

²¹⁵⁴ Transcript of the 2022 Inquiry, 23 February 2023 T717.31-718.6 (Eagle).

²¹⁵⁵ Exhibit 2-BB, Report of Dr Bruce Westmore (16 June 2003) [red pagination 7591].

²¹⁵⁶ Exhibit 2-BB, Report of Dr Bruce Westmore (16 June 2003) [red pagination 7591].

²¹⁵⁷ Transcript of the 2022 Inquiry, 23 February 2023 T718.8-45 (Eagle).

1737. In examination by Senior Counsel for the Director of Public Prosecutions, Dr Eagle was referred to the fact that in Ms Folbigg's diaries, there was no musing along the lines of, "why are my children dying?" Dr Eagle stated that she was "not sure that was a natural line of questioning for someone writing in a diary necessarily." She stated she thought Ms Folbigg was "simply writing whatever emotions she was experiencing at the time." She stated she did not think she could interpret the reason Ms Folbigg was not questioning the cause of the children's deaths was because she knew how they died. She stated she did not think these matters were for "psychiatric expertise to be honest", because she thought what she could take from the diaries is the "expression of emotions that are very consistent with someone who's grieving."²¹⁵⁸
1738. Dr Eagle was referred to the diary entry of 25 October 1997:
- Looking at the video, Sarah was boyish looking. Laura has definite feminine features. They are chalk & cheese. And truthfully just as well. Wouldn't of handled another one like Sarah. She saved her life by being different.²¹⁵⁹
1739. Dr Eagle was asked what her interpretation of that passage was. She stated it was "hard" for her "to interpret anything written in a diary like that." She stated that, "from a psychiatric perspective", Ms Folbigg "is enjoying having a living baby who she is relishing in terms of her features and her relationship with her." She said that there was "nothing in that [statement] that necessarily suggests from a psychiatric perspective that it could be a motivation or an intention or a reflection of something that would have happened."²¹⁶⁰
1740. Dr Eagle was asked by me specifically about the words "She saved her life by being different." She agreed that it "could be interpreted in a number of different ways" but there was "nothing specific" in it. Dr Eagle noted that Ms Folbigg did "speak, at times, of having a spiritual belief that the children were taken from her." She said she "didn't think you [could]... interpret that, at least from [her] expertise, as suggesting that she had done something to harm the child, but that's beyond otherwise the extent of [her] expertise." She stated that she did not "believe you could necessarily literally interpret what somebody writes in a diary for their own emotional purposes... without understanding the context of why she wrote that... [and] necessarily believe that that means that [Ms Folbigg] did something."²¹⁶¹
1741. Senior Counsel for the Director of Public Prosecutions then referred Dr Eagle to the statement made by Ms Folbigg to police during her ERISP that she disposed of all her diaries the previous Mother's Day, a statement she made prior to being informed that her house would be searched by police later that day. Dr Eagle was also referred to the fact that upon being informed of the search warrant, Ms Folbigg said "I've just started a new diary and it's up at the house." Dr Eagle was also referred to the fact that a further diary was discovered during the execution of the search warrant and the transcript of a listening recording device which recorded, "Noises consistent with Ms Folbigg entering the bedroom, appearing to open a cupboard or drawer causing a loud noise" and that Ms Folbigg was recorded saying,

²¹⁵⁸ Transcript of the 2022 Inquiry, 23 February 2023 T721.15-43 (Eagle).

²¹⁵⁹ Exhibit 2-AZ, Diaries tender bundle [red pagination 7138].

²¹⁶⁰ Transcript of the 2022 Inquiry, 23 February 2023 T722.3-21 (Eagle).

²¹⁶¹ Transcript of the 2022 Inquiry, 23 February 2023 T722.11-50 (Eagle).

“I should have fucking done what I was gunna do, stuck it underneath that” (see [887] above).²¹⁶²

1742. Dr Eagle said the interpretation of that remark is “not a matter for psychiatric evidence.” However, the “context” she took away from it was that Ms Folbigg:

...was in a police interview where they were asking her [whether]... she was potentially involved in the death of her children. That interview had occurred because of a report of a diary. She would have been aware that in the diary she would not have been portrayed well, given that they were full of uncensored emotional states and feelings, and feelings of responsibility and self-hatred as a mother, and she’s decided she doesn’t want anyone else to read those diaries because it would make her look even worse...

1743. However, Dr Eagle agreed that, consistent with her position throughout her evidence, it was not within her expertise to comment on whether or not Ms Folbigg’s conduct during that sequence of events can be interpreted to reflect a consciousness of guilt.²¹⁶³

Dr Yumna Dhansay

1744. Dr Dhansay is a Forensic Psychiatrist and Perinatal Psychiatrist. She completed her undergraduate medical degree at the University of Cape Town in 1995 and following her postgraduate training became a Fellow of the South African College of Psychiatrists. She was awarded a Masters Degree in Child and Adolescence Psychiatry from the University of Cape Town in 2012. She was awarded specialist psychiatric qualifications from the Royal Australian and New Zealand College of Psychiatrists in 2013. Dr Dhansay holds a special interest in women’s mental health, including, infertility, pregnancy and infant loss, adjustments to parenting and issues relating to perinatal and peri-menopausal periods. She was, at the time of preparing her report, a Visiting Psychiatrist at the Karitane Residential Unit where she assessed and treated mothers admitted for problems relating to adjustment to parenting. She is a conjoint lecturer with the Faculty of Medicine, School of Psychiatry at the University of New South Wales.²¹⁶⁴

a. Dr Dhansay’s Report of 13 January 2023

1745. Dr Dhansay stated she had been asked to “prepare a report in relation to Ms Folbigg’s mental state at the time she wrote in the diaries.” She stated she was specifically asked “if Ms Folbigg was suffering from a diagnosable psychiatric illness or any other mental health concern at the time, or if any aspect of her mental health could shed light on the content of her diaries.”²¹⁶⁵
1746. Dr Dhansay stated that whilst “an interview with Ms Folbigg may have afforded an opportunity to ask her about certain aspects of her mental state at the time of writing her diaries, it would rely upon her recollection of her thoughts, emotions and behaviour during a ten-year period more than two decades ago.” Dr Dhansay stated, “[f]urthermore, there are some aspects of the mental state examination that need to be directly observed and assessed, such as affect... speech, thought process, perception, cognition, insight and judgement.” In the circumstances, she “formed the opinion that interviewing Ms Folbigg would have limited utility in ascertaining

²¹⁶² Transcript of the 2022 Inquiry, 23 February 2023 T724.27-725.25 (Eagle).

²¹⁶³ Transcript of the 2022 Inquiry, 23 February 2023 T725.35-50 (Eagle).

²¹⁶⁴ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 58]

²¹⁶⁵ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 36].

her mental state during the period 1989-1999, and that her diaries would be more reflective of her mental state at the time as they provide a contemporaneous, personal account of her thoughts.”²¹⁶⁶

1747. Dr Dhansay stated that the sources of information she most relied upon in relation to Ms Folbigg’s personal history were the reports of Dr Skinner, Dr Westmore, and Dr Giuffrida prepared for Ms Folbigg’s sentencing hearing (see [1625]-[1626], [1621]-[1624] and [1616]-[1620] above), the report of Dr Diamond for the 2019 Inquiry, the report of Dr Touma (including the audio recordings of his interviews with Ms Folbigg) and the report of Dr Katie Seidler dated 26 October 2022.²¹⁶⁷ In reliance on these reports, she set out Ms Folbigg’s personal history in a matter generally consistent with the summaries provided by other psychiatrists.²¹⁶⁸
1748. Dr Dhansay referred to the fact that “during her interview with Dr Seidler, Ms Folbigg stated she suspected that she had had depression since childhood, although [she] only recognised this in retrospect.”²¹⁶⁹ Dr Dhansay also noted that “during her interviews with Dr Giuffrida in 2003, Ms Folbigg reported that she had been suffering from recurrent episodes of depression and grief over the last 14 years.”²¹⁷⁰
1749. Dr Dhansay also noted that during Ms Folbigg’s interview with Dr Seidler, Ms Folbigg also spoke about her “episodes of depression which could last months during which she felt numb and disconnected and experienced a reduced sense of pleasure, lethargy, social withdrawal and overeating.” Dr Dhansay stated that those descriptions were “in keeping with features indicative of major depressive disorder.” She stated that “[a] diagnosis of major depressive disorder is made when five or more of the symptoms below have been present... during the same two-week period and represent a change from previous functioning.” She stated that “[a]t least one of the symptoms is either depressed mood or loss of interest or pleasure.”²¹⁷¹
- (a) “Depressed mood most of the day
 - (b) Markedly diminished interest or pleasure in all, or almost all, activities most of the day, [n]early every day
 - (c) Significant weight loss when not dieting or weight gain
 - (d) Insomnia or hypersomnia nearly every day
 - (e) Psychomotor agitation or retardation nearly every day
 - (f) Fatigue or loss of energy nearly every day.
 - (g) Feelings of worthlessness or excessive or inappropriate guilt
 - (h) Diminished ability to think or concentrate, or indecisiveness,
 - (i) Recurrent thoughts of death, recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.”²¹⁷²
1750. Dr Dhansay noted there were diary entries in which Ms Folbigg’s writing is “in keeping with someone experiencing low mood/depression.” She referred, in that

²¹⁶⁶ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 36].

²¹⁶⁷ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 37].

²¹⁶⁸ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 37-45].

²¹⁶⁹ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 46].

²¹⁷⁰ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 46].

²¹⁷¹ American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders* (Washington DC, 5th ed, 2013).

²¹⁷² Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 47].

context, to the diary entries of 30 October 1996, 28 November 1997²¹⁷³ and 19 June 1999 (Annexure 3, p 97, 287 and 289).²¹⁷⁴

1751. Dr Dhansay also noted that “[d]uring her interviews with Dr Seidler, Ms Folbigg also described symptoms of anxiety” and also “described herself as someone who tended to analyse and overthink things.” She stated that “[t]hese symptoms may be indicative of an anxiety disorder.” She noted, however, that it was “unclear if Ms Folbigg experienced significant symptoms of anxiety during the period in question.”²¹⁷⁵
1752. Dr Dhansay stated that “Ms Folbigg did not endorse any symptoms of post-traumatic stress disorder (PTSD)... and by definition, she did not therefore meet criteria for the diagnosis of complex PTSD.”²¹⁷⁶
1753. However, Dr Dhansay stated that according to the ICD-11²¹⁷⁷, “complex PTSD is a disorder most frequently seen in those with a history of significant and prolonged or repetitive exposure to severe trauma during childhood.” She stated that “[t]o fulfil the criteria of complex PTSD, the individual must have had exposure to trauma as described above, meet the diagnostic requirements for PTSD... and, meet the following diagnostic criteria:
- (a) “Severe and pervasive problems in affect regulation, for example, heightened emotional reactivity, dissociative symptoms when under stress, reckless or self-destructive behaviour, and emotional numbing, particularly the inability to experience pleasure or positive emotions
 - (b) Persistent beliefs about oneself as diminished, defeated or worthless, accompanied by feelings of shame, guilt or failure related to the traumatic event
 - (c) Persistent difficulty in sustaining relationships and in feeling close to others.”²¹⁷⁸
1754. Dr Dhansay stated that “[w]hile Ms Folbigg has features of complex PTSD... she does not fulfil the requirements for diagnosis according to the ICD-11.”²¹⁷⁹
1755. Dr Dhansay said, “[b]ased on the content of Ms Folbigg’s diary entries, [Dr Dhansay did] not believe that [Ms Folbigg] suffered from a psychotic illness when she wrote in them.” She said, that is because Ms Folbigg’s writing is “clear, logical and goal directed.” She stated that “[g]iven the charges for which Ms Folbigg was convicted, the diagnosis of personality disorder, specifically antisocial and/or borderline personality disorder, should be considered.”²¹⁸⁰ She stated, however, that “Ms Folbigg had no criminal history until being charged with the murders and manslaughter of her children and prior to that, her only contact with the criminal justice system had been in the context of two stealing charges at the age of 15.” She stated Ms Folbigg did not “therefore fulfil criteria for antisocial personality disorder.”²¹⁸¹

²¹⁷³ Exhibit 2-AZ, Diaries tender bundle [red pagination 7147-7148].

²¹⁷⁴ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 47-48].

²¹⁷⁵ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 48].

²¹⁷⁶ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 48].

²¹⁷⁷ World Health Organization, International statistical classification of diseases and related health problems (11th ed.) (Web Page, 2019) <<https://icd.who.int/>>.

²¹⁷⁸ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 48-49].

²¹⁷⁹ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 49].

²¹⁸⁰ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 49].

²¹⁸¹ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 50].

1756. Dr Dhansay stated that, in summary, she believed that “Ms Folbigg suffered from low mood throughout most of the period in which she wrote in her diaries and would most likely have fulfilled the criteria for the diagnosis of persistent depressive disorder.” However, she stated that there were certain periods during which Ms Folbigg’s “low mood was more intense and pervasive and associated with symptoms such as insomnia, low energy, changes in appetite, lack of motivation, and loss of pleasure in activities.” She stated “[t]hese periods represented episodes of major depressive disorder”, stating that “one such episode was after the death of Laura.”²¹⁸²
1757. Dr Dhansay stated that “[a]fter Caleb’s birth, Ms Folbigg would have been transitioning into her role as a mother (matrescence) and likely adjusting to the demands of being a new parent” (For discussion of “matrescence”, see [1770] below). She stated that “given the insecure attachment Ms Folbigg had with both her biological and foster mothers, the less-than-ideal parenting she received... and her poor sense of self and low self-esteem, it was likely that she would have struggled with maternal adjustment, particularly given her reluctance to ask for help, her relatively young age and the fact that most of the parenting duties were her responsibility. The re-experiencing of her own childhood, in the context of becoming a mother herself, may also have triggered emotions related to her childhood trauma.”²¹⁸³
1758. Dr Dhansay stated that “[a]fter each of her children’s death, Ms Folbigg experienced periods of grief.” She noted Ms Folbigg “told Dr Seidler that Patrick’s death ‘shattered’ and ‘absolutely broke’ her.” She said that after Sarah’s death, Ms Folbigg “described walking around ‘like a robot’ for about a month.” Dr Dhansay stated that given Ms Folbigg’s “experience of losing multiple children, the sudden occurrence of the deaths and her history of depression, it is possible that Ms Folbigg developed prolonged grief disorder with the duration and/or severity of her bereavement lasting several years.”²¹⁸⁴
1759. Dr Dhansay stated that “Ms Folbigg’s mental health provides context to what is written in her diaries” and that the available diagnoses include “major depressive disorder, persistent mood disorder, personality vulnerabilities as a result of insecure attachment and exposure to severe childhood trauma, adjustment to motherhood and grief.” She said these features could be recognised in Ms Folbigg’s writing. She noted that Ms Folbigg’s “poor sense of self repeatedly caused her to question her competence as a mother and a wife, and is likely to have contributed to her thinking that perhaps her perceived inadequacy as a mother had somehow contributed to her children’s death.” Dr Dhansay stated Ms Folbigg’s “low self-esteem leads to her pre-occupation with losing weight, her belief that she is unattractive when she gains weight and her concerns about her husband’s interest in other women.” She said Ms Folbigg’s “sense of insecurity and fear of abandonment that her husband was going to leave her would be reflected in the diaries. Dr Dhansay also stated that Ms Folbigg’s “self-blame and guilt regarding the children’s deaths, simply because she had experienced frustration with them” and “her belief that she was a bad mother, simply because she was tired and/or frustrated”, was common during periods of parental adjustment, and are also features of those disorders.”²¹⁸⁵

²¹⁸² Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 50].

²¹⁸³ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 51-53].

²¹⁸⁴ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 53].

²¹⁸⁵ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 55].

1760. Dr Dhansay stated that Ms Folbigg's diaries are, to a large degree, written with little emotion. Dr Dhansay said, "[a]s such, it may be assumed that Ms Folbigg did not experience much emotion or attach much significance to certain events that one may expect to have been more emotionally laden". However, Dr Dhansay stated that "Ms Folbigg's mental health diagnoses, and her own account that she often felt detached and had a lifelong need to hide her feelings, indicates that the absence of emotion in her diaries is likely to represent a coping mechanism (compartmentalisation of emotions) which she developed in response to early trauma." She also stated that "the absence of emotion is also noteworthy since it would be expected that if Ms Folbigg murdered her children as a result of having lost control or being in a state of exasperation/frustration, there would have been some expression of more intense emotion, such as anger, in her diaries."²¹⁸⁶
1761. Dr Dhansay concluded that, "[o]verall, taking Ms Folbigg's mental health presentation into account, the content of her diaries should be interpreted as having been written by a grieving mother who had suffered significant (and repeated) losses in the context of adjustment to parenting, grief, limited social support...and discord, and on a background of significant disrupted attachments and a history of numerous adverse childhood experiences and a fragmented sense of self." Dr Dhansay stated that if interpreted as suggested above, she did "not believe that Ms Folbigg's diaries contain any admission of guilt as to harming her children."²¹⁸⁷

b. Dr Dhansay's Evidence at the Inquiry

1762. Dr Dhansay agreed that in preparing her report she consulted with Dr Eagle and Mr Sheehan. She stated she conducted a literature review of perinatal literature, shared 28 peer reviewed articles with Dr Eagle and Mr Sheehan, and participated in a conference with them on 3 January 2023. She stated that was the extent of the consultation she had with them. Dr Dhansay was asked to what extent the reports of other expert psychologist and psychiatrists who interviewed Ms Folbigg informed or affected her opinions. She stated that she "used all of that information to compile" her report, "but there were certain aspects... that carried more weight... and those would be the ones... specifically where experts had interviewed Ms Folbigg directly." She stated, however, that she "obviously read their opinions" but did not "really take that into account in forming [her] own opinion at the end."²¹⁸⁸
1763. In relation to her inability to interview Ms Folbigg, Dr Dhansay stated that she "wouldn't say it's no disadvantage at all" but that she was still able to do what she was asked to do without interviewing her. She stated that an interview would have had "limited utility", given that "so much time has passed", and Ms Folbigg "might not remember exactly... what she was feeling or thinking at the time."²¹⁸⁹
1764. Dr Dhansay agreed that she made her diagnoses without making any assumption as to Ms Folbigg's innocence or guilt. She affirmed that the matters on which she gave evidence were matters on which, as a result of her expertise, she was able to express an opinion.²¹⁹⁰
1765. Dr Dhansay was referred to Ms Folbigg's evidence at the 2019 Inquiry that she used

²¹⁸⁶ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 56].

²¹⁸⁷ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) [red pagination 56].

²¹⁸⁸ Transcript of the 2022 Inquiry, 24 February 2023 T747. 5-748.8 (Dhansay).

²¹⁸⁹ Transcript of the 2022 Inquiry, 24 February 2023 T748.14-24 (Dhansay).

²¹⁹⁰ Transcript of the 2022 Inquiry, 24 February 2023 T748.31-44 (Dhansay).

her diaries to record feelings which were negative. Dr Dhansay was asked whether if that assumption was correct, it was true that the diary entries were not necessarily reflective of a full spectrum of Ms Folbigg's feelings or emotions. She agreed that was the case, stating on the assumption that Ms Folbigg would not "have written all her feelings or all her thoughts down in the diary", it could be inferred that "there might have been other things that she might be feeling or thinking and that her mental state would influence her... her thoughts and her feelings and therefore the writing in the diary."²¹⁹¹

1766. Dr Dhansay agreed that the descriptions given by Ms Folbigg to Dr Seidler were indicative of a major depressive disorder. She stated she did not diagnose Ms Folbigg as having an anxiety disorder because she "didn't have enough information."²¹⁹²
1767. Dr Dhansay reaffirmed the view that Ms Folbigg did not fulfil the criteria for an anti-social personality disorder because her only significant contact with the criminal justice system was in respect of the charges for which she was convicted.²¹⁹³
1768. Dr Dhansay agreed that in the particular circumstances of Ms Folbigg, having regard to the deaths of the four children, it was not possible to determine what would be a normal grief reaction. She agreed, in those circumstances, it was not possible to diagnose Ms Folbigg with a persistent complex bereavement disorder. She acknowledged that she had changed her mind in this regard. She stated that was because of the formal criteria for such a diagnosis but she nevertheless considered Ms Folbigg suffered very similar symptoms.²¹⁹⁴
1769. Dr Dhansay agreed that Ms Folbigg could have experienced grief or prolonged maternal grief even if she had been responsible for or had played an active role in the deaths of her children.²¹⁹⁵
1770. Dr Dhansay was referred to the statements in her report that Ms Folbigg's self-blame, guilt and belief that she was a bad mother are consistent with adjustment to parenting or matrescence. She was asked whether the period of maternal adjustment, known as matrescence, would not have occurred with Sarah or Laura, because Ms Folbigg had already had the transition to motherhood. Dr Dhansay disagreed with that proposition, explaining that because the process of transition was interrupted with Caleb and then with Patrick, "the transition would still not have been complete." However, she agreed that there would have been a lesser influence of matrescence or adjustment to motherhood in respect of the time period after the birth of Laura and Sarah. She was asked, in those circumstances, when she engaged in her assessment of the diaries, whilst as time went on, she gave less weight to the possible impact of that adjustment to parenting and the conditions that are associated with it. Dr Dhansay agreed that that was appropriate. She emphasised that Ms Folbigg had more than one factor that was contributing to her cognitions, referring to the depression, attachment disorder, and the trauma history. Dr Dhansay stated that a lot of those "vulnerabilities" would "give a similar vulnerability as the matrescence."²¹⁹⁶

²¹⁹¹ Transcript of the 2022 Inquiry, 24 February 2023 T750.3-20 (Dhansay).

²¹⁹² Transcript of the 2022 Inquiry, 24 February 2023 T751.1-46 (Dhansay).

²¹⁹³ Transcript of the 2022 Inquiry, 24 February 2023 T752.46-753.10 (Dhansay).

²¹⁹⁴ Transcript of the 2022 Inquiry, 24 February 2023 T756.7-25 (Dhansay).

²¹⁹⁵ Transcript of the 2022 Inquiry, 24 February 2023 T757.34-37 (Dhansay).

²¹⁹⁶ Transcript of the 2022 Inquiry, 24 February 2023 T757.40-758.26 (Dhansay).

1771. Dr Dhansay agreed with the comments made by Dr Eagle that “individuals who are emotionally detached...can appear ‘emotionless’ or ‘cold’ when in fact their emotions are so unbearable, that they are unable to tolerate them.”²¹⁹⁷
1772. Dr Dhansay was referred to Mr Sheehan’s statement that he did not consider it untenable, or unavailable, to view the entries as admissions by Ms Folbigg of having played a role in causing the deaths. She agreed that her opinion to the contrary was somewhat more definitive than that of Mr Sheehan. Although she said she allowed for the possibility that the entries could be read in different ways, she said, however, that if Ms Folbigg was guilty, she thought there would be “something more implicating.” She stated she would have expected Ms Folbigg to be “grappling even more with guilt as a result of what she had done”, and there is “nothing like that there.”²¹⁹⁸
1773. In answer to questions from Senior Counsel for the Director of Public Prosecutions, Dr Dhansay agreed that she listened to the audio recording of the evidence given by Ms Folbigg in the 2019 Inquiry, the limited audio and video of the police interview and the recordings of the various interviews of Ms Folbigg by Dr Touma.²¹⁹⁹
1774. Dr Dhansay was asked whether she agreed that throughout all the diaries, there did not appear to be any entry by Ms Folbigg questioning why her children were dying, to which she replied: “I think so... yes.” She was asked from a psychiatric perspective what she thought of that absence. She said she might have expected such an enquiry, but she thought perhaps Ms Folbigg was “so avoidant” that she did not “want to go there” because it was “too painful, so she doesn’t go there.” She stated she thought Ms Folbigg had “an avoidant aspect to her personality”, stating, “it’s the same like when she dissociates.” However, Dr Dhansay stated she would not have been surprised if Ms Folbigg had written an enquiry about why her children were dying. She agreed it was possible that Ms Folbigg did not ask the question because she knew how they died.²²⁰⁰
1775. Dr Dhansay was directed to the diary entry of 28 January 1998 (Annexure 3, p 261) which contains, among other things, the following entry:
- I’ve done it. I lost it with her. I yelled at her so angrily that it scared her, she hasn’t stopped crying. Got so bad I nearly purposely dropped her on the floor & left her. I restrained enough to put her on the floor & walk away. Went to my room & left her to cry. Was gone probably only 5 mins but it seemed like a lifetime. I feel like the worst mother on this earth. Scared that she’ll leave me now. Like Sarah did. I knew I was short tempered & cruel sometimes to her & she left with a bit of help.²²⁰¹
1776. Dr Dhansay was asked about her interpretation of the words, “she left with a bit of help”²²⁰² and stated that she thought Ms Folbigg was “referring to God or some equivalent higher power.” She accepted there was an alternative explanation that Sarah left with a bit of help from Ms Folbigg. She was asked, in that context, if that was what Ms Folbigg meant, did she agree that that was the kind of entry that reflected the sort of guilt that Ms Folbigg would have had, had she murdered the children. Dr Dhansay did not agree, stating that she would be looking for something

²¹⁹⁷ Transcript of the 2022 Inquiry, 24 February 2023 T757.39-758.28 (Dhansay); referring to Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 73].

²¹⁹⁸ Transcript of the 2022 Inquiry, 24 February 2023 T759.17-44 (Dhansay).

²¹⁹⁹ Transcript of the 2022 Inquiry, 24 February 2023 T763.16-29 (Dhansay).

²²⁰⁰ Transcript of the 2022 Inquiry, 24 February 2023 T763.44-764.26 (Dhansay).

²²⁰¹ Exhibit 2-AZ, Diaries tender bundle [red pagination 7170].

²²⁰² Exhibit 2-AZ, Diaries tender bundle [red pagination 7170].

“more emotive” or “something extreme”, and that the diary entry was still written in “a sort of blandish way, like she’s just relating what’s happened”. She was asked whether the words were capable of being understood as potentially a sardonic and somewhat cold comment in circumstances where Ms Folbigg knew the reason Sarah left is because she helped her to leave. Dr Dhansay said it was “possible, but it’s just not the way that I read it.”²²⁰³

1777. Senior Counsel for the Director of Public Prosecutions asked Dr Dhansay whether she thought that if Ms Folbigg had been guilty of the crimes for which she was currently imprisoned, she would have tried to hide her diaries. Dr Dhansay stated she accepted Ms Folbigg may have hidden the diaries if she was guilty but “just because” she hid them “doesn’t mean she’s guilty.”²²⁰⁴
1778. Dr Dhansay was referred to the statement Ms Folbigg made in her interview to the effect that as of 23 July 1999, she had destroyed the diaries and her subsequent statement, after she knew that a search warrant was going to be executed at her home, that she had just started a new diary. She was also referred to the discovery of another diary on the execution of the search warrant and Ms Folbigg’s comment, “I didn’t know it was here. I thought it was gone.” Dr Dhansay was asked whether she agreed that the evidence showed that, having provided the police with the diary, consistent with her recent change of account, police had found another diary in a wardrobe which had not been volunteered by Ms Folbigg. Dr Dhansay was then referred to the comment recorded on the listening device “I should have fucking done what I was gunna do, stuck it underneath that.”²²⁰⁵
1779. Dr Dhansay was asked whether, in that context, she accepted the material showed Ms Folbigg lying about whether or not other diaries were in existence. Dr Dhansay agreed. She also agreed that Ms Folbigg appeared frustrated when the police found the diary that she tried to keep hidden. She also agreed that it could be interpreted to reflect Ms Folbigg’s consciousness of guilt.²²⁰⁶
1780. At the conclusion of her evidence, Dr Dhansay was asked, with reference to the diary entry of 28 January 1998, to which I have referred at [1775] above, whether it was possible that what Ms Folbigg was referring to was the belief that something had happened out of her control. Dr Dhansay agreed. She was also asked about her comment that, if Ms Folbigg had killed the children, she would have expected entries showing some sort of rage or frustration. She was asked whether that sort of expression of rage and frustration would be more likely to be contemporaneously with, or more or less contemporaneously with, the death of the particular child. She agreed that it would.²²⁰⁷
1781. In relation to the line “a bit of help” in the diary entry of 28 January 1998, Dr Dhansay was asked to what extent her answer was informed by what Ms Folbigg had said about it. Dr Dhansay stated she would agree with what Ms Folbigg had said but was not basing her decision on that. She said she had come to that conclusion based on her experience with seeing mums and clinical experience.²²⁰⁸

²²⁰³ Transcript of the 2022 Inquiry, 24 February 2023 T765.32-766.4-20 (Dhansay).

²²⁰⁴ Transcript of the 2022 Inquiry, 24 February 2023 T766.22-767.28 (Dhansay).

²²⁰⁵ Transcript of the 2022 Inquiry, 24 February 2023 T769.7-770.24 (Dhansay).

²²⁰⁶ Transcript of the 2022 Inquiry, 24 February 2023 T770.35-45 (Dhansay).

²²⁰⁷ Transcript of the 2022 Inquiry, 24 February 2023 T771.29-46 (Dhansay).

²²⁰⁸ Transcript of the 2022 Inquiry, 24 February 2023 T772.35-42 (Dhansay).

1782. Mr Sheehan is a Registered Psychologist, having first been registered in 1996. His practice has been predominantly in the field of forensic psychology. He has had some 15 years of experience in the custodial and community correction setting working for Corrective Services NSW and five years of experience as a Senior Specialist Psychologist within the High Risk Offender Review Group. Mr Sheehan provided a report to the Inquiry dated 6 January 2023.²²⁰⁹
1783. For the purpose of providing that report, Mr Sheehan was supplied with a great deal of material before the Inquiry (which was identical to that which was provided to Dr Eagle and Dr Dhansay, as outlined above at [1704]-[1705]). As noted above, Mr Sheehan also had the benefit of a video conference with Dr Eagle and Dr Dhansay during which the three experts shared their opinions and literature.²²¹⁰

a. Mr Sheehan's Report of 6 January 2023

1784. Mr Sheehan provided an executive summary of his report. In that executive summary he expressed the following view:

Ms Folbigg's personal history is well documented, pointing towards probable early trauma and certain inconsistency in care, associated with serious early childhood psychopathology and more enduring problems with insecure/ambivalent/avoidant attachment, complex trauma symptoms, negative identity and mood dysregulation. Ms Folbigg's psychopathology is two-edged, operating both as a possible risk factor for engaging in harm towards her children (as has been the main focus in the judgements against her), but also an alternative means of explaining her presentation and the diary entries that have been part of the case against her. The evidence from expert reports and literature review provides a viable alternative framework through which to view Ms Folbigg's writings and aspects of her presentation that were previously thought to imply confession or admission. This information introduces what I believe to be significant doubt to the prevailing interpretations of Ms Folbigg's diary. In my view, the totality of diary entries can be explained in ways that do not implicate her having murdered her children and I believe these benign interpretations to be more probable and plausible in considering the totality of evidence put before me.²²¹¹

1785. Mr Sheehan drew upon the various other reports provided to the Inquiry to set out a personal history of Ms Folbigg. He noted that there is a "recorded prior history of intrafamilial violence and strongly inferred history of abuse, but there would appear to be no clearly established facts with regard to maltreatment in infancy." He stated that the "known facts of Ms Folbigg's care during those important early years, involving unpredictable changes in carer arrangement and periods in institutional care, would also be sufficient to undermine stable identity and attachment, as referred to with some frequency in the abundant file material."²²¹²
1786. Mr Sheehan stated there had been "general consensus amongst assessing experts that Ms Folbigg had no history of psychotic mental illness." He noted that Ms Folbigg had expressed "odd mystical/superstitious beliefs surrounding her karma and the deaths of her children but these do not have the flavour of delusion and are more tied to her idiosyncratic way of coping and her negative self view." He stated, however, that "the evidence does point towards enduring problems with negative

²²⁰⁹ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) (red pagination 77).

²²¹⁰ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 41].

²²¹¹ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 41].

²²¹² Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 42].

affectivity and negativistic cognition.” He stated that was “reflected in Ms Folbigg’s diaries and her discourse on her life during various interviews” In which Ms Folbigg “notes her own low mood, feelings of loneliness and alienation, negative thinking and negative/unstable self image.” He stated there was “a sense that she is often trying to rally herself through motivational statements of intent.” He stated “[h]er disaffection has likely been influenced by the loss of her four children regardless of whether it is believed she played an active role in their deaths.” He stated it was important to understand that “although the manner of grief expression is embedded in sociocultural norms, there is no standard manner of coping with grief and there is a broad range of ways that people deal with loss.” Further, he stated that in his experience, that may involve “idiosyncratic spiritual/mystical beliefs, often serving the purpose of generating comfort or meaning, but at other times also to make sense of feelings of personal guilt.” In that context, he opined that there was “no clear diagnosis of prolonged grief disorder in Ms Folbigg’s case.”²²¹³

1787. In relation to the diagnosis of complex PTSD, Mr Sheehan stated that he was “often wary of assuming the presence of trauma as a means of explaining subsequent psychopathology.” However, he stated “in Ms Folbigg’s case the possibility of early childhood trauma is heavily inferred by the available reports of that time.” He stated that on balance it was his view that “it is most likely that Ms Folbigg did experience early childhood trauma that has impacted her development in enduring and fundamental ways that are not neatly captured in the standard PTSD diagnostic framework.” He said “the patterns of distancing, emotional numbing, detachment and dissociation are observable in Ms Folbigg’s diaries and in the aspects of her presentation that have drawn criticism of emotional callousness (such as her avoidance of normal grief expression, absence of musings pertaining to loss).” He stated the “four consecutive losses of her young children could also be rightly described as traumatic, a kind of re-traumatisation and consolidation of negative self image.” He stated that in his view, it was “not important that a diagnostic label be applied in order to recognise the role of Ms Folbigg’s early experiences in contributing to the methods of coping that have been identified as salient in her case.”²²¹⁴
1788. Mr Sheehan stated that in the cross-examination of Ms Folbigg at the 2019 Inquiry, her psychopathology would seem to have been presented as a factor going towards the likelihood of her murdering her children, but not equally explored or weighed as a possible alternative explanation for the nature of her diary entries or perceptions of her callousness. He stated that he saw this as a “deficiency in reasoning.”²²¹⁵
1789. Mr Sheehan’s criticism of the approach taken at the 2019 Inquiry, by either the Director of Public Prosecutions or the representatives of Mr Craig Folbigg, is not relevant to this Inquiry. Ultimately, it is a matter for me to assess the force of that cross-examination, having regard to the fact that evidence of the nature of that given by Dr Eagle, Dr Dhansay, and Mr Sheehan, was not before the 2019 Inquiry. The only psychiatric evidence admitted at that Inquiry was the somewhat limited evidence of Dr Diamond which I have summarised at [1631]-[1635] above.
1790. In the section of his report dealing with the relevance of the diary entries, Mr Sheehan noted that Ms Folbigg had given evidence that she had been in the practice of maintaining personal diaries since she was a teenager and had described her

²²¹³ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 48].

²²¹⁴ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 49-50].

²²¹⁵ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 50].

diaries to Dr Seidler as “a dumping ground” and “ranting books” that she would use as a safe alternative to sharing her thoughts with others.²²¹⁶

1791. Referring to the diaries tendered into evidence at the trial, Mr Sheehan noted that “the vast majority of the entries are benign, referring to mundane events, anticipating the birth of her children.” He noted that Ms Folbigg obsessed about her weight and diet, worried about money, expressed misgivings about her relationships and expressed self doubt and loneliness. He noted she “vacillates between statements of hopeless and hope.” He noted that “many of her entries [were] made late at night when she could not sleep.” He also referred to the fact there were a number of entries that were “seized upon” where she seems to express responsibility for the deaths of Caleb, Patrick and Sarah, referring to loss of control, having done “terrible things” due to stress implying that her mood played a role in the wellbeing of her children, and foreshadowing risk to Laura. He also noted she made a number of statements about her deceased children that sound cold and dismissive. He noted there was an absence of longing and pain in relation to the deceased children. He also stated that having read the diaries “it is clear that the entries thought to be admissions appear more significant when removed and listed, as opposed to being read within the full 175 pages of transcribed entries.”²²¹⁷
1792. Mr Sheehan stated it was his view that “the diary entries, particularly when isolated and listed, still have the potential to be interpreted as inferring that Ms Folbigg refers indirectly to having played a role in causing the death of her children.” He stated he did not believe that this interpretation was entirely untenable, and it was “one of the possible interpretations available.” However, he stated that “interpretation is not fact, but a deductive process resulting in a proposition.” He stated that he did not agree with the contention that this is the only “possible, likely or plain English explanation for the diary entries.” He stated that “[d]istorted levels of self blame, fragile/negative self image, trauma symptomology, and insecure attachment, are also plausible and realistic explanations for the diary entries”.²²¹⁸
1793. Mr Sheehan criticised how “the diary and mental health evidence” had been used at the trial and appeal which had “not adequately weighed the alternative interpretations and how Ms Folbigg’s background of trauma and attachment dysregulation may have manifested in her writings and presentation.” He stated that the peer reviewed journal articles and book extracts included in the brief to him “made a compelling case for contextualising Ms Folbigg’s reactions as normative, rather than distinguishing her reactions as aberrant and as evidence that she murdered her children.” He stated that, in his view, “it is more probable that the diary entries can be explained through a composite of psychological vulnerabilities and idiosyncratic beliefs surrounding the deaths of the children, as opposed to veiled admissions of multiple homicide.”²²¹⁹
1794. Mr Sheehan strayed towards what admittedly is a very fine line between interpreting the diary entries and demonstrating that, having regard to Ms Folbigg’s mental state, they are not reliable as admissions.
1795. Mr Sheehan also stated that the evidence from expert reports and literature review provides a viable alternative framework through which to view Ms Folbigg’s writings

²²¹⁶ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 60].

²²¹⁷ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 60-61].

²²¹⁸ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 69].

²²¹⁹ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 69].

and aspects of her presentation that were previously thought to imply confession. He stated the information introduces what he believed to be “significant doubt to the prevailing interpretations of Ms Folbigg’s diary.” He stated it was his view that “the totality of diary entries can be explained in ways that do not implicate her having murdered her children” and that he believed those benign interpretations “to be more probable and plausible in considering the totality of evidence put before [him].”²²²⁰

1796. Mr Sheehan stated that without personally interviewing Ms Folbigg, he was unable to form a current diagnosis.” However, he said “this would not seem to be a significant disadvantage for the purposes of the current proceedings, which are not focussed on Ms Folbigg’s contemporaneous mental state, but her functioning between 1989 and 1990 [sic]”. He said “[e]ven with interview, there are limitations as to the validity of such retrospective diagnoses.” Mr Sheehan stated that “[o]bviously the diary entries as a whole were necessary in forming [his] views.” He stated that “the historical material relating to Ms Folbigg’s early childhood influenced [his] views on how Ms Folbigg’s early experiences may have influenced her adult coping style.”²²²¹
1797. Mr Sheehan said he was unable to propose a clear diagnosis of postpartum depression or similar disorder. However, he said in his view it was “not important that a diagnostic label be applied to recognise the role of Ms Folbigg’s early experiences and later multiple bereavements in contributing to the methods of coping that have been identified as salient in her case.” He repeated that “her problems with variably low mood and negative self image are a recurring theme throughout the diaries.”²²²²
1798. Ultimately, Mr Sheehan stated that he “would propose that the statements of personal responsibility in relation to the death of her children can be viewed through the lens of grief and trauma.” He said that “[v]iewing the diary entries to indicate admissions of guilt is only one possible interpretation and, in [his] view, less probable given that the entries are more in keeping with a troubled person attempting to cope with and make sense of her unfortunate background and the death of her children.”²²²³

b. Mr Sheehan’s Evidence at the Inquiry

1799. Mr Sheehan was referred to the fact that the material with which he was briefed included a number of reports from psychologists and psychiatrists about Ms Folbigg, many of whom had interviewed her over the years. Counsel Assisting described the contents of those reports in two categories; first, accounts that Ms Folbigg may have given about events in her life or other primary documents to which those experts had access and, second, the views or opinions expressed by the authors of those reports. Mr Sheehan was asked to what extent the contents of those reports affect the content of his report. He stated it was “very difficult” for him to “pick apart exactly how it influenced” him but stated he found it “invaluable to read all those reports, both for the information related to interviews with Ms Folbigg... and also to understand how they arrived at their views and opinions.” He said, when he read through the material he formed his own views and then he looked to other experts to see how their views either accorded or differed from his own. He agreed

²²²⁰ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 70].

²²²¹ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 71].

²²²² Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 73].

²²²³ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 74].

that this approach also applied to the videoconference he had with Dr Eagle and Dr Dhansay shortly before he finalised his report.²²²⁴

1800. In answering the question whether there were any limitations to his report arising from his inability to interview Ms Folbigg, he stated it was always his preference to interview someone when he is writing a report concerning them. He said it “would have been helpful, but there is such an amount of literature over such a lot of other previous reports” that he did not “consider it a deal breaker in terms of being able to write a report.” He stated, irrespective of whether there was an interview or not, the limitations as to the validity of a retrospective diagnosis is that it is relying on memory, stating “the further you get from that time the less reliable it can become.”²²²⁵
1801. Mr Sheehan was referred to a statement by Ms Folbigg that she used the diaries to dump every negative emotion, feeling, or thought she ever had and not to record all joyous happenings²²²⁶ and to her evidence at the 2019 Inquiry when she agreed the purpose of her diaries was for her to vent her frustrations.²²²⁷ Mr Sheehan was asked that if that was true, and that the diaries may not be reflective of the full spectrum of Ms Folbigg’s feelings and emotions, how that affected how he used the diaries in formulating any diagnosis. He responded “that’s part of it” but he also understood that the diaries were incomplete in that what he examined was not a complete collection of her diaries in totality.²²²⁸
1802. Mr Sheehan was asked directly whether he considered it was within his area of expertise to express an opinion as to whether Ms Folbigg did or did not have a mental health condition in the period of 1989 to 1999. He stated he thought it was within his expertise insofar as the evidence allowed him to do so. He stated he was also in a position to comment upon how Ms Folbigg’s mental health issues might affect what’s written in the diaries. He agreed he was able to express an opinion on whether or not her diary entries are consistent with features of a mental health condition.²²²⁹
1803. Mr Sheehan was referred to his statement that “statements of personal responsibility in relation to the death of her children can be interpreted through the lens of grief and trauma.”²²³⁰ He was asked whether he accepted the question of whether the diary entries were admissions does not fall within his area of expertise and was a matter for the Inquirer. He stated he found it “difficult to separate the two”. He accepted admissions was one interpretation, but he did not think it was “the best fit in terms of how to interpret... the diary entries.”²²³¹
1804. Mr Sheehan was referred to his conclusion that the entries were more “in keeping with a troubled person attempting to cope with and make sense of her unfortunate background on the death of her children.”²²³² He agreed, in reaching that conclusion,

²²²⁴ Transcript of the 2022 Inquiry, 23 February 2023 T662.6-31 (Sheehan).

²²²⁵ Transcript of the 2022 Inquiry, 23 February 2023 T662.50-663.28 (Sheehan).

²²²⁶ Exhibit 31-07, Letter from Kathleen Folbigg to Tracy Chapman [red pagination 222].

²²²⁷ Exhibit 4, Transcript of the substantive hearing in the 2019 Inquiry, 1 May 2019 T789.34-37 (Folbigg).

²²²⁸ Transcript of the 2022 Inquiry, 23 February 2023 T662.4-20 (Sheehan).

²²²⁹ Transcript of the 2022 Inquiry, 23 February 2023 T664.4-49 (Sheehan).

²²³⁰ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 74].

²²³¹ Transcript of the 2022 Inquiry, 23 February 2023 T665.10-31 (Sheehan).

²²³² Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 74].

he not only took into account the contents of the diaries but the other material with which he had been supplied.²²³³

1805. Mr Sheehan was referred to the executive summary of his report (see [1784] above) in which he stated “Ms Folbigg’s psychopathology is two-edged, operating both as a possible risk factor for engaging in harm towards her children... but also an alternative means of explaining her presentation and the diary entries that have been part of the case against her.”²²³⁴ He was asked what it was about Ms Folbigg’s psychopathology that operates as a possible risk factor for engaging in harm towards her children. He said that in saying that, he was commenting on the material that he was given to read and comment on. He stated that “anyone with... trauma psychopathology, attachment problems, and all of the psychopathology that is mentioned” throughout the material he saw, are “more likely to engage in all manner of disordered behaviours and that can include aggression.” He agreed it could also include violence. However, he stated that it was a “massive stretch” to draw the link between Ms Folbigg’s psychopathology and engaging in harm towards the children. Particularly, “if you were to draw it strongly and say, yes, ergo she was more likely to have committed those offences.” He said he had “never seen such a link made in assessments that [he had] done in the past, because it is such a leap.” He stated he “just wanted to contextualise because in some of the reports it didn’t seem that that was made clear” and he wanted it to be made clear that he “understood this” in drawing his conclusions. He agreed that he wanted to be transparent in recognising the two-edged dimension to Ms Folbigg’s psychopathology.²²³⁵
1806. Mr Sheehan was referred to the statement in his report that “the evidence is sufficient to allow us to exclude psychotic illness”.²²³⁶ He agreed that pertained to all the years up to date in relation to Ms Folbigg and what he knows of her from the briefing material.²²³⁷
1807. He was referred to his comment, “[t]he evidence does point towards enduring problems with negative affectivity and negativistic cognition”.²²³⁸ He explained that negative affectivity is a “low mood” or “negative mood” while negativistic cognition is “a tendency towards interpreting things negatively.”²²³⁹
1808. Mr Sheehan was referred to the comment in his report, “[t]here is a danger of inappropriately pathologising her grief, the depth of which is difficult to comprehend”.²²⁴⁰ He stated that the “depth” of her grief was “one of the difficulties in arriving at a clear diagnosis, a diagnostic formulation.” He stated that whenever he was thinking diagnostically about the features Ms Folbigg presented over the years, he was “always brought back to the successive losses, and how that might influence someone, and the scale of that loss and... what is considered normal for grieving a loss of that magnitude”. He stated that was the reason he concluded there was no clear diagnosis of prolonged grief disorder in Ms Folbigg’s case. He stated in reaching that view he kept asking himself what is normal for a person impacted by the grief she suffered. He stated he did not believe a diagnosis was

²²³³ Transcript of the 2022 Inquiry, 23 February 2023 T665.49-666.2 (Sheehan).

²²³⁴ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 41].

²²³⁵ Transcript of the 2022 Inquiry, 23 February 2023 T666.39-667.21 (Sheehan).

²²³⁶ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 72].

²²³⁷ Transcript of the 2022 Inquiry, 23 February 2023 T667.41-45 (Sheehan).

²²³⁸ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 48].

²²³⁹ Transcript of the 2022 Inquiry, 23 February 2023 T668.4-11 (Sheehan).

²²⁴⁰ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 48].

necessary. He said “you don’t need to get hung up on a diagnosis to acknowledge that someone can be affected by these in enduring ways.”²²⁴¹

1809. Mr Sheehan was referred to his comment that it was “important to note that prior to her arrest for the current matters, Ms Folbigg’s adult functioning in the community could be described as adequate, without obvious impairment.”²²⁴² He agreed it was his view that a habit of coping through avoidance and dissociation enabled her, to an extent, to function adequately.²²⁴³
1810. Mr Sheehan was referred to his view that it was “likely that a diagnosis of persistent depressive disorder is available.”²²⁴⁴ He was asked whether it was his view that she had the disorder during the period 1989 to 1999. He stated he thought it was “very likely... that she had a mood disorder during that period”, noting, that there had been “some differences of opinion as to whether it was... a persistent depressive disorder, a major depressive disorder, or both”. He stated he certainly thought the evidence suggests strongly that there was some sort of mood disorder.²²⁴⁵
1811. Mr Sheehan was asked about what, from the field of psychology, is considered to be the relationship between early childhood trauma and patterns of distancing, emotional numbing, detachment and disassociation. He stated it was a “mechanism by which human beings can cope with extreme hardship by shutting down, which allows them to get through that moment, but can then generate problems later on.” He was referred to his comment that aspects of Ms Folbigg’s diaries and her presentation have “drawn criticism of emotional callousness (such as her avoidance of normal grief expression, absence of musings pertaining to loss).”²²⁴⁶ He agreed he regarded that as “explicable by reference to patterns of distancing, emotional numbing, detachment and disassociation.”²²⁴⁷
1812. Mr Sheehan said that Ms Folbigg didn’t meet the criteria for any of the specific personality disorders. He stated, however, there are “clearly some personality vulnerabilities which have been noted... by everyone who had assessed her, but they just don’t meet that criteria of personality disorder.” He stated that if he was treating her, it is certainly something he would recognise and take into account.”²²⁴⁸
1813. In relation to Ms Folbigg’s diaries, Mr Sheehan was referred to his comment, “[h]aving read the diaries, it is clear that the entries thought to be admissions appear more significant when removed and listed, as opposed to being read within the full 175 pages of transcribed entries”.²²⁴⁹ He stated that he meant that he thought they were more impactful when they were taken out of context and just listed but he found when he read the full 175 pages of diary entries that “they didn’t take on that significance because they were all the more easily interpretable in other ways than when they’re just pulled out.”²²⁵⁰

²²⁴¹ Transcript of the 2022 Inquiry, 23 February 2023 T668.13-669.7 (Sheehan).

²²⁴² Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 49].

²²⁴³ Transcript of the 2022 Inquiry, 23 February 2023 T669.30-670.3 (Sheehan).

²²⁴⁴ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 72].

²²⁴⁵ Transcript of the 2022 Inquiry, 23 February 2023 T670.31-40 (Sheehan).

²²⁴⁶ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 50].

²²⁴⁷ Transcript of the 2022 Inquiry, 23 February 2023 T671.42-672.12 (Sheehan).

²²⁴⁸ Transcript of the 2022 Inquiry, 23 February 2023 T673.6-16 (Sheehan).

²²⁴⁹ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 60].

²²⁵⁰ Transcript of the 2022 Inquiry, 23 February 2023 T675.4-13 (Sheehan).

1814. Mr Sheehan was referred to his comment that “the diary entries take on a different complexion in the absence or presence of medical factors that could explain the children’s deaths.”²²⁵¹ Mr Sheehan explained his answer by reference to the report of Ms Garbutt dated 11 October 1999 to which I referred at [1627]-[1630] above. He stated that at the time Ms Garbutt gave her report, there were “absolutely no other indications that there could be any other reasons as to why those children might have died” and referred to her comment about the logic of multiple SIDS deaths, stating the more there were the more likely it was that there was “foul play”. He stated “you have to be very careful in how you interpret [the diary entries].”²²⁵²
1815. Mr Sheehan was asked what assumptions he made as to the children dying of natural causes. He stated he “kept right out of it”. He said it did not put him in the same position as Ms Garbutt because he had not “bought into the biological side of it”, whereas Ms Garbutt had “assumed that in the absence of other evidence it’s most likely that there’s been homicide and then [based] all of her other interpretations through that prism.” He stated at that point, there was “absolutely no other indications that there could be any other reasons as to why those children might have died”.²²⁵³
1816. Mr Sheehan was referred to a number of symptoms he had identified in his report, namely self-blame, fragile/negative self-image, trauma symptomology, and insecure attachment and to his comment they are “plausible and realistic explanations for the diary entries”.²²⁵⁴ He explained he meant that that is “why the wording would be as it is” in the diaries. He agreed that those symptoms have a role or potential role in Ms Folbigg’s thought processes as they are reflected in the diaries.²²⁵⁵
1817. Mr Sheehan was referred to the comment in his report “I would propose that the absence of grief expression that was thought to be conspicuous in the diaries would most likely be an artefact of avoidance coping characteristic of trauma psychopathology” and was asked what he meant by “an artefact of avoidance coping characteristic.”²²⁵⁶ He stated he meant the result of it, explaining that “when you read through the diaries, and just see one entry, that Patrick died on this date, and then nothing, and then there’s then discussions of what car they’re going to buy or something like that a couple of months down the track, that’s quite jarring when you read that, but it makes much more sense to me that that is a result of avoidance and shutting down, and long held coping mechanisms that Ms Folbigg has had throughout her life since a very difficult childhood, that makes more sense to me.”²²⁵⁷
1818. Mr Sheehan was then asked about his comment, “Ms Folbigg seeks to circumvent grief by being future focussed, which has assisted her to function and not collapse but has not allowed her to process grief.”²²⁵⁸ He was asked on what basis he said that and explained that it was “notable in the diaries where she will go straight from a terrible loss to thinking about the gym or losing weight or what we’re going to

²²⁵¹ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 61].

²²⁵² Transcript of the 2022 Inquiry, 23 February 2023 T675.46-676.12 (Sheehan).

²²⁵³ Transcript of the 2022 Inquiry, 23 February 2023 T676.1-27 (Sheehan).

²²⁵⁴ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 69].

²²⁵⁵ Transcript of the 2022 Inquiry, 23 February 2023 T679.31-47 (Sheehan).

²²⁵⁶ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 74].

²²⁵⁷ Transcript of the 2022 Inquiry, 23 February 2023 T680.36-50 (Sheehan).

²²⁵⁸ Exhibit 21-02, Report of Mr Patrick Sheehan (6 January 2023) [red pagination 74].

have, what we've got in our future together, which is normal as people start to pull out of grief but she would try and go straight there." He agreed that being future-focused was a method of circumventing grief that was consistent with or reflective of an avoidance coping characteristic of trauma psychopathology. He was asked how it did not permit a person to process grief. He stated "there's no way around grief and people get themselves into trouble when they try to go around grief... by shutting down or by dissociating... which ...Dr Diamond has observed in situ." He said he could also see from the other reports, which he reviewed, that it could also be interpreted as dissociation: "why is this person so flat and so unemotional, when they've just come in, everyone in the wing hates them, threatening to kill them, why would they - why wouldn't they come in as a wreck and be, sort of, sobbing and blubbering?" He said this could also be dissociation.²²⁵⁹

1819. In cross-examination by Senior Counsel for the Director of Public Prosecutions, Mr Sheehan said that he had listened to some of the audio recording of Ms Folbigg's evidence at the 2019 Inquiry, but he "mostly read the transcript." He was asked why he thought it would be unnecessary to listen to the interchange between the questioners and Ms Folbigg. He explained he had a written version so would understand the interchange through reading the transcript. He was asked whether he accepted that listening to how a person gives evidence allows for a more informed assessment of that evidence than merely reading a transcript. He said it could.²²⁶⁰
1820. He was asked whether listening to the audio of Ms Folbigg's evidence may have been particularly useful because he was denied the opportunity to interview her himself. He stated he did not think those two were related. He did not interpret his central task to assess Ms Folbigg's historical diary entries in the context of the evidence she gave at the 2019 Inquiry. However, he agreed that his task was to consider whether what was written in the diaries might or might not constitute admissions of guilt by Ms Folbigg and that Ms Folbigg's own explanations of those entries in sworn evidence was highly relevant to the task given to him.²²⁶¹
1821. It was put to Mr Sheehan that had he listened to all Ms Folbigg's evidence at the 2019 Inquiry, it would give him better insight in assessing Ms Folbigg's evidence because he would have been able to hear the tone of her voice to be able to be assess how she was being treated by the questioners and thus would have been better informed than simply reading the transcript. In response he stated that he "did get a sense of that through just reading the transcript." He stated he thought it was "a very lengthy and very pressing cross-examination" and that to him it was "quite brutal" and "the two-cross examiners were convinced of her guilt and they wanted to press that point clearly" but that he supposed that "was entirely in their domain to do that", because "prosecutors prosecute, that's what they do".²²⁶²
1822. Mr Sheehan agreed that he did not recall any references in the diaries where Ms Folbigg asked or posed a question along the lines of, "Why are my children dying?" He was asked what he said about that omission occurring in that long body of diaries covering that period of time. He stated, he thought Ms Folbigg had an "alternative hypothesis as to why her children would leave her, to do with her own badness or

²²⁵⁹ Transcript of the 2022 Inquiry, 23 February 2023 T681.6-682.5 (Sheehan).

²²⁶⁰ Transcript of the 2022 Inquiry, 23 February 2023 T683.30-684.20 (Sheehan).

²²⁶¹ Transcript of the 2022 Inquiry, 23 February 2023 T684.22-50 (Sheehan).

²²⁶² Transcript of the 2022 Inquiry, 23 February 2023 T685.49-686.18 (Sheehan).

something she's carried on through her terrible childhood or the sins of her father, or her failings as a mother" which he stated was a repeated theme in her diaries. He stated, "[i]t also fits in with her approach to grieving as well and with her shutting down." He accepted that asking a question like "why are my children dying?" would be a natural question to ask. Mr Sheehan was then asked what his hypothesis was as to why Ms Folbigg did not ask herself that natural question. He explained it by reference to two main points. First, she has an alternative explanation as to why her children would leave her, to do with her own "badness" or something she has "carried on through her terrible childhood" or "failings as a mother". Second, is through a circumvention of the normal grief process. He said the other explanation, which was hinted (sic) at during her cross-examination in the 2019 Inquiry, was that it was because she murdered her children. However, it seemed to him that it was explicable through her own personality and her psychopathology.²²⁶³

1823. Mr Sheehan was referred to Ms Folbigg's diary entry of 25 October 1997 to which I have referred above at [1738]. He was asked whether it was his position that that entry reflected Ms Folbigg's innocent grief and self-blame over the death of Sarah. He stated, "it could go towards her belief that her children leave her, that they die because of the way she is, because of her problems with bonding, her problems if she loses her temper or if she's short with her children, all of the criticisms, self-criticisms she has, that we see later with Laura as well, towards the end of Laura's life."²²⁶⁴
1824. He was asked about the passage, "Wouldn't of handled another one like Sarah." He stated that Ms Folbigg "says similar things throughout the diary about her previous children", referring to entries, "I know I didn't bond with the other ones, but this one's different," and, "I was cruel with the other ones. I was short tempered with the other ones, and they left." He said he interpreted the entry in that context.²²⁶⁵
1825. Mr Sheehan was asked if the entry "Wouldn't of handled another one like Sarah" read a lot more like Ms Folbigg blaming Sarah than blaming herself. He stated it "could be interpreted that way and it has been interpreted that way." It was suggested to him that it reads much more naturally that way, but he responded that it did not, to his mind, in "the totality of looking through all of the material, all of the information that's been in front of [him]." He said he did not think that explanation was the best fit from his view as a psychologist. He stated that one of the reasons that Ms Folbigg would retrospectively say it was bad before, such as "it was all my fault before, but this time is different", was a means of coping with trauma, which is to say "well, you know, I blame myself for what's happened before and if it's my fault therefore we can handle this better... If I am less grouchy or more - less short tempered, and more available, and more relaxed this child, then they will survive." He accepted that there is an alternative explanation available and it could be read as a confidential musing by Ms Folbigg with the knowledge that she killed Sarah.²²⁶⁶
1826. Mr Sheehan was then referred to a diary entry bearing the date 8 November 1997, a Monday night at 10pm. It is common ground that this entry was made on 8 December 1997. He was referred to the passage of the entry, "Must try to release my stress somehow. I'm starting to take it out on her. Bad move. Bad things & thoughts happen when that happen. It will never happen again." Mr Sheehan was asked his

²²⁶³ Transcript of the 2022 Inquiry, 23 February 2023 T686.25-T687.11 (Sheehan).

²²⁶⁴ Transcript of the 2022 Inquiry, 23 February 2023 T687.49-T688.47 (Sheehan).

²²⁶⁵ Transcript of the 2022 Inquiry, 23 February 2023 T689.1-5 (Sheehan).

²²⁶⁶ Transcript of the 2022 Inquiry, 23 February 2023 T689.1-39 (Sheehan).

interpretation, accepting the proper context of “it will never happen again.” He stated that he took that to mean she was referring to when she lost it with Laura.²²⁶⁷

1827. He was asked whether he accepted that that passage could also be interpreted as reflective of Ms Folbigg’s desire to avoid killing Laura in circumstances where she knew that she killed her children previously. He stated the interpretation is possible, but again he did not believe it was the most likely interpretation.²²⁶⁸
1828. Mr Sheehan was then referred to the entry of 28 January 1998, which I have set out at [1775] above. He was asked whether he maintained there was an innocent explanation for this entry. He stated it was messy writing, not meant to be neat, in circumstances where it was scribbled out late at night in a state of distress. He stated it looked to him that there was a full stop or comma after “& she left” which does change the passage, which reads, “I knew I was short tempered & cruel sometimes with her & she left. With a bit of help I don’t want that ever to happen again”.²²⁶⁹
1829. Mr Sheehan then referred to the two alternative readings; the first, “I knew I was short tempered & cruel sometimes to her & she left. With a bit of help. I don’t want that to ever happen again”; and the second, “I knew I was short tempered & cruel sometimes to her & she left with a bit of help.” He said he still thought that “with a bit of help” could be referring to those outside forces that have cursed her in her life, that these terrible things happen to her, because she is responsible as a parent and “when the children leave and the children die, it’s because of her, which is a common feeling that grieving parents have”.²²⁷⁰ Mr Sheehan was asked whether “with a bit of help” referred to Ms Folbigg’s own perception of her own poor mothering, but he clarified that it meant “‘with a bit of help’ from the external forces that she feels are working in the background in her life.”²²⁷¹ He was then asked that if, proceeding on the assumption that the typed compilation was a correct representation of the punctuation (“I knew I was short tempered & cruel sometimes to her & she left with a bit of help”), he accepted that the entry can naturally be read as Ms Folbigg reflecting upon how she helped Sarah to leave by smothering her. He responded that “if you assume that Ms Folbigg murdered her children, then that is how you would interpret that, but if you don’t assume Ms Folbigg murdered her children, then I don’t think that is a natural interpretation.”²²⁷² He emphasised that he did not go so far as stating that the entry cannot be interpreted as Ms Folbigg reflecting upon how she helped Sarah to leave by killing her. He stated he could not exclude that as a possibility.²²⁷³
1830. Mr Sheehan was then asked questions concerning Ms Folbigg’s conduct surrounding the disposal of the diaries. These questions asked were similar to those put to Dr Eagle. I will not set them out in detail. Mr Sheehan agreed that there was essentially a sequence of events on 23 July 1999 where initially Ms Folbigg told police that she has disposed of all her diaries, but when she learnt there was to be a search warrant she revised her position and said she had one diary; she then provided that diary to police when they searched her premises that same evening, and then the

²²⁶⁷ Transcript of the 2022 Inquiry, 23 February 2023 T690.36-T691.1 (Sheehan).

²²⁶⁸ Transcript of the 2022 Inquiry, 23 February 2023 T691.3-10 (Sheehan).

²²⁶⁹ Transcript of the 2022 Inquiry, 23 February 2023 T691.43-692.4 (Sheehan).

²²⁷⁰ Transcript of the 2022 Inquiry, 23 February 2023 T692.8-40 (Sheehan).

²²⁷¹ Transcript of the 2022 Inquiry, 23 February 2023 T692.48-T693.2 (Sheehan).

²²⁷² Transcript of the 2022 Inquiry, 23 February 2023 T693.43-4 (Sheehan).

²²⁷³ Transcript of the 2022 Inquiry, 23 February 2023 T694.6-14 (Sheehan).

police managed to find yet another diary, which Ms Folbigg had not volunteered. Mr Sheehan was also referred to the listening device dated 24 July 1999 at 07:53am which recorded Ms Folbigg saying, “I should have fucking done what I was gunna do, stuck it underneath that.”²²⁷⁴

1831. Mr Sheehan was then referred to a transcript of a listening device that same day at 08:02am which he agreed reflected a situation where Ms Folbigg appeared to be speaking to herself at times using something along the lines of an American accent and to be acting out the role of a witness and a lawyer in a court case. He was asked, in the context of what had happened the previous day concerning the diaries and the search, what he made of those exchanges Ms Folbigg was having with herself. He said he would interpret it as Ms Folbigg playing out what might happen in court.
1832. He stated his most likely interpretation of the sequence of events involving the search warrant was that Ms Folbigg lied about the diaries. He stated she may have lied about the diaries because she did not want anyone to read them. He agreed that might be because she appreciated the diaries may contain material which incriminated her. Mr Sheehan was then asked directly whether he accepted that Ms Folbigg’s conduct during the sequence of events described above could also be interpreted to reflect her own consciousness of guilt in relation to the unlawful deaths of her children. He responded that he did not think that was necessary. He stated it was “entirely reasonable that she wouldn’t want anyone to read those diaries. Particularly, with the way she’s wired with being such a private person and she has trouble even communicating with her own husband, and puts things in a diary that she will - can’t share with anyone else.”²²⁷⁵
1833. In re-examination by Counsel Assisting, Mr Sheehan was shown the original diary entry of 28 January 1998. He agreed that immediately after the statement ‘with a bit of help’, there appeared to be a full stop and then the following words, “I don’t want that to ever happen again.” He agreed that it resolved some of the ambiguity as to the punctuation but affirmed the evidence he gave earlier that even if it was a standalone sentence, the words “with a bit of help” were capable of being understood as a reference to outside forces.²²⁷⁶
1834. Mr Sheehan was also asked whether it could be reconciled that on the one hand, Ms Folbigg expressed mystical/superstitious beliefs, for instance, blaming outside forces, whilst on other occasions the diaries reflected what he observed to be consistent with self-blame and guilt, which is recognised as part of the parental psychopathology response to sudden infant death. Mr Sheehan said, “you don’t have to reconcile it.” He stated Ms Folbigg had “entirely contradictory beliefs going on but... that’s human nature.” He stated, however, he could reconcile it because the external “with a bit of help” is still to do with her own failings. He described it in this way, “[b]ecause of my failings there’s... this intervention that people were going to leave me and that things are going to go bad.” He stated “it doesn’t have to all read rationally and it seldom does... [p]eople are entirely capable of having contradictory beliefs as well.”²²⁷⁷

²²⁷⁴ Transcript of the 2022 Inquiry, 23 February 2023 T697.22-45 (Sheehan).

²²⁷⁵ Transcript of the 2022 Inquiry, 23 February 2023 T698.1-700.32 (Sheehan).

²²⁷⁶ Transcript of the 2022 Inquiry, 23 February 2023 T701.25-39 (Sheehan).

²²⁷⁷ Transcript of the 2022 Inquiry, 23 February 2023 T702.4-21 (Sheehan).

Section 7

Evidence of Ms Megan Donegan
and Mr Colin Donegan

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Section 7 – Evidence of Ms Megan Donegan and Mr Colin Donegan

Affidavits of Ms Megan Donegan

1835. In her affidavit dated 18 February 2019,²²⁷⁸ Ms Donegan stated that she had known Ms Folbigg since 1980. Ms Donegan, at that time, was 12 years of age. She stated that since she had known Ms Folbigg, she had always “hidden her emotions.” She stated she was “not aware” of whether Ms Folbigg had any formal counselling but stated Ms Folbigg “would instead talk to her friends, including me, about how she felt.” She stated in her experience, Ms Folbigg was able to show emotion when it was a one on one situation but not in front of a group.”²²⁷⁹
1836. Ms Donegan said she was aware that Ms Folbigg kept diaries. She stated that Ms Folbigg had informed her on numerous occasions, she found it difficult to speak to her husband. She said she heard Mr Folbigg making what she described as “snide comments” about Ms Folbigg’s diaries on a number of occasions using words to the effect, “you can’t talk to me, but you can talk to that diary.”²²⁸⁰
1837. Ms Folbigg stated that she visited Ms and Mr Folbigg in Thornton at or about the time Sarah was born. She stated she would regularly visit them.²²⁸¹
1838. Ms Donegan said that when Sarah died, she rang Ms Folbigg prior to the funeral and asked her if she, her husband, and her son Alexander could come to their house. She said that Ms Folbigg told her that she and Mr Folbigg were happy for them to come. She stated that she recalled Ms Folbigg being “sad but distracted.” She had a teary affect and startled easily. Ms Donegan said that despite this, “she appeared to me to be very happy to have me there to be able to speak to.”²²⁸²
1839. Ms Donegan stated that she attended Laura’s funeral and the subsequent wake. She stated she witnessed Ms Folbigg sobbing inconsolably at the front of the church and at the wake she had a conversation with Ms Folbigg in Laura’s bedroom. She said during that conversation she stated, “I can’t cry in front of that many people and I can’t hold it together any longer.” She said they both cried. She said after Ms Folbigg had some time to calm down, they went back and joined the rest of the guests.²²⁸³
1840. She stated that she had observed Ms Folbigg being loving and caring for her children.²²⁸⁴
1841. In her second affidavit dated 8 December 2022, referring to Ms Folbigg’s concerns about her weight, Ms Donegan stated she recalled many occasions when Mr Folbigg made adverse comments to his wife about her weight in front of other people.²²⁸⁵
1842. Ms Donegan stated that she was pregnant with her son the same time Ms Folbigg

²²⁷⁸ Exhibit 32-02, Affidavit of Megan Donegan (18 February 2022) [red pagination 5-13].

²²⁷⁹ Exhibit 32-02, Affidavit of Megan Donegan (18 February 2022) [red pagination 6].

²²⁸⁰ Exhibit 32-02, Affidavit of Megan Donegan (18 February 2022) [red pagination 6-7].

²²⁸¹ Exhibit 32-02, Affidavit of Megan Donegan (18 February 2022) [red pagination 7].

²²⁸² Exhibit 32-02, Affidavit of Megan Donegan (18 February 2022) [red pagination 7-8].

²²⁸³ Exhibit 32-02, Affidavit of Megan Donegan (18 February 2022) [red pagination 8-9].

²²⁸⁴ Exhibit 32-02, Affidavit of Megan Donegan (18 February 2022) [red pagination 9].

²²⁸⁵ Exhibit 32-02A, Affidavit of Megan Donegan (8 December 2022) [red pagination 13-2].

was pregnant with Sarah. She stated she saw Ms Folbigg more than once a week during their pregnancies and that continued during Sarah's life until her son was approximately five months of age, after which she went back to work.²²⁸⁶

1843. Ms Donegan stated she became aware after the trial had finished that Mr Folbigg gave evidence in which he said Ms Folbigg had a "guttural growl"²²⁸⁷ that she directed at the children. She stated she had never witnessed Ms Folbigg do this to Patrick, Sarah or Laura, nor had she witnessed Ms Folbigg showing, expressing or acting out in frustration towards her children. She stated her reactions appeared "totally normal" to her.²²⁸⁸
1844. Ms Donegan stated that Ms Folbigg "was always very happy around her children." She observed that Ms Folbigg was "very happy at being a mother, but she was always cautious, concerned about whether what she was doing was correct."²²⁸⁹

Affidavit of Mr Colin Donegan

1845. Mr Donegan is Ms Donegan's older brother. He recalled staying at Barrington Tops for a holiday in 1993 and that Mr and Ms Folbigg were invited to come and stay with them because they were grieving heavily after the loss of their third child (Sarah). He stated that he recalled during their time at Barrington Tops, Ms Folbigg was "oscillating between upset when talking about the children's death, to excited about having another child without medical risks given that the doctor had advised them they could have a healthy baby."²²⁹⁰

²²⁸⁶ Exhibit 32-02A, Affidavit of Megan Donegan (8 December 2022) [red pagination 13-3].

²²⁸⁷ Exhibit 32-02A, Affidavit of Megan Donegan (8 December 2022) [red pagination 13-3].

²²⁸⁸ Exhibit 32-02A, Affidavit of Megan Donegan (8 December 2022) [red pagination 13-3].

²²⁸⁹ Exhibit 32-02A, Affidavit of Megan Donegan (8 December 2022) [red pagination 13-4].

²²⁹⁰ Exhibit 32-06, Affidavit of Colin Donegan (11 March 2019) [red pagination 211-212].

Section 8

Conclusion

Does the evidence at the Inquiry demonstrate there was reasonable doubt of Ms Folbigg's guilt for the crimes of which she was convicted?



Section 8 – Conclusion: Does the evidence at the Inquiry demonstrate there was reasonable doubt of Ms Folbigg’s guilt for the crimes of which she was convicted?

1846. Counsel Assisting, both in their written submissions and in oral closing submissions, submitted it was open for me to conclude that there was reasonable doubt that Ms Folbigg was guilty.²²⁹¹ The Director of Public Prosecutions accepted those submissions with two qualifications. Namely, the ultimate view of Professor Wilde, something that the Director of Public Prosecutions described as immaterial (see [1367] above).²²⁹² Second, that it was neither necessary nor desirable for me to consider whether or not it is likely that the deaths of Sarah and Laura were caused by the CALM2-G114R variant.²²⁹³ I have adopted that approach.
1847. Consistent with the submissions of the Director of Public Prosecutions,²²⁹⁴ I have not formed a view one way or the other as to whether the psychological and psychiatric evidence tendered before me would be admissible in the same form in a criminal trial.
1848. Ms Folbigg, in very extensive submissions, supported the proposition that there was reasonable doubt.²²⁹⁵ These submissions in a number of respects went further than those of Counsel Assisting. I have read the submissions and subject to what I have written above in relation to Dr Cala (refer to [1609]-[1610]), it is unnecessary to specifically address them in this Report.
1849. In oral closing submissions, Senior Counsel for the Director of Public Prosecutions submitted that, subject to the qualifications outlined in the Director’s written submissions, to which I have referred to above, it was open for me to conclude that there is reasonable doubt as to Ms Folbigg’s guilt.²²⁹⁶
1850. Dr Cala, in his written submissions, made no response to the submissions of Counsel Assisting.²²⁹⁷

Smothering

1851. The Crown’s case at the trial was that Ms Folbigg had killed all four children by smothering them and that Patrick’s ALTE was caused in the same fashion. Thus, the initial question is whether the evidence establishes, at least as a reasonable possibility, that the deaths (and Patrick’s ALTE) were caused by smothering. The circumstantial evidence said to establish that cause of death or injury beyond reasonable doubt only arises if this threshold is reached.
1852. As Counsel Assisting submitted, none of the recognised signs of smothering such as petechial haemorrhaging or facial injury were detected on autopsy.²²⁹⁸

²²⁹¹ Counsel Assisting’s Written Closing Submissions (4 April 2023) 3 [7]; Transcript of the 2022 Inquiry, 26 April 2023 T827.26-30 (Callan SC).

²²⁹² Written Closing Submissions on behalf of the Director of Public Prosecutions (19 April 2023) 2 [10] - 3 [12].

²²⁹³ Written Closing Submissions on behalf of the Director of Public Prosecutions (19 April 2023) 3 [13(a)].

²²⁹⁴ Written Closing Submissions on behalf of the Director of Public Prosecutions (19 April 2023) 3 [16(h)].

²²⁹⁵ Written Closing Submissions on behalf of Ms Folbigg (18 April 2023) 2 [1]-[2].

²²⁹⁶ Transcript of the 2022 Inquiry, 27 April 2023 T866.31-46 (Jordan SC).

²²⁹⁷ Written Closing Submissions on behalf of Dr Cala (26 April 2023) 1 [1].

²²⁹⁸ Counsel Assisting’s Written Closing Submissions (4 April 2023) 21 [71].

1853. The only forensic pathologist who suggested there were signs of smothering was Dr Cala, who stated that there were “some subtle but nevertheless concerning physical signs” of smothering in Caleb and Laura (see [1582] above).²²⁹⁹ As Senior Counsel Assisting submitted, the signs were non-specific and do not take the matter any further.²³⁰⁰
1854. Nonetheless, the general consensus of the forensic pathologists was that it was possible to smother a child without leaving any trace. This was the clear opinion of Dr Cala, both at the 2019 Inquiry and the present Inquiry (see [615]-[616], [1585]-[1587]);²³⁰¹ Professor Duflou at the 2019 Inquiry (see [577]);²³⁰² and, Professor Hilton at the 2019 Inquiry (see [591]),²³⁰³ although, in his affidavit tendered at the present Inquiry, he stated that if the smothering occurred in a fit of rage, it would be expected that some signs of smothering would be seen.²³⁰⁴ Dr Orde also accepted that it was a common understanding that asphyxial death can occur without identifiable evidence (see [1546] above).²³⁰⁵
1855. Professor Cordner accepted that suffocation could leave no trace (see [1521]). However, he stated in the case of Sarah and Laura, attempted smothering would leave some injuries as Laura (and possibly Sarah) had teeth, and medical evidence indicated some 70 seconds of forcible airways obstruction is required before changes associated with unconsciousness occurred. Particularly in the case of Laura, he emphasised the significance of a lack of injuries inside her mouth (see [1511]).²³⁰⁶
1856. Professor Cordner produced what might be described as statistical evidence to support his conclusion. I have summarised the evidence at [1513]-[1518] above. He accepted the limitations in that material and in his evidence to the Inquiry he agreed that it provides very limited assistance in resolving this issue (see [1531]-[1532]). Further, Professor Cordner’s opinion was based on the assumption that Ms Folbigg killed her children in a fit of rage which, although consistent with the remarks made by the Prosecutor at the trial, was not necessarily the case.
1857. Although Professor Fleming expressed a view on this issue,²³⁰⁷ I did not think this was within his area of expertise as a paediatric intensivist.
1858. In these circumstances, it remains reasonably possible that the four children were killed (and in the case of Patrick, injured) by smothering. However, I agree with Counsel Assisting that the possibility is reduced in the case of Laura, due to her fully erupted teeth and her capacity to struggle, and that the Crown case involved the proposition that all four children were smothered without a trace, which while possible may seem to be somewhat unlikely.

²²⁹⁹ Exhibit 13-04, Supplementary Report of Dr Allan Cala dated 13 December 2022 [red pagination 64].

²³⁰⁰ Counsel Assisting’s Written Closing Submissions (4 April 2023) 21 [72].

²³⁰¹ Exhibit 2-M, Report of Dr Allan Cala (26 November 2018) [red pagination 4111]; Transcript of the 2022 Inquiry, 23 February 2023 T653.31-T654.20 (Cala).

²³⁰² Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T105.36-T106.32 [red pagination 107-108].

²³⁰³ Exhibit 4, Transcript of the 2019 Inquiry, 19 March 2019 T106.47-T107.4 [red pagination 108-109].

²³⁰⁴ Exhibit 13-03, Affidavit of Professor John Hilton (26 July 2022) [red pagination 21].

²³⁰⁵ Transcript of the 2022 Inquiry, 22 February 2023 T610.43-T611.18 (Orde).

²³⁰⁶ Exhibit 13-02C, Supplementary Report of Professor Stephen Cordner dated 13 December 2022, with corrections as at 22 February 2023 and further amendments following request on 24 February 2023 [red pagination 13-144].

²³⁰⁷ Exhibit 11-02, Report of Professor Peter Fleming (11 October 2022) [red pagination 34].

The circumstantial case

1859. There is no direct evidence that Ms Folbigg killed her children. The Crown, in these circumstances, had to exclude any reasonable hypothesis inconsistent with her guilt. As I pointed out at [131], the Crown relied on four matters to establish Ms Folbigg's guilt. I will first deal with the matters relied on, unrelated to the diaries, and then I will deal with the diaries and the circumstances of their disposal. In dealing with each matter, I will, to the extent I have not already done so, deal with the evidence given on each of them at the 2019 Inquiry.
1860. For convenience, I will deal with each matter in a somewhat different order to how I have set them out at [131].
1861. Notwithstanding this approach, it is important to bear in mind that ultimately it is necessary to weigh the evidence holistically and not deal with it in a piecemeal fashion.²³⁰⁸

The first matter

1862. At trial, the Crown asserted that the medical evidence was to the effect there was nothing to suggest the children died of identified natural causes.
1863. This proposition was incorrect even at the time of trial as it was suggested it was possible that Laura had died from myocarditis. Having regard to the evidence tendered at the present Inquiry, particularly from the majority of the forensic pathologists who examined the slides of Laura's heart tissue, this possibility is significantly strengthened.
1864. Most significant in the present case is the genetic evidence in relation to Sarah and Laura. As I stated at [1409], I am comfortably satisfied that there was a reasonable possibility that the deaths of Sarah and Laura were caused by the CALM2-G114R variant.
1865. It is also of particular significance that the neurological evidence before me established that it was *unlikely* that Patrick's ALTE was caused by a hypoxic-ischaemic event such as smothering and was more likely to be caused by a neurogenetic disorder. This expert evidence is contrary to the Crown case theory. Further, having regard to the evidence of Dr Ryan and Professor Fleming, it is a reasonable possibility that Patrick's death could be characterised as a SUDEP.
1866. Although it cannot be considered in isolation, this evidence significantly weakens the Crown case and affects the force of the coincidence and tendency evidence which I deal with below.

The second matter – The evidence of the relationship Ms Folbigg had with her children and the particular circumstances surrounding Sarah's death.

1867. As I have pointed out, Ms Folbigg and Mr Folbigg gave inconsistent evidence of the events which occurred on the evening that Sarah died.
1868. Ms Folbigg's evidence is contained in her ERISP and her evidence before the 2019 Inquiry. I have set out her evidence in the ERISP at [241]. In essence, she stated that on her return from the toilet, she noticed that Sarah was flat on her back and she

²³⁰⁸ *R v Baden-Clay* [2016] HCA 35; (2016) 258 CLR 308 [46]-[47].

could see that she was not breathing.²³⁰⁹ She gave substantially similar evidence in answer to a further question (see [244]).²³¹⁰

1869. Subsequently, Mr Folbigg's version of the events that night were put to Ms Folbigg (see [277]).²³¹¹ His version of events was that he woke up and saw that neither Ms Folbigg nor Sarah were in their beds and that he went back to sleep. He said he was woken by Ms Folbigg's screams and saw Ms Folbigg standing at the door to the bedroom, as the light was on in the room. Ms Folbigg denied that Sarah ever left the bedroom. She agreed she shut the door but stated she did not leave any light on. Subsequently, she stated she did not recall turning on the light (see [276]-[278]).²³¹²

1870. Ms Folbigg was cross-examined further about the events on the evening of Sarah's death at the 2019 Inquiry. She referred to an entry of 16 May 1997 at 2:00am (Annexure 3, p 153) where, among other things, she wrote:

Craig says he will stress & worry but he still seems to sleep okay every night & did with Sarah. I really needed him to wake up that morning and take over from me. This time I've already decided if I ever feel that way again, I'm going to wake him up.²³¹³

1871. Ms Folbigg was asked by Mr Maxwell KC whether she was referring to the morning that Sarah died, and she stated she believed it was more general. She then said the entry may have been referring to the night that Sarah died but she was not completely sure. It was put to Ms Folbigg that what she said was that she was awake when Sarah died, but she denied that proposition stating that it was not what the entry meant.²³¹⁴ It was put to her by Ms Cunneen SC that the statement in that diary entry, "Night time & early morning such as these will be the worst for me, that's when wishing someone else was awake with me will happen. Purely because of what happened before",²³¹⁵ was a reference to the fact that, at night or early in the morning, Ms Folbigg had such bad mood swings that she killed her children. She denied this. Ms Folbigg was subsequently referred by Ms Cunneen SC to her statement "I really needed him to wake up that morning and take over from me",²³¹⁶ and it was suggested to her that at 1:10am, she and Sarah were outside the bedroom and Craig awoke to find her missing. She denied this. She was then referred to the entry, "this time I've already decided if I ever feel that way again, I'm going to wake him up",²³¹⁷ it was put to her that that was because she hoped it would prevent her taking the Sarah's life. She denied this.²³¹⁸

1872. It follows that Ms Folbigg adhered to her version of events under what can fairly be described as hostile cross-examination.

1873. So far as Mr Folbigg is concerned, it should be noted that, somewhat belatedly, on 1 February 2023 the Commissioner of Police produced a statement by Mr Folbigg dated 23 May 1999, the transcript of an ERISP of Mr Folbigg dated 19 April 2001,

²³⁰⁹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q269 [red pagination 1569-1570].

²³¹⁰ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q308 [red pagination 1581-1583].

²³¹¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q543-545 [red pagination 1654-1655].

²³¹² Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q543-545 [red pagination 1654-1655].

²³¹³ Exhibit 2-AZ, Diaries tender bundle [red pagination 7073-7076].

²³¹⁴ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T656.40-658.24 [red pagination 664-666].

²³¹⁵ Exhibit 2-AZ, Diaries tender bundle [red pagination 7073-7076].

²³¹⁶ Exhibit 2-AZ, Diaries tender bundle [red pagination 7073-7076].

²³¹⁷ Exhibit 2-AZ, Diaries tender bundle [red pagination 7073-7076].

²³¹⁸ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T730.39-T735.29 [red pagination 739-744].

and an accompanying statement also dated 19 April 2001.²³¹⁹ These documents were available at the time of the trial, but they were certainly not tendered at the 2019 Inquiry.

1874. In his statement of 23 May 1999, Mr Folbigg said that, on the evening of Sarah's death, he heard Sarah crying and carrying on that she did not want to go to bed. He said this made Ms Folbigg angry as he heard a growling noise. He said he asked Ms Folbigg what the problem was and she said "Nothing. Get out".²³²⁰ Mr Folbigg then said he said to her "How about mellowing out. She is only a bloody baby, if she doesn't want to go to sleep just leave her be".²³²¹ He claimed that Ms Folbigg said, "Just go away. She'll go to sleep if I say".²³²²
1875. Mr Folbigg said he never listened intently to what was happening in the bedroom, but heard a noise that sounded like Ms Folbigg stomping down the hall. He said Ms Folbigg stood about three paces in front of him letting Sarah fall into his lap. He stated he had never seen Ms Folbigg do this and she was angry and irrational.²³²³
1876. Mr Folbigg said he settled Sarah down by nursing her and put her to sleep. He said that evening he woke at approximately 1:00am and saw that Ms Folbigg was not in bed, as he remembered that there was a streetlight on that allowed him to see the room. He stated that he remembered seeing Sarah lying in the bed. He said that at 1:30am he was woken by screams from Ms Folbigg.²³²⁴
1877. Mr Folbigg gave a different version in his ERISP. At the outset of the interview, he was told he was under arrest for hindering the investigation.²³²⁵ He was asked by Detective Ryan whether he recalled telling him on 14 May 1999 that on the night of 30 August 1993, he woke up and Ms Folbigg and Sarah were not in their beds. He stated he did not recall telling Detective Ryan that. He subsequently stated that he could not be sure that Sarah was in her bed. It was then put to Mr Folbigg that what was in his statement of 23 May 1999 was different to what he told Detective Ryan on 14 May 1999 that Ms Folbigg and Sarah were not in their beds. He responded that he had an elephant's memory, and he was fairly sure that Sarah was not in her bed.²³²⁶
1878. I have set out Mr Folbigg's evidence at the trial at [158]-[217] above. In his evidence in chief, he repeated what he said in his statement of 23 May 1999, concerning the events of the evening that Sarah died (see [163]-[164]).²³²⁷ He then stated categorically that Sarah was not in the bed. He stated that when he initially told the Police that Sarah was in the bed, he was lying and he was certain Sarah was not in her bed. He was referred to the statement in his ERISP when he said he was not sure whether Sarah was not in her bed.²³²⁸
1879. Counsel Assisting, in their written submissions, submitted it was open for me to

²³¹⁹ Exhibit 32-09, Documents produced by the NSW Commissioner of Police on 1 February 2023.

²³²⁰ Exhibit 32-09b, Statement of Craig Folbigg (23 May 1999) [red pagination 426].

²³²¹ Exhibit 32-09b, Statement of Craig Folbigg (23 May 1999) [red pagination 426].

²³²² Exhibit 32-09b, Statement of Craig Folbigg (23 May 1999) [red pagination 426].

²³²³ Exhibit 32-09b, Statement of Craig Folbigg (23 May 1999) [red pagination 426].

²³²⁴ Exhibit 32-09b, Statement of Craig Folbigg (23 May 1999) [red pagination 427].

²³²⁵ Exhibit 32-09a, Transcript of ERISP of Craig Folbigg (19 April 2001) [red pagination 357].

²³²⁶ Exhibit 32-09a, Transcript of ERISP of Craig Folbigg (19 April 2001) [red pagination 371-375].

²³²⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 2 April 2003 T127.15-56 [red pagination 1931].

²³²⁸ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 April 2003 T341.26 [red pagination 2098].

conclude that there was no rational basis for preferring the evidence of Mr Folbigg over Ms Folbigg on this issue.²³²⁹ I agree. The evidence of Mr Folbigg varied from certainty that Sarah was in her bed, because he could see her by virtue of the streetlight, to certainty that she was not in her bed, to the intermediate position that he was not sure. The reliability of his evidence is further affected by the statement that he was lying when he said “Kathy had kissed Caleb on the night he died”, by his comments in the listening devices of 23 and 26 July 1999, followed by the inconsistencies in his evidence to which I have referred at [197]-[198] and [204]-[205], and his statement that he had lied when he told his family and friends about Ms Folbigg grieving for Laura.²³³⁰

1880. In these circumstances, I am unable to accept Mr Folbigg’s evidence in preference to that of Ms Folbigg as to what occurred on the evening of Sarah’s death. In reaching this conclusion, I am conscious of the fact that Ms Folbigg’s overall credibility is affected by the fact she lied to the Police when she stated she had not written in a diary since 9 May 1999 and her explanation of what she told the Police, given at the 2019 Inquiry was, to say the least, unconvincing. Notwithstanding this, for the reasons I have given, I am unable to accept the evidence of Mr Folbigg of the events which occurred on the night of Sarah’s death, in preference to that of Ms Folbigg.
1881. Care must also be taken in dealing with certain aspects of Mr Folbigg’s evidence regarding Ms Folbigg’s relationship with her children. For example, his statement that Ms Folbigg appeared “devastated” after Sarah died, but she did not continue to be devastated seems to me to be an attempt to minimise the grief that Ms Folbigg suffered.²³³¹ There were inconsistencies between his evidence concerning the morning of Laura’s death and his statement to the Police (see [213]-[215]),²³³² and an inconsistency in his evidence that Ms Folbigg threw Sarah at him on the evening of her death (see [205]).²³³³ It is also relevant that a considerable number of witnesses called at the trial and at this Inquiry gave evidence that Ms Folbigg was a loving mother who grieved for her children. I have summarised that evidence at the trial at [313]-[330] above. To this should be added the evidence of Ms Hall in her affidavit of 28 February 2019²³³⁴ and the evidence of Ms Donegan to which I have referred at [1835]-[1844].²³³⁵ Further, Dr Marley who was the general practitioner who attended to Patrick and Sarah said he saw no signs of neglect and that Mr and Ms Folbigg appeared caring and concerned parents.²³³⁶
1882. Counsel Assisting submitted that the evidence does not establish that Ms Folbigg was angry or frustrated towards her children on a consistent basis but rather tends to suggest that Ms Folbigg was, in general, a loving and caring mother towards her children.²³³⁷

²³²⁹ Counsel Assisting’s Written Closing Submissions (4 April 2023) 62 [220].

²³³⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 7 April 2003 T250.23- T254.24; T294.10-58; 8 April 2003 T312.10-12 [red pagination 2054-2058, 2098, 2116].

²³³¹ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 April 2003 T380.39-T382.4 [red pagination 2184-2186].

²³³² Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 9 April 2003 T408.33-41 [red pagination 2212].

²³³³ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 8 April 2003 T302.6-56 [red pagination 2106].

²³³⁴ Exhibit 14-02, Affidavit of Karren Hall (28 February 2019) [red pagination 9-10].

²³³⁵ Exhibit 32-02, Affidavit of Megan Donegan (18 February 2019) [red pagination 9]; Exhibit 32-02A, Affidavit of Megan Donegan (8 December 2022) [red pagination 13-3 to 13-4].

²³³⁶ Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Christopher Marley (9 March 1999) [5] [red pagination 3620]; Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 11 April 2003 T538.46-48 [red pagination 2342].

²³³⁷ Counsel Assisting’s Written Closing Submissions (4 April 2023) 258 [951].

1883. I am prepared to accept that Ms Folbigg may well have experienced anger and frustration towards her children from time to time. Counsel Assisting submitted that caution should be taken in respect of the idealisation of motherhood and that mothers are universally patient, nurturing and kind. They referred to the literature before the Inquiry including a study of 63 Finnish mothers who when asked to describe emotions which they experienced, which they considered to be forbidden in motherhood, most frequently reported feelings and emotional states of fatigue, love, rage, anger, aggression and guilt.²³³⁸ They also referred to Dr Dhansay's evidence of the concept of "matrescence" suggesting that most mothers experience guilt, frustration, anger and fear during the early years of a child's life.²³³⁹
1884. I accept these submissions. Indeed, they support the somewhat unsurprising proposition that primary carers of infants and young children get fatigued, frustrated, and sometimes angry. The evidence before the Inquiry, at most, demonstrates that Ms Folbigg was a loving and caring mother who occasionally became angry and frustrated with her children. That provides no support for the proposition that she killed her four children.
1885. Reliance was also placed at trial on the fact that Ms Folbigg showed no outward manifestation of grief at the deaths of her children. Evidence to this effect was given by Ms Bown of the death of Laura who, notwithstanding that evidence, agreed she appeared devastated by the deaths of Sarah and Laura (see [316]).²³⁴⁰ Her evidence, concerning Ms Folbigg's conduct at the wake of Laura, is contradictory to the evidence of the other witnesses to which I have referred at [319]-[330] above and the evidence of Ms Donegan to which I have referred at [1835]-[1844]. Further, reliance was also placed by the Crown on what is described as expressions of anger and frustration in her diaries.
1886. Leaving aside for the moment the question of whether the diaries contained admissions of guilt, it is necessary to consider whether the expressions of anger and frustration contained in some of the entries lend support to the proposition that Ms Folbigg, in a fit of rage and frustration, killed her children. The following are examples of such diary entries. They are fully set out along with the cross-examination on them in Annexure 3.
- (a) Entry of 18 June 1996 – "And I'll have help & support this time. When I think I'm going to loose [sic] control like last times, I'll just hand baby over to someone else."²³⁴¹
 - (b) Entry of 14 October 1996 – "But I think losing my temper stage & being frustrated with everything has passed. I now just let things happen & go with the flow. An attitude I should have had with all my children if given the chance. I'll have it with the next one."²³⁴²
 - (c) Entry of 17 February 1997 – "This time I'm prepared and know what signals to watch out for in myself. Changes in mood etc."²³⁴³

²³³⁸ Exhibit 35-09, Anna Rotkirch and Kristiina Janhunen, 'Maternal Guilt' (2009) 8(1) *Evolutionary Psychology* 90-106 [red pagination 119-120].

²³³⁹ Counsel Assisting's Written Closing Submissions (4 April 2023) 257-258 [949]-[950].

²³⁴⁰ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 16 April 2023 T783.36-788.50 [red pagination 2587-2592].

²³⁴¹ Exhibit 2-AZ, Diaries tender bundle [red pagination 6981-6982].

²³⁴² Exhibit 2-AZ, Diaries tender bundle [red pagination 7014-7015].

²³⁴³ Exhibit 2-AZ, Diaries tender bundle [red pagination 7039-7040].

- (d) Entry of 20 September 1997 – “Am getting very stressed, because I can’t depend on Craig for any real help or support. He doesn’t hear her or the alarms & I can’t even trust & depend on him to look after her properly...I know my feelings are normal. I’m just venting. But at the moment, I sometimes wish I hadn’t made the decision to have her but then all I have to do is look at her and all that melts away.”²³⁴⁴
- (e) Entry of 29 October 1997 – “Felt a little angry towards Laura today. It was because I am & was very tired.”²³⁴⁵
- (f) Entry of 3 November 1997 – “Why is it when I’m so tired I’m feeling sick & shitty. I cant sleep, very depressed with myself at the moment. Feeling deprived of my freedom. I know that’s the price that you pay for having a baby, but I’d not be human if it didn’t get me down a little every now & then.”²³⁴⁶
- (g) Entry of 8 November [December] 1997 – “Must try to release my stress somehow. I’m starting to take it out on her. Bad move. Bad things & thoughts happen when that happen. It will never happen again.”²³⁴⁷
- (h) Entry of 9 November 1997 – “Think I handle her fits of crying better than I did with Sarah. I’ve learnt once its getting to me to walk away.”²³⁴⁸
- (i) Entry of 28 January 1998 – “I’ve done it. I lost it with her. I yelled at her so angrily that it scared her, she hasn’t stopped crying. Got so bad I nearly purposely dropped her on the floor & left her. I restrained enough to put her on the floor & walk away. Went to my room & left her to cry. Was gone probably only 5 mins but it seemed like a lifetime. I feel like the worst mother on this earth.”²³⁴⁹
- (j) Entry of 6 March 1998 – “Laura not well, really got on my nerves today, snapped & got really angry, but not nearly as bad as I used to get.”²³⁵⁰

1887. In her ERISP, Ms Folbigg stated she used to write in the diaries as basically they were sort of like a vent or release and she used to write anything that might have bothered her in the slightest.²³⁵¹ In her evidence to the 2019 Inquiry, she stated that was the truth. She also stated that her diaries were “a pouring out of every fear, every thought - negative or positive - every emotion, anything that was concerning me, anything at all, they were poured into this diary”.²³⁵²

1888. In a letter to her friend, Ms Tracy Chapman of 1 May 2005, she stated:

“They (diaries) were used to “dump” every negative emotion, feeling, thought I’ve ever had. I didn’t use them, like other people, to record the joyous happenings etc.”²³⁵³

²³⁴⁴ Exhibit 2-AZ, Diaries tender bundle [red pagination 7132-7134].

²³⁴⁵ Exhibit 2-AZ, Diaries tender bundle [red pagination 7140-7141].

²³⁴⁶ Exhibit 2-AZ, Diaries tender bundle [red pagination 7141-7142].

²³⁴⁷ Exhibit 2-AZ, Diaries tender bundle [red pagination 7150].

²³⁴⁸ Exhibit 2-AZ, Diaries tender bundle [red pagination 7143].

²³⁴⁹ Exhibit 2-AZ, Diaries tender bundle [red pagination 7170].

²³⁵⁰ Exhibit 2-AZ, Diaries tender bundle [red pagination 7176].

²³⁵¹ Exhibit 2-E, Exhibits tendered at 2003 trial, Exhibit AJ, ERISP of Kathleen Folbigg Q457-463 [red pagination 1631].

²³⁵² Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T727.9-11 [red pagination 736].

²³⁵³ Exhibit 32-07, Letter from Kathleen Folbigg to Tracy Chapman (1 May 2005) [red pagination 222].

1889. In my opinion, a reading of the diaries as a whole demonstrates the accuracy of that statement.
1890. Ms Folbigg was not cross-examined about the context in which the diary entries were made at the 2019 Inquiry, as the Inquirer ruled that it was irrelevant. Having regard to the psychiatric and psychological evidence led at the present Inquiry, in my opinion, the context is relevant. I deal with this in detail when I come to deal with the question of whether the diaries contained reliable admissions of guilt.
1891. For present purposes, I accept Counsel Assisting's submission that, in the circumstances that Ms Folbigg came to write the diaries, these expressions of frustration and anger, such as the ones I have referred to above, cannot be said to represent the full gamut of Ms Folbigg's emotions towards the children, particularly when coupled with the observations of those who observed her with the children. I have not dealt directly with those entries said to constitute admissions of guilt. When viewed in isolation, the expressions of anger and frustration towards the children in Ms Folbigg's diaries do not support the conclusion that she was a person who was likely to kill her children or, as the Crown suggested at the trial, had a tendency to do so. This is only reinforced by the psychiatric and psychological evidence which I have set out above and my conclusions in the section where I deal with the entries in the diaries said to constitute admissions of guilt.

The third matter – The coincidence evidence

1892. I have set out the coincidence notice²³⁵⁴ in Annexure 2 to this Report. Expressed in the terms of Annexure 2, it confronts a number of difficulties. It was alleged at trial that the coincidence evidence establishes that each of the accused's children died or had an ALTE from the same cause, and that each of them had not died from SIDS or any other illness, disease or syndrome. The evidence before this Inquiry which I have summarised raises the reasonable possibility that Sarah and Laura died as a result of the CALM2-G114R variant, or in the case of Laura myocarditis, and the reasonable possibility that Patrick's ALTE resulted from an unknown neurogenetic cause. This evidence substantially undermines the probative force of any coincidence reasoning, as might be established by the matters set out in the notice as the evidence establishes the real possibility that the children may have died from different causes.
1893. At trial, as I pointed out at [134], the prosecution relied upon 10 specific matters which were asserted to disprove the hypothesis that it was coincidental that the four children died (or, in the case of Patrick, suffered an ALTE) from natural causes.
1894. In considering the first four of these matters, it must be borne in mind that the mere fact of four unexplained infant deaths does not, in the absence of any evidence to the contrary, establish murder. To reach that conclusion would be to apply the now discredited Meadow's Law and, on one view, reverse the onus of proof. Although the Crown did not directly rely upon Meadow's Law, Professor Berry at least implicitly adopted it (see [344]);²³⁵⁵ Professor Herdson explicitly did so in his evidence (see [357]);²³⁵⁶ whilst Dr Beal did so in a statement given to the police prior to giving

²³⁵⁴ Exhibit 2-BX, Crown notice of coincidence evidence (24 October 2002) [red pagination 7871-7876].

²³⁵⁵ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Peter Berry (November 2000) [red pagination 3777].

²³⁵⁶ Exhibit 2-H, Forensic pathology tender bundle, Report of Professor Peter Herdson (17 January 2002) [red pagination 3795].

evidence, and implicitly did so in the course of her evidence.²³⁵⁷ I accept Counsel Assisting's submission that this evidence should be disregarded in considering the probative value of the coincidence evidence.²³⁵⁸

1895. Further, the first four matters relied upon also confront the insuperable difficulty that there has now been established reasonably possible causes of the deaths of Patrick, Sarah and Laura, and of Patrick's ALTE. In the circumstances, as Counsel Assisting stated, there are fundamental difficulties in relying upon coincidence reasoning on the ultimate question of guilt.²³⁵⁹
1896. The fact that the children died during sleep, when in their bed, cot or bassinet, must be considered in the context that the children were very young and spent a considerable period of their life asleep, and their deaths whilst asleep are not inconsistent with a reasonably possible alternative cause of death. Further, death during sleep is a characteristic of a death as a result of SIDS or SUDEP.
1897. The remaining matters relied upon as coincidence evidence must be considered against the background that Ms Folbigg was the primary carer of the children (and so was inevitably likely to be the person who checked on them or was at home looking after them). The alleged failure to give assistance to all children, except for Laura, and as Counsel Assisting submitted it is not clear that can be relied upon as relevant coincidence reasoning.
1898. In these circumstances, coincidence reasoning whether in the terms suggested in the coincidence notice or as relied upon at the trial has very limited probative value.

The fourth matter – The tendency evidence

1899. As I pointed out at [132], the Crown accepted at the trial that, before the matters set out in the tendency notice could be used as tendency reasoning in relation to any of the deaths or Patrick's ALTE, the jury would need to be satisfied beyond reasonable doubt that Ms Folbigg had either caused Patrick's ALTE or the death of one of her children. Once again, the evidence does not exclude as a reasonable possibility that Patrick, Sarah and Laura died of identified natural causes. Nor in the circumstances of the present case can the possibility that Caleb died of natural causes, such as SIDS, be excluded.
1900. Further, as I have pointed out I am unable to accept that Ms Folbigg had a tendency to become stressed and lose her temper and control with each of her children, much less suffocate them.
1901. However, it must be accepted that these matters must be considered in conjunction with Ms Folbigg's diaries and her evidence concerning their disposal.

The fifth matter – The diaries and their disposal

1902. It is evident that the diaries formed a critical part of the Crown case. Counsel Assisting in their submissions set out details of the examinations of Ms Folbigg on some of the diary entries at her ERISP and the cross-examination, which took

²³⁵⁷ Exhibit 2-F, Complete set of transcripts of evidence given at 2003 trial, 28 April 2003 T986.54-T987.30 [red pagination 2790-2791]; Exhibit 2-H, Forensic pathology tender bundle, Statement of Dr Susan Beal (8 December 1999) [red pagination 3735, 3738].

²³⁵⁸ Counsel Assisting's Written Closing Submissions (4 April 2023) 157 [558].

²³⁵⁹ Counsel Assisting's Written Closing Submissions (4 April 2023) 157 [559].

place on certain entries at the 2019 Inquiry.²³⁶⁰ It is unnecessary to repeat what was set out in that portion of their submissions. I deal with Ms Folbigg's answers to the questions asked of her concerning the diaries in the ERISP at [281]-[300] and Annexure 3 sets out the cross-examination on them at the 2019 Inquiry.

1903. I have also set out the expert evidence concerning the diary entries, which I will not repeat.
1904. Counsel Assisting made a number of submissions as to how the diaries should be read. First, they submitted that, when reading the diaries, I ought to consider the overarching written context of the whole of the diaries as well as broader matters of context, including Ms Folbigg's mental health and emotional state.²³⁶¹ They pointed out that, even in the context of statutory interpretation, the meaning of a particular provision must be considered in context.²³⁶²
1905. I accept that the meaning of the words of any particular document need to be considered in context. However, it is important in my opinion not to elide two concepts which are relevant in the present case. First, having regard to the circumstances in which the relevant entries were written, do they contain what could be described as admissions. Second, even if they do, would such admissions be reliable.
1906. However, I agree with the submission that the context in the present case includes that the material said to be admissions were written in a diary. Associate Professor Stevenson's description of the use of diaries which I have set out at [1667] is consistent with the use that Ms Folbigg said she made of her diaries, in her ERISP and in her letter to Tracy Chapman (see [1888] above). Further, the content of the diaries, when read as a whole, are consistent with the result of the research carried out by Associate Professor Stevenson, that diaries could be accurately described as a way to work out feelings and emotional musings; they are not factual accounts and definitely not for interpretation.²³⁶³ That is consistent with the evidence of Dr Touma who described the diaries as a transitional object which has the function of soothing or generating a sense of wellbeing.²³⁶⁴ His opinion which I have set out at [1678] was that what may have been "implicating" in her diaries are "in fact nothing but secondary to a distorted reality due to her spiritual belief acting to punish her negative attributes of self".²³⁶⁵
1907. In that context, Counsel Assisting referred to the evidence of Dr Eagle²³⁶⁶ that it is orthodox in the field of psychiatry that thoughts are not facts, and emotions are not intentions.²³⁶⁷
1908. Counsel Assisting submitted that it was not the case that the entries in the diaries, which have been treated as admissions, contain statements which unambiguously record that Ms Folbigg harmed her children. It might be added that Ms Folbigg in her evidence at the 2019 Inquiry denied that any entries had or were intended to have

²³⁶⁰ Counsel Assisting's Written Closing Submissions (4 April 2023) 174 [618] - 175 [623].

²³⁶¹ Counsel Assisting's Written Closing Submissions (4 April 2023) 248 [923].

²³⁶² *Federal Commissioner of Taxation v Consolidated Media Holdings Ltd* (2012) 250 CLR 503 at [39].

²³⁶³ Exhibit 27-01, Report of Associate Professor Janine Stevenson (28 September 2022) [red pagination 10].

²³⁶⁴ Exhibit 29-01, Report of Dr Kamal Touma (13 September 2021) [red pagination 7].

²³⁶⁵ Exhibit 29-01, Report of Dr Kamal Touma (13 September 2021) [red pagination 13].

²³⁶⁶ Counsel Assisting's Written Closing Submissions (4 April 2023) 249 [926].

²³⁶⁷ Exhibit 20-02, Report of Dr Kerri Eagle (10 January 2023) [red pagination 71].

that effect. Counsel Assisting submitted that the method of interpretation which I should adopt should include consideration of the broader context of the diaries, including what the whole of the diaries reveal about the nature of Ms Folbigg's use of them as well as the mental state of the author.²³⁶⁸

1909. Ultimately, the question comes down to this. Whether the entries in the diaries which are said to contain admissions of guilt, when considered in context, including the mental state of Ms Folbigg at the time she wrote them, do in fact constitute such admissions; or, put another way, even if interpreted in isolation, they would be considered to be admissions, does the context in which they were written, including Ms Folbigg's mental state, mean that they are unreliable and, in assessing Ms Folbigg's guilt, it would be dangerous to treat them as admissions.
1910. It is necessary to confront the fact that the Court of Criminal Appeal at Ms Folbigg's appeal had no hesitation in considering that the entries constituted admissions, and the 2019 Inquiry reached the same conclusion, expressly rejecting Ms Folbigg's evidence concerning the entries.
1911. In considering this issue, there are three things which need to be borne in mind. First, at the time that the Court of Criminal Appeal considered the matter, apart from Laura's myocarditis, there were no identifiable possible causes of death of the children. At the 2019 Inquiry, the Inquirer rejected Dr Ryan's evidence and only received limited evidence as to the CALM2-G114R variant being a possible cause of the deaths of Sarah and Laura, after the Inquiry was effectively concluded. By contrast, any consideration of the diaries and Ms Folbigg's evidence in relation to them now takes place in the context of findings that the CALM2-G114R variant was a possible cause of death for Sarah and Laura, that it was unlikely that Patrick's ALTE resulted from smothering, and that there was an identifiable natural cause of Patrick's death.
1912. Second, I have accepted both the diaries and the admissions in them must be considered in the context in which they were written and having regard to Ms Folbigg's mental health at the time, the extensive psychiatric and psychological evidence available to me which suggests that any admissions were unreliable was not before the Court of Criminal Appeal or the 2019 Inquiry.
1913. Third, and possibly as a consequence, the examination of Ms Folbigg at the 2019 Inquiry did not explore her mental state as a possible explanation of what she wrote in her diaries.
1914. I have read and listened to the cross-examination of Ms Folbigg at the 2019 Inquiry. It is fair to say that the object of the cross-examination was to reinforce the finding of guilt and her examination, by both Senior Counsel acting for the Director of Public Prosecutions and Senior Counsel for Mr Folbigg, was openly hostile. That approach was perhaps understandable in the absence of the psychological and psychiatric evidence which is now before me. However, in light of that, the conclusions to be derived from that cross-examination, including the 2019 Inquirer's conclusion on credibility, are open to question.
1915. As I indicated at [495], Sully J gave a "representative sample" of diary entries, which he said made "chilling reading in light of the known history of Caleb, Patrick, Sarah

²³⁶⁸ Counsel Assisting's Written Closing Submissions (4 April 2023) 249 [927].

and Laura”.²³⁶⁹ Medical evidence available at the present Inquiry, compared to the time of the trial and appeal, makes the known history of Patrick, Sarah and Laura very different. Further, in the passage that I have set out at [495], Sully J stated that it was not disputed that the diaries were serious reflections.²³⁷⁰ Once again, that statement must be read in light of the psychological and psychiatric evidence before me. Notwithstanding that, I will deal with each of the diary entries referred to by Sully J as a “representative sample”.

1916. The first entry is the entry of 3 June 1990 (Annexure 3, p 23). The entry was written after the death of Caleb. The portion, presumably relied upon as one of the “chilling” entries, was the statement, “wether [sic] I was going to get stressed out like I did last time”. That extract, and indeed the entry as a whole, does not contain any admission of killing Caleb. I have set out the cross-examination on this entry. It does not, in my opinion, take the matter any further.
1917. The next entry is the entry of 18 June 1996 (Annexure 3, p 51). The words relied on were, “I’m ready this time. And I’ll have help & support this time. When I think I’m going to loose [sic] control like last times, I’ll just hand baby over to someone else”.
1918. In cross-examination at the 2019 Inquiry, Ms Folbigg was referred to her answer in the ERISP, that when she referred to losing control, she was referring to the frustration she felt sometimes with Patrick and Sarah. She agreed that she did not use the word “frustration” in the diary entry. It was put to her that she attempted to water down the truth, and she denied it. She stated, in answer to a question from Ms Cunneen SC, that when she said that she was going to lose control, she was not referring to having lost control with all of the babies but she felt that she had “lost of control of the whole situation and [her] whole life, not just a bit of them.” She stated that she had a permanent fear by the time that she had written the diaries that something bad was always going to happen, because she had nothing but proof of that her whole life. She stated that when she said “I have learnt my lesson this time”, it was a desperation statement. She said that she had decided that she had not been a very good mother, and had not learnt her lesson, and the words “this time” was simply her telling herself that she had to get this right.
1919. Once again, there is no admission by Ms Folbigg that she killed any of her children, and indeed taken in isolation, it would be difficult to draw this conclusion from that particular entry.
1920. The next entry is the entry of 4 December 1996 (Annexure 3, p 101). The portion relied on contained the words, “I’m ready this time. But have already decided if I get any feelings of jealousy or anger to [sic] much I will leave Craig & baby, rather than answer being as before. Silly but will be the only way I will cope.”
1921. In cross-examination by Senior Counsel for the Director of Public Prosecutions, Ms Folbigg denied that she had ever snapped her cog with a baby or had ever done anything physically to them at the time that she snapped her cog. She stated that her “frustration levels and snapping cogs is a word you like to keep using, was more directed at my feelings of not having enough support at the time, that I felt like I was doing everything myself and deprivation, my sleep deprivation wasn’t helping that situation. It was exasperating it.” She denied to Ms Cunneen SC that jealousy caused her to be angry and that her psychological mood swings caused

²³⁶⁹ *R v Folbigg* [2005] NSWCCA 23; 152 A Crim R 35 [132] (Sully J).

²³⁷⁰ *R v Folbigg* [2005] NSWCCA 23; 152 A Crim R 35 [132] (Sully J).

danger to her children. She expressly denied that her children died as a result of her psychological mood swings. In her answer to a further question on this entry, she stated that her diaries were her continually searching and asking and questioning statements and grappling with answers that she was trying to get. She agreed that she was constantly blaming herself because she had in her head a belief that her moods affected everything; she said that they affected her children, her children then died and decided that they did not wish to be with her anymore. She stated that it was “quite a warped view as to how I was thinking and is evident in the diaries and to how I’m writing them.”

1922. The next entry is the entry of 1 January 1997 (Annexure 3, p 123). The particular section relied on was the words, “I am going to call for help this time & not attempt to do everything myself anymore. I know that that was the main reason for all my stress before & stress made me do terrible things.”

1923. Ms Folbigg, in cross-examination explained that what she meant by “terrible things” was having a “frustrative [sic] thought, that was a terrible thing. If, if I left my child to cry for a second it was a terrible thing. If I hadn’t met my child’s needs in some way, that was a terrible thing.”

1924. I accept that it would be open to conclude that this entry meant that Ms Folbigg had done terrible things to her children. However, it is not a direct admission of murder. Further, if the evidence of Dr Dhansay, Dr Eagle and Mr Sheehan is accepted, it takes on a far less sinister meaning.

1925. The next entry was the entry of 4 February 1997, written at 3:30am (Annexure 3, p 133). The portion particularly relied on are the words:

Still can’t sleep. Seem to be thinking of Patrick & Sarah & Caleb. Makes me seriously wonder whether [sic] I’m stupid or doing the right thing by having this baby. My guilt of how responsible I feel for them all, haunts me, my fear of it happening again, haunts me...What scares me most will be when I’m alone with the baby. How do I overcome that? Defeat that?

1926. In cross-examination on that entry, Ms Folbigg denied that she had any direct part in the killing of her children. She stated that she “[felt] responsible for their deaths, as their mother and the fact that I did not do something in any way whatsoever that could’ve helped prevent that in some way then yes I will always say I’m responsible.”

1927. Once again, this entry contained no direct admission of guilt and Ms Folbigg denied that that was how it should be interpreted. Her explanation for the entry is consistent with the opinion of Dr Eagle, Dr Dhansay and Mr Sheehan concerning the diary entries, and for that matter, the opinion of Dr Betts and Dr Touma.

1928. The next entry is the entry of 16 May 1997 (Annexure 3, p 153). The critical portion of the entry relied on are the words:

Craig says he will stress & worry but he still seems to sleep okay every night & did with Sarah. I really needed him to wake that morning and take over from me. This time I’ve already decided if I ever feel that way again I’m going to wake him up.

1929. Ms Folbigg stated that she was not 100% sure that she was referring to the night that Sarah died in that entry. She stated she was having “a frustration with how easily I think Craig could sleep, compared to me and that I needed care and help with Sarah.” Referring to the portion of the entry that, “Night time & early morning such as these will be the worst for me, that’s when wishing someone else was awake with me will happen”, she explained that she “never liked feeling like I was

being - that I was alone in anything. I was always, always - it always goes back to me having a doubt into my abilities, and a doubt that I will not react fast enough or I would not be seeing something that I should have been seeing". She stated that that particular extract was "about just wishing that at night times when I'm feeling that way is someone else is awake with me and they're with me."

1930. Once again, there are no direct admissions.

1931. I have already stated at [1880] that I could not accept Mr Folbigg's evidence regarding what occurred on the night of Sarah's death in preference to that of Ms Folbigg. This entry does not cause me to change my mind. Further, the question of whether what was said could constitute a reliable admission of killing Sarah must again be considered in context, not only of Ms Folbigg's evidence but of the psychological and psychiatric evidence before me.

1932. The next entry is the entry of 25 October 1997 (Annexure 3, p 199). The relevant part referred to by Sully J contained the words:

...cherish Laura more, I miss her [Sarah] yes, but am not sad that Laura is here & she isn't. Is that a bad way to think, don't know. I think I am more patient with Laura. I take the time to figure what is rong [sic] now instead of just snapping my cog. Also she is a far more agreeable child & easily flows most of the time...Wouldn't of handled another one like Sarah. She saved her life by being different.

1933. Ms Folbigg suggested in cross-examination that in her remarks, "Laura is here & she isn't. Is that a bad way to think", she was questioning herself which is something which she commonly did. She was "questioning was I even thinking straight and was that a bad way to think." She also stated that, in her mind, there was no difference between frustration and snapping her cog. She admitted that she was frustrated by Sarah and her difficulty in getting her to sleep. She said the words "She saved her life by being different" was "...a mystical representation. That's me reflecting on my beliefs as in karma and the children talking to each other and God and all of those sorts of beliefs that I had." She stated that was her belief at the time that she wrote the entry.

1934. As I pointed out at [1740], Dr Eagle's evidence in relation to this entry noted that Ms Folbigg did speak at times of having a spiritual belief that the children were taken from her. She stated that she did not think she could interpret the entry, from her expertise, as suggesting that she had done something to harm the child and that she would not necessarily literally interpret what someone writes in their diary for their own emotional purposes.²³⁷¹

1935. I have set out Mr Sheehan's evidence on this entry at [1823]-[1825]. Although he conceded that it could be interpreted as an admission of killing Sarah, he stated that it was not the best interpretation from the point of view of a psychologist.²³⁷²

1936. The next entry referred to by Sully J was the entry of 29 October 1997 (Annexure 3, p 213). That entry contains the following words:

Felt a little angry towards Laura today. It was because I am & was very tired. Wonder if Craig was serious about trip to Melbourne. Would be great to see Lea's face, but also scary, because it's a little to similar to what we did with Sarah. But Laura's different.

²³⁷¹ Transcript of the 2022 Inquiry, 23 February 2023 T722.11-50 (Eagle).

²³⁷² Transcript of the 2022 Inquiry, 23 February 2023 T665.10-31 (Sheehan).

Totally she doesn't push my Button anywhere near the extent she did. Which is good for her is all I can say.

1937. Ms Folbigg stated in cross-examination that what she meant by, "Which is good for her is all I can say", was that "it kept her mother calm and that was good for her." She said that she felt that at the time of Sarah, she did not handle things. She was asked how Sarah pushed her buttons, and responded "It was simply my frustration level would exasperate the situation with her when she wasn't sleeping and I became overtired." Once again, she expressly denied killing Sarah.
1938. The next entry was 3 November 1997 (Annexure 3, p 219). The entry describes her concern when she left Laura with anyone, and concerns about her weight. At the conclusion of the entry, she wrote:
- Someone's awake, got to go. Lost it with her earlier. Left her crying in our bedroom & had to walk out. That feeling was happening & I think it was because I had to clear my head & prioritise. As I've done in here now. I love her, I really do, I don't want anything to happen.
1939. In answer to questions by Senior Counsel for the Director of Public Prosecutions, she stated the "feeling" was "not being able to figure out what my child wanted and how I could help her." She said that she could not figure out why she was crying so much. She said that "lost it" meant that she was not handling it. She denied shouting or growling at Sarah.
1940. The next entry was the entry of 9 November 1997 (Annexure 3, p 223). After referring to Laura's teething problems, she stated that Mr Folbigg had "a morbid fear about Laura". She wrote "well I know there's nothing wrong with her. Nothing out of ordinary any way. Because it was me not them." She continued, "Think I handle her fits of crying better than I did with Sarah. I've learnt once its getting to me to walk away...With Sarah all I wanted was her to shut up. And one day she did."
1941. In cross-examination by Senior Counsel for the Director of Public Prosecutions, when asked about the comment "well I know there's nothing wrong with her. Nothing out of ordinary any way. Because it was me not them", she said that the comment meant that she desperately wanted for there to be nothing wrong with Laura. She said that the comment, "Because it was me not them", was a separate thought and she said that she constantly blamed herself for everything so if anything went wrong, she would blame herself because she was their mother. When asked why she did not walk away, she said she "didn't handle the frustration of the difficulty I was having with Sarah very well". She said that the remark "With Sarah all I wanted was her to shut up. And one day she did", was an observation.
1942. None of the psychiatrists or psychologists who provided reports or gave evidence were expressly referred to this entry. However, if the evidence of Dr Betts at [1655] and [1657], Dr Seidler at [1692], Dr Eagle at [1717]-[1722], Dr Dhansay at [1759] and [1770] and Mr Sheehan at [1816] is accepted, these remarks can be explained as evidence of self-blame for the unexplained deaths, as distinct from admissions that she murdered her child.
1943. The next entry referred to by Sully J was the entry of 19 November 1997, which reads, in part, "Bit nervous tonight. Laura & I are by ourselves tonight."²³⁷³ The entry is not in Annexure 3 as it was not the subject of cross-examination at the 2019 Inquiry.

²³⁷³ Exhibit 2-AZ, Diaries tender bundle [red pagination 7145].

Immediately after the comment, described by Sully J as “sinister”, it adds “Craig’s away conference for Land Rover” and concludes “Better check on her & get some sleep”. With respect, it is quite innocuous.

1944. The next entry is the entry of 8 November [December] 1997 (Annexure 3, p 235), on which Mr Sheehan was cross-examined (see [1826]-[1827]). Mr Sheehan was asked whether the entry should be read as a desire to avoid killing Laura, to which he responded “[t]he interpretation is possible but, again, I do not believe that that is the most likely interpretation.”²³⁷⁴
1945. Ms Folbigg was cross-examined on that portion of the entry which reads “Must try to release my stress somehow. I’m starting to take it out on her. Bad move. Bad things & thoughts happen when that happen. It will never happen again.” Ms Folbigg stated that she wrote that because of her belief that her negative feelings impacted on her child, and the expression contained in the entry that “I was not meeting her needs”. Further to that, she said she did not know what she needed to do when she was crying and “I just could not stop it”.
1946. The next entry referred to by Sully J was on 31 December 1997 (Annexure 3, p 249). It contained the entry, “Getting Laura to be next year ought to be fun...Wonder if the battle of the wills will start with her & I then...She’s a fairly good natured baby – thank goodness, it saved her from the fate of her siblings. I think she was warned.”
1947. Ms Folbigg stated that she thought at the time that the children did have chats with Laura, describing it as a “clairvoyant sort of thing”, and that she believed that her bad moods affected her children. She stated that “I’m always searching for why. It never stops.” Once again, she denied suffocating them.
1948. The next entry is the entry of 28 January 1998 (Annexure, p 129), which I have set out at [1775] above. Ms Folbigg was cross-examined on the entry, particularly on the comment “she left with a bit of help.” She said that she was referring to God or some higher power, deciding that she did not want to stay and helped her leave. She said that she thought it was true at the time, and that what she wrote made sense when she wrote it. It was put to her by Senior Counsel for the Director of Public Prosecutions that the entry was “one of the closest places that you have come in the diaries to admitting your guilt of killing Sarah.” She responded that it was actually her “admitting how badly responsible I felt, and I will always feel that way”.
1949. Dr Dhansay and Mr Sheehan were asked about this entry. I have set out the evidence of Dr Dhansay at [1776]-[1777] and [1780-1781], and that of Mr Sheehan at [1828]-[1834]. They both stated that the reference to “a bit of help” could be a reference to outside forces. I do not think this was an attempt to construe the entry, rather a reference to the fact that the entry could be construed by reference to Ms Folbigg’s belief in relation to karma and other external forces.
1950. The next entry referred to by Sully J was the entry of 6 March 1998 (Annexure 3, p 277). It contained the statement, “Laura not well, really got on my nerves today, snapped & got really angry, but not nearly as bad as I used to get.” She stated in cross-examination that she was just annoyed and angry with herself for not being able to handle the situation and find out what was wrong.
1951. The next entry was an entry of 13 March 1998, which does not appear in Annexure

²³⁷⁴ Transcript of the 2022 Inquiry, 23 February 2023 T691.3-10 (Sheehan).

3. It contains the entry, “Seem to have a good day today. She didn’t piss me off more than a couple of times.”²³⁷⁵ There was no cross-examination on this entry.
1952. The final entry referred to by Sully J was an entry of 1 April 1998 (Annexure 3, p 279) which contained the entry, “Thought to myself today difference with Sarah, Pat, Caleb to Laura, with Laura I’m now ready to share my life, I definitely wasn’t before”.²³⁷⁶
1953. Sully J at [495] described the probative value of the material as “damning”. He stated that “the picture painted by the diaries was one which gave terrible credibility and persuasion to the inference, suggested by the overwhelming weight of the medical evidence, that the five incidents had been anything but extraordinary coincidences unrelated to acts done by the appellant.”²³⁷⁷ Thus, in considering the entries in the diaries, he correctly took into account the then existing medical evidence and was of the view that it overwhelmingly pointed to Ms Folbigg having committed the crimes for which she was charged. The difficulty is that, in the present case, the medical evidence is totally different and must be considered along with the psychological and psychiatric evidence before me.
1954. It is clear from a review of this sample that none of the entries contain express admissions of the crimes for which Ms Folbigg was convicted. Mr Maxwell KC, who appeared for the Director of Public Prosecutions, was probably correct in stating that the closest entry which amounted to such an admission was the expression “she left with a bit of help”, contained in the entry of 28 January 1998 (Annexure 3, p 261).
1955. The ultimate question for me is whether the diary entries should be construed as containing admissions of guilt which are reliable, or whether the entries written in the diaries in which Ms Folbigg was venting her negative feelings were a consequence of the guilt and self-blame of a grieving mother who had (at the time when most of the entries said to constitute admissions were made) lost three children.
1956. I have set out the evidence on this issue tendered before me and I do not propose to repeat it. The evidence establishes that self-blame and guilt, in circumstances where a child dies suddenly and unexpectedly, are common expressions of grief. As Counsel Assisting pointed out in their written submissions, the substantial body of literature before the Inquiry also supported this proposition. The evidence of Dr Betts was that an added complication of sudden infant death is that a parent, usually the mother, discovers the deceased or dying infant, which she stated, “exacerbates the typical shock, numbness and denial evident after the sudden loss of an infant”.²³⁷⁸
1957. Moving from the general to the particular, none of the psychiatrists or psychologists, who expressed opinions for the purpose of the Inquiry, were prepared to accept that the entries could be treated as reliable admissions of guilt.
1958. In these circumstances, taking into account the possible reasonable explanations for the deaths of three of the children, considering the entries said to constitute

²³⁷⁵ Exhibit 2-AZ, Diaries tender bundle [red pagination 7177].

²³⁷⁶ Exhibit 2-AZ, Diaries tender bundle [red pagination 7182].

²³⁷⁷ *R v Folbigg* [2005] NSWCCA 23; 152 A Crim R 35 [132] (Sully J).

²³⁷⁸ Exhibit 24-01, Updated Report of Dr Sharmila Betts (13 April 2021) [red pagination 6].

admissions of guilt in the context of the diaries as a whole, and taking into account the significant psychiatric and psychological evidence, I am unable to accept that any of the diary entries contain reliable admissions of the guilt of Ms Folbigg.

1959. My opinion is not altered by the evidence that Ms Folbigg gave concerning the disposal of the diaries. The sequence of events is conveniently summarised at [1830]. I agree with Counsel Assisting that there can be little doubt that Ms Folbigg lied to the police as to the disposal of her diaries and endeavoured unsuccessfully to conceal those which were in her possession. Her evidence on this issue is summarised at [878]-[897], and in my view it was unsatisfactory and cannot be accepted.
1960. I conclude that, in the circumstances, Ms Folbigg lied to the police in an attempt to conceal her diaries. I reject her evidence at the 2019 Inquiry where she sought to explain her conduct.
1961. However, I am not prepared to accept that those lies evidence consciousness of guilt such as to constitute admissions against her. As Counsel Assisting submitted, at the time Ms Folbigg sought to conceal the existence of the diaries, she would have been aware, from the ERISP which had been conducted, that the diaries could be used to mount a case against her. It does not follow that the lies as to their existence showed a consciousness of guilt as distinct from avoiding prosecution for acts which she did not commit. I should add that, contrary to the submissions of Counsel Assisting, I do not think it can be inferred that the decision to conceal the diaries arose out of fear of others reading her thoughts which could be embarrassing to her. There was enough already in the possession of police to render that possibility unlikely. However, that does not affect my overall conclusion that neither her attempts to conceal the diaries nor the lies she told to the police in connection with that attempt constitute admissions of guilt.
1962. In all of the circumstances, I am of the view that the diaries do not contain reliable admissions of the question of guilt. They are therefore, as Counsel Assisting submitted, neutral in determining whether Ms Folbigg is or is not guilty of the offences for which she was convicted.

Mr Folbigg's submissions

1963. Mr Folbigg was the only participant in the Inquiry who asserted that there was no reasonable doubt as to Ms Folbigg's guilt.
1964. Mr Folbigg, in his written submissions, contended that, notwithstanding the additional evidence introduced before the Inquiry, the basic structure of the case against Ms Folbigg has not changed. It was submitted, in particular, the fundamental implausibility of the hypothesis that four children in the one family died before reaching the age of two years remained the dominant factor.²³⁷⁹
1965. In his written submissions, Mr Folbigg contended that notwithstanding that Meadow's Law had been discredited, the Court of Appeal in *Folbigg v Attorney General of New South Wales* supra laid down the specific basis upon which the hypothesis of death by natural causes is to be assessed and submitted that no attempt had been made to demonstrate compliance with those standards. He made

²³⁷⁹ Written Closing Submissions on behalf of Mr Folbigg (19 April 2023) 1 [4].

this submission, relying on the passages from the judgment of the Court of Appeal, which I have set out at [29] above.²³⁸⁰

1966. At the hearing, Senior Counsel for Mr Folbigg submitted that what the Court of Appeal was stating in the passages relied upon was that, for there to be reasonable doubt in the circumstances of the present case, there needs to be a real possibility of a common cause of death. That was presumably the basis of the somewhat surprising written submission that, focusing on separate theories as to the cause of death “damaged Ms Folbigg’s campaign”.²³⁸¹ Ultimately, Senior Counsel for Mr Folbigg, whilst eschewing Meadow’s Law, sought to apply Bayes Theorem, stating that the possibility of four deaths occurring was one in a billion (1 x 1000)⁴.²³⁸² I have already dealt with this type of analysis in dealing with the evidence of Dr MacRae (see [1315], [1330]-[1332]). I reject the probabilistic approach, which is in effect a variant of Meadow’s Law, as appropriate, accepting as I have done that it is necessary to consider the coincidence evidence relied upon.
1967. Further, as I pointed out at [30]-[31], I do not regard the Court of Appeal as laying down any different test to that laid down by the High Court, namely that in a circumstantial case, for there to be a finding of guilt, all reasonable hypotheses inconsistent with guilt must be excluded.
1968. The next matter relied upon was the diaries. In his written submissions to the Inquiry, Mr Folbigg was critical that only two days was dedicated to evidence concerning the diaries.²³⁸³ That ignores the detailed reports which were provided and also ignores the fact that Senior Counsel for Mr Folbigg did not seek to cross-examine any of the experts who were called, much less challenge any of their conclusions. Further, whilst only a limited number of the diary entries were the subject of cross-examination, I have considered all of them and in this section of the Report dealt with what the Court of Criminal Appeal described as a “representative sample”. I have set out my conclusion from that review in the overall context of the case at [1954] and the submissions made by Mr Folbigg do not persuade me to the contrary.
1969. In his written submissions, Mr Folbigg referred to the fact that the diaries demonstrated a lack of curiosity as to the causes of the children’s deaths.²³⁸⁴ Dr Eagle dealt with that matter in cross-examination by Senior Counsel for the Director of Public Prosecutions and gave an explanation which I accept (see [1737]). Counsel for Mr Folbigg did not seek to challenge her answer.
1970. The next matter relied upon by Mr Folbigg in his written submissions was the absence of expressions of grief by Ms Folbigg for the deaths of her children.²³⁸⁵ For the reasons given at [1885]-[1891], I reject that submission.
1971. Mr Folbigg then submitted that the diary entries showed a lack of affection by Ms Folbigg for her children.²³⁸⁶ I have dealt with that at [1882]-[1891]. As I pointed out at [1884], the diary entries exhibiting anger and frustration do not support the view that Ms Folbigg was a person who is likely to kill her children.

²³⁸⁰ Written Closing Submissions on behalf of Mr Folbigg (19 April 2023) 2 [5]-[7].

²³⁸¹ Written Closing Submissions on behalf of Mr Folbigg (19 April 2023) 3 [10].

²³⁸² Transcript of the 2022 Inquiry, 26 April 2023 T833.39-44 (Hastings KC).

²³⁸³ Written Closing Submissions on behalf of Mr Folbigg (19 April 2023) 4 [12].

²³⁸⁴ Written Closing Submissions on behalf of Mr Folbigg (19 April 2023) 9 [26] - 10 [28].

²³⁸⁵ Written Closing Submissions on behalf of Mr Folbigg (19 April 2023) 10 [29].

²³⁸⁶ Written Closing Submissions on behalf of Mr Folbigg (19 April 2023) 10 [30] - 11 [32].

1972. Finally, there was a suggestion that there may be a genetic cause for Ms Folbigg murdering her children.²³⁸⁷ Suffice to say, this submission had no foundation in the evidence and was not permitted to be the subject of cross-examination of the genetic experts who gave evidence. The submission was rank speculation and should not have been made.
1973. In these circumstances, Mr Folbigg's submissions do not persuade me that there is not reasonable doubt that Ms Folbigg was guilty of the crimes for which she was convicted.

Result

1974. In a memorandum written to the Attorney General dated 1 June 2023, I summarised the basis on which I came to the conclusion that there is reasonable doubt as to Ms Folbigg's guilt. This Report sets out the detailed reasons for reaching this conclusion, which remains my view.
1975. At the risk of repetition, I have concluded that there is an identifiable cause of the death of Patrick, Sarah and Laura, and that it was more likely that Patrick's ALTE was caused by a neurogenetic disorder rather than suffocation. Once that conclusion is reached, any probative force of the coincidence and tendency evidence is substantially diminished. Further, I have concluded that the relationship Ms Folbigg had with her children does not support the inference that she killed them. Finally, I do not regard the diaries as containing reliable admissions of guilt.
1976. Although no identifiable cause of Caleb's death was identified the matters to which I have referred in the previous paragraph mean that in his case the reasonable possibility that he died of unknown natural causes has not been excluded.
1977. Notwithstanding that Ms Folbigg has been pardoned, I will, as required by s 82 of the CAR Act, furnish my Report to the Governor. I will also, as requested by Ms Folbigg, refer the matter with a copy of the Report to the Court of Criminal Appeal, pursuant to s 82(2) of the CAR Act for consideration of the question of whether the convictions should be quashed.
1978. It only remains to express my appreciation to Counsel and the Solicitors Assisting the Inquiry for their submissions and the manner in which the Inquiry was conducted. I also express my appreciation to all participants for assisting in this difficult matter being conducted as efficiently as possible.

²³⁸⁷ Written Closing Submissions on behalf of Mr Folbigg (19 April 2023) 5 [14].

Glossary of Terms

Term	Definition
ACMG	The American College of Medical Genetics and Genomics. In 2013, a workgroup consisting of ACMG, Association for Molecular Pathology and College of American Pathologists members developed a series of recommendations for the use of standard terminology for classifying sequence variants as pathogenic, likely pathogenic, variant of uncertain significance, likely benign, and benign. ¹
Acute	Of recent origin.
Adenine	One of the four nucleotide bases in DNA, with the other three being cytosine (C), guanine (G) and thymine (T). Within a double-stranded DNA molecule, adenine bases on one strand pair with thymine bases on the opposite strand. The sequence of the four nucleotide bases encodes DNA's information. ²
Agonal rhythm	Describes the ECG of a dying patient, characterised by slow, irregular, and wide ventricular complexes that eventually stop. It is often seen in the terminal stages of a failed attempt at cardiac resuscitation. ³
AGRF	Australian Genome Research Facility. ⁴
Ajmaline	A sodium channel blocker ⁵ and anti-arrhythmic drug used during an ajmaline challenge to uncover the characteristic ECG changes of Brugada syndrome. ⁶
Allele	One of two or more versions of DNA sequence (a single base or a segment of bases) at a given genomic location. An individual inherits two alleles, one from each parent, for any given genomic location where such variation exists. If the two alleles are the same, the individual is homozygous for that allele. If the alleles are different, the individual is heterozygous. ⁷
ALTE	Apparent or acute life-threatening event. An episode characterised by some combination of apnoea, colour change, marked change in muscle tone, choking or gagging. It may include a seizure. ⁸

¹ Sue Richards et al, 'Standards and guidelines for the interpretation of sequence variants: a joint consensus recommendation of the American College of Medical Genetics and Genomics and the Association for Molecular Pathology' (2015) 17(5) *Genetics in Medicine: Official Journal of the American College of Medical Genetics* 405-406.

² 'Talking Glossary of Genomic and Genetic Terms', *National Human Genome Research Institute* (Web Page) <<https://www.genome.gov/genetics-glossary>> ('Talking Glossary of Genomic and Genetic Terms').

³ Elizabeth Martin and Jonathan Law (eds), *Oxford Concise Colour Medical Dictionary* (Oxford University Press, 7th edition, 2020) 92.

⁴ AGRF (Web Page) <<https://www.agrf.org.au/>>.

⁵ Exhibit 4, Transcript of 2019 Inquiry Hearings, 516 (T510.17-23).

⁶ 'Diagnostic Tests – Ajmaline Challenge for Brugada Syndrome', *Melbourne Heart Rhythm* (Web Page) <<https://www.melbourneheartrhythm.com.au/learn/diagnostic-tests/104-ajmaline-challenge>>.

⁷ Talking Glossary of Genomic and Genetic Terms (n 2).

⁸ M C McGovern and M B Smith, 'Causes of Apparent Life-Threatening Events in Infants: A Systematic Review' (2004) 89(111) *Archives of Diseases in Childhood* 1043.

Term	Definition
Amino acid	Small chemical building blocks that join together to form proteins: there are 20 common amino acids which join in different combinations to make up proteins. ⁹
Anhedonia	Inability to experience pleasure from normally pleasurable activities. ¹⁰
Animal model	A non-human species used in biomedical research because it can mimic aspects of a biological process or disease found in humans. ¹¹
Anoxia	Condition of the body in which oxygen is entirely absent from tissues. ¹² Occurs either because of cessation of flow of oxygen through a main axial artery or as a result of increasing pressure within tissue caused by bleeding, infusion of fluid or sepsis. Can result in tissue death. ¹³
Anxiety disorders	Disorders that share features of excessive fear and anxiety and related behavioural disturbances. ¹⁴
APGAR Score	Clinical indicators of a neonate's condition based on skin colour, pulse, breathing, muscle tone and reflex irritability. Each characteristic is given between zero and two points, with a total score between zero and 10 points. ¹⁵
Apnoea	A complete cessation of breathing that lasts 10 seconds or greater. Sleep apnoea is a disorder in which breathing is repeatedly interrupted during sleep. ¹⁶
Arginine	An amino acid that plays an important role in the formation of urea by the liver. ¹⁷
Artefact	A sign or finding at autopsy imitating pathology, disease, or injury occurring in life. ¹⁸

⁹ The Honourable Reginald Blanch AM KC, *Inquiry into the Convictions of Kathleen Megan Folbigg* (Final Report, July 2019) 542 ('2019 Inquiry Report').

¹⁰ World Health Organisation, *International Classification of Diseases*, WHO Doc WHO/ICD-11 MB24.2 ('ICD-11').

¹¹ Talking Glossary of Genomic and Genetic Terms (n 2).

¹² 2019 Inquiry Report (n 9) 542; Encyclopædia Britannica (online at 9 July 2019) 'Hypoxia' <<https://www.britannica.com/science/hypoxia#ref114618>>.

¹³ Susan Standring et al (eds), *Gray's Anatomy: The Anatomical Basis of Clinical Practice* (Elsevier, 2021) 875.

¹⁴ *Diagnostic and Statistical Manual of Mental Disorders: DSM-5-TR* (American Psychiatric Association Publishing, 5th revised edition, 2022) ('DSM-5-TR').

¹⁵ 'Apgar score', *Merriam-Webster - Dictionary* (Web Page) <<https://www.merriam-webster.com/dictionary/Apgar%20score>>.

¹⁶ 2019 Inquiry Report (n 9) 542; Australian Sleep Association, 'Obstructive Sleep Apnoea', Obstructive Sleep Apnoea (Guideline) <https://www.aci.health.nsw.gov.au/__data/assets/pdf_file/0006/212919/Obstructive_Sleep_Apnoea_Guidelines.pdf>.

¹⁷ Elizabeth Martin and Jonathan Law (eds) (n 3) 118.

¹⁸ 2019 Inquiry Report (n 9) 542; Stephen T Goudge, *Inquiry into Pediatric Forensic Pathology in Ontario* (Ontario Ministry of the Attorney-General, 1 October 2008) Volume 3, Glossary of Medical Terms, xv.

Term	Definition
Asystole	Condition in which the heart no longer beats, accompanied by the absence of complexes in the electrocardiogram. The clinical features, causes, and treatment are those of cardiac arrest. ¹⁹
Autosomal dominant disorder	Autosomal dominant is a pattern of inheritance characteristic of some genetic disorders. “Autosomal” means that the gene in question is located on one of the numbered, or non-sex, chromosomes. “Dominant” means that a single copy of the mutated gene (from one parent) is enough to cause the disorder. A child of a person affected by an autosomal dominant condition has a 50% chance of being affected by that condition via inheritance of a dominant allele. ²⁰
Autosomal recessive disorder	Autosomal recessive is a pattern of inheritance characteristic of some genetic disorders. “Autosomal” means that the gene in question is located on one of the numbered, or non-sex, chromosomes. “Recessive” means that two copies of the mutated gene (one from each parent) are required to cause the disorder. In a family where both parents are carriers and do not have the disease, roughly a quarter of their children will inherit two disease-causing alleles and have the disease. ²¹
Autosome	Any chromosome that is not a sex chromosome and occurs in pairs of diploid cells. ²²
Axon	Nerve fibre. ²³
Basal ganglia	Several large masses of grey matter embedded deep within the white matter of the cerebrum. They have complex neural connections with both the cerebral cortex and thalamus. They are involved with the regulation of voluntary movements at a subconscious level. ²⁴
Base pair	Two complementary DNA nucleotide bases that pair together to form a “rung of the DNA ladder”. ²⁵
Biallelic variant	Variant found in both chromosomes. ²⁶
Bigeminy	Condition in which alternate, ectopic beats of the heart are transmitted to the pulse and felt as a double pulse beat. ²⁷
Biopsy	The removal of a small piece of tissue for laboratory examination. ²⁸

¹⁹ Elizabeth Martin and Jonathan Law (eds) (n 3) 125.

²⁰ Ibid.

²¹ Ibid.

²² Ibid.

²³ Talking Glossary of Genomic and Genetic Terms (n 2).

²⁴ Elizabeth Martin and Jonathan Law (eds) (n 3) 137.

²⁵ Talking Glossary of Genomic and Genetic Terms (n 2).

²⁶ Ibid.

²⁷ Elizabeth Martin and Jonathan Law (eds) (n 3) 141.

²⁸ ‘Biopsy’, *MedlinePlus – Medical Encyclopedia* (Web Page) <<https://medlineplus.gov/ency/article/003416.htm>>.

Term	Definition
Blood-lactate level	The amount of lactate, an acid containing red blood cells, present in the blood. An increased lactate may indicate either a protective or a maladaptive response to shock, ischemia or hypoxemia. ²⁹ Normal lactate levels are less than 1.0 mmol/L in all age groups. A lactate of 4.0 mmol/L significantly elevates the risk for both morbidity and mortality. ³⁰
Borderline personality disorder	A condition categorised by a pattern of instability in interpersonal relationships, self-image, and affects, and marked impulsivity. Individuals with borderline personality disorder may also have transient, psychotic-like symptoms, but these are usually more closely related to affective shifts in response to stress (e.g., intense anger, anxiety, disappointment) and are usually more dissociative (e.g., derealization, depersonalization). ³¹
Bradycardia	Abnormally slow heart rate. ³²
Brainstem	The enlarged extension upwards within the skull of the spinal cord, consisting of the medulla oblongata, the pons, and the midbrain. ³³
Bronchiolitis	Inflammation of the bronchioles (smaller branches of bronchial passageways in the respiratory tract). ³⁴
Brugada syndrome	A condition that causes a disruption of the heart's normal rhythm. Specifically, this disorder can lead to irregular heartbeats in the heart's lower chambers (ventricles), which is an abnormality called ventricular arrhythmia. If untreated, the irregular heartbeats can cause fainting (syncope), seizures, difficulty breathing, or sudden death. These complications typically occur when an affected person is resting or asleep. Brugada syndrome usually becomes apparent in adulthood, although it can develop any time throughout life. Signs and symptoms related to arrhythmias, including sudden death, can occur from early infancy to late adulthood. Sudden death typically occurs around age 40. ³⁵
Calcification	The deposition of calcium salts in tissue. ³⁶
Calcium binding proteins	Contribute to the control of calcium ion concentration in the cytosol and participate in numerous cellular functions by acting as calcium ion transporters across cell membranes or as calcium ion-modulated sensors by decoding calcium ion signals. ³⁷

²⁹ Matthew L Goodwin et al, 'Blood Lactate Measurements and Analysis during Exercise: A Guide for Clinicians' (2007) 1(4) *Journal of Diabetes Science Technology* 558-569.

³⁰ *Clinical Excellence Commission, NSW Government, Lactate in the Deteriorating Patient* (Information Sheet for Clinicians, June 2021) 1.

³¹ DSM-5-TR (n 14).

³² Elizabeth Martin and Jonathan Law (eds) (n 3) 152.

³³ Ibid 152.

³⁴ 'Bronchiolitis', *Merriam-Webster - Dictionary* (Web Page) <<https://www.merriam-webster.com/dictionary/bronchiolitis>>.

³⁵ 'Brugada syndrome', *MedlinePlus - Medical Encyclopedia* (Web Page) <<https://medlineplus.gov/genetics/condition/brugada-syndrome/>>.

³⁶ Elizabeth Martin and Jonathan Law (eds) (n 3) 161.

³⁷ Jonathan Lytton, 'Membrane Transporters: Na⁺/Ca²⁺ Exchangers' (2013) 2 *Encyclopedia of Biological Chemistry* 44-48.

Term	Definition
Calcium ion (Ca²⁺)	One of the most ubiquitous intracellular second messengers. Changes in the concentration of Ca ²⁺ control a variety of cellular processes including fertilization, proliferation, differentiation, muscle contraction, neuronal signalling, and even programmed cell death. The coordination of such a diverse set of functions is thought to be achieved through Ca ²⁺ -binding events that are sensitive to complex spatial and temporal patterns of intracellular Ca ²⁺ concentration. Unlike other second messenger systems, Ca ²⁺ cannot be metabolized, and its concentration is controlled primarily by transport across membranes that bound intracellular compartments (such as the sarco- or endoplasmic reticulum and the mitochondrion) and the cell periphery (the plasma membrane). Cells possess a complex array of different Ca ²⁺ -transporting mechanisms, and the process of Na ⁺ /Ca ²⁺ exchange is a major contributor to Ca ²⁺ efflux across the plasma membrane. The unique and precise nature and arrangement of different Ca ²⁺ transport protein molecules in different cells are generally thought to provide a major component of control over complex Ca ²⁺ dynamics. When this carefully orchestrated homeostasis goes awry and Ca ²⁺ concentrations are dysregulated, the repercussions are usually severe, resulting in damage and cell death which then cause the pathological consequences of diseases such as stroke, neurodegeneration, and heart disease. ³⁸
Calmodulin	An amino acid protein that acts as a calcium sensor. It binds and regulates hundreds of enzymes, pumps and ion channels. ³⁹
Calmodulin variant/mutation	A change in the calmodulin gene DNA leading to a change in one of the amino acids, resulting in a calmodulin protein, that is different from the normal. ⁴⁰
Cardiac arrhythmia	Variation from the normal heart rate or regularity of the heartbeat, usually resulting from irregularities within the conduction system of the heart. ⁴¹
Carrier	An individual who “carries” and can pass on to their offspring a genomic variant (allele) associated with a disease (or trait) that is inherited in an autosomal recessive or sex-linked manner, and who does not show symptoms of that disease (or features of that trait). The carrier has inherited the variant allele from one parent and a normal allele from the other parent. Any offspring of carriers is at risk of inheriting a variant allele from their parents, which would result in that child having the disease (or trait). ⁴²

³⁸ Jonathan Lytton, ‘Membrane Transporters: Na⁺/Ca²⁺ Exchangers’ (2013) 2 *Encyclopedia of Biological Chemistry* 44-48.

³⁹ Transcript of Proceedings, *2022 Inquiry into the convictions of Kathleen Megan Folbigg* (Judicial Inquiry, Mr Thomas Bathurst AC KC, 15 November 2022) T74.23-30.

⁴⁰ Exhibit 6-02, Report of Professor Michael Toft-Overgaard and Professor Mette Nyegaard dated 18 October 2022, 11.

⁴¹ ‘Arrhythmia’, *Britannica* (Web Page) <<https://www.britannica.com/science/arrhythmia>>.

⁴² Talking Glossary of Genomic and Genetic Terms (n 2).

Term	Definition
Catecholaminergic polymorphic ventricular tachycardia (CPVT)	A severe genetic arrhythmogenic disorder of childhood characterised by adrenergically-induced ventricular tachycardia (bidirectional ventricular tachycardia and, less frequently, supraventricular tachycardia and atrial fibrillation) manifesting as syncope and sudden death. ⁴³
Cav1.2	An ion channel in the cell membrane which enables the movement of ions into and out of the cell. ⁴⁴ Cav1.2 is the primary determinant of I _{Ca,L} in the ventricular myocardium, where it plays a prominent role in excitation-contraction coupling and the Ca ²⁺ induced - Ca ²⁺ release process. ⁴⁵
Central dogma	A theory which states that genetic information flows only in one direction, from DNA to RNA to protein. There are several exceptions to the theory. ⁴⁶
Cerebellum	The largest part of the hindbrain, bulging back behind the pons and the medulla oblongata and overhung by the occipital lobes of the cerebrum. Like the cerebrum, it has an outer grey cortex and a core of white matter. Three broad bands of nerve fibres – the inferior, middle, and superior cerebellar peduncles – connect it to the medulla, the pons, and the midbrain respectively. It has two hemispheres, one on each side of the central region (the vermis), and its surface is thrown into thin folds called folia. Within lie four pairs of nuclei. The cerebellum is essential for the maintenance of muscle tone, balance, and the synchronization of activity in groups of muscles under voluntary control, converting muscular contractions into smooth coordinated movement. It does not, however, initiate movement and plays no part in the perception of conscious sensations or in intelligence. ⁴⁷
Cerebrum	The largest and most highly developed part of the brain, composed of the two cerebral hemispheres, separated from each other by the longitudinal fissure in the midline. Each hemisphere has an outer layer of grey matter, the cerebral cortex, below which lies white matter containing the basal ganglia. Connecting the two hemispheres at the bottom of the longitudinal fissure is the corpus callosum, a massive bundle of nerve fibres. Within each hemisphere is a crescent-shaped fluid-filled cavity (lateral ventricle), connected to the central third ventricle in the diencephalon. The cerebrum is responsible for the initiation and coordination of all voluntary activity in the body and for governing the functioning of lower parts of the nervous system. The cortex is the seat of all intelligent behaviour. ⁴⁸

⁴³ ICD-11 (n 10) BC65.5.

⁴⁴ Transcript of the 2022 Inquiry, 15 November 2022 T88.7-89.20 (Toft Overgaard); Exhibit 6-05, Printed version of the PowerPoint slides displayed to Professors Toft Overgaard and Nyegaard during their oral evidence on 15 November 2022 slide 30 (red p 79).

⁴⁵ Robert Rose and Peter Backx, 'Chapter Two - Calcium Channels in the Heart' in Douglas Zipes and Jose Jalife (eds) *Cardiac Electrophysiology: From Cell to Bedside* (Saunders, Sixth Edition, 2014), 13-22.

⁴⁶ Talking Glossary of Genomic and Genetic Terms (n 2).

⁴⁷ Elizabeth Martin and Jonathan Law (eds) (n 3) 174.

⁴⁸ Ibid 175.

Term	Definition
Channelopathy (cardiac)	An inherited condition predisposing to arrhythmia that is characterised by a genetic mutation affecting one of the cell membrane channels responsible for transport of ion (e.g. potassium or sodium) into or out of the cardiac cells. ⁴⁹
Chromatin	The material of a cell nucleus that stains with basic dyes and consists of DNA and protein: the substance of which the chromosomes are made. ⁵⁰
Chromosome	Threadlike structures made of protein and a single molecule of DNA that carry the genomic information from cell to cell. Humans have 22 pairs of numbered chromosomes (autosomes) and one pair of sex chromosomes (XX or XY). Each pair contains two chromosomes, one coming from each parent, which means that children inherit half of their chromosomes from their mother and half from their father. Chromosomes can be seen through a microscope when the nucleus dissolves during cell division. ⁵¹
Claustrophobia	Fear of enclosed spaces. ⁵²
ClinVar	A freely accessible, public archive of reports of the relationships among human variations and phenotypes, with supporting evidence. ⁵³
Codon	The unit of the genetic code that determines the synthesis of one particular amino acid. Each codon consists of a section of the DNA molecule, and the order of the codons along the molecule determines the order of amino acids in each protein made in the cell. ⁵⁴
Coliform	Facultative anaerobic, non-sporulating, rod-shaped bacteria that produce acid and gas from the fermentation of the sugar lactose. Usually occur in the intestinal tracts of animals, including humans. Examples include <i>Escherichia coli</i> , <i>Enterobacter aerogenes</i> and <i>Klebsiella pneumoniae</i> . ⁵⁵
Colitis	Inflammation of the colon due to infection, inflammation, or ischaemia. ⁵⁶

⁴⁹ Elizabeth Martin and Jonathan Law (eds) (n 3) 178.

⁵⁰ Ibid 185.

⁵¹ Talking Glossary of Genomic and Genetic Terms (n 2).

⁵² ICD-11 (n 10) 6B03.

⁵³ 'What is ClinVar?', *National Library of Medicine* (Web Page) <<https://www.ncbi.nlm.nih.gov/clinvar/intro/>>.

⁵⁴ Elizabeth Martin and Jonathan Law (eds) (n 3) 194.

⁵⁵ 'Coliform Bacteria', *Britannica* (Web Page) <<https://www.britannica.com/science/coliform-bacteria>>.

⁵⁶ Elizabeth Martin and Jonathan Law (eds) (n 3) 195.

Term	Definition
Complex post-traumatic stress disorder	A disorder that may develop following exposure to an event or series of events of an extremely threatening or horrific nature, most commonly prolonged or repetitive events from which escape is difficult or impossible. All diagnostic requirements for PTSD are met. In addition, Complex PTSD is characterised by severe and persistent 1) problems in affect regulation; 2) beliefs about oneself as diminished, defeated or worthless, accompanied by feelings of shame, guilt or failure related to the traumatic event; and 3) difficulties in sustaining relationships and in feeling close to others. These symptoms cause significant impairment in personal, family, social, educational, occupational or other important areas of functioning. ⁵⁷
Congenital	Describes a condition that is recognised at birth or that is believed to have been present since birth. ⁵⁸
Constrained gene	A gene with few observed variants, from which it may be inferred that the function of the gene is critical to the organism, and that variants to the gene are highly pathogenic. ⁵⁹
Contusion	Bruise. ⁶⁰
Copy DNA (cDNA)	Synthetic DNA that has been transcribed from a specific mRNA through a reaction using the enzyme reverse transcriptase. While DNA is composed of both coding and non-coding sequences, cDNA contains only coding sequences. ⁶¹
Copy number variation (CNV)	A phenomenon in which sections of the genome are repeated and the number of repeats in the genome varies between individuals in the human population. ⁶²
Cortex	The outer part of an organ, situated immediately beneath its capsule or outer membrane. ⁶³
Cortical blindness	The inability to see because of a bilateral injury to the occipital lobes which is caused by a loss of the brain's ability to process visual information. ⁶⁴
CRISPR	Clustered Regularly Interspaced Short Palindromic Repeats. A technology used by research scientists to selectively modify the DNA of living organisms. ⁶⁵

⁵⁷ ICD-11 (n 10) 6B41.

⁵⁸ Elizabeth Martin and Jonathan Law (eds) (n 3) 202.

⁵⁹ Exhibit 6-02, Report of Professor Michael Toft-Overgaard and Professor Mette Nyegaard dated 18 October 2022, 13.

⁶⁰ Elizabeth Martin and Jonathan Law (eds) (n 3) 206.

⁶¹ Talking Glossary of Genomic and Genetic Terms (n 2).

⁶² 2019 Inquiry Report (n 9) 544; Rany M Salem and Laura Rodriguez-Murillo, 'Copy Number Variant (CNV)' in Marc D Gellman and J Rick Turner (eds), *Encyclopaedia of Behavioural Medicine* (Springer, 2013).

⁶³ Elizabeth Martin and Jonathan Law (eds) (n 3) 209.

⁶⁴ Elliott L Mancall et al (eds), *Gray's Clinical Neuroanatomy: The Anatomic Basis for Clinical Neuroscience* (Elsevier, 2011) ch 16.

⁶⁵ Talking Glossary of Genomic and Genetic Terms (n 2)

Term	Definition
Cyanosis	A bluish discoloration of the skin and mucous membranes resulting from an inadequate amount of the oxygen in the blood. Cyanosis is associated with heart failure, lung diseases, the breathing of oxygen-deficient atmospheres, and asphyxia. ⁶⁶
Cytosine (C)	One of the four nucleotide bases in DNA, with the other three being adenine (A), guanine (G) and thymine (T). Within a double-stranded DNA molecule, cytosine bases on one strand pair with guanine bases on the opposite strand. The sequence of the four nucleotide bases encodes DNA's information. ⁶⁷
de novo	A type of variant present for the first time in a child and not inherited from either parent. ⁶⁸
Deletion	A type of variant that involves the loss of one or more nucleotides from a segment of DNA. ⁶⁹
Deoxyribonucleic acid (DNA)	The molecule that carries genetic information for the development and functioning of an organism. DNA is made of two linked strands that wind around each other to resemble a twisted ladder — a shape known as a double helix. Each strand has a backbone made of alternating sugar (deoxyribose) and phosphate groups. Attached to each sugar is one of four bases: adenine (A), cytosine (C), guanine (G) or thymine (T). The two strands are connected by chemical bonds between the bases: adenine bonds with thymine, and cytosine bonds with guanine. The sequence of the bases along DNA's backbone encodes biological information, such as the instructions for making a protein or RNA molecule. ⁷⁰
Dissociative disorders	Characterised by involuntary disruption or discontinuity in the normal integration of one or more of the following: identity, sensations, perceptions, affects, thoughts, memories, control over bodily movements, or behaviour. Disruption or discontinuity may be complete, but is more commonly partial, and can vary from day to day or even from hour to hour. The symptoms of dissociative disorders are not due the direct effects of a medication or substance, including withdrawal effects, are not better explained by another mental, behavioural, or neurodevelopmental disorder, a sleep-wake disorder, a disease of the nervous system or other health condition, and are not part of an accepted cultural, religious, or spiritual practice. Dissociative symptoms in dissociative disorders are sufficiently severe to result in significant impairment in personal, family, social, educational, occupational or other important areas of functioning. ⁷¹

⁶⁶ Elizabeth Martin and Jonathan Law (eds) (n 3) 217.

⁶⁷ Talking Glossary of Genomic and Genetic Terms (n 2).

⁶⁸ 'Inheritance Patterns', *Garvan Institute of Medical Research* (Web Page) <<https://www.garvan.org.au/research/kinghorn-centre-for-clinical-genomics/learn-about-genomics/for-gp/genetics-refresher-1/inheritance-patterns#:~:text=De%20novo%20variants%20are%20a,cell%2C%20or%20shortly%20after%20fertilisation>>.

⁶⁹ Ibid.

⁷⁰ Talking Glossary of Genomic and Genetic Terms (n 2).

⁷¹ ICD-11 (n 10) 06.

Term	Definition
DNA sequencing	Process for determining the pattern or order in which the nucleotide bases occur in a piece of DNA. ⁷²
Double helix	A term used to describe the physical structure of DNA. ⁷³
Dravet syndrome	A refractory epileptic encephalopathy occurring in otherwise healthy infants during the first year of life. The interictal EEG may initially be normal but with time background activity deteriorates and bilateral asymmetric, focal or multifocal paroxysms of polyspike and slow-waves appear. Mutations in the voltage-gated sodium channel gene SCN1A are commonly found. ⁷⁴
Duplication	A type of variant in which one or more copies of a DNA segment (which can be as small as a few bases or as large as a major chromosomal region) is produced in humans. An important mechanism in the evolution of the genomes of humans and other organisms. ⁷⁵
Dysthymic/persistent depressive disorder	Characterised by a persistent depressive mood (i.e., lasting two years or more), for most of the day, for more days than not. In children and adolescents depressed mood can manifest as pervasive irritability. The depressed mood is accompanied by additional symptoms such as markedly diminished interest or pleasure in activities, reduced concentration and attention or indecisiveness, low self-worth or excessive or inappropriate guilt, hopelessness about the future, disturbed sleep or increased sleep, diminished or increased appetite, or low energy or fatigue. During the first two years of the disorder, there has never been a two-week period during which the number and duration of symptoms were sufficient to meet the diagnostic requirements for a depressive episode. There is no history of manic, mixed, or hypomanic episodes. ⁷⁶
Edema/oedema	Excessive accumulation of fluid in the body tissues. The resultant swelling may be local, as with an injury or inflammation, or more general, as in heart or kidney failure. ⁷⁷
EF-hand motif	A diverse motif class consisting of 30 amino acids that fold into a helix-loop-helix structure. Its structure resembles a right-hand fist, with the index finger and thumb extended. The index finger represents the N-terminal “E” helix and the thumb represents the C-terminal “F” helix. The loop between the helices (at the palm) comprises approximately 12 conserved residues that can coordinate a Ca ²⁺ or calcium ion. ⁷⁸

⁷² 2019 Inquiry Report (n 9) 544; NSW Health, ‘Glossary’, Centre for Genetics Education (Web Page, 26 February 2016) <<https://www.genetics.edu.au/publicationsand-resources/glossary#D>>.

⁷³ Talking Glossary of Genomic and Genetic Terms (n 2).

⁷⁴ ICD-11 (n 10) 8A61.11.

⁷⁵ Talking Glossary of Genomic and Genetic Terms (n 2).

⁷⁶ ICD-11 (n 10) 6A72.

⁷⁷ Elizabeth Martin and Jonathan Law (eds) (n 3) 473.

⁷⁸ Adelaine Kwun-Wai Leung, ‘Chapter Two – Nucleobindins and Encoded Peptides: From Cell Signalling to Physiology’ (2019) 116 *Advances in Protein Chemistry and Structural Biology* 91-133.

Term	Definition
Electrocardiography (ECG or EKG)	A technique for recording the electrical activity of the heart. Electrodes connected to the recording apparatus (electrocardiograph) are placed on the skin of the four limbs and chest wall; the record itself is called an electrocardiogram. In conventional scalar electrocardiography 12 leads are recorded, but more may be employed in special circumstances. Intracardiac electrocardiography involves the passage of a recording catheter into the heart for accurate mapping and analysis of arrhythmias. ⁷⁹
Electroencephalopathy (EEG)	The technique for recording the electrical activity from different parts of the brain and converting it into a tracing called an electroencephalogram. The machine that records this activity is known as an encephalograph. The pattern of the EEG reflects the state of the patient's brain and his level of consciousness in a characteristic manner. Electroencephalography is mostly used in the diagnosis and management of epilepsy and sleep disorders. ⁸⁰
Electrophoresis	The technique of separating electrically charged particles, particularly proteins, in a solution by passing an electric current through the solution. ⁸¹
Encephalitis	Encephalitis is irritation and swelling (inflammation) of the brain, most often due to infection. ⁸²
Encephalopathy	Any diffuse disease of the brain that alters brain function or structure. ⁸³
Epicardium	The layer that covers the heart and great vessels. ⁸⁴
Epiglottis	A thin leaf-shaped flap of cartilage, covered with mucous membrane, situated immediately behind the root of the tongue. It covers the entrance to the larynx during swallowing. ⁸⁵
Epilepsy	A disorder of brain function characterised by recurrent seizures that have a sudden onset. ⁸⁶
Epileptic encephalopathy	Epilepsy for which no clear etiology can be detected or occurring at the presence of two or more static structural or metabolic conditions increasing the risk for epileptic seizures. The epileptic activity itself may contribute to severe cognitive and behavioural impairments above and beyond what might be expected from the underlying pathology alone. ⁸⁷

⁷⁹ Elizabeth Martin and Jonathan Law (eds) (n 3) 258.

⁸⁰ Ibid 258.

⁸¹ Ibid 259.

⁸² 'Encephalitis', *MedlinePlus – Medical Encyclopedia* (Web Page) <<https://medlineplus.gov/ency/article/001415.htm>>.

⁸³ 'Encephalopathy', *National Institute of Neurological Disorders and Stroke* (Web Page) <<https://www.ninds.nih.gov/health-information/disorders/encephalopathy>>.

⁸⁴ Susan Standing et al (eds) (n 13) 1070.

⁸⁵ Elizabeth Martin and Jonathan Law (eds) (n 3) 269.

⁸⁶ Ibid.

⁸⁷ ICD-11 (n 10) 8A62.

Term	Definition
Epistasis	A type of gene action in which one gene can suppress the action of another (nonallelic) gene. ⁸⁸
Etiology/aetiology	The cause or causes of a disease. ⁸⁹
Exome	The sequence of all the exons in a genome, reflecting the protein-coding portion of a genome. ⁹⁰
Exon	The sequence of DNA present in mature messenger RNA, some of which encodes the amino acids of a protein. Most genes have multiple exons with introns between them. ⁹¹
Fibroblast	The principal active cell of connective tissue. ⁹²
First-degree relatives	A family member who shares about half of their genetic information with specific other individuals in their family. First-degree relatives include an individual's parents, siblings and offspring. ⁹³
Florid	Of a disease or its symptoms, appearing in a fully developed form. ⁹⁴
Forensic pathology	The discipline of pathology concerned with the investigation of deaths where there are medico-legal implications. ⁹⁵
Formalin	A solution containing 40% formaldehyde in water, used in pathology as a fixative. ⁹⁶
Frameshift variant	An insertion or deletion involving a number of base pairs that is not a multiple of three, which consequently disrupts the triplet reading frame of a DNA sequence. Such variants (or mutations) usually lead to the creation of a premature termination (stop) codon, and result in a truncated (shorter-than-normal) protein product. ⁹⁷

⁸⁸ Elizabeth Martin and Jonathan Law (eds) (n 3) 271.

⁸⁹ 'Etiology', *MedlinePlus* (Web Page) <<https://medlineplus.gov/ency/article/002356.htm>>.

⁹⁰ Talking Glossary of Genomic and Genetic Terms (n 2).

⁹¹ 'Exon', *National Cancer Institute – NCI Dictionary of Genetics Terms* (Web Page) <<https://www.cancer.gov/publications/dictionaries/genetics-dictionary/>>.

⁹² 2019 Inquiry Report (n 9) 545; Encyclopædia Britannica (online at 9 July 2019) 'Fibroblast' <<https://www.britannica.com/science/fibroblast>>.

⁹³ Talking Glossary of Genomic and Genetic Terms (n 2).

⁹⁴ 'Florid', *Macquarie Dictionary* (Web Page) <https://www.macquariedictionary.com.au/features/word/search/?search_word_type=Dictionary&word=florid>.

⁹⁵ Forensic Autopsy: Manual for forensic pathologists (2016; UNODC) pages 3-12: <chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://staff.najah.edu/media/scientific-research/books/2017/05/29/PSEX02_Autopsy-compressed_1.pdf> ('Forensic Autopsy: Manual for forensic pathologists').

⁹⁶ Elizabeth Martin and Jonathan Law (eds) (n 3) 297.

⁹⁷ 'Frameshift variant', *National Cancer Institute – NCI Dictionary of Genetics Terms* (Web Page) <<https://www.cancer.gov/publications/dictionaries/genetics-dictionary/def/frameshift-variant>>.

Term	Definition
Functional assay	Systematic experiment (either in vitro or in vivo) used to elucidate the function of a protein in a cellular pathway or biological process. ⁹⁸
Gain of function variant	Referring to a gene variant associated with one of the following abnormalities: an increase in one or more functions of the gene product; a novel function of the gene product; a change in timing of gene expression. ⁹⁹
Gene	A short piece of DNA which tells the body how to build specific proteins. There are about 20,000 genes in each cell of the human body. Together, they make up the blueprint for the human body and how it works. ¹⁰⁰
Gene amplification	An increase in the number of copies of a gene. ¹⁰¹
Gene regulation	The process used to control the timing, location and amount in which genes are expressed. It is carried out by a variety of mechanisms, including through regulatory proteins and chemical modification of DNA. Gene regulation is key to the ability of an organism to respond to environmental changes. ¹⁰²
Genetic code	The code in which genetic information is carried by DNA and messenger RNA. This information determines the sequence of amino acids in every protein and thereby controls the nature of all proteins made by the cell. ¹⁰³
Genetic counselling	The procedure by which patients and their families are given advice about the nature and consequences of inherited disorders, the possibility of becoming affected or having affected children, and the various options that are available to them for the prevention, diagnosis, and management of such conditions. ¹⁰⁴
Genetic testing	The use of a laboratory test to examine an individual's DNA for variations. Used to confirm or rule out a suspected genetic disease and to determine the likelihood of parents passing on a genetic mutation to their offspring. May be performed prenatally or after birth. ¹⁰⁵
Genetics	The branch of biology concerned with the study of inheritance, including the interplay of genes, DNA variation and their interactions with environmental factors. ¹⁰⁶

⁹⁸ Jeremy C Simpson, 'Functional Assays' in Detlev Ganten et al (eds), *Encyclopedic Reference of Genomics and Proteomics in Molecular Medicine* (Springer, 2005) 617-620.

⁹⁹ 'GeneReviews Glossary', *National Library of Medicine* (Web Page) <<https://www.ncbi.nlm.nih.gov/books/NBK5191/#IX-G>>.

¹⁰⁰ 'Genes', *MedlinePlus – Medical Encyclopedia* (Web Page) <<https://medlineplus.gov/ency/article/002371.htm>>.

¹⁰¹ 'Gene amplification', *National Cancer Institute* (Web Page) <<https://www.cancer.gov/search/results?swKeyword=gene+amplification>>.

¹⁰² Talking Glossary of Genomic and Genetic Terms (n 2).

¹⁰³ Elizabeth Martin and Jonathan Law (eds) (n 3) 309.

¹⁰⁴ Ibid.

¹⁰⁵ Talking Glossary of Genomic and Genetic Terms (n 2).

¹⁰⁶ Ibid.

Term	Definition
Genome	The total genetic material of an organism, comprising the genes contained in its chromosomes. ¹⁰⁷
Genome Aggregation Database (gnomAD)	A resource developed by an international coalition of investigators, with the goal of aggregating and harmonizing both exome and genome sequencing data from a wide variety of large-scale sequencing projects and making summary data available for the wider scientific community. ¹⁰⁸
Genome-wide association study (GWAS)	A research approach used to identify genomic variants that are statistically associated with a risk for a disease or a particular trait. The method involves surveying the genomes of many people, looking for genomic variants that occur more frequently in those with a specific disease or trait compared to those without the disease or trait. Once such genomic variants are identified, they are typically used to search for nearby variants that contribute directly to the disease or trait. ¹⁰⁹
Genomics	The branch of genetics concerned with the study of genomes. It includes both the mapping of genomes – and ultimately producing a DNA sequence for any particular organism or individual – and understanding how gene expression is controlled and gene products change under different conditions, including disease states. ¹¹⁰
Genotype	The genetic information carried by a pair of alleles, which determines a particular characteristic. ¹¹¹
Germ Line	The sex cells (eggs and sperm) that sexually reproducing organisms use to pass on their genomes from one generation to the next (parents to offspring). ¹¹²
Glasgow coma score (GCS)	A numerical system used to estimate a patient's level of consciousness. Each of the following are numerically graded: eye opening (1–4), motor response (1–6), and verbal response (1–5). The higher the score, the greater the level of consciousness: a score of seven indicates a coma. ¹¹³
Gliosis	A fibrous proliferation of glial cells in an injured area of the central nervous system. ¹¹⁴
Glycine	An amino acid produced by the body. ¹¹⁵

¹⁰⁷ Elizabeth Martin and Jonathan Law (eds) (n 3) 310.

¹⁰⁸ GnomAD (Web Page) <<https://gnomad.broadinstitute.org/>>.

¹⁰⁹ Talking Glossary of Genomic and Genetic Terms (n 2).

¹¹⁰ Elizabeth Martin and Jonathan Law (eds) (n 3) 310.

¹¹¹ Ibid 310.

¹¹² Talking Glossary of Genomic and Genetic Terms (n 2).

¹¹³ Elizabeth Martin and Jonathan Law (eds) (n 3) 313.

¹¹⁴ Martina A McAteer and Robin P Choudhury, 'Chapter 4 – Applications of Nanotechnology in Molecular Imaging of the Brain' (2009) 180 *Progress in Brain Research* 72-96.

¹¹⁵ 'Glycine', *National Library of Medicine* (Web Page) <<https://pubchem.ncbi.nlm.nih.gov/compound/Glycine>>.

Term	Definition
Glycosuria	The presence of glucose in the urine in abnormally large amounts. ¹¹⁶
Guanine (G)	One of the four nucleotide bases in DNA, with the other three being adenine (A), cytosine (C) and thymine (T). Within a double-stranded DNA molecule, guanine bases on one strand pair with cytosine bases on the opposite strand. The sequence of the four nucleotide bases encodes DNA's information. ¹¹⁷
Guthrie card	Collection cards used to store blood collected from newborn babies for screening. ¹¹⁸
Haematology	The study of blood and blood-forming tissues and the disorders associated with them. ¹¹⁹
Haematoma	An accumulation of blood within the tissues that clots to form a solid swelling. Injury, disease of the blood vessels, or a clotting disorder of the blood are the usual causative factors. ¹²⁰
Haemorrhage	Loss of blood from a ruptured blood vessel, externally or internally. ¹²¹
Haemosiderin	A particle representing an iron-storage complex that is formed by the breakdown of haemoglobin or an abnormal metabolic pathway of ferritin. ¹²²
Haplotype	A physical grouping of genomic variants (or polymorphisms) that tend to be inherited together. A specific haplotype typically reflects a unique combination of variants that reside near each other on a chromosome. ¹²³
Heterozygous	Describing an individual in whom the members of a pair of genes determining a particular characteristic are dissimilar. ¹²⁴
Histone	A protein that provides structural support for a chromosome. Each chromosome contains a long molecule of DNA, which must fit into the cell nucleus. To do that, the DNA wraps around complexes of histone proteins, giving the chromosome a more compact shape. Histones also play a role in the regulation of gene expression. ¹²⁵
Histology	The study of the structure of tissues by means of special staining techniques combined with light and electron microscopy. ¹²⁶

¹¹⁶ Elizabeth Martin and Jonathan Law (eds) (n 3) 317.

¹¹⁷ Talking Glossary of Genomic and Genetic Terms (n 2).

¹¹⁸ 'Medical Definition of Guthrie Test', *MedicineNet* (Web Page, 6 March 2021) <https://www.medicinenet.com/guthrie_test/definition.htm>.

¹¹⁹ Elizabeth Martin and Jonathan Law (eds) (n 3) 324.

¹²⁰ Ibid 324.

¹²¹ Ibid 327.

¹²² 2019 Inquiry Report (n 9) 545; Gerald Litwack (ed), *Human Biochemistry* (Academic Press, 2018) 591.

¹²³ Talking Glossary of Genomic and Genetic Terms (n 2).

¹²⁴ Elizabeth Martin and Jonathan Law (eds) (n 3) 339.

¹²⁵ Talking Glossary of Genomic and Genetic Terms (n 2).

¹²⁶ Elizabeth Martin and Jonathan Law (eds) (n 3) 341.

Term	Definition
Histopathology	A branch of pathology concerned with the study of the microscopic changes in diseased tissues. ¹²⁷
Holter monitor	A machine that continuously records the heart's rhythms. The monitor is worn for 24 to 48 hours during normal activity. ¹²⁸
Homeostasis	The physiological process by which the internal systems of the body (e.g. blood pressure, body temperature, acid-base balance) are maintained at equilibrium, despite variations in the external conditions. ¹²⁹
Homozygous	Describing an individual in whom the members of a pair of genes determining a particular characteristic are identical. ¹³⁰
Human Genome Project	A global scientific project which, in 2003, produced a genome sequence that accounted for over 90% of the human genome. It was as close to complete as the technologies for sequencing DNA allowed at the time. ¹³¹
Hunter syndrome	A hereditary disorder caused by deficiency of an enzyme that results in the accumulation of protein-carbohydrate complexes and fats in the cells of the body. This leads to learning disability, enlargement of the liver and spleen, and prominent coarse facial features. The disease is sex-linked, being restricted to males, although females can be carriers. Also known as Mucopolysaccharidosis type II. ¹³²
Hypoglycaemia	A deficiency of glucose in the bloodstream, causing muscular weakness and incoordination, mental confusion, and sweating. ¹³³
Hypoxia	A deficiency of oxygen in the tissues. ¹³⁴
Hypoxic-ischaemic encephalopathy	Brain damage caused by a lack of oxygen and blood flow to the brain. ¹³⁵
Idiopathic ventricular fibrillation (IVF)	A rare cause of sudden cardiac arrest. Patients with IVF present with a sudden onset of ventricular fibrillation (VF) of unknown origin that is not identified even after extensive diagnostic testing. ¹³⁶ A genetic arrhythmia disorder.

¹²⁷ 2019 Inquiry Report (n 9) 545.

¹²⁸ 'Holter monitor (24h)', *MedlinePlus – Medical Encyclopedia* (Web Page) <<https://medlineplus.gov/ency/article/003877.htm>>.

¹²⁹ Elizabeth Martin and Jonathan Law (eds) (n 3) 342.

¹³⁰ Ibid 343.

¹³¹ 'The Big Picture', *National Human Genome Research Institute* (Web Page, 24 August 2022) <<https://www.genome.gov/about-genomics/educational-resources/fact-sheets/human-genome-project>>.

¹³² Elizabeth Martin and Jonathan Law (eds) (n 3) 346.

¹³³ Ibid 354.

¹³⁴ Ibid 356.

¹³⁵ 2019 Inquiry Report (n 9) 546; Stephen T Goudge, *Inquiry into Pediatric Forensic Pathology in Ontario* (Ontario Ministry of the Attorney-General, 1 October 2008) Volume 3, Glossary of Medical Terms, xx.

¹³⁶ Marloes Visser et al, 'Idiopathic Ventricular Fibrillation: The Struggle for Definition, Diagnosis, and Follow-Up' (2016) 9(5) *Circulation: Arrhythmia and Electrophysiology* 3817.

Term	Definition
Immunology	The study of immunity and all the phenomena connected with the defence mechanisms of the body. ¹³⁷
Infarction	The death of part or the whole of an organ that occurs when the artery carrying its blood supply is obstructed by a blood clot (thrombus) or an embolus. A small, localized area of dead tissue produced as a result of an inadequate blood supply is known as an infarct. Infarcts also arise when venous outflow from an organ or tissue is obstructed. ¹³⁸
Inflammation	The body's response to injury, which may be acute or chronic. Acute inflammation is the immediate defensive reaction of tissue to any injury, which may be caused by infection, chemicals, or physical agents. It involves pain, heat, redness, swelling, and loss of function of the affected part. Blood vessels near the site of injury are dilated, so that blood flow is locally increased. White blood cells enter the tissue and begin to engulf bacteria and other foreign particles. Similar cells from the tissues remove and consume the dead cells, sometimes with the production of pus, enabling the process of healing to commence. In certain circumstances healing does not occur and chronic inflammation ensues. ¹³⁹
Inherited	Refers to a trait or variants encoded in DNA and passed from parent to offspring. ¹⁴⁰
Inotropic medication	Affecting the contraction of heart muscle. Drugs such as dobutamine, dopamine, and enoximone have positive inotropic action, stimulating heart muscle contractions and causing the heart rate to increase. Beta-blocker drugs, such as propranolol, have negative inotropic action, reducing heart muscle contractions and causing the heart rate to decrease. ¹⁴¹
Insertion	A type of variant that involves the addition of one or more nucleotides into a segment of DNA. An insertion can involve the addition of any number of nucleotides, from a single nucleotide to an entire piece of a chromosome. ¹⁴²
Insult	An injury or physical trauma. ¹⁴³
Intercostal recession/retraction	Drawing-in of the intercostal muscles between each rib during breathing. A sign of respiratory distress. ¹⁴⁴
Intracranial	Within the skull. ¹⁴⁵

¹³⁷ Elizabeth Martin and Jonathan Law (eds) (n 3) 360.

¹³⁸ Ibid 364.

¹³⁹ Ibid 365.

¹⁴⁰ Talking Glossary of Genomic and Genetic Terms (n 2).

¹⁴¹ Elizabeth Martin and Jonathan Law (eds) (n 3) 367.

¹⁴² Talking Glossary of Genomic and Genetic Terms (n 2).

¹⁴³ Elizabeth Martin and Jonathan Law (eds) (n 3) 369.

¹⁴⁴ Theodoros Vassilakopoulos et al, 'Muscle Function' in Peter J Papadakos, Burkhard Lachmann and Laraine Visser-Isles (eds), *Mechanical Ventilation: Clinical Applications and Pathophysiology* (Saunders, 2008) 111, 111-112.

¹⁴⁵ Elizabeth Martin and Jonathan Law (eds) (n 3) 373.

Term	Definition
Intracranial pressure	An increase in pressure within the skull caused by changes in the volumes of the intracranial components or by the presence of a pathological mass entity. ¹⁴⁶
Intercurrent	Occurring at the same time. ¹⁴⁷
Interleukin-10 (IL-10)	One of a group of related proteins made by leukocytes and other cells in the body. Interleukin-10 is made by activated macrophages and by some T lymphocytes. It reduces inflammation by blocking production of cytokines by immune cells. Interleukin-10 also increases antibody production by plasma cells and helps them live longer. Lab-produced Interleukin-10 is used as a biological response modifier to boost the immune system. ¹⁴⁸
International Calmodulinopathy Registry (ICaMR)	An observational multi-centre study enrolling patients with a mutation in one of the three calmodulin genes, followed prospectively for 10 years. Genetic and clinical data are collected through a dedicated form sent to centres in Europe, North America and Japan. ¹⁴⁹
Intron	A region within a gene which does not remain in the final mature mRNA molecule following transcription of that gene and does not code for amino acids that make up the protein encoded by that gene. Most protein-coding genes in the human genome consist of exons and introns. ¹⁵⁰
In vitro	Describing biological phenomena that are made to occur outside the living body. ¹⁵¹
In vivo	Describing biological phenomena occurring within the living body. ¹⁵²
Ion	An atom or group of atoms that has lost one or more electrons, making it electrically charged and therefore more chemically active. ¹⁵³
Ion channel	A protein that spans a cell membrane to form a water-filled pore through which ions (e.g. calcium [Ca ²⁺], sodium [Na ⁺], potassium [K ⁺]) can pass into or out of the cell. ¹⁵⁴
Ischaemia/ischemia	An inadequate flow of blood to a part of the body, caused by constriction or blockage of the blood vessels supplying it. ¹⁵⁵

¹⁴⁶ ICD-11 (n 10) 8D60.

¹⁴⁷ Elizabeth Martin and Jonathan Law (eds) (n 3) 370.

¹⁴⁸ 'Interleukin-10', *National Cancer Institute* (Web Page) <<https://www.cancer.gov/search/results?swKeyword=Interleukin-10>>.

¹⁴⁹ Crotti et al, 'Abstract 14840: International Calmodulinopathy Registry (ICaMR)' (2016) 134(Supple_1) *Circulation* A14840.

¹⁵⁰ Talking Glossary of Genomic and Genetic Terms (n 2).

¹⁵¹ Elizabeth Martin and Jonathan Law (eds) (n 3) 374.

¹⁵² Ibid.

¹⁵³ Ibid 375.

¹⁵⁴ Ibid 375.

¹⁵⁵ Ibid 376.

Term	Definition
Isolated sulfite oxidase deficiency (ISOD)	A disorder of the nervous system, with a severe classic form that starts in the newborn period and a milder, late-onset form that begins later in infancy or early childhood. Classic ISOD appears within the first few days after birth with signs and symptoms of brain dysfunction (encephalopathy) that quickly get worse. Babies with classic ISOD have seizures that are difficult to treat and feeding difficulties. They have muscle stiffness that results in paralysis of the arms and legs (spastic quadriplegia) and episodes of muscle spasms that cause backward arching of the spine (opisthotonus). Because development of the brain is impaired, the head does not grow at the same rate as the body, so it appears that the head is getting smaller as the body grows (progressive microcephaly). Abnormalities in facial features also become increasingly pronounced with lack of normal head growth. These facial differences include a relatively long and narrow face; deep-set, widely-spaced eyes; elongated openings of the eyes (palpebral fissures); puffy cheeks; a small nose; a large space between the nose and upper lip (a long philtrum); and thick lips. Babies with classic ISOD do not respond to their environment except to startle easily in response to noises, and they do not develop any motor skills such as turning over or sitting up. They usually do not live for more than a few months. Affected individuals who survive past infancy usually develop displacement of the lenses of the eyes (ectopia lentis). Because these individuals do not react to visual stimuli (are behaviourally blind) due to the brain damage associated with classic ISOD, the ectopia lentis has no further impact on their vision. Late-onset ISOD usually begins between the ages of six and 18 months, often after an illness involving fever. Individuals with this form of the disorder may not have the seizures and ectopia lentis that usually occur in the classic form. They have developmental delay and may lose skills that they had already developed (developmental regression). Movement problems occur in this form of the disorder, including muscle tensing (dystonia), uncontrolled movements of the limbs (choreoathetosis), and difficulty with coordination (ataxia). The signs and symptoms of late-onset ISOD can gradually get worse (progress), or they can be episodic, which means that they come and go. Some individuals with this form of ISOD survive into childhood or adolescence; because of the rarity of this disorder, their life expectancy is unknown.¹⁵⁶
Isoleucine	An essential amino acid. ¹⁵⁷
Karyotype	A karyotype is an individual's complete set of chromosomes. The term also refers to a laboratory-produced image of a person's chromosomes isolated from an individual cell and arranged in numerical order. A karyotype may be used to look for abnormalities in chromosome number or structure. ¹⁵⁸

¹⁵⁶ 'Isolated sulfite oxidase deficiency', *MedlinePlus* (Web Page) <<https://medlineplus.gov/genetics/condition/isolated-sulfite-oxidase-deficiency/>>.

¹⁵⁷ Elizabeth Martin and Jonathan Law (eds) (n 3) 377.

¹⁵⁸ Talking Glossary of Genomic and Genetic Terms (n 2).

Term	Definition
Laryngomalacia	A condition characterized by paroxysmal attacks of breathing difficulty and stridor. It occurs in small children and is caused by flaccidity of the structure of the larynx. It usually resolves spontaneously at the age of two years. ¹⁵⁹
Larynx (laryngeal)	The structure in the neck that extends from the tongue to the trachea. It is an air passage, a sphincter and an organ of phonation. ¹⁶⁰
Lesion	A zone of tissue with impaired function as a result of damage by disease or wounding. ¹⁶¹
Leukocytes/leucocytes	White blood cells. ¹⁶²
Leukodystrophy	Group of rare progressive genetic diseases that are caused by mutations in genes that lead to destruction of white matter of the brain by disrupting development of the myelin sheath. More than 50 different leukodystrophies have been identified. ¹⁶³
Linkage	The situation in which two or more genes lie close to each other on a chromosome and are therefore very likely to be inherited together. ¹⁶⁴
Lividity	Occurs after death when blood pools in the dependent parts of the body after the circulation has ceased. ¹⁶⁵
Log likelihood ratio (LLR) algorithm	Used to measure the likelihood that a given variant is pathogenic. ¹⁶⁶
Logarithm of the odds (LOD) score	A statistical estimate of the relative probability that two loci (e.g., a disease-associated gene and another sequence of interest, such as a variant or another gene) are located near each other on a chromosome and are therefore likely to be inherited together. ¹⁶⁷
Long QT syndrome (LQTS)	A heart signalling disorder ¹⁶⁸ characterised by a prolongation in the depolarisation time-course of cardiac myocyte action potentials. ¹⁶⁹ Can lead to symptomatic ventricular arrhythmias and an increased risk of sudden cardiac death. ¹⁷⁰

¹⁵⁹ Elizabeth Martin and Jonathan Law (eds) (n 3) 392.

¹⁶⁰ Susan Standring et al (eds) (n 13) 717.

¹⁶¹ Elizabeth Martin and Jonathan Law (eds) (n 3) 396.

¹⁶² 'Leukocyte', *Merriam-Webster* (Web Page) <<https://www.merriam-webster.com/dictionary/leukocytes>>.

¹⁶³ ICD-11 (n 10) 8A44.

¹⁶⁴ Elizabeth Martin and Jonathan Law (eds) (n 3) 400.

¹⁶⁵ Ibid.

¹⁶⁶ Exhibit 6-06, Further Report of Professors Michael Toft Overgaard and Mette Nyegaard (10 February 2023) 114.

¹⁶⁷ Talking Glossary of Genomic and Genetic Terms (n 2).

¹⁶⁸ 'Long QT Syndrome', *Mayo Clinic* (Web Page, 3 June 2022) <<https://www.mayoclinic.org/diseases-conditions/long-qt-syndrome/symptoms-causes/syc-20352518>>.

¹⁶⁹ 2019 Inquiry Report (n 9) 547; Encyclopædia Britannica (online at 10 July 2019) 'Ion channel' <<https://www.britannica.com/science/ion-channel>>.

¹⁷⁰ ICD-11 (n 10) BC65.0

Term	Definition
Loss of function variant	Refers to a variant associated with partial or total loss of the function of a gene product. ¹⁷¹
Lymphocyte	A variety of white blood cell (leucocyte), present also in the lymph nodes, spleen, thymus gland, gut wall, and bone marrow. ¹⁷² The primary cells of adaptive immune responses. ¹⁷³
Mapping	The process of determining the location of genes on chromosomes. ¹⁷⁴
Major depressive disorder	Characterised by discrete episodes of at least two weeks' duration (although most episodes last considerably longer) involving clear-cut changes in affect, cognition, and neurovegetative functions and inter-episode remissions. A diagnosis based on a single episode is possible, although the disorder is a recurrent one in the majority of cases. Careful consideration should be given to the delineation of normal sadness and grief from a major depressive episode. Bereavement may induce great suffering, but it does not typically induce an episode of major depressive disorder. When they do occur together, the depressive symptoms and functional impairment tend to be more severe and the prognosis is worse compared with bereavement that is not accompanied by major depressive disorder. Bereavement-related major depressive episodes tend to occur in persons with other vulnerabilities to depressive disorders. ¹⁷⁵
Matrescence	The physical, emotional, hormonal and social transition to motherhood. ¹⁷⁶
MCAD	Medium-chain acyl-CoA dehydrogenase. ¹⁷⁷
Meadow's law	The dictum of paediatrician Professor Roy Meadows that "one infant death is a tragedy, two is suspicious, and three is murder". ¹⁷⁸
Metabolic disorder	An inherited condition resulting from a block (partial or complete) to a pathway in the body's metabolism, or defects in the transport of substances. Though individually rare, collectively they represent an important cause of childhood morbidity and mortality. ¹⁷⁹

¹⁷¹ 'GeneReviews Glossary' (n 96).

¹⁷² Elizabeth Martin and Jonathan Law (eds) (n 3) 408.

¹⁷³ Kelly A Young et al, *Anatomy and Physiology* (OpenStax College, 2013) 920.

¹⁷⁴ Talking Glossary of Genomic and Genetic Terms (n 2).

¹⁷⁵ DSM-5-TR (n 14).

¹⁷⁶ Exhibit 22-02, Report of Dr Yumna Dhansay (13 January 2023) 51.

¹⁷⁷ 'Medium-chain acyl-coenzyme A dehydrogenase deficiency', *National Center for Advancing Translational Sciences – Genetic and Rare Diseases Information Center* (Web Page) <<https://rarediseases.info.nih.gov/diseases/540/medium-chain-acyl-coenzyme-a-%20dehydrogenase-deficiency>>.

¹⁷⁸ Owen Dyer, 'Meadow Faces GMC Over Evidence Given in Child Death Cases' (2004) 328(7430) *British Medical Journal* 209.

¹⁷⁹ 'Metabolic Disorders', *The Royal Children's Hospital Melbourne* (Web Page, June 2022) <https://www.rch.org.au/clinicalguide/guideline_index/Metabolic_disorders/>

Term	Definition
Mediastinum	The space in the chest between the pleural sacs of the lungs that contains all the tissues and organs of the chest except the lungs and pleurae. ¹⁸⁰
Mendelian inheritance	Certain patterns of how traits are passed from parents to offspring according to dominant and recessive modes of inheritance. ¹⁸¹
Messenger RNA (mRNA)	A type of single-stranded RNA involved in protein synthesis which carries the information of the genetic code of the DNA from the cell nucleus to the ribosomes, where the code is translated into protein. ¹⁸²
Microarray technology	A general laboratory approach that involves binding an array of thousands to millions of known nucleic acid fragments to a solid surface, referred to as a “chip.” The chip is then bathed with DNA or RNA isolated from a study sample (such as cells or tissue). Complementary base pairing between the sample and the chip-immobilized fragments produces light through fluorescence that can be detected using a specialized machine. Microarray technology can be used for a variety of purposes in research and clinical studies, such as measuring gene expression and detecting specific DNA sequences. ¹⁸³
Micrograph	A photograph of an object as viewed through a microscope. ¹⁸⁴
Missense variant	A genetic alteration in which a single base pair substitution alters the genetic code in a way that produces an amino acid that is different from the usual amino acid at that position. Some missense variants alter the function of the protein. ¹⁸⁵
Modifier gene	Genes that affect the phenotypic and/or molecular expression of other genes. ¹⁸⁶
Molybdenum and cofactor deficiency (MoCD)	A rare inherited metabolic disorder characterized by neonatal onset intractable seizures, severe psychomotor retardation, dysmorphic facies, and dislocated ocular lenses. ¹⁸⁷
Mosaicism	The occurrence of two or more cell lines with different genetic or chromosomal make-up, within a single individual or tissue. ¹⁸⁸

¹⁸⁰ ‘Mediastinum’, *Merriam-Webster* (Web Page, 23 February 2023) <<https://www.merriam-webster.com/dictionary/mediastinum>>.

¹⁸¹ Talking Glossary of Genomic and Genetic Terms (n 2).

¹⁸² Elizabeth Martin and Jonathan Law (eds) (n 3) 428.

¹⁸³ Talking Glossary of Genomic and Genetic Terms (n 2).

¹⁸⁴ Elizabeth Martin and Jonathan Law (eds) (n 3) 432.

¹⁸⁵ ‘Missense Variant’, *National Cancer Institute* (Web Page) <<https://www.cancer.gov/publications/dictionaries/genetics-dictionary/def/missense-variant>>.

¹⁸⁶ Ad Geurts van Kessel, ‘Colorectal Cancer’ in Geoffrey Ginsburg and Huntington Willard (eds) *Genomic and Personalized Medicine* (Academic Press, Second Edition, 2013).

¹⁸⁷ CR Scriver et al, ‘Molybdenum Cofactor Deficiency and Isolated Sulfite Oxidase Deficiency’ in CR Scriver et al (eds), *The Metabolic and Molecular Bases of Inherited Disease* (McGraw-Hill, Vol II, 2011) 3168-3177.

¹⁸⁸ ‘Mosaicism’, *National Cancer Institute* (Web Page) <<https://www.cancer.gov/publications/dictionaries/genetics-dictionary/def/mosaicism>>.

Term	Definition
Mucopolysaccharidosis	A group of rare diseases in which the body is missing or does not have enough of an enzyme needed to break down long chains of sugar molecules (glycosaminoglycans), which then build up in different parts of the body and cause various health problems. ¹⁸⁹
Mucosa	The lining to many internal hollow organs in which the inner surfaces are moistened by mucus, such as the intestines, conducting portions of the airway, and the genital and urinary tracts. ¹⁹⁰
Mutation	See 'variant'.
Myocarditis	Inflammation of the heart muscle. ¹⁹¹
Myocytolysis	A type of cellular necrosis involving significant damage to cardiac myocytes caused by myocardial strain. ¹⁹²
Nav1.5	An ion channel in the cell membrane which enables the movement of ions into and out of the cell. ¹⁹³ Nav1.5 is the predominant cardiac voltage-dependent sodium channel subtype, which consists of a transmembrane pore-forming α -subunit protein associated with a modulatory β subunit and several regulatory proteins. ¹⁹⁴
Necrosis	The death of some or all of the cells in an organ or tissue, caused by disease, physical or chemical injury, or interference with the blood supply. ¹⁹⁵
Neonatal	The neonatal period is considered to extend from birth to 28 days postnatally. The early neonatal period extends from birth to seven days and the late neonatal period from seven to 28 days. ¹⁹⁶
Neonatology	A branch of medicine concerned with the care, development, and diseases of newborn infants. ¹⁹⁷
Nucleic acids	Long chains of linked nucleotides (polynucleotide chains), which in DNA contain the purine bases adenine and guanine and the pyrimidines thymine and cytosine. In RNA, thymine is replaced by uracil. ¹⁹⁸

¹⁸⁹ 'Mucopolysaccharidoses', *MedlinePlus – Medical Encyclopedia* (Web Page) <<https://medlineplus.gov/ency/article/001246.htm>>.

¹⁹⁰ Susan Standring et al (eds) (n 13) 41.

¹⁹¹ 'Myocarditis', *MedlinePlus – Medical Encyclopedia* (Web Page) <<https://medlineplus.gov/ency/article/000149.htm>>.

¹⁹² Giorgio Baroldi, *The Etiopathogenesis of Coronary Heart Disease: A Heretical Theory Based on Morphology* (CRC Press, 2nd ed, 2004) 88.

¹⁹³ Transcript of the 2002 Inquiry, 15 November 2022 T88.7-89.20; 90.30-40 (Toft Overgaard); Exhibit 6-05, Printed version of the PowerPoint slides displayed to Professors Toft Overgaard and Nyegaard during their oral evidence on 15 November 2022 slide 30 (red p 79).

¹⁹⁴ M R Ghonani et al, 'Physiology and Pathophysiology of Sodium Channel Inactivation' (2016) 78 *Current Topics in Membranes* 479.

¹⁹⁵ Elizabeth Martin and Jonathan Law (eds) (n 3) 452.

¹⁹⁶ Susan Standring et al (eds) (n 13) 366.

¹⁹⁷ 'Neonatology', *Merriam-Webster* (Web Page) <<https://www.merriam-webster.com/dictionary/neonatologist>>.

¹⁹⁸ Elizabeth Martin and Jonathan Law (eds) (n 3) 468.

Term	Definition
Nucleotide	A molecule consisting of a nitrogen-containing base (adenine, guanine, thymine, or cytosine in DNA; adenine, guanine, uracil, or cytosine in RNA), a phosphate group, and a sugar (deoxyribose in DNA; ribose in RNA). DNA and RNA are polymers comprised of many nucleotides, strung together like beads in a necklace. ¹⁹⁹
Nucleus	The membrane-enclosed organelle within a cell that contains the chromosomes. An array of holes, or pores, in the nuclear membrane allows for the selective passage of certain molecules (such as proteins and nucleic acids) into and out of the nucleus. ²⁰⁰
Occipital lobe	Located at the back of the head behind the parietal and temporal lobes. Analyses and processes visual information from the retina. ²⁰¹
Oculogyric crisis	State of disordered tonicity of the ocular muscles that is marked by involuntary intermittent or sustained deviation of the eyes in a usually upward direction. Often an adverse reaction to certain medications (as antipsychotic or antiemetic drugs) but may be associated with certain medical conditions. ²⁰²
Paediatrics	The general medicine of childhood. ²⁰³
Panic disorder	Characterised by recurrent unexpected panic attacks that are not restricted to particular stimuli or situations. Panic attacks are discrete episodes of intense fear or apprehension accompanied by the rapid and concurrent onset of several characteristic symptoms (e.g. palpitations or increased heart rate, sweating, trembling, shortness of breath, chest pain, dizziness or lightheadedness, chills, hot flushes, fear of imminent death). In addition, panic disorder is characterised by persistent concern about the recurrence or significance of panic attacks, or behaviours intended to avoid their recurrence, that results in significant impairment in personal, family, social, educational, occupational, or other important areas of functioning. The symptoms are not a manifestation of another medical condition and are not due to the effects of a substance or medication on the central nervous system. ²⁰⁴
Paresis	Muscular weakness caused by disease of the nervous system. ²⁰⁵

¹⁹⁹ 'Nucleotide', *National Cancer Institute* (Web Page) <<https://www.cancer.gov/publications/dictionaries/genetics-dictionary/def/nucleotide>>.

²⁰⁰ Talking Glossary of Genomic and Genetic Terms (n 2).

²⁰¹ 'Brain components', *MedlinePlus* (Web Page, 9 July 2021) <<https://medlineplus.gov/ency/anatomyvideos/000016.htm>>.

²⁰² 'Oculogyric crisis', *Merriam-Webster* (Web Page) <<https://www.merriam-webster.com/medical/oculogyric%20crisis>>; 'Dystonia', *Merriam-Webster* (Web Page, 2 March 2023) <<https://www.merriam-webster.com/dictionary/dystonia#medicalDictionary>>.

²⁰³ Elizabeth Martin and Jonathan Law (eds) (n 3) 489.

²⁰⁴ ICD-11 (n 10) 6B01.

²⁰⁵ Elizabeth Martin and Jonathan Law (eds) (n 3) 496.

Term	Definition
Parietal lobe	One of the major divisions of each cerebral hemisphere, lying behind the frontal lobe, above the temporal lobe, and in front of the occipital lobe. It contains the sensory cortex and association areas. ²⁰⁶
Pathogenic	Capable of causing disease. ²⁰⁷
Pathology	The study of disease processes to understanding their nature and causes. Involves observing samples of blood, urine, faeces, and diseased tissue obtained from the living patient or at autopsy, and the use of medical imaging. ²⁰⁸
Pedigree	A chart illustrating the inheritance of a trait or health condition through the generations of a family. Shows the relationships among family members and, when the information is available, indicates which individuals have a trait(s) of interest. ²⁰⁹
Peer review	Review by a person of material generated by another person with the same specialised knowledge or expertise.
Penetrance	The proportion of people with a particular genetic variant (or gene mutation) who exhibit signs and symptoms of a genetic disorder. If some people with the variant do not develop features of the disorder, the condition is said to have reduced (or incomplete) penetrance. ²¹⁰
Persistent complex bereavement disorder/ prolonged grief disorder	A disturbance in which, following the death of a partner, parent, child, or other person close to the bereaved, there is persistent and pervasive grief response characterised by longing for the deceased or persistent preoccupation with the deceased accompanied by intense emotional pain (e.g. sadness, guilt, anger, denial, blame, difficulty accepting the death, feeling one has lost a part of one's self, an inability to experience positive mood, emotional numbness, difficulty in engaging with social or other activities). The grief response has persisted for an atypically long period of time following the loss (more than six months at a minimum) and clearly exceeds expected social, cultural or religious norms for the individual's culture and context. Grief reactions that have persisted for longer periods that are within a normative period of grieving given the person's cultural and religious context are viewed as normal bereavement responses and are not assigned a diagnosis. The disturbance causes significant impairment in personal, family, social, educational, occupational or other important areas of functioning. ²¹¹
Petechiae	Small round flat dark-red spots caused by bleeding into the skin or beneath the mucous membrane. ²¹²

²⁰⁶ Ibid.

²⁰⁷ Ibid 498.

²⁰⁸ Ibid 496.

²⁰⁹ Talking Glossary of Genomic and Genetic Terms (n 2).

²¹⁰ 'What are reduced penetrance and variable expressivity?', *MedlinePlus* (Web Page) <<https://medlineplus.gov/genetics/understanding/inheritance/penetranceexpressivity/>>.

²¹¹ ICD-11 (n 10) 6B42.

²¹² Elizabeth Martin and Jonathan Law (eds) (n 3) 508.

Term	Definition
Proportion expressed across transcripts (PEXT) score	Used to examine per-base expression patterns across transcripts, exons and tissues in order to interpret coding variants. Regions with low PEXT scores are likely of less biological importance. ²¹³
Phenotype	The physical and/or biochemical characteristics of a person, an animal or other organism which are determined by their genetic make-up and/or environment. ²¹⁴
Pleura	The covering of the lungs (visceral pleura) and of the inner surface of the chest wall (parietal pleura). Consists of a closed sac of serous membrane, which has a smooth shiny moist surface due to the secretion of small amounts of fluid. This fluid lubricates the opposing visceral and parietal surfaces so that they can slide painlessly over each other during breathing. ²¹⁵
Pneumomediastinum	The presence of air in the mediastinum. May be caused by a wide range of pathological conditions or physiological states including penetrating trauma, ruptured major airways or oesophagus, hyperventilation or distressed ventilation such as acute asthma, periparturition or diabetic ketoacidosis. ²¹⁶
Polymorphism	The occurrence of a chromosome or a genetic character in more than one form, resulting in the coexistence of more than one morphological type in the same population. ²¹⁷
Polysomnogram	A record of measurements of various bodily parameters, including brain waves, oxygenation of blood, heart rate, breathing and eye/leg movements, ²¹⁸ during sleep. Used in the diagnosis of sleep disorders. ²¹⁹
Postpartum depression	A syndrome associated with pregnancy or the puerperium (commencing within about six weeks after delivery) that involves significant mental and behavioural features, most commonly depressive symptoms. Does not include delusions, hallucinations, or other psychotic symptoms. ²²⁰
Post-traumatic stress disorder (PTSD)	The development of characteristic symptoms following exposure to one or more traumatic events. The clinical presentation varies. ²²¹
Primer	A short single-stranded DNA fragment used in certain laboratory techniques, including DNA sequencing. ²²²

²¹³ Sanna Gudmundsson et al, 'Variant Interpretation using Population Databases: Lessons from GnomAD' (2022) 43(8) *Human Mutation: Variation, Informatics and Disease* 1012-1030.

²¹⁴ 2019 Inquiry Report (n 9) 548; NSW Health, 'Glossary', Centre for Genetics Education (Web Page, 26 February 2016) </www.genetics.edu.au/publicationsand-resources/glossary>.

²¹⁵ Elizabeth Martin and Jonathan Law (eds) (n 3) 519.

²¹⁶ Susan Standring et al (eds) (n 13) 1098.

²¹⁷ Elizabeth Martin and Jonathan Law (eds) (n 3) 524.

²¹⁸ 'Polysomnography (sleep study)', *Mayo Clinic* (Web Page, 17 February 2023) <https://www.mayoclinic.org/tests-procedures/polysomnography/about/pac-20394877>.

²¹⁹ Elizabeth Martin and Jonathan Law (eds) (n 3) 525.

²²⁰ ICD-11 (n 10) 6E20.

²²¹ DSM-5-TR (n 14).

²²² Talking Glossary of Genomic and Genetic Terms (n 2).

Term	Definition
Proband	An individual being studied or reported on. Usually the first affected individual in a family who brings a genetic disorder to the attention of the medical community. ²²³
Promoter	A region of DNA upstream of a gene where relevant proteins (such as RNA polymerase and transcription factors) bind to initiate transcription of that gene. The resulting transcription produces an RNA molecule (such as mRNA). ²²⁴
Protein	One of a group of organic compounds of carbon, hydrogen, oxygen, and nitrogen (sulphur and phosphorus may also be present). The protein molecule is a complex structure made up of one or more chains of amino acids, which are linked by peptide bonds. Proteins are essential constituents of the body; they form the structural material of muscles, tissues, organs, etc., and are equally important as regulators of function, as enzymes and hormones. Proteins are synthesized in the body from their constituent amino acids, which are obtained from the digestion of protein in the diet. Excess protein, not required by the body, can be converted into glucose and used as an energy source (gluconeogenesis). ²²⁵
Psychosis	One of a group of mental illnesses that feature loss of contact with reality. The psychoses include schizophrenia, major disorders of affect, major paranoid states, drug intoxication, and organic mental disorders. They can be chronic or transient. Psychotic disorders manifest some of the following: delusions, hallucinations, severe thought disturbances, abnormal alteration of mood, poverty of thought, ego disturbances, and inappropriate affect. ²²⁶
Pulmonary	Concerning, affecting, or associated with the lungs. ²²⁷
QT Interval	The interval on an electrocardiogram between the beginning of ventricular depolarization (Q wave) and the beginning of repolarization (the T wave). ²²⁸
Relative risk	The ratio of probability of an event in an exposed group to the probability of an event in a non-exposed group. ²²⁹
Residue	Describes the location of an amino acid. ²³⁰

²²³ 2019 Inquiry Report (n 9) 549; Talking Glossary of Genomic and Genetic Terms (n 2).

²²⁴ Talking Glossary of Genomic and Genetic Terms (n 2).

²²⁵ Elizabeth Martin and Jonathan Law (eds) (n 3) 540.

²²⁶ Elizabeth Martin and Jonathan Law (eds) (n 3) 544.

²²⁷ Ibid 547.

²²⁸ Elizabeth Martin and Jonathan Law (eds) (n 3) 553.

²²⁹ 2019 Inquiry Report (n 9) 549; Miquel Porta (ed), Dictionary of Epidemiology (6th ed, 2014) 'Relative risk'.

²³⁰ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook, and Todor Arsov (25 October 2022) 123.

Term	Definition
Ribonucleic acid (RNA)	A nucleic acid present in all living cells that has structural similarities to DNA. Unlike DNA, however, RNA is most often single-stranded. An RNA molecule has a backbone made of alternating phosphate groups and the sugar ribose, rather than the deoxyribose found in DNA. Attached to each sugar is one of four bases: adenine (A), uracil (U), cytosine (C) or guanine (G). Different types of RNA exist in cells: messenger RNA (mRNA), ribosomal RNA (rRNA) and transfer RNA (tRNA). In addition, some RNAs are involved in regulating gene expression. Certain viruses use RNA as their genomic material. ²³¹
Ribosome	An intercellular structure made of both RNA and protein and the site of protein synthesis in the cell. The ribosome reads the messenger RNA (mRNA) sequence and translates that genetic code into a specified string of amino acids, which grow into long chains that fold to form proteins. ²³²
Rigor mortis	The stiffening of a body within eight hours of death in temperate climates, due to chemical changes in muscle tissue. It usually starts to disappear after about 24 hours. ²³³
Ryanodine receptors (RyRs)	Located in the sarcoplasmic/endoplasmic reticulum membrane. Responsible for the release of Ca ²⁺ from intracellular stores during excitation-contraction coupling in both cardiac and skeletal muscle. Variants in RyR2 are associated with human disorders such as catecholaminergic polymorphic ventricular tachycardia. ²³⁴
RyR2	An ion channel in the sarcoplasmic reticulum which enables the release of ions from the sarcoplasmic reticulum into the extra cellular space. ²³⁵ It is the major Ca ²⁺ release channel on the sarcoplasmic reticulum in cardiomyocytes and is part of the cardiac excitation contraction coupling. ²³⁶ Mutations in RYR2 can result in disordered Ca ²⁺ regulation during exercise or stress-induced activation of the sympathetic nervous system. ²³⁷

²³¹ Talking Glossary of Genomic and Genetic Terms (n 2).

²³² Ibid.

²³³ Elizabeth Martin and Jonathan Law (eds) (n 3) 570.

²³⁴ Johanna T Lanner et al, 'Ryanodine Receptors: Structure, Expression, Molecular Details, and Function in Calcium Release' (2010) 2(11) *Cold Spring Hard Perspect Biology* 1-21.

²³⁵ Transcript of the 2022 Inquiry, 15 November 2022 T91.29-92.3 (Toft Overgaard); Exhibit 6-05, Printed version of the PowerPoint slides displayed to Professors Toft Overgaard and Nyegaard during their oral evidence on 15 November 2022 slide 36 (red p 85).

²³⁶ Exhibit 6-02, Report of Professor Michael Toft-Overgaard and Professor Mette Nyegaard dated 18 October 2022, 9.

²³⁷ Karen Van Tassel and Scott Schulman, 'Malignant Hyperthermia' in John Atlee (ed) *Complications in Anaesthesia* (Saunders Elsevier, Second Edition, 2007), 656.

Term	Definition
Schizophrenia	Characterised by disturbances in multiple mental modalities, including thinking (e.g., delusions, disorganisation in the form of thought), perception (e.g., hallucinations), self-experience (e.g., the experience that one's feelings, impulses, thoughts, or behaviour are under the control of an external force), cognition (e.g., impaired attention, verbal memory, and social cognition), volition (e.g., loss of motivation), affect (e.g., blunted emotional expression), and behaviour (e.g., behaviour that appears bizarre or purposeless, unpredictable or inappropriate emotional responses that interfere with the organisation of behaviour). Psychomotor disturbances, including catatonia, may be present. Persistent delusions, persistent hallucinations, thought disorder, and experiences of influence, passivity, or control are considered core symptoms. Symptoms must have persisted for at least one month in order for a diagnosis of schizophrenia to be assigned. ²³⁸
SCN5A	The gene which codes for Nav1.5 protein. Variants in SCN5A are sometimes associated with cardiac arrhythmias. ²³⁹
Segregation analysis	The process of fitting formal genetic models to data on expressed disease characteristics (phenotype) in biological family members to determine the most likely mode of inheritance for the trait or disease under study. ²⁴⁰
Seizure	Sudden, uncontrolled body movements and changes in behaviour that occur because of abnormal electrical activity in the brain. Symptoms include loss of awareness, changes in emotion, loss of muscle control, and shaking. ²⁴¹
Status epilepticus	The occurrence of repeated epileptic seizures without any recovery of consciousness between them. ²⁴²
Stridor	An abnormal, high-pitched, musical breathing sound caused by a blockage in the throat or larynx. ²⁴³
Stroke	An interruption to the flow of blood to the brain. An ischaemic stroke occurs when the flow of blood is prevented by clotting or by a detached clot, either from the heart or a large vessel (such as the carotid artery), that lodges in an artery. A haemorrhagic stroke results from rupture of an artery wall. Prolonged reduction of blood pressure may result in more diffuse brain damage, as after a cardiorespiratory arrest. A stroke can vary in severity from a passing weakness or tingling in a limb to a profound paralysis, coma, and death. ²⁴⁴

²³⁸ ICD-11 (n 10) 6A20.

²³⁹ Exhibit 5-07, Further Joint Report of Professors Carola Vinuesa, Matthew Cook, and Todor Arsov (23 January 2023) 191.

²⁴⁰ 'Segregation analysis', *National Cancer Institute* (Web Page) <<https://www.cancer.gov/publications/dictionaries/genetics-dictionary/def/segregation-analysis>>.

²⁴¹ 'Seizure', *National Cancer Institute* (Web Page) <<https://www.cancer.gov/publications/dictionaries/cancer-terms/def/seizure>>.

²⁴² Elizabeth Martin and Jonathan Law (eds) (n 3) 607.

²⁴³ 'Stridor', *MedlinePlus – Medical Encyclopedia* (Web Page) <<https://medlineplus.gov/ency/article/003074.htm>>.

²⁴⁴ Elizabeth Martin and Jonathan Law (eds) (n 3) 613.

Term	Definition
Substitution	A type of variant in which one nucleotide is replaced by a different nucleotide, or one amino acid in a protein is replaced by a different amino acid. ²⁴⁵
Sudden infant death syndrome	The abrupt and unexplained death of an apparently healthy infant remaining unexplained after a thorough case investigation, including performance of a complete autopsy, examination of the death scene, and review of the clinical history. ²⁴⁶
Sudden unexpected death in infancy/childhood (SUDI/SUDC)	Encompasses all cases in which there is death (or collapse leading to death) of a child, which would not have been reasonably expected to occur 24 hours previously and in whom no pre-existing medical cause of death is apparent. ²⁴⁷
SUDEP	Sudden Unexpected Death in Epilepsy.
Susceptibility	Refers to state of being predisposed to, or sensitive to, developing a certain disease. An individual's disease susceptibility is influenced by a combination of genetic and environmental factors. ²⁴⁸
Syncope	Loss of consciousness due to a sudden drop in blood pressure, resulting in a temporarily insufficient flow of blood to the brain. It commonly occurs in otherwise healthy people and may be caused by an emotional shock, by standing for prolonged periods, or by injury and profuse bleeding. Recovery is normally prompt and without any persisting ill-effects. ²⁴⁹ Syncope can also arise from cardiac arrhythmia. ²⁵⁰
Tachycardia	A heart rate that is above the age-adjusted range of normal heart rates. ²⁵¹
Tachypnoea	Abnormally rapid breathing. ²⁵²
Thalamus	One of two egg-shaped masses of grey matter that lie deep in the cerebral hemispheres in each side of the forebrain and which process sensory messages before they are transmitted to the cortex. ²⁵³

²⁴⁵ Talking Glossary of Genomic and Genetic Terms (n 2).

²⁴⁶ ICD-11 (n 10) MH11.

²⁴⁷ Helena Kennedy, 'Sudden unexpected deaths in infancy and childhood' (2016) The Royal College of Pathologists 1-107.

²⁴⁸ Ibid.

²⁴⁹ Elizabeth Martin and Jonathan Law (eds) (n 3) 620.

²⁵⁰ Exhibit 5-06, Joint Report of Professors Carola Vinuesa, Matthew Cook and Todor Arsov (25 October 2022) (red p 124); Exhibit 15-06, Koichi Kato et al, 'Novel CALM3 Variant Causing Calmodulinopathy With Variable Expressivity in a 4-Generation Family' (2022) 15(3) *Circulation: Arrhythmia Electrophysiology* 183-194 (red p 102).

²⁵¹ Lois Jane Heller, 'Tachycardia' in Marc D Gellman and J Rick Turner (eds), *Encyclopedia of Behavioural Medicine* (Springer, 2013).

²⁵² 'Tachypnea', *Merriam-Webster* (Web Page) <<https://www.merriam-webster.com/dictionary/tachypnea#medicalDictionary>>.

²⁵³ Elizabeth Martin and Jonathan Law (eds) (n 3) 630.

Term	Definition
Thymine (T)	One of the four nucleotide bases in DNA, with the other three being adenine (A), cytosine (C) and guanine (G). Within a double-stranded DNA molecule, thymine bases on one strand pair with adenine bases on the opposite strand. The sequence of the four nucleotide bases encodes DNA's information. ²⁵⁴
Torticollis	A condition in which the neck muscles cause the head to tilt, turn or rotate to the side. ²⁵⁵
Toxicology	The science of drugs and poisons. Capacity to detect drugs and poisons in fluids and tissues sampled at autopsy is a critical component of a comprehensive forensic pathology service. ²⁵⁶
Transient tachypnoea of the newborn (TTN)	Disordered rapid breathing occurring shortly after delivery, most often in early term or late preterm babies. ²⁵⁷
Transitional object	A doll, blanket, or other item spontaneously used by a child to ease the anxiety of separation from his or her first external object, the mother, until the child has established an internal object, or mental representation of her, that provides a sense of security and comfort. By extension, any person or thing that provides security, emotional well-being, and a symbolic connection with a valued other. ²⁵⁸
Uvula	A small soft extension of the soft palate that hangs from the roof of the mouth above the root of the tongue. It is composed of muscle, connective tissue, and mucous membrane. ²⁵⁹
Variable expressivity	The range of signs and symptoms that can occur in different people with the same genetic condition. ²⁶⁰
Variant	Any difference from the reference sequence. ²⁶¹
VCGS	Victorian Clinical Genetics Service.
Whole exome sequencing	A laboratory process that is used to determine the nucleotide sequence primarily of the exonic (or protein-coding) regions of an individual's genome and related sequences, representing approximately 1% of the complete DNA sequence. ²⁶²

²⁵⁴ Talking Glossary of Genomic and Genetic Terms (n 2).

²⁵⁵ 'Torticollis', *MedlinePlus* (Web Page) <<https://medlineplus.gov/ency/article/000749.htm>>.

²⁵⁶ Forensic Autopsy: Manual for forensic pathologists (n 93).

²⁵⁷ 'Transient Tachypnea – Newborn', *MedlinePlus* (Web Page) <<https://medlineplus.gov/ency/article/007233.htm>>.

²⁵⁸ 'Transitional Object', *American Psychology Association – Dictionary of Psychology* (Web Page) <<https://dictionary.apa.org/transitional-object>>.

²⁵⁹ Elizabeth Martin and Jonathan Law (eds) (n 3) 661.

²⁶⁰ 'What are Reduced Penetrance and Variable Expressivity?', *MedlinePlus* (Web Page) <<https://medlineplus.gov/genetics/understanding/inheritance/penetranceexpressivity/>>.

²⁶¹ Edwin Kirk, *The Genes that Make Us* (Scribe Publications, 2020) 250.

²⁶² 'Whole Exome Sequencing', *National Cancer Institute* (Web Page) <<https://www.cancer.gov/publications/dictionaries/genetics-dictionary/def/whole-exome-sequencing>>.

Term	Definition
Whole genome sequencing	A laboratory process that is used to determine nearly all of the approximately three billion nucleotides of an individual's complete DNA sequence, including non-coding sequence. ²⁶³
Wild type (WT)	Specialised strain of laboratory experimental organism which principally serves as a standard against which variation is measured. ²⁶⁴
X-Linked	Refers to characteristics or traits that are influenced by genes on the X chromosome. Humans and most other mammals have two sex chromosomes, X and Y. Females have two X chromosomes in their cells, while males have one X and one Y. In the case of an X-linked disease, it is usually males that are affected because they have a single copy of the X chromosome that carries the disease-causing mutation. In females, the presence of a second, non-mutated copy may cause different, milder, or no symptoms of a sex-linked disorder. ²⁶⁵
Z Score	A score that indicates how many standard deviations a value is above or below the mean. ²⁶⁶

²⁶³ 'Whole Genome Sequencing', *National Cancer Institute* (Web Page) <<https://www.cancer.gov/publications/dictionaries/genetics-dictionary/def/whole-genome-sequencing>>.

²⁶⁴ Tarquin Holmes, 'The Wild Type as a Concept and in Experimental Practice: A History of its Role in Classical Genetics and Evolutionary Theory' (2017) 63 *Studies in History and Philosophy of Biological and Biomedical Sciences* 15-27.

²⁶⁵ Talking Glossary of Genomic and Genetic Terms (n 2).

²⁶⁶ 'Z-Score', *National Cancer Institute* (Web Page) <<https://www.cancer.gov/publications/dictionaries/genetics-dictionary/def/z-score>>.

The Coincidence Notice

2

OUR REFERENCE

Laurel Baglee

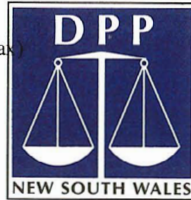
YOUR REFERENCE

Folbigg

DATE

24 October 2002

(02) 9267 2224 (fax)



OFFICE OF THE DIRECTOR
OF PUBLIC PROSECUTIONS

265 Castlereagh Street
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Sydney South NSW 1232
DX 11525 Sydney Downtown
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Facsimile (02) 9285 8600

Peter Krisenthal
Legal Aid Commission
DX 5 SYDNEY

Dear Sir

NOTICE: COINCIDENCE EVIDENCE

PURSUANT TO : **SECTION 98 OF THE EVIDENCE ACT 1995**
MATTER : PROSECUTION of Kathleen Megan FOLBIGG
REFERENCE : 070046/02
DPP CASES NO : 2114320

Notice is given that the Prosecution presently intends to adduce "coincidence" evidence pursuant to the coincidence rule in sub-section 98(1) of the Evidence Act 1995, ie. evidence that 2 or more related events occurred to prove that, because of the improbability of the events occurring coincidentally, a person did a particular act or had a particular state of mind.

1. The "person" referred to in the proceeding paragraph is Kathleen Megan FOLBIGG
2. The substance of evidence of the occurrence of the related events is contained within the following documents which previously have been served upon you. The Crown alleges that the coincidence evidence establishes:
 - (i) that each of the accused's children died/had an ALTE (Apparent Life Threatening Event) in a similar way
 - (ii) that each of the accused's children died/had an ALTE from the same cause
 - (iii) that the accused killed/caused an ALTE to each of the four children by asphyxiating them with the intent to kill or do GBH to them
 - (iv) that the accused's four children did not die from Sudden Infant Death Syndrome or any other illness, disease or syndrome.

A **SCHEDULE** is also attached which particularises the related events.

<u>DOCUMENT</u>	<u>DATE</u>	<u>PARAGRAPH</u>
1. Caleb FOLBIGG Birth Certificate	1. 18/01/00	

2. Patrick FOLBIGG Birth Certificate	2. 17/01/00	
3. Sarah FOLBIGG Birth Certificate	3. 17/01/00	
4. Laura FOLBIGG Birth Certificate	4. 04/04/00	
5. Caleb FOLBIGG Death Certificate	5. 18/01/00	
6. Dr Joseph DEZORDI Examination notes	6. 17/03/00	4, 5
7. Patrick FOLBIGG Death Certificate	7. 17/01/00	
8. Sarah FOLBIGG Death Certificate	8. 17/01/00	
9. Dr Tuan AU	9. 16/03/99	4
10. Craig FOLBIGG Statement Letter	10. 19/05/99 01/07/91	10, 11, 22, 24, 27, 29, 31, 40, 42, 45, 68, 72 P3
11. Kathleen FOLBIGG	11. Undated statement	2, 3
12. Kathleen FOLBIGG ERISP	12. 23/07/99	ANS 149, 223, 247, 269, 333
13. Kathleen FOLBIGG Transcript of 000 call	13. 01/03/99	P1
14. Kathleen FOLBIGG Diary entry	14. 19/02/89	
15. DSC Bernard RYAN	15. 24/08/99	4
16. DSC Bernard RYAN Report of Death to Coroner	16. 01/03/99	P1
17. DSC Bernard RYAN Scene Investigation Checklist	17. 01/03/99	P1
18. Dr Christopher WALKER Hospital Notes	18. 18/01/00 13/02/91	7 P1

19. SC Stephen SAUNDERS	19. 12/09/93	8, 9
20. Richard BAINES	20. 29/10/99	6
21. David HOPKINS Ambulance Report Q007	21. 01/10/99	6
22. Kathleen COYLE	22. 06/09/99	7
23. Harold PICTON	23. 15/09/99	7
24. Brian WADSWORTH	24. 15/09/99	8
25. Dr Peter BERRY	25. Nov/00	P3, 7, 27
26. Dr R CUMMINGS	26. 09/05/89	P1
27. Drs J BISHOP & G SING- KHAIRA	27. 14/02/91	P1
28. Dr John HILTON	28. 25/11/93	P5
29. Dr Allan CALA	29. 26/07/99	P2, 3
30. Dr Janice OPHOVEN	30. 01/12/01	P3, 5, 6, 8, 11
31. Dr David COOPER	31. 06/12/99	6, 8, 9, 10
32. Dr Christopher SETON	32. 23/11/99	9
33. Dr Bridget WILKIN	33. 14/01/00	4
34. Dr Ian WILKINSON	34. 08/10/99	5
35. Dr Barry SPRINGTHORPE Letter	35. 21/03/89	
36. Deborah MARTIN	36. 08/10/99	23

3. So far as known to the Prosecution, particulars of the date, time, place and circumstances at or in which each of those events referred to in paragraph 2 above occurred are contained within the documents referred to in paragraph 2 above.

4. So far as known to the Prosecution, the names of each person who saw, heard or otherwise perceived each of those events referred to in paragraph 2 above are contained within the documents referred to in paragraph 2 above.

SIGNED:

PRINTED NAME:

L. Baglee

Solicitor in the employ of the Office of the Director of Public Prosecutions

TELEPHONE:

SCHEDULE
R v Kathleen Folbigg
Co-incidence evidence

SIMILARITY	Caleb FOLBIGG	Patrick FOLBIGG ALTE	Patrick FOLBIGG	Sarah FOLBIGG	Laura FOLBIGG
Child of Kathleen and Craig Folbigg	✓ Birth Certificate 01/02/89	✓ Birth Certificate 03/06/90	✓ Birth Certificate 03/06/90	✓ Birth Certificate 14/10/92	✓ Birth Certificate 07/08/97
Child under two years of age at death/ALTE (Apparent Life Threatening Event)	✓ 20 days old Death Certificate - Monday 20/02/1989	✓ 4 months old Dr DEZORDI 17/03/00 par 4 Thursday 18/10/90	✓ 8 months old Death Certificate - Wednesday 13/02/91	✓ 11 months old Death Certificate - Monday 30/08/93	✓ 19 months old Dr Au 16/03/99 par 4 - Monday 01/03/99
Death/ALTE in child's own bed	✓ Craig FOLBIGG 19/05/99 Par 11 Kathleen FOLBIGG Undated statement Par 2	✓ Craig FOLBIGG 19/05/99 Par 24 Kathleen FOLBIGG ERISP Ans 149	✓ Craig FOLBIGG 19/05/99 Par 31 Kathleen FOLBIGG ERISP Ans 223	✓ Craig FOLBIGG 19/05/99 Par 45 Kathleen FOLBIGG ERISP Ans 269	✓ DSC Bernard RYAN 24/08/99 Par 4 Kathleen FOLBIGG ERISP Ans 333 page 99
Death/ALTE during sleep period	✓ Kathleen FOLBIGG Undated statement Par 2	✓ Kathleen FOLBIGG ERISP Ans 149	✓ Kathleen FOLBIGG ERISP Ans 223	✓ Craig FOLBIGG 19/05/99 Par 45	✓ DSC Bernard RYAN 24/08/99 Par 4 Kathleen FOLBIGG ERISP Ans 333 page 99
Child last seen alive by the accused	✓ Approx 1am Kathleen FOLBIGG Undated statement Par 2	✓ Approx 3.00am Dr DEZORDI 17/03/00 Par 4	✓ Approx 7.30am – mid morning Dr WALKER 18/01/00 Hospital notes 13/02/91 P1 Kathleen FOLBIGG ERISP Ans 223	✓ Approx 12 or 12.30am mother heard child move in bed SC SAUNDERS 12/09/93 Par 9	✓ Approx 11.00am DSC Bernard RYAN 01/03/99 Report of Death to Coroner P1
Child found not breathing by accused	✓ Approx 2.50am Craig FOLBIGG 19/05/99 Par 11 Kathleen FOLBIGG Undated statement Par 2	✓ Approx 4.30am Dr DEZORDI 17/03/00 Par 4 Craig FOLBIGG 19/05/99 Par 24	✓ Approx 10am Craig FOLBIGG 19/05/99 Par 29 Kathleen FOLBIGG ERISP Ans 223	✓ Approx 1.00/1.30am Craig FOLBIGG 19/05/99 Par 45 SC SAUNDERS 12/09/93 Par 9	✓ Approx 12 noon Kathleen FOLBIGG ERISP Ans 333 Page 101 Transcript 000 telephone call by accused on 01/03/99
Child found at unusual time for SIDS death	✓ 2.45am Dr BERRY Nov 2000 P27	✓ 4.30am Dr BERRY Nov 2000 P27	✓ 10.03am Dr BERRY Nov 2000 P27	✓ 1.30am Dr BERRY Nov 2000 P27	✓ About 12 noon Dr BERRY Nov 2000 P27

Short interval after child last seen alive by accused and being found lifeless	✓ Approx 1.00am – 2.50am Kathleen FOLBIGG Undated statement Par 2	✓ Approx 3.00am - 4.30am Dr DEZORDI 17/03/00 Par 4	✓ Approx 7.30-10.00am Dr WALKER 18/01/00 Hospital notes 13/02/91 P1	✓ Approx 12.00 – 1.00/1.25am SC SAUNDERS 12/09/93 Par 9	✓ 11.00am – 12.05pm DSC Bernard RYAN 01/03/99 Report of Death to Coroner P1
Only accused present or husband also present and heavy sleeping	✓ Craig FOLBIGG 19/05/99 Par 11, 22	✓ Craig FOLBIGG 19/05/99 Par 24, 22	✓ Kathleen FOLBIGG ERISP Ans 247	✓ Craig FOLBIGG 19/05/99 Par 45	✓ DSC RYAN 24/08/99 Par 4
Accused fails to pick up child after discovering child not breathing	✓ Craig FOLBIGG 19/05/99 Par 11	✓ Craig FOLBIGG 19/05/99 Par 24	✓ Craig FOLBIGG 19/05/99 Par 29	✓ Craig FOLBIGG 19/05/99 Par 45	-
Accused summonses assistance	✓ Craig FOLBIGG 19/05/99 Par 11 Kathleen FOLBIGG Undated statement Par 2	✓ Craig FOLBIGG 19/05/99 Par 24 Kathleen FOLBIGG ERISP Ans 149	✓ Craig FOLBIGG 19/05/99 Par 29	✓ Craig FOLBIGG 19/05/99 Par 45 Kathleen FOLBIGG ERISP Ans 269 SC SAUNDERS 12/09/93 Par 9	✓ Craig FOLBIGG 19/05/99 Par 72 Kathleen FOLBIGG ERISP Ans 333 Page 101
Child found while still warm	✓ Craig FOLBIGG 19/05/99 Par 11 Richard BAINES 29/10/99 Par 6 David HOPKINS 01/10/99 Par 6	✓ Craig FOLBIGG 19/05/99 Par 24 David HOPKINS 01/10/99 – Ambulance report Q007	✓ Craig FOLBIGG 19/05/99 Par 29 Kathleen COYLE 06/09/99 Par 7	✓ Craig FOLBIGG 19/05/99 Par 45	✓ Harold PICTON 15/09/99 Par 7 Brian WADSWORTH 15/09/99 Par 8
No sign of injury to child	✓ Dr CUMMINGS 09/05/89 Page 1	✓ Dr DEZORDI 17/03/00 Par 5	✓ Drs BISHOP & SING-KHAIRA 14/02/91 page 1	✓ Dr HILTON 25/11/93 Except some small scratches	✓ Dr CALA 26/07/99 page 3 Except some bruising of the leg Dr OPHOVEN 01/12/01 at P11
No major illness before death/ALTE (other than mild coughs/colds etc). Child appears to be normal healthy child	✓ Kathleen FOLBIGG Undated statement Par 3 Dr BERRY Nov 2000 P27	✓ Dr BERRY Nov 2000 P27	✓ Other than epilepsy arising after ALTE	✓ SC SAUNDERS 12/03/93 Par 8 Dr BERRY Nov 2000 P27	✓ DSC RYAN 01/03/99 Death Scene Investigation Checklist Page 1 Dr BERRY Nov 2000 P27
Sleep studies normal	N/A	✓ Dr COOPER 06/12/99 par 9 Dr BERRY Nov 2000 p27	✓ Dr COOPER 06/12/99 par 9 Dr BERRY Nov 2000 p27	✓ Dr COOPER 06/12/99 par 6, 10 Dr BERRY Nov 2000 p27	✓ Dr SETON 23/11/99 par 9 Dr BERRY Nov 2000 p27
Tests for inherited and biochemical disorders normal	✓ Dr B WILKEN 14/01/2000 Par 4 Dr OPHOVEN 01/12/01 P3	✓ Dr B WILKEN 14/01/2000 Par 4 Dr BERRY Nov 2000 p27	✓ Dr B WILCKEN 14/01/2000 Par 4 Dr BERRY Nov 2000 p27	✓ Dr B WILCKEN 14/01/2000 Par 4 Dr BERRY Nov 2000 p27	✓ Dr B WILCKEN 14/01/2000 Par 4 Dr BERRY Nov 2000 p27

ECG/EEG normal	N/A	✓ Dr COOPER 06/12/99 EEG 15/06/90 normal par 6 EEG dated 18/10/90 abnormal par 8	✓ Dr COOPER 06/12/99 EEG 15/06/90 normal par 6 EEG dated 18/10/90 abnormal par 8	-	-
Autopsy/examination fails to reveal cause of death/ALTE	✓ SIDS Dr CUMMINGS 09/05/89 Page 1 Dr OPHOVEN 01/12/01 at P3	✓ Unknown Cause Dr DEZORDI 17/03/00 Par 6 Dr OPHOVEN 01/12/01 at P5	✓ Asphyxia due to Airway obstruction [Death Cert, Dr WILKINSON] Cardiac arrest [Dr's BISHOP & SING-KHAIRA 14/02/91 p1] Unknown cause [Dr WALKER 18/01/00 par 7, Dr OPHOVEN 01/12/01 at P6]	✓ SIDS Dr HILTON 25/11/93 Page 5 Dr OPHOVEN 01/12/01 at P8	✓ UNDETERMINED Dr CALA 26/07/99 Page 2 Dr OPHOVEN 01/12/01 at P11
Death/ALTE arose from anoxic event	✓ Dr CUMMINGS 09/05/89 Page 1	✓ Dr DEZORDI 17/03/00 Par 5	✓ Dr WILKINSON 08/10/99 Par 5	✓ Dr HILTON 25/11/93 Page 5	✓ Dr CALA 26/07/99 Page 2
Accused had shown acute irritation at child prior to death/ALTE or appeared to have been under acute stress	✓ Kathleen FOLBIGG Diary entries 19/02/89 Dr BERRY Nov 2000 P27 See diary entries and ERISP references referred to in tendency notice	✓ See diary entries and ERISP references referred to in tendency notice	✓ Craig FOLBIGG 19/05/99 Par 27 Dr BERRY Nov 2000 P27 See diary entries and ERISP references referred to in tendency notice	✓ Craig FOLBIGG 19/05/99 Par 42 Dr BERRY Nov 2000 P27 See diary entries and ERISP references referred to in tendency notice	✓ Craig FOLBIGG 19/05/99 Par 68 Dr BERRY Nov 2000 P27 See diary entries and ERISP references referred to in tendency notice
Child in bad mood/won't sleep/slight illness at time of death	✓ Kathleen FOLBIGG Diary entries 19/02/89 Letter Dr SPRINGTHORPE 21/03/89	✓ Dr DEZORDI 17/03/00 Examination notes Page 1	✓ Craig FOLBIGG letter 01/07/91 P3 DR BERRY Nov 2000 P7	✓ SC SAUNDERS 12/09/93 Par 8	✓ DSC RYAN 24/08/99 Par 4
Sleep monitors not in use at time of death	N/A	-	-	✓ Craig FOLBIGG 19/05/99 Par 40 Deborah MARTIN 08/10/99 Par 23	✓ Craig FOLBIGG 28/06/01 Par 10 Kathleen FOLBIGG ERISP Ans 333 P97

Schedule

Diary entries which were the subject of
cross-examination at the 2019 Inquiry

A large, white, serif-style number '3' is positioned on the right side of the page, centered vertically between two horizontal white lines. The number is the primary visual element of this section.

1989 Diary

14 February 1989

8 **gave wind mixture (seemed to help)
8.30 – Still Restless
9 – always crying – put back down.
12.30AM wind pretty good.
1 75-80mls? (doing No 2)
Big sleep [1.30-4.30]
5 - 90ml (wind pretty good)
5.30 Asleep?
7 – awake. doing no 2.
7.30 Slight vomit.
Still awake. 85mls.
[including top up 20mls at 8.00pm]

8.00 went down to sleep.
Sleeping [8.30-10.00]
9.30 Still asleep. luckily
10.15 – 80mls
12.45 (wind good) 80mls.
1.30 asleep!
Sleeping [1.30-3.30]
4.00 Starting to stir.
4.30 wind pretty good. 80mls
5.00 Still awake

6 behind okay. (slight vomit) 30ml.

has been pretty good all
day!²

² Exhibit 2-AZ, Diaries tender bundle [red pagination 6926].

Cunneen SC

Q. Then on the next, the next entry in that diary of any relevance was 14 February and there are, it seems that you - that’s your writing is it?

A. Yes.

Q. You were keeping a lot of written records about the various things to do with babies sleeping and the formula that you were feeding him and how much he was taking?

A. It was a care journal yes.

Q. And keeping close - keeping a close eye on everything and behaving as an attentive mother should?

A. Yes.

Q. Doing your best to look after your baby just as well as you could?

A. Correct.³

³ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T676.13-27 [red pagination 684] (Cunneen SC).

15 February 1989

2 weeks old.

Dad looking after Caleb
[have everything ready]
8.30 (Appointment Hospital (EEG) 7th floor Nickson wing)
9.00 60mls. (wind pretty good)
Still awake
40 mls again
Asleep [10.15-11.00]
11.00 Still awake.
11.15 Bathed him –
11.30 80mls. Asleep.⁴

Asleep [11.45-2.00]
2.30 dirty nappy. wind okay
2.45 100mls asleep? [2.30-3.00]
Asleep till 6.30pm. [3.15-6.00]⁴

6.30 100mls
7 slight vomitt (wind not bad)
7.30 – Put down to sleep?
awake. but not restless
[8-8.30]
9 75mls wind not to bad.
9.30 Still awake little unsettled
Asleep [10-12]
*12.30AM 80mls wind okay slight spew
1 woke up slightly Restless
asleep [1.30-3.00]
slightly unsettled
3.30 - starting to stir
4 90mls – wind pretty good.

7.30 – stirring 80mls
slight vomitt.
wind okay.

⁴ Exhibit 2-AZ, Diaries tender bundle [red pagination 6927].

Morris SC

Q. If we look at this, and if we go through to the 15th or somewhere like that, we’ve got an entry underneath the number 15, “Dad looking after Caleb. Have everything ready”. And, if you see there to the right of that, there’s “8.30 appointment, hospital EEG”?

A. Yes.

Q. Does that mean that you had a hospital appointment at that time?

A. Yes.

Q. And there are various entries with respect to whether he was awake or asleep, whether he was bathed or not?

A. Yes, correct.

Q. This is a document, is it, that you prepared either at the time or shortly after Caleb was born?

A. Yes.

Q. To that extent, you went through this diary and filled out a good number of pages with a similar series of times?

A. Yes. ⁵

⁵ Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T778.3-22 [red pagination 788] (Morris SC).

19 February 1989

Awake [8.00-9.45]
10.00 40mls.
10.30 60ml. settled back down.
asleep. [11-12.30]
12.30 AM
12.45-1.30 100mls wind okay.
½ wake ½ asleep [1.30-3.15]
3.15 100mls wind OK.
asleep. [3.30-5.00]
5.00 100mls⁶

½ awake ½ asleep. [6.30-8.00]
asleep [8/8.30-12.00]
12 120mls wind OK
1 Put back to sleep?
1.30 a little Restless [...]
2 Finally Asleep!!

⁶ Exhibit 2-AZ, Diaries tender bundle [red pagination 6931].

Cunneen SC

Q. On 19 February 1989, that was sadly the last day of Caleb’s life and he had by, well 3am passed away, 3am into 20 February was it?

A. Yes.

Q. But as late in his life as 2am, you had written there at 1.30, “A little restless” to “Finally asleep”?

A. Yes.

Q. Would that have been an entry that you wrote at 2am on that date?

A. I would say yes.

Q. And sadly within the hour the baby had died?

A. Yes.

Q. Even though you had been with him at 2?

A. Mm-hmm.

Q. And you thought that he had gone to sleep?

A. Yes.

Q. Just an entry in the right margin there or some writing, I’m sure that it’s very hard for you to see, but would you - I expect you don’t remember whether you wrote something there or what it is?

A. I’m not recognising that, I wouldn’t know what that is.

Q. I am aware that the diaries are now, the originals are now here in court with us, I wonder if I could call for that, the original your Honour please.

...

WITNESS: I still can’t make out even what that says, so I can’t help with that.

Q. Just while you have it there, can I suggest to you that it says “I wish”?

A. No I don’t think that looks like “wish.”

Q. Written on the side as it were?

A. Yeah.

Q. “I wish”?

A. No.

Q. You don’t agree with that?

A. No.

Q. You don’t think it’s possible that it says that?

A. No, I’m not seeing that as “wish” at all.

Q. Do you say that it’s anyone’s handwriting but yours?

A. No I’m not saying it’s not my handwriting, I’m just saying I can’t recognise it and I don’t know what it says.

Q. But you reject that it says “I wish”?

A. Yeah.⁷

⁷ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T676.29-T677.43 [red pagination 684-685] (Cunneen SC).

20 February 1989

6.30
7
7.30
8
8.30
9
9.30
10
10.30
11
11.30
12
12:30AM
1
1.30
2
2.30
3
3.30
4
4.30
5
5.30
6
6.30
7
7.30
8
~~8.30~~
9
~~9⁸~~

⁸ Exhibit 2-AZ, Diaries tender bundle [red pagination 6932].

Morris SC

Q. If we go to the entry for the 20th and 21st, this is after Caleb’s death?

A. Yes.

Q. And we look at the next eight or ten pages, out to 27 February,⁹ all these times were inserted by you?

A. Yes.

Q. Except that, unfortunately, Caleb died and you never got to fill them out?

A. That’s right.

Q. It’s the case, isn’t it, that you, if you look at 1 March, put in an entry “Four weeks, 1 month”, which was four weeks after Caleb’s death - sorry, after his birth?

A. After his birth, yes.¹⁰

⁹ The diary entries between 24 February 1989 and 1 March 1989 have, among other things, handwritten times in intervals similar to the entries of 20 to 23 February 1989.

¹⁰ Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T778.24-37 [red pagination 788] (Morris SC).

21 February 1989

Russells Birthday.

6.30
7
7.30
8
8.30
9
9.30
10
10.30
11
11.30
12
12.30AM
1
1.30
2
2.30
3
3.30
4
4.30
5
5.30
6
6.30
7
7.30

5.30
6¹¹

¹¹ Exhibit 2-AZ, Diaries tender bundle [red pagination 6933].

22 February 1989

3 WEEKS.

+ Dr Holland – 1st floor macafry building +

6.30
7
7.30
8
8.30
9
9.30
10
10.30
11
11.30
12
12.30AM
1
1.30
2
2.30
3
3.30
4
4.30
5
5.30
6
6.30
7
7.30
8
~~8.30~~
9

Take him
to clinic
check by midwife.
Don Dicks
chemist

pm[12.30]
1
1.30

5.30
6¹²

¹² Exhibit 2-AZ, Diaries tender bundle [red pagination 6934].

23 February 1989

[12.30]pm

1
1.30

5.30
6¹³

6.30
7
7.30
8
8.30
9
9.30
10
10.30
11
11.30
12
12.30AM
1
1.30
2
2.30
3
3.30
4
4.30
5
5.30
6
6.30
7
7.30
8
~~8.30~~

¹³ Exhibit 2-AZ, Diaries tender bundle [red pagination 6935].

24 May 1989

16 weeks (4 months)

Make appointment
Dr Leeder.
Booster
For
Caleb.¹⁴

¹⁴ Exhibit 2-BN, Diary entry of 24 May 1989 [red pagination 7721].

Morris SC

Q. Now, your Honour, there were two other pages which were provided to my friend as to subsequent entries which were peripherally relevant. I don't know whether they've been put up on the screen. They have?

Q. This one of 24 May, "16 weeks, four months", that's something that you would have put in at about the time that you put the other entries - other numbers in?

A. Yes. Yes, I was making sure that appointments were to be met.

Q. And you make reference there to "Make appointment Dr Heda" - is that "Heda" or --

A. Yeah, I believe it's Heda, yeah.¹⁵

¹⁵ Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T778.39-50 [red pagination 788] (Morris SC).

19 July 1989

24 weeks (6 months)
Booster for Caleb¹⁶

¹⁶ Exhibit 2-BN, Diary entry of 19 July 1989 [red pagination 7722].

Morris SC

Q. --"Booster for Caleb". And if we can go to the next one, please, 19 July, "Booster for Caleb" again. Is it the fact that, when you set about putting these entries in, you were marking off in the diary events that were to happen into the future that you'd have to attend to in due course?

A. Yes, absolutely. Yes.

Q. To that extent you, sometime shortly after Caleb's birth, set to organise yourself to make sure that you had a good account of the attendances that you would make upon him and record it in this diary?

A. Yes.

Q. And also to record important medical consultations which you knew would have to take place into the future for his health and benefit?

A. Yes.

Q. As I understand it, you took Caleb to a number of doctors during his short life, is that right?

A. He had a paediatrician, yes.

Q. A paediatrician?

A. Yes.

Q. Who was that?

A. Dr Springthorpe.

Q. Did you attend with Craig at that appointment, or was that something you did?

A. Something I did.

Q. You followed Dr Springthorpe's advice?

A. Yes.

Q. Indeed, just while we're onto medical attendances and consultations, with Patrick, before his incident on 18 October, you had taken him to a number of doctors' attendances including GPs and paediatricians. Is that correct?

A. Yes.

Q. After that incident, you attended - I mean, he was a very sick little boy after that, wasn't he?

A. Yes, he was.

Q. And you had no hesitation, did you, in taking him to hospital when he needed it? Did you?

A. No.

Q. Or taking him to various medical attendances?

A. No.

Q. As and when were necessary?

A. Yes.

Q. Some of those attendances at the hospital were with Craig in your presence?

A. Yes, they were.

Q. And there were others, were there, where you attended by yourself?

A. Yes.

Q. With respect to other general practitioner appointments and so forth, you would take Patrick to those appointments by yourself?

A. Yes.

Q. And, on occasions, with Craig as well?

A. Yes.

Q. Of course, when Sarah was born, there were other assessments and so forth that took place with respect to her?

A. That's right, yes.

Q. And you arranged many of those, didn't you?

A. I didn't arrange them but, yes, I would go to them and take them to her (as said), yeah.

Q. I see. When you say you didn't arrange them, are you saying that your GP would arrange them?

A. Yes.

Q. And the same with Laura?

A. Yes.

Q. And that you ensured as best you were able, I take it, that these children got whatever medical attention they needed from time to time, is that correct?

A. Yes, of course.

Q. And you followed advice from people, from time to time?

A. Absolutely.¹⁷

¹⁷ Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T779.2-T780.37 [red pagination 789-790] (Morris SC).

1990 Diary

3 June 1990

This was the day that Patrick Allan David Folbigg was born. I had mixed feelings this day wether [sic] or not I was going to cope as a mother or wether [sic] I was going to get stressed out like I did last time [underlined in original]. I often regret Caleb & Patrick, only because your life changes so much, and maybe I'm not a person that likes change. But we will see?¹⁸

¹⁸ Exhibit 2-AZ, Diaries tender bundle [red pagination 6952].

Maxwell KC

Q. ...So this is 1990, 3 June 1990, the day that Patrick was born, and you say - could I just ask you, was this an entry that you actually put in on 3 June 1990?

A. I don't recall.

Q. Was it the situation that you sometimes went back, in other words wrote an entry back in time on a particular date?

A. Yes, possible.

Q. What you've said there is that you had mixed feelings on that day, and the mixed feelings were about whether or not you were going to cope as a mother or whether you were going to get stressed out "like I did last time", right?

A. Yes.

Q. When you refer to "last time" that was referring to the death of Caleb, is that right?

A. It's referring to the fact I was a brand new mother last time with Caleb.

Q. But is it referring to the fact that you were stressed out at the time of Caleb's death?

A. Stressed out at the time of his death?

Q. Well immediately before he died.

A. No, I don't agree with that.

Q. You weren't stressed out at all?

A. No. I won't say at all. I was a brand new mother, you're constantly--

Q. You say--

MORRIS SC: Let her finish.

A. --worried that you're not doing the right thing on how to go about things, so I was also a first time mother. There were a lot of doubts.

MAXWELL KC

Q. You say, "I often regret Caleb and Patrick only because your life changes so much and maybe I'm not a person that likes change but we will see", do you see that?

A. Yes.

Q. If this was written on 3 June 1990, the date of Patrick's birth, you'd hardly have time to regret him?

A. It's - regret's probably the wrong word. It all boils down to me doubting myself. I'm not seeing anything unusual in that entry. I'm doubting myself as how I went about was I good enough mother with Caleb, I'd failed, Caleb had died. I was now doubting as to whether I was making the right decision with Patrick.

Q. But what you say is, you don't say I doubted myself as a mother or I regret how I acted as a mother, you don't say that. You say, "I often regret Caleb and Patrick only because your life changes". Do you see that?

A. But I never put in my diaries exactly what I was meaning. I already had in my head what I was meaning. I was having difficulty in trying to put down what I was meaning in my diaries.

Q. Regret means to feel sorry or disappointed about something doesn't it? You know that.

A. Well I was disappointed. Disappointed and sorry that Caleb had died.

Q. But you say you regret Patrick as well.

A. As in was I making the right decision to have gone ahead and had Patrick.

Q. Were you happy to bring this new life into the world of Patrick?

A. Yes, at the time, yes.

Q. Did you feel warmth towards your new baby?

A. I was reserved. I was a little reserved with Patrick, but yes I did.

Q. You felt warmth towards him?

A. Yes.

Q. But yet you say that you regretted him?

A. I'm not - I don't believe I'm saying I regretted him. I'm, I'm saying I regretted doubting the decision whether to have had him.

Q. Do you accept that when you give birth to a child your life does immediately change?

A. Absolutely.

Q. You suddenly have a baby to care for and it takes all your time and puts you under pressure.

A. Okay.

Q. Do you accept that?

A. Yes.

Q. But here in this entry of 3 June you're saying you regret your newborn child because of how it will change your life. That's what you're saying isn't it?

A. No, I don't believe that's what I'm saying at all.

Q. You say that that interpretation that I've put to you just does not follow--

A. No, that's--

Q. --is that your answer?

A. Yeah, that's right.¹⁹

Cunneen SC

Q. Now I will turn to the 1993 diary which is tab 3 in this Inquiry and I know you've been asked about this by Mr Maxwell but I just wish to ask you some more questions about the entry for 3 June 1990, you will recall at once the significance of that day?

A. Yes.

Q. But may I suggest to you that that entry was clearly written after Patrick's birth, not on the day of Patrick's birth?

¹⁹ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T640.17-T642.13 [red pagination 648-650] (Maxwell KC).

A. No, that's right.

Q. Because otherwise you wouldn't have written "This was the day that Patrick Allan David Folbigg was born", and nor would you have written "I had mixed feelings this day"?

A. Yeah that's right.

Q. So it could well have been written some considerable time after Patrick's birth, could it not?

A. Could have been yes.

Q. When you say there, "I had mixed feeling this day, whether or not I was going to cope as a mother or whether I was going to get stressed out like I did last time", you were talking about having felt on the day that you gave birth to Patrick, a concern about whether things would go the way they had the last time, is that right?

A. Yes, I was doubting my ability yes.

Q. Did you do the underlining, under "I did last time"?

A. Yes.

Q. So it is clear that you felt by the time that Patrick was born, that you had been stressed out during Caleb's life?

A. I felt - that's hard to say, I felt that I wasn't sure whether or not I'd been a good enough mother last time, Caleb was only around for three, four weeks, it was hard you know, I can't say as to whether I was successful or not, other than the fact I felt like I wasn't because he died, stressed out, you're a new mother, it's not a hard stretch to think you'd be stressed out if you're a brand new mother and you're not sure what's going on.

Q. You would only feel that you had been unsuccessful because he died, if you did something to contribute to his death I'd suggest to you?

A. No, as, as his mother I felt I'd failed, so as in failing being his mother, something went wrong, I couldn't say what it was so I therefore doubted my ability, so here I am having Patrick and was doubting my ability straight up.

Q. You were doubting your ability to control your stress, is that right?

A. To a degree yes.

Q. You were doubting your ability to control yourself when your stress overwhelmed you?

A. No, I won't - I won't say that. As I said, Caleb wasn't around for life - long enough for me to make a comparison of any sort. I, I, I simply knew that something had gone wrong and I'd failed.

Q. Well, no-one from the medical profession told you that there was any obvious reason why Caleb had died, did they?

A. No. No, they did not.

...

Q. Now, you say in that entry, "I often regret Caleb and Patrick, only because your life changes so much and maybe I'm not a person that likes change". Do you agree that that entry is most likely to have been written after Patrick's death, after the death of both little boys?

A. No, isn't, isn't this diary after Patrick was born?

Q. Well, the entry is in the space for the day that he was born, but I think you’ve already conceded that the entry must have been written at least after that day, and perhaps considerably after?

A. I’m not believing that it was after Patrick’s death. In - you referred to, “I often regret Caleb”, Caleb’s a regret because he died and I was unsuccessful. Patrick was a regret because I was unsure of my ability and as to whether I’d made the right decision. They’re two separate things.

Q. So, you’re saying that you might be writing that you regret Patrick, even while he was still alive?

A. Regret as in whether I was good enough, yes. I had to prove - I was constantly having to prove to myself that I might be good enough.

Q. So, do you say that you believe that this entry was written between Patrick’s birth and his death?

A. That’s what I’m believing by reading it, yes.

Q. So, even while Patrick was alive, you said, “I often regret Caleb and Patrick, only because your life changes so much and maybe I’m not a person that likes change, but we will see?”

A. “But we will see?” is an optimism at the end of all of that. I was looking forward to being able to see. Patrick was with me, and will I cope, and will it all be good, and will it work out? Yes.

Q. And you were hoping that you might become a person that doesn’t mind change after all?

A. That’s right.

Q. And you were hoping you might become a person who is a better mother to Patrick than she was to Caleb?

A. Yes, ‘cause when Caleb died, you can’t get a bigger change in your life than your child dying, it’s a humongous change.

Q. Except, perhaps, when a child comes into your world?

A. That’s right, and that’s another change.

Q. “But we will see?”?

A. As in, optimism as to, I’m looking forward to the possibility of seeing where this would go.

Q. Well, there’s not much optimism in a passage that includes “stressed out, like I did last time”, and regretting two - named the two children that you’ve so far had, is there?

A. Not in the expressing of those feelings at the time, no, but I had ended it with an optimistic expression of thought.

Q. Qualified by the question mark?

A. ..(Not transcribable)..²⁰

²⁰ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T678.3-680.28 [red pagination 686-688] (Cunneen SC).

10 July 1990

Well another day. Looks like Pat might be starting to sleep all night – hope so.

He just plays up a little during the night though. I think a full large feed during the night is in order. He seems to be more hungry then. He is getting a bad habit of going to bed with craig. I'll have to really try to stop that. He's getting to an age where he realises that its lovely to do. Well better get some work done²¹

²¹ Exhibit 2-AZ, Diaries tender bundle [red pagination 6956].

Cunneen SC

Q. In that passage, you say, do you not, that “It looks like Pat might be starting to sleep all night, hope so”?

A. Yes.

Q. But then you go on to talk about a “bad habit” that Pat is getting, “He is getting a bad habit of going to bed with Craig”?

A. Yes.

Q. So, you were talking about a little boy who’s only a bit over a month old, a baby--

A. Yes.

Q. --and you are noting in your diary that “He is getting a bad habit”?

A. As in, Craig’s getting a bad habit.

Q. Well, you’re saying that Patrick’s getting a bad habit, are you not?

A. If it continued then, yes, it would have been a bad habit.

Q. It can’t be Craig, because you say, “He is getting”- “He” is the subject--

A. Yes.

Q. --”is getting a bad habit of going to bed with Craig”, who is the object?

A. Yes, and that comes from being advised in pregnancy and when having Patrick that taking your child to bed with you is not supposed to be a good thing.

Q. Yes, and yet, you are saying that the baby himself is developing the bad habit?

A. I may be. I might have been thinking that he’s going to get a bad habit from doing this, so I’ve written it that way.

Q. You then go on to say, “I’ll have to really try to stop that. He’s getting to an age where he realises that it’s lovely to do”. Who was the person you were speaking of there, when you say, “He’s getting to an age where he realises that it’s lovely to do”?

A. Well, all babies love you having them close to you, and I, I had thought that this could develop into a bad habit if he’s going to be going into bed with Craig at all times. And, being advised that that wasn’t a good thing to do because of SIDS thinking and that was around at the time and, yes, I thought I would - I’ll probably have to put a stop to it.

Q. May I suggest that this was the start of a jealous feeling that you were getting about the bonding between Patrick and his father?

A. No.²²

²² Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T680.33-T681.26 [red pagination 688-689] (Cunneen SC).

11 July 1990

Well, what a dismal day, raining, windy and cold. At least we will have the gas on tonight, our house should be nice and warm. Patrick is asleep. He always settled after his morning feed & bath.

Think I'll give up trying to get him to settle down of a nighttime it obviously doesn't work. The life of a mother.

Been really lucky lately he has been missing the early morning feeds. Its been great 5-6 hrs sleep²³

²³ Exhibit 2-AZ, Diaries tender bundle [red pagination 6956].

Cunneen SC

Q. On the next day, which is on the same page, there's one paragraph and then, "Think I'll give up trying to get him to settle down of a night time, it obviously doesn't work. The life of a mother"?

A. Just, lamenting with what it's like to be a mother.²⁴

²⁴ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T681.28-31 [red pagination 689] (Cunneen SC).

12 July 1990

Well, craig has been sacked today. But don't seem to be any skin off our nose. He's lucky he has got another job already. I've been seriously thinking about going back to work. We could do with extra money. But only draw back is that I'd have to try to organise someone to look after him during the day. If I get a nighttime job, I'd have to be picky about the hours. Only good thing is that Craig would be here to look after Patrick. I'll look in Sat morns paper to see what sort of jobs are around at the moment. Well - Pats been asleep for about an ½ hr don't know wether it will last²⁵

²⁵ Exhibit 2-AZ, Diaries tender bundle [red pagination 6957].

Morris SC

Q. And 12 July 1990, it seems that Craig has lost his job and he's got another job already, but you were seriously thinking about going back to work?

A. Yes.

Q. And it was because money was tight, is that correct?

A. Yes.

Q. In the three months that followed that, can I suggest - and we can go to your diaries if you want to, but there were discussions that took place between you and Craig about whether you should stay where you were then living or otherwise consider moving towns, basically. Do you have any recollection of that now?

A. Sorry, I have no memory or recollection, no.²⁶

²⁶ Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T780.40-T781.3 [red pagination 790-791] (Morris SC).

21 July 1990

Well, havent written anything anywhere for quite some time. Ive decided that I have to go back to work. I’m tired of being broke most of the time. Greg, Craig & I looked into going into business today. I personally think it has great potential, for all of us.

*But things that we have to consider one could be put up with greg & trudie on a long term basis? I’d be concerned about wether greg would try to take more out of the business than hes entitled too? But it sounds like a viable proposition. Next step is to see about financing it. Craig & I are in a slightly better position too than greg, but Ill have to make sure that because of that we dont end up becoming the brunt of the financial burden!

*Then theres moving away from every day. I personally don’t think it would bother me. They would just have to travel to see us. Its only an hour, not that far away that people won’t visit. During sumer it would be fantastic. The idea of being independent and free from medling family members would be wonderful. My mother couldn’t complain at least I’m not miles & miles away from her. Ide come down home, occasionally but not over night.

*Bringing Patrick up in that sort of life is a little concerning but the Kid wouldnt want for anything that’s for sure. And to make the move now wouldn’t affect him at all. Hed grow up to be a Hawkes nest boy instead of a Mayfield boy. He’d have ideal conditions during sumer and well we’de manage. Well better sign off, coincidence the taken over 3 days to write just this (21st Sat 1990) Kathleen

Wohes me – money problems!²⁷

²⁷ Exhibit 2-AZ, Diaries tender bundle [red pagination 6958].

Morris SC

Q. If we go to 23 July 1990, and if you just read the entries for 21, 22 and 23 to yourself, that are on the screen? Let me know when you’re finished reading that.

A. Yes, okay.

Q. If we look at that entry of 23 July, one of the issues you were grappling with at that point was a potential move up to Hawks Nest?

A. Yes.

Q. At about point 5 on the page, one of the concerns you had was that Patrick, who you’re writing about, would end up growing up to be a Hawks Nest boy instead of a Mayfield boy. “He’d have ideal conditions during” - I can’t read that word?

A. “During”--

Q. During?

A. I’m not sure, summer maybe.

Q. Summer, okay, and that was what you were thinking at the time?

A. Yes.²⁸

²⁸ Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T781.5-24 [red pagination 791] (Morris SC).

20 August 1990

long time no write! Bumer of a day except that I have my son, husband & my home there isn't much going for us at the moment. Lifes being a real bitch! Seriously thinking that moving down to Melbourne is the only way that we are going to get ahead. being scared of leaving here isn't a good enough excuse to stay. Opportunities are gone here. We need a fresh start somewhere else. A place where opportunities to have a great life are boundless because of the size & population of the city. I think that pats future would be better if we moved away. Melbourne has top schools & education system. Think about it?²⁹

²⁹ Exhibit 2-AZ, Diaries tender bundle [red pagination 6963].

Morris SC

Q. In that you were looking at making family decisions about where you'd live?

A. Correct.

Q. And that one of the considerations would be the impact on Pat's future if you moved away?

A. Yes.

Q. And that one of the considerations you had at that time, that you were thinking about at that time, was that Melbourne has top schools and an educational system--

A. Mm-hmm.

Q. --down there.

A. Yes.

Q. And that you should think about that?

A. Yes, of course.

Q. The reason that I ask this is that you were asked some questions yesterday about a later diary entry taken some years after the event in which you were lamenting that you were glad that you had made no plans for the future education of your children, and that being the case would you agree that these entries that I've just shown you indicate that at the time you were writing these entries you were actually making plans for - you were taking into account Pat's future, Patrick's future, in making your family decisions and discussing those with Craig.

A. Yes, at the time of writing that, yes.³⁰

³⁰ Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T781.35-T782.11 [red pagination 791-792] (Morris SC).

August 1993 Calendar Sheet

30 August 1993

Sarah left us. 1am.³¹

³¹ Exhibit 2-AZ, Diaries tender bundle [red pagination 6974].

Cunneen SC

Q. And at 1 o'clock that morning she died didn't she?

A. I am not sure on the actual time, no.

Q. I think you put an entry in a diary that it was 1 o'clock that morning that she died.

A. Okay, yep.³²

³² Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T733 [red pagination 742] (Cunneen SC).

1996 – 1997 Diary

4 June 1996

Well, here I am. Dubbo.
Bought this [diary] today. My last one got destroyed. Continue later. Things to do.
Kathy³³

³³ Exhibit 2-AZ, Diaries tender bundle [red pagination 6975].

Cunneen SC

Q. On 4 June 1996, when you commenced a new diary, you said, did you not, “Bought this one today, my last one got destroyed”? Was that about the diaries?
A. Yes.
Q. Do you remember how your last one got destroyed?
A. No. No, I don’t.
Q. Is that truthful?
A. Yes.³⁴

³⁴ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T701.7-13 [red pagination 710] (Cunneen SC).

7 June 1996 - friday

Well, back home now.

Holiday in Dubbo was good. We're now favourites with Dad and Mary again, because we took them with us. Mind you, I think we tired of each others company by the time we were heading home. I am off until Thursday 13th – thank god. I need some time to myself. I don't really get to have any of that. Craig has to be with me all the time.

Well, not pregnant. Period started last night. Took me by surprise. Looking back I don't think I really had any warning at all. Although I know I have them now. Haven't felt period pain in years. Well it means I have a little longer to get rid of this excess weight I'm carrying. Will try for earnest while I'm off. I won't have anyone around that will influence me negatively. Well that's all for now. I know Craig's pood because of my mood. But fairs fair he's never had to suffer one ever with me so PMT away we go.

(HA). Kathy³⁵

12.45pm

Well went out tonight. Was good fun. Craig was at his usual pissed flirting stage. Carolyn seems to be the only one that he is truly attracted too. He asked me does she bother or threaten me. I told him no. Because [he] that if he ever did anything and I found out I leave him. And whoever he was with could have him. Sometimes I fear that he will leave me for another woman. But hopefully that day will never come. If it does I hope there are no children involved. If I was pregnant and found out he had an affair I'd abort. Only because I can't see myself alone rearing a child for starters. Hopefully I'll never have to face that problem. Surely he wouldn't be that stupid?? Going out again on Saturday nite 15th

Might ring Tracey & see if she would like to come up & stay o come out too. Hope Steve's & Mels mother in law is okay and pulled through the operation.

Mel was pissed as a nut when I went over earlier. Poor sod. She has to have the maj. attention or she feels like a failure. But you'd of thought that she would of thought of Steve first in this instance, but it was probably her way of handling a crisis. We're all different that way. Me I become a nasty person. I felt good tonight. Women seemed to envy me, men seemed to be perving on me even with my overweight behind. Haven't done to bad diet wise today. Cereal, coffee, scones and jam and cream, sandwich & 3 slices of pizza. Not best choices but little portions. This week I will loose [well] goal is 1-2kg at least. Walk tomorrow. Might go downtown and back, use my CD and new carrier. It's a plan. Well time to try and sleep now over MR buzzsaw. Tomorrow maybe?

Kathy³⁶

Cunneen SC

Q. So, in some senses you wanted Craig with you all the time, but other times you didn't want Craig with you all the time. Is that fair?

A. Yes.

Q. At the end of that entry, "I know" - you might have to help me - "I know Craig's", I think it says "P-O-O-D", does it?

A. Yes.

Q. "Pood because of my mood", is that right?

A. Yes, that's right.

Q. "But fair is fair, he's never had to suffer one ever with me, so, PMT away we go, ha"?

A. Yes.³⁷

...

Q. We might move on to 8 June 1990 (as said), please. 96, yes, thank you very much. You say there about "handling a crisis", ma'am?

A. Mm-hmm.

Q. "We're all different that way. Me, I become a nasty person"?

A. As in, cranky and not nice to be around. I would deem that as equalling to being nasty.

Q. Speaking of this entry - and this was something that you may not do now if you write things, but - throughout this book and the next, you often write a few lines about what's happening and then you will say, "Me, I do such and such, and so and so"?

A. Mm-hmm.

Q. That's one of the things that you do?

A. Yes.

Q. To show that some people are doing this but, on the other hand, you might do it differently or think differently or whatever?

A. Yes.³⁸

³⁵ Exhibit 2-AZ, Diaries tender bundle [red pagination 6976].

³⁶ Exhibit 2-AZ, Diaries tender bundle [red pagination 6976-6978].

³⁷ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T681.45-T682.8 [red pagination 689-690] (Cunneen SC).

³⁸ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T682.26-45 [red pagination 690] (Cunneen SC).

18 June 1996 – Tues - 10:21am -

Getting ready for shower and work now. decided that my back problem is stress & muscular. Must just relax – more exercise & forget about it. So far that’s helped. Was going for walk this morning. Cleaned and washed instead – either way I was active. Getting lazy again – must get up and walk & be active in the morning. Heard for Lea last night, still pissed off with her. Forgot my birthday as usual. Still not going to ring her She can jump. She’s turned into mum selfish and only worried about herself. Just not as nasty. Baby plans still on the go. Could be preggy now. Won’t find out til next month though. Back could create problem if my bodies [sic] not in peak condition- it may not accept pregnancy. Must have sex more if wanting to get pregnant. I’m ready this time. And I’ll have help & support this time. When I think I’m going to loose [sic] control like last times, I’ll just hand baby over to someone else. Not feel so totally alone Getting back into my exercise after will help my state of mind & sleeping whenever possible as well. I have learnt my lesson this time.

Well. 10.30 Time for shower & coffee with Craig before heading off to work

feeling good – today stay that way

Kathy³⁹

³⁹ Exhibit 2-AZ, Diaries tender bundle [red pagination 6981-6982].

Maxwell KC

Q. You were asked about that entry in your interview at question, and your answer was at question 597 of the ERISP, if that could be brought up. 597, so if you could just read that 597, question and answer to yourself first?

A. Yes okay.

Q. So in that answer you, where you’re asked about what you mean by “lose control”, you start out by referring to the frustration that you felt with Sarah every now and then and the “frustration I feel with Patrick”?

A. Yes.

Q. You say “Never frustrations that was detrimental to the kids in any way but always directed at myself or at Craig”, and you say, “Keeping in control as such, sorry I meant keeping in control as in not keeping in control as such, but sort of keeping control and learning to voice an objection or voice if I’ve got a problem”, see that?

A. Yes.

Q. If you could now go back to the diary again. You’ve said, “When I think I’m going to lose control like last times, I’ll just hand the baby over to someone else”?

A. Yes.

Q. Now, I just want to compare that entry with what you’ve said in your interview. Because what you’ve said in your interview is that “losing control” is kind of equivalent to you “being frustrated” in a way that was directed at yourself or at Craig, and if you felt like that then you “needed to learn to voice an objection”, and by that, I suppose, speaking to someone. Is that right?

A. Yes.

Q. But you see, in your diary entry, you don’t use the word “frustration”, do you accept that?

A. But I have used the word frustration.

Q. Sorry?

A. I did use the word “frustration”.

Q. In your diary?

A. In - no, sorry, in this entry in the diary. No, you’re correct, yes.

Q. You only ever start to use the word “frustration” in your record of interview. That’s correct, isn’t it?

A. If you’re talking about this specific entry then, yeah, no, I haven’t used the word “frustration” in here.

Q. No, instead you use the word “lose control, like last times”. Correct?

A. Yes, and “lose control”, at the - at that time, I had a belief that I had to control absolutely everything, and it wasn’t necessarily just me, it was the relationship, it was my whole life. I felt I’d lost control.

Q. But you see, in your diary, immediately after you refer to “losing control, like last times”, you say, “I’ll just hand the baby over to someone else”?

A. Yes, because, in my view--

Q. And is that--

MORRIS SC: Yes, let her finish.

WITNESS: In my--

MAXWELL KC

Q. Well, I'm just asking whether you accept that answer, that you've said, "I'll just hand the baby over to someone else". Do you accept that that was the entry?

A. At, at the - yes, at the time I thought that would be better, yes.

Q. I suggest that the only meaning that that entry can have is that, at a time that you lost control was a time when the baby was in danger and you had to hand the baby over. What do you say about that?

A. I don't agree with that at all.

Q. That the baby was in danger from your losing control with it. What do you say about that?

A. I don't agree with that.

Q. And that's what you meant--

A. No, that's not what I meant.

Q. --in your diary?

A. That's not what I meant at all.

Q. And that the answer you gave in your interview is an attempt by you to water down the truth. What do you say about that?

A. The same as I said, I'm not going to agree with that at all.

Q. You're not going to agree with it, because to agree with it would admit that you had killed your child. That's correct, isn't it?

...

A. I'm going to say that when I used the words "control" through all - throughout every diary--

Q. "Loss of control"?

A. "Loss of control", for me, I had decided that I had lost control of something. My children had died, I'd lost control of something. It became almost obsessional that I get that control back.

Q. You see--

A. So, when I use the word "control" - sorry, I had a belief that if anything was ever going to happen and I thought I was losing control even slightly, even with anything - the relationship, myself, Craig, anything at all - I had decided that maybe it would be better if I did leave the child with Craig, because Craig had family, Craig had support, Craig had everything that could help him.

Q. You see, there's a contemporaneity in this diary entry between losing control and handing your baby over. That's what I'm putting to you. Do you accept that?

A. Not really, no.

Q. You see, what I’m putting to you is that, you recognise that in the past, in relation to your babies, you have lost control and at that time you need to hand your baby over to someone else. What do you say?

A. No, I--

Q. Is that a correct interpretation of that?

A. No, I - I’m recognising there that my thought was I had to have control of just about the whole universe and if I was losing any and slipping any control whatsoever, then it crossed my mind, as a fleeting thought, “Would it be better if I’d left my child with Craig?”

Q. I put to you that you acknowledge in this entry of 18 June 1996 that, at the times you’ve lost control, your babies were in danger from you?

A. No, I won’t agree with that at all.

Q. You deny that completely?

A. Absolutely.

Q. Would you ever get in a dangerous mood?

A. A dangerous mood to me equals depression, but it does not mean a dangerous - as in, dangerous.

Q. Well, does it mean - could it mean that you’re placing someone in danger--

A. No, that’s not--

Q. --because of your mood?

A. --that’s not how I was thinking of it.⁴⁰

Cunneen SC

Q. Moving ahead to 18 June 1996. Towards the bottom of the left-hand page you say, “I’m ready this time” and from what you’ve said before would you agree that means I’m ready to have a baby this time?

A. Yes.

Q. “And I know I’ll have help and support this time”.

A. I was always thinking I needed it, yes.

Q. In fact you mentioned earlier today that when you were being asked about the prospect of leaving Laura with Craig, if you became stressed--

A. Mm-hmm.

Q. --leaving the two of them, leaving the house, and you said that you would leave the baby with Craig because he had a lot of support and a big family--

A. Yes.

Q. --and so forth.

⁴⁰ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T642.39-T645.30 [red pagination 650-653] (Maxwell KC).

A. That's correct.

Q. That support and that family of Craig's was always available to you too wasn't it?

A. It was, but I always thought that I was alone and felt lonely and all my basic thoughts always went back to that. I always felt like I needed more, more support.

Q. Even though you wouldn't say, would you, that Craig's brothers and sisters and their partners weren't very helpful to you, kind, supportive?

A. They were very, very helpful and kind. I've never said they weren't.

Q. Some of them, like Craig's sister Carol, lived very close?

A. Yes.

Q. John was close and supportive?

A. Absolutely, but that doesn't change the fact that my - in myself always felt that I was alone and had to do everything myself, and I myself was having issues and problems that had nothing to do with whether or not they all loved me and supported me and stuff. I knew they were there, and I knew that I could ask them and I knew that they would help, but that didn't stop the inner turmoil that I was going through on my own.

Q. You knew that they would help because they often did help?

A. Yes.

Q. Isn't that right?

A. That's right.

Q. Craig's family completely enveloped you into their family and loved, accepted you and supported you from the start?

A. Yes, but that's - as I said, that doesn't change the fact that I myself always had this inner thing where I didn't quite fit, there was never enough, things weren't right, and I was always constantly in turmoil myself.

Q. When you said "I'll have help and support this time" was it the case that you no longer had that feeling of being alone?

A. No, I've always had the feeling of being alone. I've always had the feeling of having to do things myself.

Q. Do you today accept that you weren't alone at all and that that was a false feeling of aloneness?

A. Yes, most - yeah, I can agree with that.

Q. Because you had plenty of family help and support close by and ready to assist?

A. Yes I did and it's also another concern and turmoil in me that I didn't verbally reach out and ask a lot for it. I attempted to do everything myself.

Q. But you knew that you could drop the baby over to your sister-in-law and did that often, didn't you?

A. At times, yes.

Q. So you did ask for help?

A. As I said, occasionally, but as I'm saying the - all of that support and all the friends and all of the access that I had didn't change the fact that in myself I felt like I couldn't ask, and in myself I was having turmoil and trouble with that.

Q. Now when we get to June of 1996 you say, "I'm ready this time and I know I'll have the help and support this time"?

A. Yes.

Q. Was it different people or the same people, you just--

A. No, it would have been the same core of people.

Q. You decided that this time you would ask?

A. This time I was deciding that I should try and convince myself that I needed to reach out more and be verbal and attempt to do so more myself.

Q. So when you say there, "When I think I'm going to lose control, like last times, I'll just hand baby over to someone else".

A. And as I said before, control for me was absolutely every, every aspect of my life, ranging from right down to how I looked, my weight, my dietary concerns, right down to whether my relationship with Craig was working. I felt like I had to fix everything. It was total control.

Q. Let's just return to this entry, "When I think I'm going to lose control, like last times, I'll just hand baby over". I want to put to you that you deliberately chose to write "last times" instead of "time" there because you were there referring to the three babies that you had lost.

A. Yes.

Q. You were referring there to having lost control with all of those babies?

A. No, I'm referring to my feeling that I lost control of the whole situation and my whole life, not just a bit of them.

Q. Wouldn't you agree that when you talk about "last times" you're talking about some specific occasions?

A. Yes, I am referring to losing control of the whole situation and my whole life, and the end result of that was the death of my children and I equated that to be the same. I've lost control of something, my children have left me. It was all an ongoing turmoil thing and constant.

Q. This entry is just about losing control in relation to your children I'd suggest to you?

A. Yes, I was the mother, they died, I must have lost control of something, and that's how I viewed and believed it to be.

Q. Well you lost control of yourself when you brought about their deaths.

A. I didn't bring about their deaths, so I didn't lose control in that fashion at all.

Q. You are talking here about losing control, which will be helped by handing the baby over to someone else.

A. I'm talking about if I felt like my world was unravelling and I was contemplating dark and doomy things where it possibly could, I had a permanent view by the time I'd written these diaries, that something bad was always going to happen, because I had nothing but proof

of that my whole life, and as in giving the baby to someone else, yes that was a reference to leaving it with Craig because I knew Craig loved this child, and would look after the child, and his family support and everyone that was there, that also was there for me but I wasn't reaching out to them, would be successful and he would have the child that he wanted and life would continue.

Q. You said you knew Craig loved this child. The child wasn't born yet was she?

A. I never doubted, I never doubted that Craig would love his children.

Q. You were right, weren't you, he always loved them totally and completely?

A. Yes.

Q. And was always there to give you whatever help you asked him for?

A. Yes, and I lament the fact that I didn't ask, yes.

Q. He was always there to give you help that he volunteered without you having to ask?

A. Yes, I'm sure.

Q. Well he was, wasn't he?

A. Yes.

Q. At the end you go on to say, "getting back into my exercise after will help my state of mind and sleeping wherever possible as well", and that means doesn't it that after you have the baby, that you were planning to have Laura as it turned out, that the way you were going to do things differently was to get back into your exercise and sleep as much as you could, is that right?

A. Yes.

Q. That would, you hoped, bring about a happier result this time?

A. Yes. In preparation for Laura I had also become quite obsessed with the thought that I myself whilst pregnant with her had to be the ultimate of health. I was continually - my diaries are full of me lamenting over my weight and diet, and the consequence that that may have on my unborn child. I had to make sure and control even that, that she would be as healthy as possible when born.

Q. Your constant references in your diaries to your weight were not in relation to the effect that it would have on your unborn child in the main, were they?

A. In this one, in these diaries in preparation for Laura, that was one of my main issues with it. There were three probably. One was the health in regards to Laura. The second was an overwhelming concern that I wasn't good enough to keep my marriage and relationship together, connected to how I looked. It was all scooting to the same thing. And the third was probably slight vanity. Any woman likes to go to the gym and try to look their best.

Q. And you wanted to look good at nights out with your friends as you've--

A. Yes.

Q. --you often said.

A. Yes.

Q. So that women would envy you? I think you say that in terms.

A. Yes, yeah.

Q. And that men would look at you?

A. Yes. The reference to men looking at me was my feelings of not quite getting the attention that I thought I should have had from my own husband.

Q. You're not suggesting that he was ever inattentive to you?

A. No, I'm, I'm merely trying to explain how much turmoil my whole mind and - would have been - was at the time. Everything I had to control and that included down to how I was looking and the reason, all different reasons as to why I wished to look that way.

Q. But you've mentioned now turmoil in your mind, and you mentioned earlier before lunch about being depressed on occasions.

A. Yes.

Q. You say in the diaries often, "I'm depressed today. I feel very depressed today."

A. Yes.

Q. Were you suffering from clinical depression?

A. I was never diagnosed with it, I never saw anybody about it.

Q. Was there any reason why you didn't mention it to your doctor?

A. I mentioned it to GPs as such, but didn't go to actual doctors as such in regards to depression. I was put on antidepression medication at one time.

Q. When was that?

A. I don't remember, I can't recall exactly when.

Q. Was it close relative to the births or 5 deaths of any of your children?

A. More than likely, the deaths more likely, yes, with Laura yes.

Q. What you say after your idea about getting back into exercise, sleeping as well as possible, you say back onto the entry of 18 June 1996, "I have learnt my lesson this time."

A. Yes. I was continually feeling like I'd failed. I was continually walking around feeling like I was just a failure as a mother, that everything had to be controlled, routines had to be set, it was all a matter of me trying to keep it all together and I had in my head decided that I had to have learnt lessons from my last three, so therefore Laura would be fine.

Q. Because you were trying to tell yourself that you have learnt your lesson not to be what you were with your previous three children?

A. I have learnt my lesson this time, it's a desperation statement. It's not, it's not because I thought I'd done all these - I believed I'd done a lot of mistakes and errors of judgment, and my inability and I decided I hadn't been a very good mother, and I haven't learnt my lesson this time is simply me telling myself I have to get this right.

Q. You knew you'd been a very good mother in some respects didn't you?

A. (No verbal reply)

Q. Your children were always well dressed and clean?

A. Yes.

Q. Your house was always clean and tidy?

A. Yes.

Q. And painted and decorated?

A. Yes.

Q. Your children were very well fed and nourished?

A. Yes.

Q. The only problem was the terrible things you did when you got stressed out wasn't it?

A. My belief that being stressed out is a terrible thing, yes.

Q. For you it became a terrible thing on five occasions didn't it?

A. No, not in the way that you're inferring it, no.

Q. That was the lesson. You were trying to psych yourself up in preparation for your fourth child, psyche yourself up that you had learnt your lesson at last and you wouldn't lose the next child the way the others had been lost?

A. No. I was merely saying my preparation for Laura was almost extreme in regards to tried to have the best and changing the home and the environment right down to how I was thinking about things. Trying to keep my relationship and my marriage as perfect as I thought it was supposed to be. And, "I have learnt my lesson" is simply me reaching out and going okay, whatever things went wrong in the past, they're not going to go wrong this time and it's all going to work out.⁴¹

⁴¹ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T682.47-T688.6 [red pagination 690-696] (Cunneen SC).

22 June 1996 – Sat

Well, I always start my page with Well, Wonder why?

Not hectic today Craig’s been in a mood all week. He’s stressed out about his earning. Can’t do much about it. Must remember to give him my contribution to the rent. It’s still in my wallet. Must start putting \$50 away in bank each week or when I do stop working I’ll have no money in there at all. I think Craig’s still in a mood even though I got him to talk a little on Thursday nite. He’s too hard on himself. Too much the protector, provider, money earner. He just regards me as a hindrance. There are times I feel that he really wished he wasn’t so tied down. But then he always tells me he wouldn’t have it any other way. I watched a movie today about Shizophrenia [sic], wonder if I have mild curse of that. I change moods really quickly. In my most dangerous mood, I’m not nice to be around & always want to be anywhere, but where I am. As long as it has music & men to show off too. Then there are times I wish to be more of a home body & please my hubby. Am I strange or is this behaviour normal. Guess I’ll never know. Going out to Nicole’s and warren’s today. Hoping it’s another friendship we could make. Although Craig’s ante social mood could fuck everything up as usual. Sometimes he’s hard to live with as I am probably. Most of the time. Will report in later after tonight. Good chance I’m pregnant this month. But again we’ll have to wait to find out. Then stress attacks will be all round, not just Craig.

Kathy.⁴²

⁴² Exhibit 2-AZ, Diaries tender bundle [red pagination 6983-6984].

Maxwell KC

Q. But you used that word in your entry of 22 June 1996, didn’t you, “In my most dangerous mood, I’m not nice to be around”?

A. Yes, as in, I was depressed, a little cranky, don’t come near me.

Q. But doesn’t the word “dangerous” suggest that you might hurt someone or that somebody could suffer? Isn’t that what danger suggests?

A. If you’re referring to someone suffering then, yes, that was me, I was suffering. So, if you want to use the word like that then, yes, I was suffering.

Q. But you’re there - in that entry you say, “In my most dangerous mood, I’m not nice to be around”, so you’re talking there of a danger to someone else, aren’t you?

A. No, I’m talking of being in a very depressive mood and wouldn’t be a very nice person to be around.⁴³

Cunneen SC

Q. Might we go to 22 June 1996, just a few pages on please? In that entry halfway down the page on the right-hand side of the screen you start talking about having watched a movie about schizophrenia wondering if you have a mild case of that?

A. I’m searching for answers there. I’m searching for anything. Sorry.

Q. You said, “I change moods really quickly.”

A. I believed I used to do that, yes.

Q. That means doesn’t it that your anger rises very quickly?

A. I’m talking more how I could get depressed so easily.

Q. But in the next line you say, “In my most dangerous mood I’m not nice to be around and always want to be anywhere but where I am.”

A. As I said, dangerous mood equalled a black depression to me, where I always wanted just to be on my own.

Q. “Dangerous” suggests that it’s a mood that might do someone else some harm doesn’t it or even yourself some harm?

A. Yes. As in myself some harm, yes. It was also a depressive mood that I didn’t wish to inflict on anyone else around me either. It’s why I always wanted to be anywhere than where I was.

Q. When you say, “I’m not nice to be around”, that’s about the effect on other people of your mood isn’t it?

A. Yes. Yes.

Q. Who were you thinking of?

A. Well Craig was my world at the time, so it was only Craig. I didn’t want my mood affecting Craig.⁴⁴

⁴³ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T645.32-34 [red pagination 653] (Maxwell KC).

⁴⁴ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T688.8-37 [red pagination 696] (Cunneen SC).

21 July 1996 – Sunday 10:43pm

Moved furniture and put cot back up today mixed emotions, sadness, nervousness, exciting. Looked at books I’ve got – never opened. I do hope and pray that the next child we have will get to have them read and read them also. Not sure how Craig feels – he didn’t say. Going to paint now that everything’s out of there – well at least I am.

Depressed a little now. Probably because it will be a couple of more months before I’m pregnant. Pretty sure I’m not now, had or having what I think is a period. God I hope so or these tablets will cause brain damage. Probably would be just desserts for me considering. But not fair for Craig at all. I would feel like failure and wouldn’t cope at all. Can’t be dwelling on what ifs. I truly deserve anything life throws at me so my philosophy is whatever happens happens & it’s the way it shall be. I’m going to try my hardest this time. If anything does happen, I’ll just leave & try to let Craig go in peace and start again. No, I wouldn’t. I’m not that brave - Really I depend on people & other people’s help too much.

Kathy⁴⁵

⁴⁵ Exhibit 2-AZ, Diaries tender bundle [red pagination 6994-6995].

Cunneen SC

Q. May we move forward please to 21 July 1996? Yes, thank you I think it’s the second part. On the second page there, there’s a few lines where you indicate that you don’t think you’re pregnant and on the second page, can you see that?

A. Yeah.

Q. “God I hope so, or else--”, you’re not pregnant, “God I hope so--” as in, “I hope I’m not pregnant or else these tablets will cause brain damage.” Did you mean brain damage to your unborn child?

A. Yes, I was concerned about any medications I took for any reason.

Q. Then you say, “Probably would be just desserts for me considering, but not fair for Craig at all.”

A. Yes, I felt like I was a failure as a mother. I’d already lost three. So, I felt like a total failure and thought--

Q. The situation is there that you are concerned that whatever tablets you were taking at the time, you hope you’re not pregnant because if you are the tablets you’re taking may cause brain damage to the baby weren’t you?

A. Yes.

Q. Not yourself?

A. No.

Q. Then you say, “Probably would be just desserts for me considering.”

A. As in not having another baby straight away. I’m talking about delaying as in having a baby there.

Q. No, you’re not. I would suggest to you that you are talking about it would be just desserts to you. You would deserve having a baby with brain damage after what you had already done to your other babies?

A. No, not at all. That’s, that’s two separate thoughts. One is about the medication and the concern I had for brain damage for an unborn child. The second is my criticising myself and saying could it be just desserts and I may not get to have another baby because I didn’t have success in the last three.

Q. You see, you’re not talking about - you’re hoping not to be pregnant this time. But you’re talking about the prospect of brain damage being caused to an unborn child that you might be carrying but hope you’re not, right?

A. Yes.

Q. Then you say, “It’s just desserts for me considering, but not fair for Craig at all.”

A. Yeah, not fair for Craig if I don’t have another child.

Q. Not fair for Craig to have a baby with brain damage, but just desserts for you because of what you had done to your other children isn’t it?

A. No. I've just explained that they're two separate thoughts there. You, every time someone reads these diaries you keep extracting and dumping sentences together. And I'm trying to tell you that they're two separate thoughts. My thoughts are not always fluid when I'm writing these diaries. They're random at times.

Q. There's nothing random about this is there?

A. I wrote it. It's random. I've got two separate thoughts going on there. One is about the effects that it could have on a child and I am thinking to myself if I'm not pregnant that's good because damage could be done to a child if I take this medication. The second is I am being criticising myself, lamenting and saying I've just lost three. Maybe it's just desserts that I don't get to have a fourth one and then, the thought flips to that's not fair on Craig because he deserves to have another child.

Q. Well, you're putting in a lot of extra phrases and clauses that aren't there.

A. No, I'm not. You've asked me to explain what's written and I'm explaining what's written.

Q. I'll ask you again; this passage is about the prospect of a baby being born brain damaged isn't it?

A. Yes.

Q. Straight after the words "brain damage" you say, "Probably would be just desserts for me considering." And I'm going to suggest to you that you were considering there, you were thinking there of what had happened to your child, Patrick?

A. No. I, I, I've, I've just explained that when I was writing in these diaries, I write random and spasmodically and thoughts can switch at any given moment into anything.

Q. You were acknowledging there the fact that you thought it would be just desserts for you to give birth to a baby with brain damage, because you had caused brain damage to your son, Patrick in the close call that he suffered in the early months of his life, months before he died?

A. No. That's incorrect. I'm not going to say anymore on that because I've said it three times exactly what I meant when I wrote that.

Q. It's not a matter for you, it's a matter for his Honour to stop me if--

A. Okay, I understand that but I'm not sure how much more I can explain this to everybody that there are three separate thoughts going on there and they're random.

Q. One final thing; you didn't think it would be fair for Craig to have a brain damaged baby because he hadn't done anything to Patrick or the other children but you deserved it and you knew it?

A. No, the reference to "not fair at all to Craig" is simply that I thought he deserved - he should have had another child. He would have been a good dad and it wouldn't have been fair for him to have not been able to have another child.

Q. That's not true is it?

A. That is true and that's all I'll say.

Q. [Portion of the entry read]...Now, that, in this diary that you wrote for yourself to vent, I'm suggesting to you that you were showing an insight and some kind of remorse for what you had done, that you deserve anything life throws at you after what you'd done with your other children?

A. Incorrect. I felt that I deserved whatever bad things were happening in my life because of how much of a failure and - sorry -

...

Q. Just returning to that last entry from 21 July 1996, “I’m going to try my hardest this time” and then over the page, “If anything does happen, I’ll just leave and try to let Craig go in peace and start again”, what you mean there is this right, is although you’ll try hard, if your next baby dies, you’ll just leave and let Craig go in peace and start again?

A. Yes.

Q. Because it doesn’t look like you’re there talking about leaving Craig with the baby does it, “If anything does happen, I’ll just leave and try to let Craig go in peace and start again”?

A. No, you’re right.

Q. So what you mean by “If anything does happen, you mean the baby dying?

A. Yes, if I was - if anything had happened and we weren’t successful at being parents again then yes I was prepared to leave Craig so that he could.

Q. So “I’m going to try my hardest this time” means that you are going to try hard not to lose control and kill the baby?

A. No, it is, I just had a belief that I had to try my best and succeed, I was determined to succeed.

Q. You knew what you had done before was wrong?

A. I didn’t do anything before, I don’t know why any of my children died, but I didn’t kill them.

Q. You did kill them all, didn’t you?

A. No, no I didn’t.

Q. And your references throughout both of these books, don’t point in any other direction but that you killed them and you knew you had, but you wanted to try again and do better?

A. No I didn’t kill my children and these diaries are a record of just how depressed and how much trouble I was having and all of the issues that go with that.

Q. Well there’s a lot of positive material in these--

A. There’s quite a bit.

Q. --diaries, isn’t there?

A. Yes there is quite a bit.

Q. Many good times and things going very well through these diaries?

A. Yes but--

Q. And certainly you don’t dwell in these diaries about how sad you are that any of your children are no longer with you, do you?

A. I always thought of my children and I’ve always been sad at their passing and will always suffer grief for that, but you’re correct, a lot of it is not mentioned in these diaries, because a lot of the focus on these last few diaries is in the preparation for Laura.⁴⁶

⁴⁶ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T688.39-T692.19 [red pagination 696-700] (Cunneen SC).

26 August 1996 – 9:30am Monday

Been a while. Nothing on baby front. Well I think I might be this month but haven’t had a period this month yet. But maybe it’s not due till 2nd beginning of the month. Did urine test yesterday was negative so have to wait and see. Have decided to do house up. Craig seems spurred on this time after seeing Gail’s place.

Murder nite was good. We were the only ones that got dressed up. But was fun any way. As predicted I ended up being murdered & murderer. Good twist.

Have been spring cleaning lately- cupboard curtains etc. Must be pregnant. Well I hope so. I feel the time would be right now for us.

Sharon rang this morning. Felt like I actually had a friend. Wether she was ringing to catch up or to ____ about making towards a farm they want - no she wouldn’t theyre not that kind. To down to earth. Poor Shane I feel has no say in anything much though. Her kids seem to have slight genetic defects, Peta with her hearing Emma with her sight. But I suppose we all get dealt whatever.

J/C not going too well. I suppose my heart isn’t really in it. Because I want a baby. Yes I actually do want one!! Went to Clairvoant [sic] last week – so did Craig. I always believed there is more going on than just human nature. I seem content now because I now know that even though I’m responsible. It’s alright. She accepts & is happy their [sic]. I’ve always felt her strongly. And now know why. She is [underlined in original] with me. I think my mother is too. Nice to know that Craig’s mum and guardian angel are with him. He seems more relaxed now he knows they are still with him. Well, best clean up again and walk to Craig to pick up car. Back to life!!! ?

Kathy

Monday nite 9.30pm

Didn’t end up going to work today – was deeply depressed and thoughtful. Sorted through Baby gear – surprised how much I had. Except for dresses, shouldn’t be too much that can’t be used again. Will still buy stuff though for sure. Decided except for step classes on Tuesday nites will back off gym – can’t afford it – 6.00 a week and work out at home will be more economical. Just hope I don’t become lazy and not do it. Hopefully Craig will encourage me. He has created a nice home gym room for me. Who needs crowds etc. I’ll get more done with good music and will power. Haven’t eaten too much today. Feel as though I’ve stuck to it pretty good. Will see on Thursday. Well off to sleep. Very tired today ? Kathy⁴⁷

⁴⁷ Exhibit 2-AZ, Diaries tender bundle [red pagination 7004-7006].

Maxwell KC

Q. [Portion of the entry read]...So, who are you referring to there?

A. Sarah, I believe.

Q. So, did you make contact with Sarah at the clairvoyant, did you?

A. I wouldn’t say I made contact, no.

Q. Well, you say that you know she’s happy. How do you know she’s happy?

A. The clairvoyant that I went to was a general one, it was in a mall. I didn’t specifically go to a targeted one. She was capable of reading auras and colours, as such, and had stated that she thought she saw children around me, that they were all happy and, and that everything was okay.

Q. But what you’ve said here is that “She” - being Sarah - “accepts and is happy there”. You see that?

A. Yes.

Q. So, you believed that, did you?

A. At the time, yes. I’ve always believed--

Q. Well, do you now?

A. Well, if you’d let me finish. I’ve always believed that - maybe not necessarily in god, but I’ve always believed that there are other things that go on. I always believed in fate, destiny, karma, all of those styles of belief. When I saw this clairvoyant, I was pleased that she told me that she’d seen children around me. I had concluded that they must have been mine and Sarah, being gone, I used to always - all of them - worry about their spiritual wellbeing, as to whether were content and at peace.

Q. So, as a result of going to the clairvoyant, you came away believing that Sarah was happy, wherever she might be?

A. Yes.

Q. That Sarah, who died at ten and a half months, is happy, wherever she’s gone, that’s what you came away from the clairvoyant thinking, is that right?

A. Yes, because for me there, there would have been no, no worse a thought than your children have passed on and they’re not at peace in some way.

Q. Even though you said you’re responsible?

A. Because I felt responsible, I was their mother.

Q. You say your position is that you were very hard on yourself about the children, isn’t it?

A. Absolutely.

Q. So, you felt responsible for what was actually just a death that you had nothing to do with physically? That’s your position isn’t it?

A. Yes, because I didn’t understand why.

Q. You see, what I suggest to you is that, what you’re saying there is that you’re accepting in your diary you were directly responsible for their death, by smothering them?

A. No.

Q. Or Sarah, in this case?

A. No.

Q. But that it’s okay because Sarah, wherever she is now, is happy, so that kind of made you feel better. What do you say about that?

A. No.

Q. So, if you go to question 610 in the interview. So, you’re there being referred to this diary entry and you’re asked - just read it to yourself, 610 and the answer thereto.

A. Yeah.

Q. And, question, “What do you mean by that, ‘even though I’m responsible’?”. You say, “I was still carrying around the thought that I could have done more or should have done more, so the word ‘responsible’ in there sort of refers to that, my thoughts of, or I didn’t try enough, or didn’t do something, or should have done something”. That’s what responsible meant to you, correct?

A. Yes.

Q. Wouldn’t it have been more accurate to say in your diary “even though I could have done more”?

A. To me it’s the same thought.

Q. “Even though I could have done” more would have expressed far more accurately your position?

A. It may have but it’s still along the same line of thought. I felt responsible because I was their mother and I had failed at being that mother.

Q. I suggest that you didn’t have words something like, “I could have done more” because you have used the word “responsible” to mean that you killed your child. What do you say about that?

A. No, I won’t accept that.

Q. And that acceptance that she’s happy in death is a way of you trying to absolve your guilt? What do you say?

...

WITNESS: My feeling, and I still carry that now is that I do feel responsible, doing more or not doing more, all those questions are all the same thought and along the same lines. I’m not seeing any difference. It makes to me, just because I didn’t use those words again in my diary, the thought pattern is all the same, I’m feeling responsible, I was their mother, and I, I’ve always felt I didn’t do enough. Something went wrong, and I was always searching for why.⁴⁸

Cunneen SC

Q. You express numerous times through this book, the idea that now things would be right because you have become more mature, at one stage you say you’re almost 30 and that now is a better time to have children for you and Craig?

⁴⁸ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T645.47-T648.37 [red pagination 653-656] (Maxwell KC).

A. Yes, it was also that we're in a good, I thought we were in good, trying to keep our relationship and our marriage in a good way, I also thought that we had a lovely home, the environment was right and I also thought that financially we were in a good position.

Q. And you also thought didn't you that you may have matured enough not to lose it, not to snap your cog, not to get angry and do terrible things with your new baby?

A. Yes I agree with that.

Q. You were intent on being different this time?

A. Yes, because I believed that that was what I had to do, that's what was supposed to be--

Q. You knew it was in your control didn't you?

A. Sorry.

Q. You knew it was in your control?

A. I took everything as being in my control yes.

Q. And it was indeed in your control whether your children, health as they were, lived or died wasn't it?

A. No I'm not going to go to say that far, I don't, as I said I don't know why my children died, that's out of my control.

Q. I'm suggesting to you that because you knew it was within your control, that is why you continue to express through this book, that the time is finally here, that you could--

A. I was convincing myself that the time was right and that it should happen and convincing myself that we couldn't get a better time, with the correlation of everything else that was going on, for us to have another child.

Q. You had determined to do better?

A. Yes.

Q. Just briefly, I know you've been through this one, the visit to the clairvoyant, which is I think in the entry for 26 August 1996, on the next page please - I was just going to ask you about this reference to Sarah, accepting, "It's all right she accepts and she's happy there, I've always felt her strongly and now I know why, she is with me", you have underlined the "is"?

A. Yes.

Q. And that's because the clairvoyant reassured you that she could see the children around you?

A. She told me she could see children around me and I assumed that meant mine.

Q. So that's why you thought, Sarah is with me?

A. Yes.

Q. That's why I feel that she's here?

A. Correct, yes.

Q. And you said that "It's all right, she accepts and she's happy there", she has even grown to accept and be happy despite the fact that she knows that her mother took her life?

A. No that's, I'm looking for peace there, if you've lost your child, you want peace, you also want to know that your children are resting in peace, you want them safe, you want them secure in wherever you've you know, interred them and seeing the clairvoyant and her saying that she saw children around me and they seemed happy, I took that as meaning mine and I took that and got peace from that, as in Sarah must be happy and that also helped me refocus my attention then on the child I was about to have.

Q. Because you said, "I seem content now because I now know that even though I'm responsible, it's all right, she accepts and she's happy there"?

A. Because I felt responsible, I was their mother and I failed.

Q. You were responsible because you were her mother who had smothered her to death?

A. No.

Q. But this reassured you that she accepted that and was happy anyway?

A. No, responsible as in I was their mother, I failed and it brought me peace when I spoke to that clairvoyant to know that her spirit was peaceful and that she was happy.

Q. Yes and you felt--

A. It's as simple as that.

Q. --that she'd forgiven you, that's right isn't it?

A. Forgiveness had nothing to do with it.

Q. Well she accepted it?

A. Correct.⁴⁹

⁴⁹ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T693.11-T694.49 [red pagination 701-702] (Cunneen SC).

8 September 1996 - Sunday - avo

Started Painting Room Today. Ceiling & door frames white. Chose colour – iced Apricot. Should look nice. New Curtains Needed. But otherwise should look great.

Ray has called around this avo. good to see him, but always comes when we’re about to settle & watch a video, have to turn it off because he talks too much.

Feeling good and relaxed about myself lately. Feeling pretty controlled. Have accepted that I’m never going to be 55kg again, but I can be my best now. Craig, I know has finally accepted me no matter what I look like. Although I know he prefers it when I look hot, sexy, than anything else. Feel now is a time for us to have another baby. Have finally realised the right time for me. I have Craig and he wants a child. That I can give him. And I have enough friends now not to loose it like before

Kathy⁵⁰

⁵⁰ Exhibit 2-AZ, Diaries tender bundle [red pagination 7009].

Cunneen SC

Q. If we move to 8 September 1996, you say, “Feel now is a time for us to have another baby. Have finally realised the right time for me. I have Craig and he wants a child” - is it, “I have Craig”?

A. “I have Craig”, yes.

Q. “And he wants another child. That, I can give him, and I have enough friends now not to lose it like before.” What you mean there is, that’s one of many, I would suggest to you, times that you psych yourself up for being different with your next child, isn’t it?

A. Convincing myself, yes, that everything will work out, that’s correct.

Q. And even though yesterday you agreed that you did have a lot of family support from Craig’s very large extended family--

A. Yes.

Q. --and, indeed, from Craig himself?

A. At times, yes.

Q. Well, all the time, didn’t you, from Craig?

A. And I also stated yesterday that that doesn’t change the fact that I was having an inner turmoil, inner struggle, and believing that I was dealing with things myself and had to do things myself, and that I was having trouble asking for help.

Q. Craig used to even come home for lunch didn’t he, most of the time?

A. But he did that before we had children, but as far as I’m concerned is irrelevant.

Q. Yes, but it broke up your day and helped you, didn’t it?

A. Yes.

Q. It was only those times when you were alone that you were really worried about things wasn’t it?

A. Yes, as in - as I’ve stated, the fear of tragic things always happening when I was alone, me finding my children is what I’m talking about.

Q. You felt alone because Craig was asleep--

A. Yes.

Q. --some of those times?

A. Yes.

Q. Other times he was at work?

A. Yes.

Q. You said, “And I have enough friends now not to lose it like before”. Did you consider it more important for you to find the people who helped you with the children rather than have those on tap from Craig’s family?

A. Yes, it was a, a way of which I was trying to control the situations as which I was in.

Q. Was it so that you could manipulate those people because they didn't know so much about you?

A. No.

Q. When you said, "I have Craig and he wants a child, that I can give him", what you're saying there is, isn't it, I can give him a child but I can't guarantee that the child will stay alive?

A. No. I - having failed at being the mother that I thought I was supposed to be and providing Craig with the family that I thought we were supposed to have, that sentence is "that I can give him" is, is what I wished to do for him and our family unit.

Q. This failed as a mother that you have repeated through your evidence--

A. Yes.

Q. --you know intellectually that a mother who loses children to natural causes is not a failure as a mother don't you?

A. In my head I may know that.

Q. Yes.

A. In my heart's a different matter. That's - when you lose a child it's the worst thing in the word and--

Q. But I'm just suggesting to you that a mother who has lost a child through an illness or other such things, a natural cause, or even an accident perhaps, has not failed as a mother. You know that don't you?

A. But I wasn't being faced with that. I was being faced with my children have died and I've lost my children and yet I'm not having any exact black and white answer as to how or why.

Q. The children all had two parents naturally, you and Craig.

A. Yes.

Q. You didn't consider that the other parent, the father, was a failure as a father because your children had died, did you?

A. No, because I took the onus of responsibility for it all upon myself.

Q. I suggest that you did that because you knew that it was you and not Craig who was responsible for the deaths of the children.

A. No. I took the responsibility and the onus of the responsibility for the deaths of my children extremely hard, because I had worked so hard in preparation and in my attempt to succeed at being a mother I did deem it as a personal failure that I had lost my children and I was not succeeding where I thought I was supposed to be.

Q. Or to put it another way, you deemed it as a personal failure every time you lost control of your temper and did away with your children in circumstances where you felt alone, even if you were not physically alone.

A. No, I deemed it as a personal failure, yes, if I'd thought I'd lost control, if I'd shown frustration or any negative feelings towards anything, including Craig, children, whichever, I took that onus of responsibility totally on myself and I thought I had to fix everything, and it was my bordering on obsession with doing so that created such an attitude where I just continually felt that I was failing at the plan of life which I thought I was supposed to be undertaking.⁵¹

⁵¹ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T701.18-T703.22 [red pagination 710-712] (Cunneen SC).

11 September 1996 – Tuesday nite 8:30pm

Can’t stand it when Craig talks down to me. Like I’m some sort of inferior being. Feeling inferior doesn’t help. Feeling inadequate because I’m not pregnant yet. Feel as though its [sic] my fault. Think its [sic] deserved, after everything that’s happened. I suppose I deserve to never have kids again. I am just so depressed don’t know what to do. Feel like taking the rest of the week off. But know my pay will be grossly affected if I do.

Kathy⁵²

⁵² Exhibit 2-AZ, Diaries tender bundle [red pagination 7009].

Cunneen SC

Q. [Portion of the entry read]...Once again there you are saying that you don’t deserve to have kids again, you feel that you are not pregnant because you don’t deserve it after what you did to the other three children?

A. No, I’m feeling that I didn’t deserve and was having trouble falling pregnant because I didn’t, I felt at the time I didn’t deserve that chance again because I felt as if it was a major failure that I hadn’t successfully reared the last three.

Q. You were right, weren’t you, you didn’t deserve another chance after what you have done?

A. Who’s to say that?

Q. You said it.

A. Yes, that was my - as I - you know, this is a diary, it’s a private thought, not anymore, but it was a private thought and demonstrates the turmoil with which I was going through, at the time, in my decision to get pregnant and have a fourth go and requesting--

Q. You don’t say “We don’t deserve to have any baby, Craig and me” do you?

A. No.

Q. Because you knew in your mind that what you had done with the others.

A. No, that’s incorrect.

...

Q. You knew that you had asphyxiated your other three children when you lost control of your temper, when they wouldn’t sleep as you wanted them to.

A. No.

Q. Isn’t that right?

A. No, that’s not right.

Q. That’s why you knew that you really didn’t deserve to be given the chance with another child?

A. No, it wasn’t a case of knowing that I don’t deserve. I even use the word “I suppose” there, that that’s not a definite, “I suppose I don’t deserve”.

...

Q. You said “I suppose I deserve to” and you said that qualified your thought. Am I putting that fairly?

A. Yes.

Q. I think you are making the point or endeavouring to make the point that you weren’t definite about feeling that you deserved to never have kids again?

A. Correct, yes.

Q. I’m suggesting that the reason that you allowed yourself that leeway is because you morally, you blamed your father’s actions from many year’s before, your father’s actions in leaving you without a mother and ruining your life?

A. My father rarely ever entered the picture of my world. As far as I was concerned, and I stated in the record of interview, that I regarded my father as a loser and my father never popped up into my life hardly ever, as in thought or in any other way, so I'm a bit confused as to why you're even suggesting that he's got any relevance in these diaries that I'm talking about.⁵³

⁵³ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T703.24-T705.30 [red pagination 712-714] (Cunneen SC).

14 October 1996 – Monday 9:00am

Sitting in bed deciding whether to go back to sleep till whenever. Could save me walking, except I need to. I have gone back up to 67kg I'm sure. Must lose at least 2kg before Sat night. Don't want to look fat. Tim and Megs and Alex came up yesterday. Was good to see them. Yesterday was a great day. Wonder why Craig and I always want to have people come over. I often wonder if Craig also likes to show off our home and hospitality. Children thing still isn't happening. Thinking of forgetting the idea. Nature, fate & the man upstairs have decided I don't get the 4th chance. And rightly so I suppose. I would like to make all my mistakes & terrible thinking be corrected and mean something though. Plus, I'm ready to continue my family time now. Obviously, I'm my father's daughter. But I think losing my temper stage & being frustrated with everything has passed. I now just let things happen & go with the flow. An attitude I should have had with all my children if given the chance. I'll have it with the next one. Painting the house is going along fine. Changing the house giving it our touches and truly making it ours. Well tired now. Might cat nap. If worst comes to worst I drive to work. Catch later. Must make more regular entries. Maybe every second day. Nothing major happens all the time. But still should enter every day huh.

Kathy.⁵⁴

⁵⁴ Exhibit 2-AZ, Diaries tender bundle [red pagination 7014-7015].

Maxwell KC

Q. [Portion of entry read]...You were asked about that in your original interview, about what you meant by, “Obviously, I’m my father’s daughter.” Do you remember that?

A. Yes.

Q. At 644 and 656 you said it meant to you that, “My father is just like a big total loser.” 656, “Thinking I was a loser of some kind, just a passing thought.” Do you accept that they’re the answers that you gave?

A. Yes.

Q. As to what you were referring to when you said obviously you’re your father’s daughter?

A. Yes, I believed and thought at the time that my father’s actions ruined my life and my life never seemed to go right from there. And it was a thought of, along the lines of sins of the father being on the daughter. Was I paying the price?

Q. What was the sin of your father?

A. My father killed my mother.

Q. You thought the sin of the father might come through to the daughter?

A. I believed at the time, yes that the, as I said by the, writing these diaries in preparation for Laura, everything was very dark and every thought was very dark and I blamed my father a lot for most of my life just going wrong.

Q. But you see, what you’re talking about there, there are three concepts there. You’re talking about being ready to continue your family. Then you say, “Obviously, I’m my father’s daughter” and then you say, “But, I think losing my temper stage and being frustrated with everything has passed.” So, you’re saying there aren’t you, that you think you’re ready to have another family because the losing your temper stage and being frustrated has passed. Is that right?

A. No, number one is I thought I might have been ready to have another family. The second thought is about my father and how my life never went right after that. And the temper and frustration bit was me lamenting and desperately trying to seek answers and trying to control and make sure that everything went right and this attempt at having another child went the way it was supposed to.

Q. But you see, your father and you knew this at the time, had killed your mother?

A. Yes.

Q. Your understanding was that he’d killed her as a result of losing his temper?

A. Yes.

Q. What you’re saying there is that you’re ready because you won’t lose your temper anymore like your father lost his temper and killed your mother. That’s what you’re saying aren’t you?

A. No.

Q. You see, I put it to you that this reference to you just meant your father was a loser, doesn’t make any sense at all in the context in which you say that, “Obviously I’m my father’s daughter.” What do you say?

A. That there are two separate thoughts there. I'm ready for my family now and then I've randomly thought because of thinking of family I've randomly thought because of my father, how life has gone all wrong. And then I've jumped back to going back to did the sins of my father visit on me as in me being frustrated in any way whatsoever and then my inability to control absolutely everything in my life at the time. I have to make sure. I was preparing and had to make sure that all went well.

Q. What you're putting in those three sentences is that not that your father is a loser but that he was a killer and he killed when he was angry and that you're concerned about that quality in you. What do you say?

A. No. My, thoughts of my father rarely entered my head. That would have been one of the few times that it ever did. I disregarded him 90% of my life. But here I am preparing after three failures at being a mother, failures at, and me believing that I'd failed and lost control and couldn't handle anything, severely doubting my abilities. Here I am preparing to have another child and my father happened to pop into my head and I reflected on that.

Q. Reflected that you may have inherited the sin of killing when you're angry?

A. I don't believe you can, you can inherent being able to kill people.

Q. What you just said, the sins of your father, you were the one that raised it.

A. As a, as a generalised saying. It's what I believe isn't it.⁵⁵

Cunneen SC

Q. I would like to suggest to you that the first part of that paragraph is you're saying it looks like you're not going to have a fourth chance, "rightly so" because you don't deserve it in effect. What do you say about that?

A. The same as I've been saying all along; that I always felt like I didn't deserve. It was an issue and a struggle that I was having. I believed in nature, fate, karma, destiny at some times, and some points even God. I had belief that if I wasn't going to fall pregnant and it seemed to be a problem in doing so, I had convinced myself that maybe I wasn't deserving of that chance because I had lost three children and had failed in the path and the life of which I was trying to set myself.

Q. The second part of the paragraph you say, "I would like to make all my mistakes and terrible thinking be corrected and mean something though. Plus, I'm ready to continue my family time now." That means that you still hold the hope of having another baby. That's right isn't it?

A. Yes.

Q. And continue your "family time". That is you and your husband and a child, is that right?

A. Yes.

Q. But you think that having another child and succeeding in keeping her or him alive will correct your "mistakes and terrible thinking" of the past?

A. Yes, I'll agree with that. That, that was where my mind was at the time.

Q. And the "terrible thinking" was in relation to the three children who were already deceased was that you would lose it with them and in temper when you felt alone imposing your will on them to go to sleep, you would put them to sleep by suffocating them wouldn't you?

⁵⁵ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T672.21-T674.1 [red pagination 680-682] (Maxwell KC); See also T670 [red pagination 678] (Maxwell KC).

A. No. I explained before what terrible thinking to me means and it's a general term. It's not an action term.

Q. But it must mean something about losing your temper doesn't it?

A. It referred, terrible thinking to me referred to absolutely everything and anything. It wasn't--

Q. Losing your temper was one such thing wasn't it?

A. Getting frustrated and losing my temper yes, I'll agree was one such thing, yes.

Q. Because you go on to say that, "But I think losing my temper stage and being frustrated with everything has passed. I now just let things happen and go with the flow, an attitude I should have had with all my children."

A. Yes. I'm stating there that I was thinking and had a belief that whatever I'd done the last three times must have been wrong. My instilling of routines and doing such things that that must have been wrong. Therefore, I had to fix it and I was attempting to prepare and do everything that I could to make sure that the hope that I had that I could have another child and that Craig and I could have the family that we'd be striving for would succeed.

Q. You see, you don't say there anything about Craig and him being a failure or any such thing do you?

A. These diaries - no, these diaries are about my thoughts and my feelings and my issues and my turmoil and my problems. Craig was mentioned in a few of them if I thought that I was having a problem with him or with our relationship in such a manner, but no it makes no sense to me that I would be popping him in every five seconds on something.

Q. It was your turmoil and this was the only place that you could record it and release it, wasn't it?

A. That's what I felt yes.

Q. And you meant it to be a secret between you and those books?

A. Of course I did, it's a diary.⁵⁶

⁵⁶ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T708.50-T710.48 [red pagination 717-719] (Cunneen SC).

30 October 1996 – Wednesday 5am

So many things troubling me lately. Not sure where to start. Craig and I are fine as in our relationship, becoming pregnant or rather not, in my case is starting to weigh me down. Think I must be suffering a stress reaction. I know as each month goes by depressions are getting worse. Haven't had this month's period yet, but feel I will any day now.

Work is truly depressing me most days. The group at Retravision seem to of lost track as to why I'm there. They don't include me in training nites any more, don't really tell me what's going on around the place. But at the same time I'm just expected to know. July next year I'll of been there 2 years. Another 2 years gone by.

Only things that are making me happy at the moment is my relationship with Craig and even it has its rare moments of feeling possessed and crowded but on the whole it's good and comforting to have. And I love him. And 2ndly my home. I'm proud of it. Like it Craig shows it off. The repainting is going great. Every room we do seems to change to becomes just ours when its finished. The bathroom has turned out the best so far.

I think that the business with my mother is finally wearing me down. I just can't understand a hate so strong.

Saw Russell 2 weeks ago. Said he just wanted to catch up, family tree business. Took all info but I saw that I wasn't on it. And never will be while she's allowed to dominate.

Heard from an aunty in Queensland I'm supposed to have. Rudie and Bill sound nice. She seemed disappointed in how mum is behaving.

Nice to think that Russ and Lea acknowledge me, but they only do for each their own reason. Lea because she considers me strong and a comrade in arms over mum – pity she doesn't realise that I now pity the woman and feel sad that she thinks I'm responsible for all her faults and demons and trouble in her life.

Russ – well problem is I don't know where he's coming from. Worries me. A lot. He's not spoke or had anything to do with me for years and now under the guise of the family tree etc he's contacted me more in 2 weeks than he has my whole life – why? Lea says he never crawls or be nice unless there's something in it for him? Could be financial, my dad left me something in his will. Probably not, mums been changing them for years. Maybe he's got conscious about all that he ½ found out that was going on and had to clear his own mind. Maybe he just wants to know his younger sister. Guess I'll never know will I, because I don't know or trust him enough to ask him and I wouldn't expect the truth. I know mum and dad are a influence. He gave me dad's phone number but I never rang. Probably should of. But, I know he knows what's going on. Lea has told him. So why do I have to move first. Besides I'm sure he thinks talking to me wouldn't be worth the wrath from mum he'd receive when she found out. Little disappointed that he hasn't defended me in any way. But why should he. He's such a quiet man. Yet I'll always fear and love him. Things I remember are not good about my upbringing but one fact remains I had a safe home, food, clothing. I a person who had a choice of that or state orphanages all her life can't expect much more.

I worry that my next child will suffer my physicological [sic] mood swings like the others did. I pray I'm prepared & ready mind wise for this next one.

Maybe nature has decided I will never be & it will never happen.

Dawn birds waking up chirping everywhere. For them life is day by day. Maybe I should follow their advice and take my life that same way.

Kathy.⁵⁷

⁵⁷ Exhibit 2-AZ, Diaries tender bundle [red pagination 7016-7019].

Cunneen SC

Q. [Portion of the entry read]...It's very clear there isn't it that you express regret for your mood swings and the effect that they had on your three deceased children?

A. Yes, the psychological mood swings is referring to how I would get depressed, yes, and I was always worrying because it was a belief and a view I had that any negative moods from me would impact the people around me and that included my children.

Q. Well Caleb was only 19 days old wasn't he when he died?

A. Yes.

Q. And the psychological mood swing that affected him the most was the one that you had between 2 and 3 o'clock on the morning that he died wasn't it?

A. No, when I had Caleb there was, my thoughts weren't as dark as what they are here, you're talking, there's nearly a ten year gap.

Q. Well you don't say there that "I worry that my next child will suffer my psychological mood swings like Patrick and Sarah did", you say "like the others did"?

A. And I always referred to previous children, all three, as the others or the three of them, so I'm not quite sure what you're trying to get at.

Q. Well in that passage you are admitting that your children suffered from your psychological mood swings, all of them?

A. And as I said I had a belief that if I had negative moods at all that it was affecting the people around me and that included my children, I always worried and stressed about that because I linked it in a rather warped fashion to my whole belief that I wasn't succeeding or very successful at doing this and blaming myself for that.

Q. And it was these violent swings of mood and that's my word, but I'd suggest to you that that's what happened to you, a dramatic complete turn in your mood, that brought about something that shocked even you, your actions in smothering each of your children?

A. No, you're saying, dramatic, as in a sudden change or spontaneous change of mood and my diaries, as far as I'm concerned are evidence that that's not what happened, my depressions were, when they hit they were quite deep, that I was fermenting and constantly worrying about that as well and then attempting to try to fix that which meant I was trying to fix me, which turned into the whole me being in turmoil, so--

Q. You do use the word depression quite often during these journals, that is true isn't it?

A. Yes.

Q. But you don't use depression in this paragraph, you say "I worry that my next child will suffer my psychological mood swings, like others did"?

A. Psychological is just a fancy word for saying you're having a personality or a depression of some sort, that's how I'm taking it.

Q. What about the word "swing, mood swings", there might be depression on one end of the swing, one end of the spectrum, but what about the other end?

A. My diaries are evidence that I would have those swings, my diaries are evidence that at times I was happy and incredibly euphoric about what my hopes and dreams for life are and then at the same time my diaries were also a representation of the dark moods and the swings and the depression that I would be in.

Q. At one end of your mood swings, I would suggest to you, was such anger with your children not doing as you wanted, usually sleeping I'd suggest to you, that you took it into your own hands and smothered them?

A. No.⁵⁸

⁵⁸ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T710.50-T712.24 [red pagination 719-721] (Cunneen SC).

4 December 1996 – Thurs 4:30am

Restless, Craig making too much noise as well. Don’t blame him. Dropped a clanger on him yesterday. We did it. We’re pregnant. Did 2 tests yesterday and they both said positives. Be about 4-5 weeks. Should of realised but didn’t have all the signs last couple of weeks. Been lethargic and exhausted, boobs achey and heavier than usual. No morning sickness as such. But early days. Although never suffered it with the others. Was excited and scared at the same time. Happy though. Means I can finally give Craig what he wants – a child heir apparent. I know he’s going to have to get used to the idea as I am. Even though we’ve been planning that didn’t save the shock after it taking so long this time. Once I’d decided to have Sarah it only took a couple of months or even only 1. But this one took from May – 5 months. Although this time my body is different. Healthier I think. Plus the pill I was on was quite strong. Have decided that I will continue aerobics but cut out weight training and will cut back to low impact all the time. Did ½ hr step class last night. Never really picked it up but definitely got a workout alright. Figure being pregnant was why I had become so ill last week, plus I decided to take rest of week off from the gym. Exhaustion must be avoided as well. Now will be a delicate time I must relax, take things easy and not strain myself. I remember I nearly had a miscarriage at this time with Sarah so care is needed. Hopefully having to survive through all my aerobics etc lately, obviously this one is a strong one. I’m ready this time. But have already decided if I get any feelings of jealousy or anger to [sic] much I will leave Craig & baby, rather than answer being as before. Silly but will be the only way I will cope. I think support & not being afraid to ask for it will be a major plus. Also - I have & will change my attitude & try earnestly not to let anything stress me to the max. I will do things to pamper myself regularly & just deal with things. If I have a clingy baby, then so be it. A cat napper so be it. That will be when I will ask help & sleep whenever I can. To keep myself in a decent mood. I know now that battling wills & sleep depravaision [sic] were the causes last time. Fish I’ve got help they are relaxing to watch its quite funny.

Well enough now. Best get some sleep. Kathy.⁵⁹

⁵⁹ Exhibit 2-AZ, Diaries tender bundle [red pagination 7022-7024].

Maxwell KC

Q. At this stage, three of your babies had died, Caleb, Patrick and Sarah, correct?

A. Yes.

Q. Were any of them bad sleepers?

A. Sarah was, yes.

Q. What about Caleb and Patrick?

A. Patrick no. Caleb, I didn’t have him long enough to even find out.

Q. You’ve used the word “catnapper”. By that did you mean that at least Sarah woke up a lot?

A. Yes, I used to joke and refer to Sarah as a catnapper.

Q. So just when you’d finally - did you ever experience this with Sarah during her life, that just when you’d finally got off to sleep she’d wake up again?

A. Yes, quite often.

Q. It put you under enormous pressure?

A. Yes, I would say so.

Q. Enormous stress?

A. Yes.

Q. Such that you snapped?

A. No.

Q. Such that you snapped your cog?

A. No.

Q. This “snap the cog” you say has got nothing to do with losing control and doing something, is that right?

A. Not to my child, no.

Q. Not to your child?

A. Snap--

Q. Did you lose control and do anything physically to yourself at the time you snapped a cog?

A. No.

Q. You’ve referred to a clingy baby. Was either Patrick, Caleb or Sarah a clingy baby?

A. Not as such, no.

Q. When you say, “If I have a clingy baby” were you not really referring to any babies that you’d had?

A. No. I may have been thinking to myself whether my next one might be clingy.

Q. Was the thought of having a clingy baby not appealing to you?

A. I'm not saying that there. I'm saying that any style would be fine and I would deal with it.

Q. Even if it was a clingy baby?

A. Yes.

Q. But to the extent that the baby might be clingy, might that be something that you would find difficult?

A. I can't answer that because I never had a clingy baby.

Q. You've referred to "battling wills and sleep deprivation" that were the causes last time. Is that right? Is that what you said in your diary entry, "battling wills and sleep deprivation were the causes last time"?

A. Because I--

...

Q. So causes of what?

A. Causes of the deaths. I'm, I'm reaching and searching for any reason or cause of death.

Q. Sleep deprivation, that's something that you suffered from, particularly with Sarah, correct?

A. Yes.

Q. It can put or would put or did put you under enormous pressure?

A. At times, yes.

Q. Such that you could snap your cog?

A. Not at Sarah.

Q. Not at Sarah?

A. Not at Sarah, no.

Q. Even though you were battling wills with Sarah, is that right?

A. My frustration levels and snapping cogs is the word you like to keep using, was more directed at my feelings of not having enough support at the time, that I felt like I was doing everything myself and deprivation, my sleep deprivation wasn't helping that situation. It was exasperating it.

Q. But you accept that sleep deprivation for an extended period with a child who you've said that you battled wills with at times, correct?

A. Yes.

Q. Could put you under enormous pressure and did, is that right?

A. Yes, I've never denied that.

Q. Such that you might lose control of your actions and hurt the child?

A. No.

Q. Did you ever have any feelings like that, even close to that?

A. No, no, not at all.

Q. I suggest that what the concept or idea that you are describing in that entry is being placed under such stress that you snapped and were a danger to your children. What do you say?

A. I say no to that.

...

JUDICIAL OFFICER: Before you leave it, Mr Maxwell, earlier on in that passage there's a sentence that "I've already decided if I get any feelings of jealousy or anger too much I will leave Craig and baby rather than answer being as before."

MAXWELL KC

Q. Do you see that, Ms Folbigg, the previous page?

A. Yes.

Q. You've said now if you feel jealousy or anger you'd just leave Craig and the baby, right?

A. Jealousy is referring to - they're two separate thoughts there. They're broken up by the word "or", okay. Jealousy is referring to, it was a recollection of how Patrick was, even though I cared for him all the time, he was more Craig's boy, Sarah was my girl, and Laura ended up being my girl. The jealousy refers to that. It's not a jealousy as in me being jealous of my children. I was never ever jealous as such of my children.

Q. Is the word "jealousy" in relation to you, feeling jealous?

A. No, the word "jealousy" is a, is a reflection as the difference in, between the children, and how, you know, you can have a daddy's girl, you can have a mummy's girl. It's a, it's a different reference. Then it's broken by the word "or" and "anger too much", well as I said I didn't back then differentiate between frustration, anger, annoyance. It was all the same to me.

Q. But where does jealousy come into that explanation? I just don't understand that.

A. As I say, if I had any feelings of the jealousy as in just with, you know, was this child going to be more Craig's or more mine, you know, and to - if it fell into any sort of frustration or an anger situation, then yes, I felt that I would leave Craig and leave the baby with Craig. Again it's another fleeting thought. These are not set in stone. They were never set in stone. All my thoughts were just random thoughts.

Q. But do you accept that it was a feeling of jealousy that you had?

A. Not jealousy as in a jealousy that I would do anything about. It's a fleeting, it's a fleeting thought.

Q. You would do something about it. You'd leave Craig and the baby.

A. But I never did.

Q. I beg your pardon?

A. But I never did.

Q. You see, I want to get - to try to understand what you've said in your diary. You say that if you had any feelings of jealousy, too much that you'd leave Craig and the baby.

A. Jealousy is also--

Q. Is that right?

A. Jealousy is also as I said, it's, it's, it was a reflective thought. It, it, it wasn't connected to the next phrase.

Q. Whether it's reflective or not, it's a thought that you had and it's something that you acknowledged in your diary that you felt jealousy, correct?

A. But as far as I was concerned, I also believed Craig felt the same thing in reverse.

Q. Let's forget about Craig at the moment if you wouldn't mind.

A. Yep, no that's okay.

Q. Is this a statement in your diary that you felt some jealousy?

A. Okay, I will concede yes.

Q. Who did you feel, in relation to what did you feel jealousy?

A. In relation to maybe a little jealous of Craig. Not jealous of my child.

Q. Maybe what?

A. Maybe jealous of Craig, not, not my child.

Q. Jealous, what that Craig had the affections of a child, the child liked him more than he liked you. Is that right?

A. Along those lines, yes.

Q. Is that the basis for it?

A. Basically, yes.

Q. Is the answer yes?

A. Yes.

Q. You are saying here that if you felt jealousy either jealousy like that or anger, too much that you would leave Craig and the baby?

A. Because at the time I had a belief and constant doubt as to my own mothering skills and I was reaching and desperate and searching for whatever answers I could find. And part of that whole thing was if I didn't believe in myself that I was going to be very good at this, then yes, I would have left the child with Craig.

Q. Which child?

A. Any. The, the diaries refer to me, doing, saying similar thoughts with all of them.

Q. By that time three of your babies had died?

A. Yes.

Q. The thing that you were telling yourself here in December 96, that if you felt jealousy or anger too much this time then you would leave Craig and the baby?

A. Yes.

Q. You'd be prepared to leave your baby?

A. I'm not agreeing that I would have been prepared to do it because I never did.

Q. Well, that’s what you’ve said isn’t it?

A. Yes, but the bottom line of this is, these are diaries and these are thoughts. They’re not actions.

Q. This was your vehicle to vent, to speak about things that concerned you, correct?

A. Yes.

Q. In that entry you say and I’ll read it again, “If I get any feelings of jealousy or anger too much, I will leave Craig and the baby, rather than answer being as before.” See that?

A. Yes.

Q. I’ll ask you something about that; what happened before is that when you’d felt anger and perhaps jealousy, you didn’t leave Craig and the baby did you?

A. No.

Q. Rather, the babies died, correct?

A. Yes.

Q. Rather than, “answer being as before”, you’re referring to you having killed the babies. That’s correct isn’t it?

A. No, it’s not. The words as to, “answer as before” is I never wanted to be put in the position where I, where I walked in and found one.⁶⁰

Cunneen SC

Q. May we turn to 4 December 1996. By the way ma’am, so many of these entries are written in the early hours of the morning and at hours when perhaps most people sleep, is that right?

A. Yes.

Q. Did you suffer from insomnia in this decade of your life?

A. I question as to whether I might have been suffering it from, yes.

Q. So even at this stage when you didn’t have any baby to keep you awake, you were still in the habit of writing very frequently in the journals in the early hours of the morning?

A. Yes.

Q. In the entry for 4 December 1996 you say, you record that you have had a positive pregnancy test and - may we go to the next page please, on the page on the right of your screen madam, you say “I’m ready this time, but have already decided if I get any feelings of jealousy or anger too much I will leave Craig and baby rather than answer being as before, silly but will be the only way I will cope”, what you mean there, is rather than the answer being as before, is that fair, if you were writing all the words out?

A. No I’ve written “rather than answer.”

Q. The answer before rather than leaving Craig and the baby, was for you to take the life of the baby in your fit of temper, wasn’t it?

A. No.

⁶⁰ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T648.39-T651.23, T651.25-T654.5 [red pagination 656-659] (Maxwell KC).

Q. In your fit of jealousy and/or anger?

A. No, as was covered this before, the jealousy section was talking about the difference in how each parent can be connected with their child, the anger was in reference to frustration or depression or any of those sorts of emotions, I did also last time admit that yeah I might have had a little bit of jealousy but you know, Patrick was Craig's boy, is that unusual, I don't find that unusual because you always have a mummy's boy or a daddy's girl and such matters, and I was merely reflecting and discussing that.

Q. Even with Sarah there was jealousy about when Craig would be staying awake with her instead of Sarah going to sleep, you were a bit jealous of that weren't you?

A. A little bit jealous of the connection they had yes I'm not going to deny that.

Q. And with Laura the same?

A. No Laura, Laura as far as we were concerned, Laura was mine, I had more of a connection with Laura than probably Craig did.

Q. She was very attached to him on the last day of her life wasn't she, when you went to visit him at work?

A. I'm not understanding what you're getting at.

Q. She didn't want to leave him did she?

A. If she didn't want to leave him she wouldn't have got in the car, I'm not sure what you're trying to--

Q. So you had some jealous feelings about the boys and Sarah bonding with their father?

A. Yes.

Q. And so that caused you to be angry did it?

A. No, as I said these diaries entries are just fleeting thoughts, everyone keeps trying to state that they're an action of some sort, they're not, they're thoughts and a lot of these thoughts are reflective in nature.

Q. But madam, these record your reflections on what has happened, these particular ones and your intentions for the future, to make things different don't they?

A. My attempt to yes.

Q. Your attempt to, precisely?

A. My attempt to make things better for the future yes.

Q. So they are a snapshot into your mind at the time that you wrote them, of course, aren't they?

A. All right I'll concede, yes.

JUDICIAL OFFICER

Q. Just while we're dealing with that particular passage, in the diary entry of 4 December 1996, you've written, "rather than answer being as before", could you explain to me what was the answer before that you're referring to?

A. "Rather than answer to before", is a separate thought again and it is a very dark thought and it's I didn't want to answer as in being the one to discover my children, I didn't want to do that again your Honour.

CUNNEEN SC

Q. That wasn't the answer, that wasn't an answer because when you're saying "Rather than answer being as before", you're talking about how you answered your feelings of jealousy and anger before aren't you?

A. No, my diaries are quite - as I've said before, they can be random and I can turn from one thought to another in a split second. I can be discussing how well - I'm having coffee and a relationship with Craig in one sentence and, within a full stop, I can be going into something that's quite deep and dark, so--

Q. Just like your psychological mood swings that caused danger to your children?

A. It didn't cause danger to my children.

Q. They all died as a result of them, didn't they?

A. No, they did not.

Q. You say, after that, "I think support and not being afraid to ask for it, will be a major plus". So, even though you've conceded you had a lot of support before, you considered that you had more support by the time you were expecting Laura, and where was that support coming from? Or, is that right and where was it coming from?

A. I would agree that there was more support in preparation for Laura. We also had a whole team of medical support as well by the time we were preparing for Laura, as in, doctors knowing that we were preparing to try to have another child, the counselling, anything that was involved with doing that.

Q. The monitors to the hospital?

A. The monitors, as such, yes. So, there was an awful lot of support in regards to Laura, but that didn't stop me from always thinking that I had to try to do everything myself and I had a bad problem with actually asking people to help.

Q. ...Then you say - the first few words are on the previous page - "Also, I have and will change my attitude and try earnestly not to let anything stress me to the max"?

A. Yes.

Q. You know, you're telling yourself - you've just found out you're expecting another baby, haven't you?

A. Yes.

Q. And you're telling yourself that the main thing you've got to remember is to change your attitude and "try earnestly" not to let anything stress you "to the max"?

A. Yes, and the focus on that - in that extract, as far as I'm concerned, is to change my attitude. I - as I said - constantly keep saying, I took the onerous responsibility on my own shoulders for failing to be the parent I was supposed to be and the plan that I thought my life was supposed to take, and I was constantly trying to fix everything myself. So, as far as I'm concerned, that extract demonstrates that.

Q. Well, ma'am, may I suggest to you, you weren't trying to fix everything in your life, you were just trying to fix your attitude in relation to your baby, weren't you?

A. Anything. I've written the words, "not to let anything stress me out". That's a - generalising, that's not specific to the children.

Q. Well, it's not stress you "out", is it, it's "stress me to the max"?

A. Yes.

Q. May I suggest to you that what you meant there was, when you are stressed to the max, something dreadful happened to your babies in the past?

A. I believed, as I said before, that all negative emotions - stress, frustration or anything else - impacted on the people around me, including my children, and I had almost convinced myself that my children, in a very warped way, had decided to not stay with me and I blamed myself for that.

Q. Well, that was one of the ways, I'd suggest to you, that you absolved blame from yourself, knowing that physically you had taken all their lives?

A. No.

Q. That was one of the ways. The other way was to blame everyone else in your life, starting with your father?

A. No, my diaries are pretty much evident and obvious that I'm constantly blaming myself. I'm not blaming anybody else, I'm always blaming myself.

Q. Because you knew that it was you and no-one else who had brought about the death of your children?

A. No.

Q. Then you say, "If I have a clingy baby, then, so be it", and I'm going to suggest to you that that's a direct reference to your son Patrick?

A. No.

Q. Who, I suggest to you, Patrick certainly became a clingy baby after he suffered his near fatal episode and became an epileptic and blind?

A. I don't think Patrick was a clingy baby.

Q. I'd suggest to you that he was and that you said so, at the time?

A. No. The, the reference "If I have a clingy baby, then, so be it", is a generalising statement. It's, it's not directed at Patrick. It's certainly not directed at, really, anything. I'm talking in general terms.

Q. And yet, in the next sentence, you're being specific about one of your babies, aren't you?

A. "Catnapper", yes.

Q. Yes?

A. And, as I said - I just said, my thoughts could flick in the matter of a second and I can then be writing about something else.

Q. Well, you're not writing about something different, you're just going on to your next child then, a "catnapper", being Sarah, and being the name you used to have for her?

A. Yes.

Q. “If I have a clingy baby, then, so be it. A catnapper, so be it. That will be when I will ask help and sleep whenever I can, to keep myself in a decent mood”?

A. Yes, and that goes back to my belief at the time that all of my emotions and moods, or anything at all, were affecting the people around me and my children.

Q. You are saying there that you know that those moods affected your children to such a degree that you no longer had them?

A. It was a belief I had, yes.

Q. Well, you knew it, didn’t you? You knew it was your dreadful moods, rather than keeping in a decent mood, that caused the deaths?

A. No, the - these diaries are me continually searching and asking and questioning. Statements such as those in them are me grasping and grappling with answers that I’m - that I’m trying to get. And when you take it from the point of view that I’m constantly blaming myself, yes, I had in my head a belief that my moods affected everything, they affected my children, my children then died and decided they didn’t wish to be with me anymore. It was quite a warped view as to how I was thinking and is evident in the diaries and to how I’m writing them.

Q. Because you know, don’t you, that children, babies, don’t decide whether or not to live?

A. At that stage in my life, I did not know that. At that stage in my life, I was doubting everything and highly stressed, and worried that here I am about to - you know, I’m going off on another tangent and I’m having another child, and my concerns were always - almost paranoia in the point, that I’m, I’m trying to make sure that Laura survives, Laura is successful, we’re a family unit and my life goes the way I wish it to go.

Q. Yes, you were trying to change to ensure that that would happen, weren’t you?

A. Yes.

Q. Because, as you say there, “I know now that battling wills and sleep deprivation were the causes last time”. Now, I’m going to suggest to you that it’s patently clear, isn’t it, that you meant the causes of the deaths of the other children?

A. What’s clear there to me is, again, I’m blaming myself for everything.

Q. “Battling wills” was a phrase that arose in the context of Sarah?

A. Yes.

Q. You battled wills with her about sleeping, didn’t you?

A. Yes, because she was a catnapper and sleep was a problem.

Q. And sleep deprivation was also a cause. That’s your sleep deprivation, isn’t it?

A. Yes.

Q. You don’t mean the baby’s sleep deprivation?

A. Well, I was always concerned that Sarah wasn’t getting enough sleep. If you’ve got a child that would only sleep for 15, 20 minutes in a row or, if you’re lucky, an hour or two, as a mother you’re then concerned that they’re not getting enough sleep--

Q. You’re not seriously suggesting that, where you say “sleep deprivation” there, you weren’t talking about your own deprivation of sleep?

A. No, there I am talking about myself, yes.

Q. And you're saying there that battling wills, in the case of Sarah, and sleep deprivation and the anger that caused you were the causes of the other children's deaths because you killed them, being sleep deprived and/or being in a battle of wills?

A. No.

Q. Did you think it was unusual to have a battle of wills with a baby who was under nine months old?

A. Yes.

Q. Because "battle of wills" is something that you mention a few times in your diaries, isn't it?

A. Yes.

Q. "Battling wills"?

A. Yes.

Q. And it's always in the context of Sarah?

A. Yes.

Q. Would you say when that battle of wills commenced?

A. No, I can't answer that.

Q. You can't say when Sarah--

A. No.

Q. --what Sarah's age was when that started?

A. No.

Q. How did the battle of wills play out?

A. In the - in the point - in the fact of just the frustration level and my lack of sleep, concern of her lack of sleep, it created a frustration situation, and I didn't know how to handle that. It must be remembered that Sarah was also - even though she was my third child, she was also, in retrospect, my first child of being able to have such experiences with. Patrick did not have a sleeping problem, due to his epilepsy and medication that he was on, and Caleb had not developed a sleeping issue, and I had no sleeping issue back then either. This was new ground and new territory and, basically, I'm a new mother trying to deal with a child that didn't wish to go to sleep very often.

Q. Well, Caleb and Patrick both, as babies do, required feeding during the night, didn't they?

A. Yes.

Q. At times when Craig was fast asleep?

A. Yes.

Q. And that caused, not just for you but I suppose for any parent dealing with it, sleep deprivation?

A. Yes, as any parent, yes.

Q. As to battling of the wills, what was it about Sarah that you perceived was her battling against your will? It was you against her, was it, that's the "battle of the wills"?

A. It, it was a battling of wills as - not necessarily me against her, it was I believed I was supposed to have a routine in place for her that was supposed to make both our lives, and our family unit, easier. In not going with that routine and her difficulty in being able to stay asleep, yes, it didn't fit the routine of which I was trying to do, and my lack of sleep and her lack of sleep, and the whole frustration of the whole situation, at times, it could become quite exasperating as to how to solve that issue and how to fix that problem. And, again, I took that on myself as to, how do I fix this? As a mother, you want - I did, always wanted to try to meet the needs of my child in some fashion.

Q. And yet, you felt you were in a battle of the wills with her because, as you just said, her not being able to stay asleep?

A. Yes. I have never denied that. I'm not denying any of that.

Q. When you wanted her to be asleep?

A. When it was time or I thought that in - by my routine I was trying to do, that she should have been asleep, then, yes.

Q. And if she wasn't, she was battling against your will?

A. Okay, yes.

Q. If we go to--

JUDICIAL OFFICER: Just before you do that.

Q. In that particular line, "I know that battling wills and sleep deprivation were the causes last time", when you used the word "the causes" what did you mean, the causes of what?

A. My belief at the time, your Honour, was it was all linked and related, my frustration and my inability to be a successful parent, I had belief that, you know, it was a wrong belief and a warped belief, but I had a belief that my children had decided they weren't staying with me anymore, and I did not understand why.

Q. So when you say "were the causes last time", the causes of?

A. The causes of their - yeah, the causes of them dying. They woke up and decided to never wake up again.

Q. So--

A. Like they'd sleep and decided never to wake up again.

Q. --it would read then on that basis, "I know now that battling wills and sleep deprivation were the causes of their deaths"?

A. In some respect to me, yes that's what I believed at the time.⁶¹

⁶¹ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T712.26-719.25 [red pagination 721-728] (Cunneen SC).

1 January 1997 – 9:30pm Wednesday

Another year gone & what a year to come. I have a baby on the way, which means major personal sacrifice for both of us. But I feel confident about it all going well this time. I am going to call for help this time & not attempt to do everything myself anymore. I know that that was the main reason for all my stress before & stress made me do terrible things. Had a talk to Craig while in the bath tonight. Our favourite talking spot. Haven't really cleared anything, just told him how I feel and what vibes I'm receiving from him. I get the distinct impression that he isn't happy and is going to leave me to handle everything, offering me no emotional support if he feels it will drain him. Just wish I knew so that I can prepare myself for the 1st year of this baby's life. Once that 1st birthday comes I feel he will relax as will I and become a father of great magnitude. Had lunch with Tim and Megs and David Jones, was good. They will never change their lifestyle. isn't for us, they are a little messy around the house but it's not our problem they are great friends. This baby will weed out who are true friends and who are not. In the end I'll know who to thank and who to tell off and never speak to again. Well tired now. Sleep time.

Happy new year. Kathy⁶²

⁶² Exhibit 2-AZ, Diaries tender bundle [red pagination 7026-7027].

Maxwell KC

Q. [Portion of the entry read]...You were asked about that in the interview at 706? We're really starting at 705 and I'll just read it. At 705, it's a very strong expression isn't it, "terrible things"? Your answer:

"Yeah, yeah it is but you know I used to sort of think that the odd angry thought or the odd stress or the odd frustration didn't help the situation. It's not that that particular angry thought or the frustration or stress in general, it was actually what caused their death. But I didn't help the situation any was what I was probably trying to get at, so stress made me do terrible things. Would probably mean I didn't want to get to the stress level where I would have an angry thought and therefore"--

--the word, it says "exasperated", it might be exaggerated. You probably don't remember but anyway - "therefore" - either, exasperated or exaggerated - "the situation and make it worse sort of thing is what I probably meant." Is that something like the answer in explanation that you would give today?

A. Yes. And as I said, that goes back to me not differentiating between a slight frustration, an angry thought, anything along those lines. The doing terrible things part is I had such a, a belief that I'd got it all so wrong that it, it didn't really matter if I was going to have a frustrative (as said) thought, that was a terrible thing. If, if I left my child to cry for a second it was a terrible thing. If I hadn't met my child's needs in some way, that was a terrible thing. It all meant exactly the same to me.

Q. The concept, "doing terrible things" you have explained as what, having a bad thought or something like that?

A. Yes.

Q. Is that right?

A. (No verbal reply)

Q. Would it not have been more appropriate for you to say, well stress made me feel anger towards the child?

...

Q. What I'm suggesting to you is the word "terrible things" is far more consistent with killing your children than it is with having some kind of angry thought. What's your answer to that?

A. As I stated before, no.⁶³

Cunneen SC

Q. [Portion of the entry read]...You are in a New Year's resolution mood there aren't you?

A. Yes.

Q. You're going to do it differently this time?

A. Yes.

Q. You're going to call for help this time?

A. Yes.

⁶³ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T654.7-T655.16 [red pagination 662-663] (Maxwell KC).

Q. Call out to Craig perhaps?

A. I'm referring to asking for help from anywhere.

Q. Yes, but this time it's "call for help". I'd suggest to you it's like a sing out to someone, physically call out, is that what you mean?

A. No, I'm simply stating that I would like to call out or ask for help from anyone.

Q. And in the night that would mean calling out to Craig wouldn't it?

A. Obviously, yes.

Q. And not attempting to do everything yourself anymore?

A. Yes, and that goes back to my view of where I always thought that I was lonely and doing everything myself.

Q. That gave you the stress that made you do terrible things?

A. And as it's been covered before, "terrible things", is a general term. For me, it covers a multitude of things. It's not a terrible word - a terrible action as in any action of mine.

Q. You were talking weren't you in that few lines about what was going to happen when you made the major personal sacrifice of becoming a mother again?

A. The personal sacrifice section of that is that's, that's generalised as in Craig and I had been, as in a single couple for a while, and now we were going to be going into having another child and creating that family unit, so you don't do the same things as if you were going to be single and a couple, your life changes, so yeah, you sacrifice a few things so that you may venture into your family life.

Q. You considered it a major personal sacrifice?

A. Yes, because it was a big decision, it was a humungous decision to, to be going down this path and have another child.

Q. Certainly, but we're talking about the major personal sacrifice involved in the decision.

A. Yes.

Q. What things did you feel--

A. Well there would be no more, you know, going out with, with Craig or anybody else, in my view, this is how I was believing it to be. There will be money constrictions due to another child coming on the scene. Life in general just changes dramatically once you have a child. It is a big personal sacrifice.

Q. But you felt confident it will go well this time because unlike the other times, that's my words putting in, but this is what you meant, tell me if this is fair, unlike the other times you are going to call for help to stop the stress that made you do terrible things the other times?

A. Again I'm saying that the word "terrible things" is that it covers a whole heap of ground here. You're, you're trying to limit it to a terrible action I'm supposed to have taken, and I will always argue that point, there was no terrible action on my part.

Q. You thought it was terrible when you lost it with Laura later on, didn't you, the first time you lost it with Laura?

A. Of course I did.

Q. Was that terrible?

A. Yes, it was terrible.

Q. What about when you lost it with Caleb and Patrick and Sarah? Is that what you meant?

A. I never lost it with Caleb. I don't recall ever losing it with Patrick. Did I lose it with Sarah due to frustration and all the issues I was having, yes. I've never denied that, and I've written and fully admit that, yes, I, I lost it that time with Laura and that particular time was quite stressful even, and distressing even for me.

Q. You say that you similarly lost it with Sarah?

A. Yes.

Q. In the same sort of way that you later lost it with Laura?

A. In a, in the way that, incessant crying and I've had to walk away to take a deep breath, then yes.

Q. How did you lose it? Walking away and taking a deep breath seems like you're handling it.

A. I didn't look at it like that. I looked at it as I'm not handling this at all.

Q. So what were the "terrible things" that you did?

A. For me the "terrible things" are anything. As I said, it's a broad spectrum of things that I'm using the word terrible for. It could be me placing my child down to let her cry for even 30 seconds. That's a terrible thing in my view.

Q. You only thought that it was selfish and thoughtless of your father to kill your mother.

A. What has that got to do with what you're trying to refer to here?

Q. I'm just trying to get into your lexicon, into the way you use words.

A. As I say before, the actions of my father and my father in general, he does not crop up much in my life and my thoughts at all, so I'm refusing to have it enforced on me which is what I'm feeling you're trying to do, that he has anything to do with my writings in these diaries at such a late stage.

Q. My point madam is this, that you don't even describe your father's killing of your mother as terrible, only selfish and thoughtless, and here you have admitted that you did terrible things as a result of stress in relation to your other children, don't you?

A. My father killing my mother, it's just an assumed terrible thing. I, I don't think I would need to be stating that anywhere. Why would that not be a terrible, why would that, not be an awful thing?

Q. Of course it's an awful thing, but you only referred to it as a selfish and thoughtless thing because you were only thinking of yourself, weren't you?

A. Of course I was. I was lamenting my father's actions as to how my own life had ended up. Of course I was talking about myself. They're my diaries. It's my thoughts and they are about myself.

Q. Yes.

A. Yes.

Q. Well, poor Kathy.

A. At times, yes.

Q. What were the terrible things that stress made you do with your other children?

A. As I've stated before, terrible things is such a general term. Terrible things can be anything from me not meeting the needs of my child and not understanding how to. Terrible things could be a negative thought at any time that I wasn't coping, that I wasn't good enough, that it just wasn't happening how I thought my plan of life was supposed to go.

Q. As you have said, you found the children who died very shortly after they had died, you say.

A. Yes.

Q. You were the one to find them.

A. Yes.

Q. You were the one with them.

A. Of course I was, yes.

Q. In this entry you say that you're going to call for help this time, when you - if you have any stress?

A. Yes.

Q. The terrible things you're referring to there are smothering your other children under great stress, isn't it? The terrible things were the killing of your children.

A. No.

Q. That's what you refer to there.

A. No it's not.

Q. Stress made you do terrible things.

A. No, it's not referring to that at all.⁶⁴

⁶⁴ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T719.29-T722.49 [red pagination 728-731] (Cunneen SC).

14 January 1997 – Tuesday morn 3:00am

Woke up wide awake so decided to get up. Craig was grinding his teeth. The one thing that gets into the back of my brain and twists. Should wear my ear plugs again if I find them, New ones would be good. Not happy with myself lately, finally starting to physically show that I'm pregnant. Doesn't do much for the self-esteem. Don't get me wrong I couldn't be happier – it's just Craig's roving eye will always be of concern to me. I suppose this is a concept known by all women. We are vulnerable emotionally at this stage. So everything is exaggerated 10-fold. I know he loves me but I ask every now and then just for assurance anyway. 11 weeks this week; next week is supposed to be the last week of my first trimester. In one way it has been slow, in another not really. I feel once you know your baby is doing well, you hear the heartbeat and see your child you relax with life and get on being the protector and provider without doubts of any kind. My skin problem I think must be emotional, when bored I scratch more or if upset. I think its stress related. I must learn to calm down and be rational and worry about things as they happen not if they do. I also was bad last night. I will get Mel some flowers. I invited myself to Teagan's party last night. It was probably just for family and she obviously wasn't impressed since she thinks the worst of me. If they had wanted me there they would of said so. Might slip her a note to apologise today before I leave for work. Well, best go. Time to return to bed & see if I can get some sleep. I'm sure this is training for when the baby arrives. That's OK, I'm pretty sure this time I'll handle it better. Hope so.⁶⁵

⁶⁵ Exhibit 2-AZ, Diaries tender bundle [red pagination 7030].

Cunneen SC

Q. [Portion of the entry read]...You are really psyching yourself up to do a better job than last time. That's right, isn't it?

A. Yes.

Q. The training, you're meaning, is having to be up in the night?

A. Yes.⁶⁶

⁶⁶ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T723.1-8 [red pagination 732] (Cunneen SC).

4 February 1997 – Tuesday morn 2:30am

Yes am, I know, should be in bed sleeping. Think maybe I’m in practice for my future wake up calls for junior. That’s okay I’ve learnt finally that I can catch up sleep later on each day. 14 weeks pregnant this week. All seems okay. Haven’t had much movement of baby lately. Hope everything is okay. I don’t blame it really I have been having bad coughing fits lately. And I’m sure I’ll do damage if I don’t try to stop them. Not to bad the last couple of days. So hopefully I’ll be okay. Leg aches this morning could be from wearing my new shoes yesterday. Think I’ll wear my sandals today. Still can’t wait till I leave work in July. I know it’s not because I’m not satisfied with the job or the people I work for which I’m not. It’s not because I’m going to be a mother. Its only because I’m a person who would much rather not work, take my life at home be out & about and be looked after. Don’t get me wrong, it’s obvious these days that its harder when the ½ of a couple doesn’t work, but I also believe that children are more stable if they at least have one parent to rely on regularly at being there always for them. Could it be because I personally feel, that no one was for me. My parents never came to school functions, sports carnivals or anything like that, even my tennis matches when I won my trophy. She had more important things to do all the time, things for herself. Maybe I’m getting to high a standard for myself I don’t know. Will have to be more imaginative when it comes to home expenses once I’m not working. Like food wise & xmas time will start using layby systems try to think in advance for children clothes etc. Eg when baby is getting close to 6 months old, try to get a layby out that has size 1 & 2s in it in advance of growing years. Plan shopping trips, only get necessary items. Be budget conscious. Not like now, we spend on ourselves only. NB – have to try & put at least \$20 a week away so ill have something to show for my remaining time spent working. Must be diligent. Use my bank account. Eg. If I get to 230 a week \$200 – to Craig every week \$20 on laybys \$10 to save. None for me but what do I need money for when I have saved enough ill bank it & start again. But must be strong to do it. Should try & squeeze extra hrs out of work. Stay till 5pm – 5.30 every day if possible & start at 11.30 each day, that will give me bonus money. Well enough for this morning time for sleep. Kathy⁶⁷

4 February 1997 – Tuesday morn 3:30am

Still can’t sleep. Seem to be thinking of Patrick & Sarah & Caleb. Makes me seriously wonder wether [sic] I’m stupid or doing the right thing by having this baby. My guilt of how responsible I feel for them all, haunts me, my fear of it happening again, haunts me. My fear of Craig & I surviving it if it did, haunts me as well. I wonder wether [sic] having this one, wasn’t just a determination on my behalf to get it right & not be defeated by me [sic] total inadequate feelings about myself. What sort of mother am I, have I been – a terrible one, that’s what it boils down too [sic]- that’s how I feel & that is what I think I am trying to conquer with this baby. To prove that there is nothing rong [sic] with me, if other women can do it, so can I. Is that a wrong reason to have a baby. Yes I think so, but it’s too late to realise now. I’m sure with the support I’m going to ask for I’ll get through. What scares me most will be when I’m alone with the baby. How do I overcome that? Defeat that? Kathy⁶⁸

⁶⁷ Exhibit 2-AZ, Diaries tender bundle [red pagination 7035-7036].

⁶⁸ Exhibit 2-AZ, Diaries tender bundle [red pagination 7038].

Maxwell KC

Q. [Portion of the entry read]...Is it the case that the time that you were the most scared about was when you were alone with the baby?

A. Yes. And that’s purely because when I found the children I was always alone.

Q. Were you?

A. I felt I was.

Q. But were you?

A. Technically no.

Q. Physically were you alone?

A. A couple of times Craig was there yes.

Q. Two out of the four babies’ deaths, Craig was asleep in the house as well with you was he not?

A. Asleep, so therefore alone.

Q. You had been asleep as well had you not?

A. Yes.

Q. When the baby died?

A. Yes.

Q. Because you weren’t awake when the baby died were you?

A. No.

Q. You were in the same position as Craig?

A. Yes, but--

Q. Both of you asleep?

A. He wasn’t the one that found them. I was.

Q. What you are expressing in that entry is great fear of being awake and alone with the baby, what do you say about that?

A. I agree with that purely on the point that I was the one that always found them.

Q. What you are saying is that the time of greatest danger to the baby is when you were with them. That’s what you’re saying isn’t it?

A. No.

Q. That’s what scared you the most. Is that right?

A. No.

Q. Because you’d snap a cog?

A. No.

Q. And because that’s what you’d done before when you were alone with the babies that had already died, isn’t that correct?

A. No.

Q. Isn’t that the thought you’re expressing in that diary at that point?

A. No. I’m expressing my fear. That’s all it is.

Q. You were expressing a fear of being alone with the baby. That’s what you’re frightened of?

A. I’m expressing the fear that I was scared to death of finding my child not alive.⁶⁹

Cunneen SC

Q. [Portion of the entry read]...Again, you were awake at an inconvenient time during the night, even without a baby born yet?

A. Yes.

Q. So were you pretty used to sleep deprivation or did you often, did you wake up every night in the middle of the night and do things?

A. I woke up a lot, early hours of the morning, yes, as with Caleb, that was not an issue, I was still a person that could sleep for 12 hours a day if you really wanted me to, after Patrick it became an issue and waking up early hours of the morning, I still do it now and it is just an instinctive thing that I do, I wake up early hours of the morning.

Q. All right thank you. May we turn to another page, the next page after that, you reflect on the fact that your parents never came to your school functions and so forth, no-one was there for you during your childhood?

A. Yes.

Q. And that’s part of something that you blame ultimately on your birth father?

A. As I keep saying, my father, my father’s irrelevant except for the fact that the life path that I ended up, I’m to going to say I, I’m not going to say I keep blaming him for anything because he was irrelevant in my life.

Q. Although later on you even refer to him by his first name of Tom?

A. As I’d been told that was his name, Tom, Thomas, yes.

Q. May we move on to the second entry on that night, 4 February 1997 at 3.30am. In that entry you say “Still can’t sleep, 5 seem to be thinking of Patrick and Sarah and Caleb, makes me” is that--

JUDICIAL OFFICER: “Seriously”, “seriously wonder.”

CUNNEEN SC: Seriously, thank you.

Q. “Seriously wonder whether I’m stupid or doing the right thing by having this baby, my guilt of how responsible I feel for them all haunts me, my fear of it happening again haunts me, my fear of Craig and I surviving if it did haunts me as well”, once again you’re saying that you acknowledge responsibility for their deaths, aren’t you?

A. As in I feel responsible all the time yes, that passage is quite good really at explaining constantly how my mind was going.

⁶⁹ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T655.18-T656.38 [red pagination 663-664] (Maxwell KC).

Q. You were, on that night anyway, racked by guilt about being responsible for the deaths of your children, weren't you?

A. Not for the physical response no, you keep, you know I will always say I had no direct part in the killing of my children, do I feel responsible for their deaths, as their mother and the fact that I did not do something in any way whatsoever that could've helped prevent that in some way then yes I will always say I'm responsible.

Q. Well that just doesn't make any sense madam does it, if you had done nothing active to bring about those children's deaths, you would deserve no more guilt than your husband?

A. I'm not going to agree with that, because I constantly blamed myself for everything, including the responsibility. I took the onus of responsibility because I was their mother and being their mother was very important to me, and the idea of being a mother was very important to me. The idea of family was important to me. The constant need of me wanting a family was important to me.

Q. And your fear of "it happening again" haunted you?

A. The fear of me walking in and finding one of my children deceased, yes.

Q. You feeling guilt, because you feel "responsible for it happening". That's because you did something active to bring about their deaths during those times when you were alone or felt alone--

A. No.

Q. --and stressed?

A. No.

Q. When you say:

"I wonder whether having this one wasn't just a determination on my behalf to get it right and not be defeated by the total inadequate feelings about myself. What sort of mother am I? Have I been a terrible one? That's what it boils down to"?

A. Yes, and that is, pretty much, a statement agreeing with how my mind was working at the time, where I constantly felt that I'd failed, I--

Q. And that is because, I'd suggest to you, you did fail, in the most extreme way, with each of your children by bringing about their deaths?

A. No.

Q. You weren't a terrible mother in any other way, were you?

A. No. That doesn't stop the, the responsibility of which I felt for that. I could have been the best caring, as in, day-to-day carer of my child ever, but when you lose a child you doubt all that, and that's what I was doing, constantly doubting that.

Q. If it was just a feeling that you failed because as a mother you're responsible, you would join Craig in those feelings, that the two of you are responsible because our children keep dying?

A. Why would I? If I'm taking the onus of responsibility on my own shoulders, why would I be including Craig in that?

Q. Well, I'm suggesting to you, that the only reason you take that responsibility is because you, in contrast to Craig, were the one to do something active to kill your children?

A. No.

Q. And there is the word "terrible" again when, in relation to your father, you say, some years later on 19 June 1999, "I can't help but feel my life would have been so different, and how it was meant to be, if only Tom hadn't made a stupid mistake one night and the family hadn't interfered in the way they did"?

A. It was a stupid mistake, wasn't it? An error of judgment, a stupid mistake, be it, however he made it.

Q. You're speaking, of course, of your father's murder of your mother?

A. Yes.

Q. That was "a stupid mistake"?

A. Of course, it was. I'm sure he felt that too.

Q. Returning to you calling yourself a "terrible mother", I am going to suggest to you that that strong word is used because of the active thing that you did to your children?

A. No.

Q. To kill them?

A. No, absolutely not.

Q. "What sort of mother am I? Have I been a terrible one? That's what it boils down to. That's how I feel and that is what I think I'm trying to conquer with this baby, to prove that there is nothing wrong with me. If other women can do it, so can I."

You thought, didn't you, that if you could improve yourself and overcome your mood swings and your anger and your jealousy and your extreme stress, and have a baby who survived, that you could expunge all your previous wrongdoings in relation to the other children?

A. You're partly right. I will say you're partly right with that. This, this extract is well and truly me questioning my abilities as to whether I'm going to be a successful mother this time round. That particular extract, was - "to conquer with this baby", yes, I felt I had failed, I felt I had to succeed, I felt family was what I was desiring the most. I felt that Craig and I could have the family that we were supposed to be having and, did I view that as a, a challenge, as such, to try to conquer all that? Then, yes, I did.

Q. And then you say:

"Is that a wrong reason to have a baby? Yes, I think so, but it's too late to realise now. I'm sure, with the support I'm going to ask for, I'll get through. What scares me most will be when I'm alone with baby. How do I overcome that, defeat that?"

A. Yes, the first part of that extract is, "Is that a wrong reason", I'm still questioning things, I'll - eternally questioning things. And then I concede that it's "too late" now because I'm pregnant, and the child. And, "scares me the most" will be "alone", is reference to my fear of anything happening and me discovering another child that was deceased.

Q. Well, that's not so, is it? You clearly there, are fearful of what you will do when you find yourself alone with the baby, unable to call for help, without help, what you will do if the stress you know you're capable of overcomes your will again?

A. No, that's not what that whole extract means at all.

Q. "What scares me most will be when I'm alone with baby"?

A. Yes, because even though Craig might have been asleep and present for two of the deaths of my children, I was the one that kept discovering them. I was the one that found them, and I felt alone.

Q. I'll suggest to you that you were alone with your baby on each occasion that he or she died, weren't you?

A. I was alone on discovering them, yes. I felt that I was alone when I was discovered them--

Q. You were with them--

A. --that's what I'm getting at there.

Q. You were alone with them when they died because you killed them?

A. No.

Q. And that's why you were worrying, in this personal journal, that you thought that no-one else would ever see, "How 5 do I overcome that, defeat that?"

A. No.

Q. You knew--

A. My, my diaries are a pouring out of every fear, every thought - negative, positive - every emotion, anything that was concerning me, anything at all, they were all poured into this diary. They were a way for me - as has been explained, I used those diaries as a friend and a confidant and, if you're having a discussion with your friend and confidant, are you expecting that friend and confidant to then go around telling everybody about it? You don't. So, I'm not expecting that people are going to be reading my diaries.

Q. Yes, and so this was your "friend and confidant", this journal?

A. Yes.

Q. And because it was your confidant, you felt free to divulge the deepest secrets of your mind?

A. I felt alone, I felt lonely, I had limited people to talk to - or I felt that I had limited people to talk to. These diaries were something that I could empty my head, get rid of emotions, try to figure out what was going on, how to figure out where I was going with life and they are - that's all they are. There's--

Q. Put it down on paper and get rid of the guilt in your head?

A. Put it down on paper and get rid of all the emotions and thoughts that were rallying around in my head, yes.

Q. The "guilt"?

A. As - no.

Q. Well, you used--

A. You're, you're implying a guilt as in an action I've done. I've done no action to be guilty about.

Q. You used the word “guilt” in a previous entry, you recall?

A. Because of the responsibility of - which I was feeling, yes. The responsibility that I took on myself to feel.

Q. I'd suggest to you that you only felt guilt not because children had accidentally or naturally died, but because they had died at your hands?

A. No.⁷⁰

⁷⁰ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T723.20-T727.44 [red pagination 732-736] (Cunneen SC).

Gee long time no write. Oh well. Last couple of months haven't been great. But last couple of days, great. All because Craig finally told me how he feels about our life changes happening, baby, me etc. Wasn't all good news for me, But now I know what to do & say to keep him happy with me & everything else. Found out he's jealous already of Bub. He says he only has 6mths left to be with me and for me. Hopefully I've explained, thats not true, he should be for me forever, just because a baby is entering our life makes no difference really. One day it will leave. The others did, but this one's not going in the same fashion. This time I'm prepared and know what signals to watch out for in myself. Changes in mood etc. Help I will get if need be. I also know that my lethargy & tiredness & continued rejection of him had a bad effect. I have to accept that if he doesn't get sex regularly from me, he feels abandoned & unwanted. Silly but it's how he responds. In the end we were separate people, not really wishing to be near each other at all. Bad problem, but I can solve it by every couple of day permitting him to make love to me – I hope. Really he needs to feel more secure about us. Why doesn't he I'm having his baby for Christ sake – men, worse than women, totally non understandable I'm sure. Missed Wards birthday. Probably being shit on. But what's new, missed it for years anyway. Ring later & check how everything is.

Kathy⁷¹

⁷¹ Exhibit 2-AZ, Diaries tender bundle [red pagination 7039-7040].

Q. [Portion of the entry read]...So, did you feel that you might lose some of Craig when the baby came, some of Craig's attention?

A. That's a reference to Craig possibly feeling jealous.

Q. Yes?

A. That's not a reference to me.

Q. Except for the part that you note that "He says he only has six months left to be with me and for me"?

A. Yes, that's as in Craig having limited attention from me, not the other way around.

Q. Yes, well, I expect though that you only would have written about it if it affected you in some way, and that the way it affected you was that you thought that Craig would not be able to give you as much attention when the baby came?

A. As in, reflecting how both of us would most likely not be giving each other the attention to our marriage and relationship as we could or should.

Q. Then you say - I'm going from the bottom of the page on the left to the page on the right:

“Hopefully, I've explained that's not true. He should be for me forever. Just because a baby is entering our life, it makes no difference really, one day it will leave. The others did, but this one's not going in the same fashion”?

A. Yes, I'm referring to my view of marriage there. That, if we're married, we're married and we're to be together forever, that our attention for each other should be forever, whether a child is in the picture or not. It should actually improve that, not detract from it.

Q. Aren't you deflecting attention from the comment about how your other children left and how this one wouldn't leave the same way?

A. No, you didn't ask me about that.

Q. “It makes no difference really, one day it will leave. The others did, but this one's not going in the same fashion”?

A. Okay, “it will leave”, is when - I have a hopeful thought there that my child's going to get older, become an adult and will leave. That refers to that.

Q. Yes, you're going to try your best to make sure that happens?

A. Yes. “The others did”, well, they did. They died, they left.

Q. Yes, “but this one's not going in the same fashion”, you say?

A. Because I'm trying my hardest to make sure that she doesn't go, like the other three of my children did.

Q. Quite so. And you are confident at that point, you're able to say it unequivocally, “this one's not going to go in the same fashion”, because you have determined to change and have control of your homicidal rages?

A. No. I'm going to say that that is a hopeful thought, I'm having a hopeful thought there that my child will survive to adulthood and then she will leave as a normal adult, and not like my last three who died.

Q. You knew you could be confident in saying it because you were in control of what happened with your next child I'd suggest to you?

A. No.

Q. In the same paragraph you say, "This time I'm prepared and know what signals to watch out for in myself, changes in mood et cetera. Help I will get if need be."

A. Yes, and that goes again to my belief that my moods affected everybody and everything around me, including my children.

Q. What that means is you got frustrated and angry and in a rage when you felt that you weren't getting help, when you felt alone?

A. No.

Q. The result of that rage was the death of your children, the deliberate killing of your children?

A. No.⁷²

⁷² Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T727.46-T729.21 [red pagination 736-738] (Cunneen SC).

28 April 1997 – Monday morn 9.15

Had call from Russell last night. Think he just called to check if everything was okay. Never know with him. Always a little worry & nervous for a while after. Always think his pumping me for information to tell mum. Although he says he doesn't see them that often. Wonder?

Lea hasn't bothered about me lately. Not surprising I've always got to ring her she rarely rings me.

Had good weekend different went Wollomly (?) for lunch & look around.

Craig always buys me something, thinks buying me things keeps me happy. In a way I suppose it does. I am a materialistic person.

Not a good emotional weekend for Craig. I decided to finalise the scrap books for the boys. Asked him to get cards for me. Shouldn't of. He found Sarah's feet picture & it tore him up. I feel better, because now everything is finalised with the other 3 my mind anyway. And I can truly concentrate on this little one coming soon.

And soon it is, only about 11-10 weeks left now. Baby seems well, moves well.

Me, well, piling on wight [sic] now, what I eat doesn't help. Also all the books say that baby piles on stacs [sic] of fat from now on as well.

Hope that my labour isn't too different or I'm not sure I'll cope to [sic] well but made up my mind- will attempt breast feeding at least for the first 4-6 weeks then will swap to a bottle. I think this baby deserves everything I can give her. Concidering [sic] I really gave nothing to the others. I think even my feelings towards this one are already deeper. Shame, but thats [sic] the way it is. I think its [sic] because I'm 30 now & time to settle & bring up a child. Obviously I wasn't ready before at all.

Well, that's all for now. Haven't written in regularly for ages – obviously not the type to.

Better late than never. Can't believe I'm getting close to finishing this book – not really that many pages to go. 1998 will be the test to see if I remember to write in here at all after baby is born & well & truley here.

Kathy⁷³

Cunneen SC

Q. Again just in relation to your writing style, at the top of that page “Me, well piling on weight now.” Sometimes you talk about your thoughts in that way “Me” comma, and so forth, that's right isn't it?

A. Yes.

Q. You have this to and fro about breast feeding Laura when she comes, don't you, you're considering it because you didn't really do that with the others?

A. Yes.

Q. You said, “I think this baby deserves everything I can give her, considering I really gave nothing to the others.”

A. That was how I was feeling at the time, yeah.

Q. Another reflection of your guilt about how they met their deaths wasn't it?

A. No. It was a feeling of, as a mother, I was constantly criticising myself and felt that I hadn't given enough.

Q. You said:

“I think even my feelings towards this one are already deeper. Shame, but that's the way it is. I think it's because I'm 30 now and time to settle and bring up a child. Obviously I wasn't ready before at all.”

I'm going to suggest to you that it is clear there that in your spirit of trying to make reparations for the past, trying to do the right thing with this child you are psyching yourself up, as it were, to the idea that now you were mature at the age of 30, not as young as you were before of course, that you would be able to have control of yourself and ensure that you did nothing to harm the baby that you were about to have?

A. No. I'll agree with you that I had thoughts that now that I'm older, yes, I did have my three children previously before that at a reasonably young age, and the time to settle and bring up a child, well yes, you know, I thought that it was the right time, that we were at the point where we could.

Q. You say--

A. And I wasn't ready before. That's a constant thing. I was always doubting whether I was ready or not.

Q. Because you really resent in those dark times alone with baby, your moods swung and you in a feeling of resenting the baby, feeling sleep deprived and jealous or angry, you did something to harm them?

A. No, I've never resented my children ever.

Q. Because you weren't ready before at all.

A. That's how I felt at the time when I wrote that, yes.⁷⁴

⁷³ Exhibit 2-AZ, Diaries tender bundle [red pagination 7067-7068].

⁷⁴ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T729.23-T730.21 [red pagination 738-739] (Cunneen SC).

1 May 1997 - Thursday nite. 948

Not well, have had flu like symptoms for last couple of days – bought inhaler. Shouldn’t do to if any damage to bub only using it so that I can breathe while asleep. Worst feeling in the world. Baby moving heaps now to the stag that it hurts if she catches me by surprise now. Feeling very fat though. Little worried about that. But obviously not that much or I would keep eating the things I do. Obviously baby isn’t lacking appears good size wise. Will see soon 28 week appointment coming up. I think I have to have more blood tests done. Hopefully everything will be fine. Tiring quickly at work. Still very unhappy about giving up the money. But I guess Craig & I will have to work out if he can afford to give me any each month or not. Hopefully I still won’t want myself for too much. Worst thing last time was the feeling that I was being deprived. I don’t think that’s feeling will be too great this time, because I have everything I could ever want already. Baby will be icing on our cake. Pleased that Craig is finally accepting it & that he plants to spend time & help with me with baby once she’s born. Already referring to it as she, wonder if nature will surprise us or not. Well, best get some sleep. Tired so easily during the day can’t wait till I’m off work, will nap of an afternoon.

Kathy⁷⁵

⁷⁵ Exhibit 2-AZ, Diaries tender bundle [red pagination 7069-7070].

Cunneen SC

Q. On 1 May 1997, in fact it’s a very positive entry, isn’t it, because you say “Worst thing last time was the feeling that I was being deprived. I think that feeling will be”, this is at the end of the page on the right, “I don’t think that’s, that’s, that feeling will be too great this time because”, may we turn the next page please, “I have everything I could ever want already. Baby will be icing on our cake.”

A. Yes. I had my home, I had my husband, we were financially set, we were in a right position to try again and see if we - if I - me personally, see if I could succeed at where I felt I’d failed.

Q. Everything was just exactly as you wanted it at that point--

A. Yes.

Q. --wasn’t it?

A. Yes.⁷⁶

⁷⁶ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T730.23-37 [red pagination 739] (Cunneen SC).

16 May 1997 – Fri morn 2am.

Yes, up early & awake. Have found that sleeping in harder bed (spare one) helps back. Don't have bad back aches all day. Heart burn & back woke me up this time. Having a glass of milk to combat the heart burn. Not warm.

29 weeks come Monday. Feeling it too. Baby has grown heaps. So have I. Am up to 79kg now, not happy but they reckon 5-6khs is usually baby & related fluids. That still 5-6kg that I've put on & will have to work hard to get back off.

Decided that now I know that I'll be at home in between hospital sleep studies in Sydney, I should be able to get a fair exercise regime going.

Going to start going for a walk everyday if weather doesn't permit then Mels machines should compensate okay. Also, getting back to basics food wise should also help. Can start now by deciding to really try & stop the sweet sugary things that I've been eating, go back to fruit & savoury biscuits in between. Once she's born I'll be able to concentrate on that because what I eat so will she. I think breast feeding will work out for a while. If it will help me lose my weight I'd be really stupid not to give it a go.

I think that Mel maybe leaving her little mark through me, but I don't mind it. Might reduce her grief that she still seems to suffer about it Although last Christmas she seemed okay not so blue. But what she did when alone I can't say. I think that she will be a great help in preventing me from stressing out as much as I've done in the past.

Night time & early morning such as these will be the worst for me, that's when wishing someone else was awake with me will happen. Purely because of what happened before.

Craig says he will stress & worry but he still seems to sleep okay every night & did with Sarah. I really needed him to wake that morning and take over from me. This time I've already decided if I ever feel that way again I'm going to wake him up.

I'm glad I don't have to stay down in Sydney by myself. That prospect was really nerve racking [sic]. I would of [sic] felt so vulnerable & exposed. Relying on total strangers all the time Only good point about that was, you would owe them nothing in return.

Not long now & she'll be here. Her movements are strong & definite now. Hope she does roll over into the right position in the next few weeks. I really don't want added stress of a difficult birth. Everything else this time has be [sic] harder, different & unexpected, but I'm praying birth will be simple so that I handle it okay.

Still going to leave end of June, whether Helen likes it or not. To work any longer might not be good for me standing for so long now is exhausting. And besides anything I'll be pretty useless & not capable of getting around well. I also have selfish reasons I'd like my last amount of private own time myself. It's just do what I want. Pictures, videos, sleep in late etc. They are all things that will change after this baby comes.

Craig & I also haven't really spent time together.

I am a little bit upset that he just doesn't suggest or even hint that he desires me any more. Although when I look in the mirror I don't blame him. I'm not attractive anymore & no desire whatsoever lately anyway. As long as I remember not to exclude him from attention once she's here. I think he'll handle it for quite sometime yet.

Another reason why breastfeeding won't go on to long. I'll want to get back on the pill & resume relations with Craig when I feel like it & can.

Still not tired. Might iron that always helped.

Catch next entry.

Kathy⁷⁷

⁷⁷ Exhibit 2-AZ, Diaries tender bundle [red pagination 7073-7076].

Maxwell KC

Q. [Portion of the entry read]...You're saying there's a feeling of resentment towards Craig, correct, correct?

A. Not resentment no.

Q. You're saying, "Craig says he will stress and worry but he still seems to sleep okay every night and did with Sarah"?

A. It's a little frustration yes.

Q. "I really needed him to wake up that morning and take over from me", so are you referring to that morning when Sarah died?

A. I'm referring to the early morning, as in the day and just the thoughts that I felt like Craig did sleep too easily through a lot and that I just felt like he could've helped out more.

Q. But you see it's a cry of desperation almost isn't it?

A. (No verbal reply)

Q. Understand what I'm getting at?

A. I understand what you're getting at, yes.

Q. But you're feeling that you desperately needed him to wake up that morning and take over from you, and you're referring to the morning, the time that Sarah died aren't you?

A. I don't believe I am, I believe I'm being more general.

Q. Well what else can it mean?

A. That because of the sleep deprivation and being exhausted and tired, that I just felt I needed more help and I wasn't getting it.

Q. "Wake up that morning", what is "that", isn't that the morning that Sarah died?

A. It may have been.

Q. Well it is isn't it, that's what you're referring to?

A. I'm not, I'm not a hundred per cent clear on that.

Q. "I really needed him to wake up", let's just go back a bit, "Says he will stress and worry, but he still seems to sleep okay every night and did with Sarah, I really needed him to wake up that morning and take over from me", well clearly you're referring to the time that Sarah died aren't you?

A. I may have been, I'm not a hundred per cent clear.

Q. And you are saying that you were awake, "I really needed him to wake up that morning and take over from me", well that means you were awake, doesn't it?

A. I'm still not a hundred per cent clear that I'm referring to that morning that she died there in that reference. I'm still--

Q. You see--

A. I believed and felt then that I wasn't getting the support that I thought I wanted and yes I was having a frustration with how easily I think Craig could sleep, compared to me and that I needed care and help with Sarah.

Q. You were awake with Sarah that morning, weren't you?

A. If I was caring for her then yes I most likely was.

Q. And that was the morning she died wasn't it?

A. I can't say with any clarity on that.

Q. And you were saying there that you were awake when Sarah died, aren't you?

A. No.

Q. That's what it means doesn't it?

A. No it doesn't.

Q. And you're trying to give it a different meaning I suggest to you, what do you say?

A. No, it doesn't mean that at all.

Q. Because that's not what - you haven't told the police or - you say that you went to Sarah and she was dead and that you weren't awake at the time, the actual time she died, that's what your position is isn't it?

A. Yes.

Q. But I suggest to you that this diary entry demonstrates something different to that?

A. I'm not agreeing with that.⁷⁸

Cunneen SC

Q. ...[When you write 'she will be a great help'] you're talking about a woman friend, Mel [who was]...a close neighbour in that house that you had not been in with the other children?

A. That's right.

Q. So you thought that she might make the difference for you?

A. Yes.

Q. From stressing out like you had before?

A. In helping me cope and, and be the mother I wish to be, yes.

Q. Then you say, "Night time and early mornings such as these will be the worst for me. That's when wishing someone else was awake with me will happen. Purely because of what happened before."

A. That's referring to me finding my own children. Craig may have been there but I had to wake him to be there with me. That's referring to a thought that, along the lines of why couldn't he have been the one? Why did it always have to be me that found my children? Why wasn't he with me by my side awake with me at the time?

Q. That doesn't make sense I'd suggest to you, because what you're saying is that there is a time when you were wishing someone else was awake with you when something happens. Am I right so far?

A. Yes, because I had a morbid and dreaded fear of being alone and discovering things like that.

⁷⁸ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T656.40-658.24 [red pagination 664-666] (Maxwell KC).

Q. May I suggest without wishing to upset you in any way, if as you say you came across your children just recently deceased, do you recall thinking “I wish someone else was awake with me now” instead of thinking “Oh God, my child’s dead”?

A. I don’t recall thinking anything other than panicking.

Q. You’re talking there, when you say “Night time and early mornings such as these will be the worst for me. That’s when wishing someone else was awake with me will happen.”

A. Yes, because I never liked feeling like I was being - that I was alone in anything. I was always, always - it always goes back to me having a doubt into my abilities, and a doubt that I will not react fast enough or I would not be seeing something that I should have been seeing, and it refers to me wishing that at that particular extract is about just wishing that at night times when I’m feeling that way is someone else is awake with me and they’re with me.

Q. It’s not true for you to say “I never wanted to be alone” is it? Because, I suggest to you, these journals are full of entries where you’re saying “I wish I could just get some time to myself”.

A. But this extract is referring to me discovering things that no one should be discovering on their own, and me feeling things and emotions that I truly thought that someone else should be there with me.

Q. With respect, you’re not just referring to the three times wasn’t it in the night, during the night, that something went wrong with your babies?

A. Yes, and once early in the morning, like -

Q. Yes, two of your babies died during the day didn’t they?

A. Yes.

Q. When you were alone with them?

A. Yes.

Q. So when you say, “Night time and early mornings such as these will be the worst for me. That’s when wishing someone else was awake with me will happen purely because of what happened before”--

A. Purely because of what happened before is referring to my discovery of my children.

Q. I’d suggest to you it is referring to the fact that you know that during night time and early mornings you had before had such a mood swing, or such an angry reaction, that you killed your children.

A. No.

JUDICIAL OFFICER

Q. Can I just ask you this. In that passage that’s been read out to you, it says you wish that somebody would wake up that morning and “take over from me” which tends, seems to indicate you want them to take over from you?

A. The care, yes, the general care of my child, yes.

Q. But is your explanation for this passage that you wanted somebody to be there when the baby was found to have died?

A. Yes, because by this stage your Honour I had an absolute fear of that. I never wanted to go through that again.

Q. But what I'm pointing out, that you're saying you wanted somebody to take over from you, which seems inconsistent with just having somebody there to be there when you found the dead baby.

A. I'm, I'm not sure I understand the difference, your Honour. I'm still saying that I didn't wish to be alone in either situation.

CUNNEEN SC

Q. You then say, "This time I've already decided if I ever feel that way again I'm going to wake him up."

A. That is a spontaneous decision that I've made right there and then whilst writing that, that I would wake him up.

Q. Yes, and so it's not about you finding a baby dead is it?

A. No, that, that particular passage does switch thoughts again and I'm thinking of how Craig could help me and that I did have a frustration level with his ability to be able to just sleep through things. And I'd made a spontaneous decision in that extract to, I was going to wake him if I ever felt that I needed him.

Q. When you had the babies you'd be frustrated that you could hear them crying and he couldn't?

A. Yes, a little.

...

Q. "Craig says he will stress and worry but he still seems to sleep okay every night and did with Sarah. I really needed him to wake that morning and take over from me."

A. Yes, and as I explained, taking over from me as in the care of my child.

Q. Well, what--

A. Be it that it might be--

Q. --what was "that morning"?

A. Even if it was that morning.

Q. What morning?

A. I've been, you know I'm getting told that's the morning that she died.

Q. You wrote the entry in the journal madam.

A. Yes.

Q. What did you mean by "that morning"? "I really needed him to wake that morning and take over from me"?

A. Because I was awake, so I thought to myself, "Why couldn't he be awake at the same time?"

Q. You were awake weren't you?

A. I, I got up to go to the toilet, yes I was awake. I, I got up to go--

Q. What did you need him to take over--

A. --toilet. I was awake. I then discovered my child and Craig's asleep. That, that extract is me not understanding why he couldn't have taken over. Why was I there by myself again, discovering such a thing? Even with him in the room and he was asleep.

Q. Sarah was sleeping in the same room as you that night, the night she died wasn't she?

A. Yes, she was.

Q. Was it the first or the second night that she slept without the apnoea blanket?

A. I don't know, first I think. I'm not sure.

Q. And at 1 o'clock that morning she died didn't she?

A. I am not sure on the actual time, no.

Q. I think you put an entry in a diary that it was 1 o'clock that morning that she died.

A. Okay, yep.

Q. Yet, you didn't wake Craig until sometime after that?

A. I don't have a clear memory of times. I may have written a time but that doesn't mean that it was the time.

Q. At ten past one, you and Laura were both outside the bedroom?

A. No, we weren't.

Q. And Craig woke to find you both missing?

A. No. And I understand that statements have been made where that statement was then decided to be incorrect and he wasn't sure.

Q. You remember that night with some resentment towards Craig don't you?

A. In the fact that he was asleep and I felt totally alone discovering my daughter, yes.

Q. Well, "I really needed him to wake that morning and take over from me", means take over looking after the baby doesn't it?

A. Yes.

Q. Not take over making arrangements for a dead child?

A. When am I discussing making arrangements for a dead child?

Q. There's nothing to take over with great respect if the baby is deceased is there?

A. As in providing support and being there for each other, then yes.

Q. You didn't mean that there did you? "Craig says he will stress and worry, but he still seems to sleep okay every night and did with Sarah. I really needed him to wake that morning and take over from me."

A. Yes, I am saying my frustration at Craig's ability to be able to sleep through things. And then I was saying why he couldn't have woken up to have been with me and yes, it was in care, in general response to the care of my child. But there's also the added part there when I'm the one that was discovering Sarah and I felt alone again.

Q. That can't be right because the next thing you write is, "This time I've already decided if I ever feel that way again I'm going to wake him up."

A. Yes, a spontaneous decision that I don't care what's going on, I'm going to wake him up.

Q. If the baby's annoying you?

A. Not if the baby's annoying me. If, if, if there's any reason that if I'm overtired or if I'm feeling like I need some help then instead of allowing him to sleep I'm going to wake him up. It's a spontaneous decision I'm making there.

Q. That will you hope preserve your new baby's life you hope at that stage?

A. I hoped that with him by my side to do this and help me with Laura that there's an extra pair of eyes, an extra pair of, an extra guardian, an extra, to prevent any such thing as me finding and discovering my children as I did the last three times.

Q. An extra pair of eyes and an extra guardian to prevent you taking the life of your child?

A. No.

Q. On that occasion?

A. No.

Q. Would you turn to the next page please? As to your dislike of being alone, you say there, "I also have selfish reasons and I'd like my last amount of private own time to myself to just do what I want." That's what you said in relation to leaving work early isn't it?

A. I'll just read sorry. Yes, that's in relation to me leaving work early yes.

Q. So that you could have private time to yourself to do what you want, pictures, videos, sleep in late et cetera?

A. Yes.

Q. That was being alone, doing things on your own wasn't it?

A. Yes, and that's - why is that unusual? Are you saying that no one likes to have private time?

Q. I'm suggesting it's only unusual because you said in evidence within the last half hour that you disliked being on your own.

A. I disliked being on my own with my children because of my morbid paranoia and for - and fear sorry of any tragic thing happening. By the time I'd had lawyer (as said) - Laura, that was extreme. My fear of anything happening at all, accidental or otherwise was extreme.⁷⁹

⁷⁹ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T730.39-T735.29 [red pagination 739-744] (Cunneen SC); See also T732.17-31 (Cunneen SC).

1997 – 1998 Diary

6 June 1997

Fri 5.30pm

Like this diary it has decent lines marked & a thicker line to put my date & Day on.

Mel seems fine today, swelling on her ankle has gone down a lot. So hopefully she will be up and about soon. Craig bought her some flowers to cheer her up. Seems to of worked.

Terrible storm outside. Thunder and lightening. Have only small lights on, but microwave is defrosting. Hope nothing happens to it.

I can understand how poor Jessa freaks. I'm here alone and it's pretty eerie.

Looks like Craig has just pulled up. Thank god. Maybe not, hope he's not too long.

Rain has just started. Don't mind that too much. Haven't had a really good down poor for a while.

Cats outside although I'm sure he's ready to come in now.

Poor Ned, he gets his kennel that's it. Storms don't seem to bother him.

Might mellow in a bath – only if lightening eases up a bit. Enough for now will write in again soon. Check on MWO & dinner, what to have?

Kathy⁸⁰

fri nite 9:30pm

Storm finished. Nothing destroyed. Enjoyed my bath.

Always seem to want to come to bed before Craig now. Gives me a chance to totally mellow. Write in here, ponder thoughts.

I think that both of us are just waiting patiently for our child to grow fat & healthy & eventually arrive.

Big changes will occur once it does. Our whole life structure will change from being totally for ourselves, to being for someone else. I think I'm ready for that now.

I turn 30 in 7 more days. Worried that I haven't really achieved anything in my life. But I have. I have a beautiful home, a few nice and good friends, love of my animals and most importantly total love & adoration of my husband. A man that would & does everything possible for me & always will. From now on though I'm sure his attention & focus will change from me to his child & so it should.

I couldn't see that before. I was very selfish when it came to Craigs attention.

Hopefully this time we have both learned how to share it but still manage to keep a little something aside for just each other. We will see.

I hope I can say to him hey, this is our personal time just you & me, baby not included.

Maybe if I remember to Pamper him, he'll remember me eg, put bub to sleep & have dinner with him, do a bath for him & I etc. Always hug & kiss him with love & intent affection, Cards, notes etc. listen to him. Not let baby totally dominneer [sic] my emotions & feelings. Maybe then he will see when, stress of it is getting to be too much & save me from ever feeling like I did before, during my dark moods.

Maxwell KC

Q. The entry of 6 July [June] 97, so the second page, starting “Hopefully”, yes about point 5 of the second page, “Hopefully preparing myself will mean the end of my dark moods”, are you referring to feeling depressed there?

A. Yes.

Q. “Or at least the ability to see it coming and say to him or someone, hey help I’m getting overwhelmed, help me out”, see that?

A. Yes, I’m referring to depression.

Q. “That will be the key to this baby’s survival”, do you see that?

A. Yes.

Q. So in dark moods did you lose control?

A. No, what I’m referring to there is I had a belief that even a mood from me could affect my child.

Q. What, cause its death?

A. Cause it to be not happy, I had a desperate weird thought that my moods contributed to my children making a choice that they didn't want to stay, that's how desperate I was.

Q. Anyway, so in order for the baby that you - this is a month before Laura’s birth, correct?

A. Yes.

Q. About. So you’re considering her survival, whether she’ll survive or not?

A. Whether she’d stay with me yes.

Q. And I suggest you’re considering her survival because you know that you’ve killed the other three when you’ve been in a dark mood, what do you say about that?

A. No.⁸²

Cunneen SC

Q. Perhaps if we just move on to 6 July [June] 97. In that entry you talk about big changes occurring soon and in fact, it's a very positive entry about your beautiful home and friends and husband. Everything is going very well at that time?

A. Yes.

Q. How you’re going to be 30 in seven more days. If you just turn to the next page please? Then you say, on the left-hand side of the page near the top,

“From now on though I'm sure his attention and focus will change from me to his child and so it should. I couldn't see that before. I was very selfish when it came to Craig's attention. Hopefully this time we have both learned how to share it, but still manage to keep a little something aside for just each other. We will see.”

Did you mean that with your first three children, you were unable to cope with feelings of jealousy about Craig’s attention to the other children?

A. No.

⁸⁰ Exhibit 2-AZ, Diaries tender bundle [red pagination 7092-7093].

⁸² Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T658.34-T659.15 [red pagination 666-667] (Maxwell KC).

Hopefully preparing myself will mean the end of my dark moods, or at least the ability to see it coming & say to him or someone hey, help I'm getting overwhelmed, help me out. That will be the key to this babies [sic] survival. It surley [sic] will.

But, enough dwelling, things are different this time. It will all work out for sure.

Kathy.⁸¹

⁸¹ Exhibit 2-AZ, Diaries tender bundle [red pagination 7092-7093].

Q. What did you mean by you said, “I was very selfish when it came to Craig’s attention”?

A. Craig’s attention is a reference to I felt we had a relationship issue at many times where his attention was not focused on me. It would be on others.

Q. This is about his attention to his and your child isn’t it?

A. Yes.

Q. It’s not about attention to any other thing outside--

A. The reference to me being very selfish when it comes to Craig’s attention, that’s a reference to his attention not being on me. It was on others and hopefully we have both learned is I’m hoping and having a positive outlook that our relationship can get back on track. We can be strong. We can succeed in being the family we should be.

Q. If you move to on the page on the right, just before we leave the page on the left, “Maybe if I remember to pamper him he will remember me.” You’ve got a plan to keep things happy with Craig?

A. Yes, it’s a relationship comment, yes.

Q. Then on the next page you say, “Not let baby totally domineer my emotions and feelings. Maybe then he will see when stress of it all is getting to be too much and save me from ever feeling like I did before during my dark mood.” “Mood” is it or--

A. Mood, yes.

Q. I think it’s in the plural in the original. Would you agree?

A. I don’t know.

Q. “My dark moods”?

A. Not let, not--

Q. You are saying there, aren’t you, that you are going to do your best to try to keep Craig considering you and helping you so that you don’t descend into the dark moods that brought about your having lost control to the extent of killing your previous children?

A. No, that’s not what this is about at all. The, the sentence where I’m saying I totally domineer my emotions, it’s because I would let all of my emotions and my feelings be for my baby and the time and I was feeling that I’d let Craig down in not being the wife that I should have been to him.

Q. Well you were hoping that if you treat him even better than before, he will help you when the stress of it all is getting too much and save you from feeling like you did before during your dark moods?

A. Yes.

Q. And the dark moods were what led to the killing of your children?

A. My dark mood is as I’ve stated before, when I say dark mood I’m referring to when I’m depressed.

Q. And well didn’t these dark moods come on you without warning, with very little warning and even surprise you?

A. Occasionally yes.

Q. And they shocked you and you were shocked at what they brought about after they had passed, isn't that right?

A. No I'm not going to agree with that, that they shocked me.

Q. Well you go on to say, "Hopefully preparing myself will mean the end of my dark moods or at least the ability to see it coming and say to him or someone, hey help I'm getting overwhelmed here, help me out"?

A. Yes, as in I'm getting depressed and that I will require help at that time.

Q. You don't say depressed, even though you do say depressed a lot of times in the journal, you don't say that here do you?

A. My reference to a dark mood is a reference to depression.

Q. This is worse than that I'd suggest to you, this is a dark and murderous mood?

A. No.

Q. Because then you say, "That will be the key to this baby's survival, it surely will"?

A. As in reference to me being, if I'm not as depressed I can give 120% to my child and her needs, then yes that is what that's referring to.

Q. The key to survival, the one thing that keeps baby alive that means doesn't it?

A. It's an extreme way of thinking about it but my diary is full of extreme thoughts, they're not, at times not even making sense to myself, so--

Q. Madam you always made sense to yourself in these journals didn't you?

A. Not all the time no.

Q. There was no point--

A. There's many a time I've said in my journal, that's rather silly or along those lines, realising and accepting that I've just said something that is totally silly.

Q. You may have looked back in hindsight years before and thought that things were silly, in hindsight, that may have happened, correct?

A. Yes, of course.

Q. But when you were writing these entries, you were being very sincere with yourself I'd suggest, for how you felt at that time?

A. Yes okay.

Q. And you knew that the key to the baby's survival, the one thing that it was essential to do, was to have someone help you see the dark moods coming, someone to be with you to identify that, what do you say?

A. Someone to help me at the time when I'm feeling depressed and lonely and unsure of myself, then yes I would've liked that.

Q. But there's nothing indefinite about this, "That will be the key to this baby's survival, it surely will", is there?

A. I'm convincing myself there that whatever I'm doing in my preparation for this is going to work and Laura will survive and everything will be well.

Q. You're trying to tell yourself that you can do it in the future, you can resist the temptation to kill your child when the stress builds up so high, that's what you're trying to tell yourself isn't it?

A. No, I'm telling myself that yes I can do it and I'm trying to convince myself that yes I can do it and that everything will be well.

Q. "At least the ability to see it coming", that is the dark moods, you were really worried about that then weren't you, that you couldn't - you didn't even know when these moods were going to overcome your mind?

A. I'm always, in my diaries I'm always questioning myself, I'm always doubting myself.

Q. Let's not talk about what you're always doing all through your diaries, I'm just asking you about those lines, "Or at least the ability to see it coming, hopefully preparing myself will mean the end of my dark moods or at least the ability to see it coming"?

A. Yes, I'm doubting my ability and I'm pretty much stating it there, I'm doubting my abilities in general.

Q. Your ability to what?

A. My ability to cope, my ability to be the best mother that I could be.

Q. You're doubting your ability to see the mood coming that you know results in you taking a baby's life, that's it?

A. No I don't know that at all and that's not what it's saying.

Q. Well that's exactly what it says isn't it?

A. No it's not.

Q. You want to have the ability to see those moods coming don't you?

A. Wouldn't anybody want to see or understand if they're depressed and try to help themselves or figure out why.

Q. Certainly. I am suggesting to you that you, knowing what you had been - had done to the other children, you did genuinely want not to do it again and you wanted to see, you wanted some foresight of when the mood would overcome you?

A. No.

Q. What do you say?

A. I'm going to refute and say no.⁸³

⁸³ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T736.6-739.22 [red pagination 745-748] (Cunneen SC).

8 June 1997 Sunday 10pm

Mel and Teags must of went with Steve today. Nice of her to mention it. Hope they looked after my car properly & filled the tank back up. It was full when they took it. I expect it full when it's given back. Not to much to ask for I don't think.

They obviously used it to run around in while in Sydney. Last time I lent it. Didn't lend it for them to joy ride around in.

Craig painted my laundry, looks good now, fresh,___ not done properly but at least done, besides it is only a laundry after all. I know he really doesn't like painting so I'm glad if he only does that. Suppose I'm not too concerned if he doesn't paint the rest of the house, it can wait. The house is fine without it. Although every time we finish a room I have a feeling that we put our spirits into the house & slowly rid it of the Haggartys. Silly huh. I hope that he does get to paint the rest before the baby is born. That will mean a total new beginning for us. A good, strong beginning that we can build solidly from. And continue to grow with.

Heard from Megan Fogo today. Wasn't interested in talking to her. Blast from the past that has proven to mean pretty much nothing to us. She's fat, lazy, not much good at anything but thinking of herself, not a good mother either.

Wants us to go there for dinner but we are going to refuse. Don't like there untidy, unclean house, ways or the way that he cooks everyone knows she doesn't. Besides I don't like travelling of a night anymore down there. Takes to long to get home.

Won't go down for family why should we go down for them.

Not sure if it's a good idea that Craig sells Nicole ? & Warren a car, could turn into a big headache. I hope not, we like them. They are fairly good friends.

Craig didn't bother to tell me that Nic & Warren were even coming over today, or that he took Was & his dad for a test drive. He seems to decide what I should be told & what I shouldn't, disappoints me when I find out things 2nd hand.

Proves to me that he could possibly be & hide an affair from me & I would never know?

Scary thoughts - not good enough!

I have written in here every day since I got it, unusual for me. Once bubs is here getting time maybe a problem. But I will try, it's a good way to release feelings & tension I sometimes feel.

Funny how writing has always been that for me. Someday I should write a book of my life. Getting a depressing feeling over me, think its because I have a feeling that my birthday is probably going to be forgotten again. Craig will get so wrapped up with himself & cars, even work that he will just let it slip his mind. I will be hurt terribly if he does.

Kathy⁸⁴

Cunneen SC

Q. ...And yet, may I suggest that you considered yourself to be a good mother in terms of looking after a baby on a day to day basis?

A. Yes.

Q. You even noticed in other people, things when they were not good mothers didn't you?

A. I guess I had comments and opinions about it, yes.

Q. On the right-hand page there you say something about a lady called Megan, what's that, Fogo is it?

A. Yes.

Q. And you say that you weren't interested in talking to her. "She's fat, lazy, not much good at anything but, and not a good mother either."

A. It's an extreme view but--⁸⁵

⁸⁴ Exhibit 2-AZ, Diaries tender bundle [red pagination 7096-7097].

⁸⁵ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T735.31-46 [red pagination 744] (Cunneen SC).

11 June 1997 – Wednesday nite 9:45pm

Sad news for Craig & his dad & family, His grandmother Gam died tonight.

Even though craig says, she wasn’t very special to him I’m sure he feels sadness of some kind. He says that he has been thinking about her lately for some reason. I think he has slight ability to foresee whats happened or going to happen. Wonder if he’ll predict our coming birth in the same way, interesting.

Shouldn’t of eaten tea & chocolate tonight, now having pains in gut etc. Feeling very uncomfortable. Think that the bub is having another growth spurt, extremely tight, swollen & uncomfortable. Not good feeling at all. Feeling a little flushed as well.

Put bassinet in our room today, not sure why, but feels right to have everything ready.

Looks OK should work out okay I hope. Doesn’t seem to of intruded to much space wise. Craig can still get up his side of the bed okay.

I know its a selfish thought, but why is at that something always seems to happen so that my birthday pales to non existence & becomes less important. I’m 30 this year, another milestone age, and again I feel depressed, lonely & unaknowledged [sic].

I think its because, Mum & Dad now no longer aknowledge [sic] me on my birthdays it hurts. On my birthdays I have no family of my own that really cares about when I was born into this world. Except for craig & this year its now been marred by Gams death. It will be interesting to see who rembers [sic] me & who doesn’t.

None of craigs family will except Dad & Mary & they may still get to [sic] upset over Gams funeral to remember anyway, Mel might remember, work will probably let it slide.

If it wasn’t for my baby coming soon I’d [sic] sit & wonder again what I was put on this earth for, what contribution have I made to anyones life. Only person I think Ive made a difference too is craig. And times like this I can’t do anything for him so I fail there as well. 30 years, first 5 I don’t really remember, rest I don’t choose to remember last 10-11 have been filled with trauma, Tragedy, happiness, mixed emotions of all designs. Maybe from now on I’ll be able to settle a little. But no Immediate future brings. Turmoil, happiness, Sad memories, Happy ones, depression, great pride & it goes on. Life sux [sic], you can never figure it out is anyone meant too [sic].

Don’t think I’ll suffer alzimers [sic] disease, my brain has too much happening, unstored and unrecalled memories just waiting. Heaven help the day they surface & I recall. That will be the day to lock me up & throw away the key.

Something I’m sure will happen one day.

My problem is Im feeling like an obscurity of non existana [sic]. And it happens every birthday- Damn why have them.

Kathy⁸⁶

Cunneen SC

Q. [Portion of the entry read]

A. Yes, that paragraph is after going through some counselling, it was mentioned to me that I had a tendency to block a lot of my memories and I wasn’t remembering things I should’ve and I’m merely reflecting there as to something that was suggested to me that it may not be a good thing if all of those memories are ever unlocked and I could not know how to handle that or what would happen with me if that happened.

Q. Are you deliberately missing the point, the main point of that entry, where you are acknowledging that your conduct has been such that a day will come when you will be locked up and the key thrown away?

A. No, I’m reflecting and wondering whether I could end up in a mental institution if I was to recall all of the memories that I’ve ever had in my life.

Q. Madam you know very well that when someone uses the expression, “The day to lock me up and throw away the key”, means someone going to prison for a long time, doesn’t it?

A. I only know that because I happen to be in prison and I’ve been in prison for 16 years now.

Q. Yes well it’s a very common expression that you knew then?

A. No it would not have been an expression that I would’ve known at all back then.

Q. So just by chance you came up with an expression about, “That will be the day to lock me up and throw away the key”?

A. Because I’m referring to my psychiatric state there yes, lock up throw away the key, back then I’d heard of people that could end up in mental institutions if they didn’t gain the help they were supposed to with whatever psychiatric conditions or whatever was happening with them.

Q. What does “Throw away the key mean”?

A. I’m merely reflecting along the lines of after being through counselling and having it suggested to me that I have an awful lot that I’ve blocked and not remembered, that unblocking that could be detrimental to me in a psychiatric fashion and I’m merely stating there and pointing out an opinion that gosh I could end up in a mental institution and never get back out again, it’s a comment.

Q. “Something I’m sure will happen one day”?

A. If I ever unblocked all the emotions, feelings and memories that I probably have, I was wondering if it could.

Q. You said you were sure it would happen one day?

A. Well at that particular time I wrote that I probably thought so.

Q. You were sure that one day the law would catch up with you for killing our children, weren’t you?

A. That part of my diary there’s absolutely no mention of law, it is referring to a psychiatric state and I had no--

Q. Are you saying, “That will be day to lock me up and throw away the key”, has got nothing to do with the law?

A. Absolutely.

⁸⁶ Exhibit 2-AZ, Diaries tender bundle [red pagination 7100-7101].

Q. Come now madam, you were very worried that one day it would occur to people, even before Laura’s death, that the deaths of Caleb, Patrick and Sarah might be looked at again for suspicious circumstances, weren’t you?

A. No I wasn’t.

Q. You even show there I’d suggest to you, a guilty conscience about those things, a guilty conscience about something so serious that you felt deep down that you deserved to be incarcerated for your life?

A. No, absolutely not, that part of that diary doesn’t talk about that at all.⁸⁷

Morris SC

Q. This relates to some cross-examination at page 739 through to 740 in relation to that cross-examination by my learned friend Ms Cunneen, about the use of the expression “lock me up and throw away the key”.

A. Yes.

Q. You told his Honour that your reference to being locked up and throw away the key was due to mental illness concerns that you had?

A. Yes.

Q. Could you just read for his Honour, just let’s go through this entry at the top, “Sad news for Craig, his dad and family, his grandma Gam died tonight.”

A. Yes.

Q. So it was in the context of a death in the family, right?

A. Yes.

Q. Then you go on to say that Craig says that she wasn’t very special, but you were sure that he felt some sadness of some kind, and he said that he’d been thinking about her lately for some reason.

A. Yes.

Q. Just read on from there.

A. “I think he has slight ability to foresee what’s happened or going to happen. Wonder if he’ll predict our coming birth in the same way. Interesting.” Do you wish me to keep going?

Q. We don’t need to go onto the next bit because that’s a part of the document in which you shift from that thought to your dietary concerns, right?

A. Yes.

Q. Of course this was sometime around your birthday, wasn’t it, this death?

A. Yes.

Q. If we go to the next page in the - sorry, it’s on that same page. You then say, “I know it’s selfish thought but why is it that something always seems to happen so that my birthday pales into insignificance.”

A. Yes.

⁸⁷ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T739.24-740.41 [red pagination 748-749] (Cunneen SC).

[Next portions of the entry read]

Q. And is it fair to say that on this day when you made this entry, you were sitting there pondering your position on Earth, what it's all about and that maelstrom of emotions and difficulties you've had over all the years?

A. Yes, absolutely.⁸⁸

⁸⁸ Exhibit 4, Transcript of the 2019 Inquiry, 1 May 2019 T784.40-T786.25 [red pagination 794-796] (Morris SC).

26 June 1997 – Thursday nite 9:30pm

Well, finished work for good today. Probably could of gone a little longer, but figured that bub would need the rest as much as me. Now we'll have at least a couple of weeks to relax with feet up. And store some energy for our trip down labour lane. Have an idea that this labour will be fairly quick, will be painful if braxtons are anything to go by. But hopefully I'll handle everything Okay.

Starting to get excited now. Knowing that soon, pretty soon I'll be created our extension of Craig & my love for each other. A symbol of our unity, & strength. This time I'm positive with support from Friends etc & Craig this time everything will work out fine & the sight & visions of the future I've been having will come true this time. With the other 3 I never bothered to think of school & teenage years. Maybe because I always knew they'd never get there - but this one I see myself taking her to school & Craig doing homework etc with her. Therefore I assume I'm actually ready for the "Family Life" now where I wasn't before. Feeling secure, loved successful & wanted by Craig has helped me. And to a degree the fact that I don't wish to die with no one really knowing I was here. At least now I know my son or daughter will. If God or that elusive higher power doesn't take them away from me once they are older to punish me. I'm trying to do right this I hope that is received & understood.

Most of my life has been turmoil, sadness, anger etc. I think now I might of [sic] actually realised it was mostly of my own making & stupidity that made it that way. Now I understand truly that your life & how it turns out is in your control, no one elses.

Couldn't imagine my life without Craig now. He's part of me, my soul & being as I think I am of him. I do truly love him. And will & could never feel this way about anyone else.

Kathy tired time to sleep.⁸⁹

⁸⁹ Exhibit 2-AZ, Diaries tender bundle [red pagination 7108-7109].

Cunneen SC

Q. [Portion of the entry read] ...ma'am can that possibly have any other meaning than that you always knew you would never have the patience not to bring about those babies' deaths?

A. It has a lot of other meaning besides that. With the other three, Caleb was too young, Patrick was so sick we concentrated on the present and the now with him, or at least I did and with Sarah, just as I was starting to think of a future she died, it was taken away, with Laura I'm hoping that I can have that future.

Q. What did you mean by “Maybe because I always knew they’d never get there”?

A. "I always knew" is a separate thought again, and it is because of my depressed state and a doom and gloom aspect, I always just was expecting the worst, everything, I was always expecting the worst and "I always knew" refers to that.

Q. So you always knew, during their lives you always knew that each of those babies would die?

A. I always knew that I was going to have problems of some sort, I was always expecting a problem of some sort, it doesn't refer to always knowing that I'm responsible for their deaths in that way.

Q. You say, "Because I always knew they'd never get there", they'd never get to school and teenage years?

A. As I've just explained, the three different children, one was too young, Patrick was always sick and Sarah was taken away before I had the opportunity to be thinking of a future and her going to school.

Q. But Patrick did become sick but he still would have school and teenage years wouldn't he?

A. But at the time I was looking after Patrick, my whole instinct and care of him was in the now and the present and getting him through each day.

Q. And Sarah lived to nine months old?

A. She did and as I said, I was just starting to think of having a future with her.

Q. But you said you never did, you never bothered to think of it because you knew she and the others would never get there?

A. No that's not what it's meaning at all, "I always knew" is a doom and gloom aspect to the whole thing, when I say "I always knew", it's because I just constantly was expecting the worst situations or the worst scenario or the worst scenario or the worst whatever to happen, that what "I always knew" means, it's a separate thought to the rest of it. It is connected but it's a separate thought.

Q. You knew your moods wouldn't allow those children to live--

A. No.

Q. --during their lives?

A. No.

Q. That's what it means doesn't it?

A. Not what it means at all.⁹⁰

⁹⁰ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T740.43-T742.2 [red pagination 749-751] (Cunneen SC).

...

Q. Returning to 26 June 1997, at the end of the page on the right, you say now that:

“I don’t wish to die with no-one really knowing I was here. At least now I know my son or daughter will, if god or that elusive higher power doesn’t take them away from me once they are older to punish me. I’m trying to do right” - on to the next page - “this. I hope that is received and understood.”

What I suggest to you what you’re saying there is that you do intend to do your best with Laura, but you are worried that fate or god will take the child from you when she or he is older “to punish” you. That’s clear, isn’t it?

A. ...Yes, but I always felt I was being punished, in some form or other.

Q. Well, I’m suggesting that you are acknowledging there that, even if you get your child past infancy, she or he is at risk of fate or someone punishing you for what you did to your other children, your earlier children?

A. No. I - I’m thinking of the - when my child could be older and fate or whatever could interfere, and that child may have an accident and then die and be taken away from me.

Q. Yes, precisely, you’re worried that you think that you deserve punishment by that means, that is your child being taken from you by accident or other causes later in his or her life, because of what you did to your previous children?

A. But I didn’t do anything to my previous children.

Q. Well, you understand that I am suggesting to you that you did and these words are a reflection of your consciousness of that?

A. No. You know, I’m, I’m merely stating that, you know, I again am seeing the worst and, and having a fear, that even if the - if Laura reaches adulthood, that something could happen and she could still end up being taken away from me. And, yes, I did regard that as a--

Q. Yes, well, then you--

A. --if you’d let me finish--

Q. I’m so sorry.

A. --regard that as, as I did with all the others, a punishment for a failure as, as not being good enough in what I was doing.

Q. But I’m suggesting to you that this is different. The punishment comes when this child is older and the punishment is for what happened to the other children, that’s clear, isn’t it?

A. The punishment for, yes, the responsibility that I felt, yes. Whether my child would reach adulthood or not, I don’t think that that would make any difference to my responsibility feeling on it all.

Q. You see, then you say, “I’m trying to do right this” and may I suggest that, perhaps because the page required turning, you didn’t finish that sentence “I’m trying to do right this time”. Is that what that line means, or not?

A. I, I don’t know. I probably could have just finished the sentence.

Q. Well, it’s not a complete sentence, is it--

A. No.

Q. --if it's "I'm trying to do right this"?

A. Yes.

Q. So, do you accept that that really means, "I'm trying to do right this time"?

A. Possibly, yes.

Q. And, on the next page, "I hope that is received and understood". You are saying there, aren't you, "I hope that god, fate, karma, destiny receives this message and understands that I'm trying to do the right thing this time and, therefore, please don't punish me"?

A. Yes.

Q. And that's because--

A. I don't - I don't have anything further to say on that, because it all goes to my struggle I was having with blaming myself and, yes, I always knew that, you know, if anything ever happened then it was my fault and it was punishment, and how was I going to deal with that?

Q. Punishment is only relevant when you have done something to deserve punishment, isn't it?

A. And I had decided for myself that I deserved what I was getting throughout my life because things were failing, I was failing, and things weren't happening how I wanted them to be.

Q. You were saying to the higher power, whatever it was, "Please understand, I know I deserve punishment, but don't, because I'm doing the right thing this time. I am not going to kill this baby"?

A. No, it doesn't mean that at all.⁹¹

⁹¹ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T743.29-T745.20 [red pagination 752-754] (Cunneen SC).

2 July 1997 – 3am. Wednesday

Can’t sleep Tossin & Turnin. Getting very agitated now. Was very upset yesterday evening, crying & being totally emotional. Couldn’t think of anything else to do but cry. As usual, Craig wasn’t around when I could of done with a hug & some TLC. He never is lately. OR he reacts to my emotional outbursts as something he’s done & turns it around to sound as if everything is his fault.

Was just so & still am, scared is the word. I know that it won’t be long now. 4 weeks ? Sounds a fair amount of time but, he/she could decide to come earlier than that. If its got any sense it will, my poor bod isn’t handling it all well at all any more.

Must admit, I now have reached the “sick & tired” of being pregnant stage.

Lieing [sic] in bed seems to becoming such an effort now. Easier just to prop myself up & sleep sitting up. Except you then get a numb bum from doing that. Either side is now becoming uncomfortable, should hop in firmer bed except its had a curtain & Rod on it all week, might see if I can move it this morning & hop in. I think the soft mattress on ours is really most of my problem. But I think truth of the matter is I’m now just getting to big to comfortably lie anywhere.

Concerned that Craig was right about Mel. Think I might be spending to much time with her. She seems to be on a downer about herself at the moment, since she hurt her foot. Probably because she can’t walk as much as she used to. Poor thing, Something happened that has really affected her self image. Shouldn’t talk mines not that good either. My effort to watch my weight has been a failure. If I’d done as I was supposed to I wouldn’t have put on an extra 7-8kg it would of only been 3-4. I have been using this pregnancy as an excuse to get away with all my old eating habits.

Today, its got to change. Small meals are better at the moment any way, no more sugary stiff, marg, salt etc chips, lollies, pies etc are out again. Start eating snacks like, apples, carrots, crackers wit stuff on it etc. I know what to do. So there is no real excuse except my laziness. I have 4 weeks left! To provide healthy food, energetic food for both baby & me. Would only benefit me surely & possibly help me to have a quiet, healthy baby. It will be my fault when I have a baby that required sweet sugary things to keep it quiet, because I have addicted it to it already.

Well that’s unloading. Will try for some sleep now.

Today will do housework, clean bathroom cupboard, iron, change sheets on spare bed, clean shelves out. Check my hospital bag & make sure I have everything well need – all this depends on energy level. Arvo sleep is becoming a habit, but have decided to listen to this bag of bones of mine & not push. If tired out I rest & sleep.

Craig painted my kitchen. Effect is brilliant. Will be even happier when he finishes rest of house. Hopefully his having next week off to do it all. Can’t wait much longer than that. Or it will have to wait a quite a while before we’ll get another chance.

I already know that he won’t take any time off. My not working has hit him hard, all he sees is grand less in his hand / bank a year now. He’s already starting to worry about it. Like I stressed that he would. I’ll have to accept, he wont be as much support to me as I thought he might. Change is a coming. A big one. Well just have to take day by day, hour by hour & cope. Hopefully everything will prove to be different this time.

It has to be. I have to be!

Kathy.⁹²

Cunneen SC

Q. [Portion of the entry read]...My only question is that your major priority, even over health, was to have a “quiet” baby?

A. No, I - that passage is about me being concerned of my health and making sure at the pregnancy stage I was the healthiest I could possibly be.

Q. Yes?

A. I was addicted to sugar and would eat a lot of it and I’m worried that, you know, would me being addicted to sugar affect my child in some way?

Q. And quiet was slightly more important than healthy?

A. No.

...

Q. At the end you say, “Hopefully, everything will prove to be different this time. It has to be. I have to be, Kathy”?

A. Yes, and that’s the amount of pressure I was putting on myself.

Q. Yes, but it’s the message to yourself that the survival of the baby about to be born was about you being different, wasn’t it?

A. To have the family that I wanted and to have a child was everything to me, and that is me putting a lot of pressure on myself and, yes, stating that it has to be this way, because I certainly could go through what I’d already been through three times before.

Q. And the thing that had to change was you?

A. I believed at the time, as I said, I took the onus of responsibility all on myself. So, yes, I was trying to fix everything, so, yes.⁹³

⁹² Exhibit 2-AZ, Diaries tender bundle [red pagination 7109-7112].

⁹³ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T745.47-T747.7 [red pagination 755-756] (Cunneen SC).

12 August 1997 - Wednesday 6.30pm

God, its all over, she’s here. Fairly okay labour. I think I handled it okay.

Have a real bad case of piles, & a really sore coxis bone, but other than that physically everything seems okay. Bowels don’t seem to open much. But I suppose they’ll return to normal sooner or later.

Been rather emotional last couple of days. Mixed feelings not sure where to start. Relieved she’s here, apprehension that she is. Worry & concern if my decision was right. But then I look at Craig & know I did the right thing.

Am just letting myself cry if I want to this time if helps. If I’m not strong like everyone expects me to be this time & I tell people. Craig is home with me, will be so different when the time comes for him to be gone all day.

That will be my test but I hope by then I’ll be able to walk okay & get back to my exercise. It will make me feel better I’m sure.

Well enough for now.

Kathy⁹⁴

⁹⁴ Exhibit 2-AZ, Diaries tender bundle [red pagination 7131].

Maxwell KC

Q. This is 12 August 97, so just the second page towards the top, this is, what are you still in hospital with Laura, this is five days after she’s born or are you at home or what?

A. I don’t remember.

Q. Well it’s shortly after she’s born anyway, five days it appears, you may be in hospital or you may be at home, correct?

A. Yep.

Q. You say “Craig is home with me, will be so different when the time comes for him to be gone all day”, right?

A. Yes.

Q. “That will be my test but I hope by then I will be able to walk okay and get back my exercise”, see that?

A. Yep.

Q. You see, in entries that I’ve taken you to just shortly, not too long before this, you are talking as though Craig wasn’t much use to you at all, even when he was there, is that correct?

A. At times yes.

Q. So even if he’s there he’s not helping you much, is what you’re saying?

A. That’s how I felt yes.

Q. So why will it be your big test when he’s not with you?

A. Because of the apprehension and fear and all those overwhelming thoughts that I was having by the time Laura arrived.

Q. But it was no use to you anyway you were saying, so like how does it make any difference if he’s not at home with you?

A. Because I had a fear of being alone with my child.

Q. I suggest to you the fear was that you might do something to the child if Craig wasn’t there at home to intervene, what do you say about that?

A. No, you’ve just said Craig whether he was there or not makes no difference to me, my fear is and always was, especially by the time I was preparing for Laura, that being alone with her in the past had always equalled something tragic happening.

Q. But you weren’t always alone in the past, there were two occasions when Craig was with you, is what you’ve said?

A. Doesn’t change the fact that I felt alone.⁹⁵

⁹⁵ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T659.17-T660.9 [red pagination 667-668] (Maxwell KC).

25 August 1997 – Monday nite 8.30pm

Off to bed, feeling sick. Sick, because I am really tired, must try & nap in the afternoon, if Laura will let me or a sleep in or something.

Scary feelings, I've realised I actually love her & have bonded with her, wish to protect her etc. Maternal instinct, is what they call it. I now know I never had it with the others. Monitor is a good idea. Nothing can happen without the monitor knowing & since I'm not game enough to not plug it in, because they'd want to know why I hadn't. Everything will be fine this time.

Kathy⁹⁶

⁹⁶ Exhibit 2-AZ, Diaries tender bundle [red pagination 7132].

Cunneen SC

Q. [Portion of the entry read]

A. It was, it was a scary feeling. I had - Caleb I was a first time mother so I was struggling with did I bond or not? Patrick was - I had bonded with him and then was so intent on his survival and day to day care that I didn't really think of much else. Sarah I was restrained in my bonding with her because I'd already lost Caleb and Patrick, but I did in the end, and with Laura, yes, I was feeling an immediate bond with her and it was the first time that I'd felt that.

Q. In fact you say not only did you - you don't say there, "I know my maternal instinct didn't arrive for several weeks or months after the others", you say "I know now I never had it with the others".

A. Because the feeling was extremely strong with Laura so I just merely commented in there that I didn't believe I had it with the others.

Q. Then you're talking about the monitor being a good idea, and that's about Laura having had a device which was connected to something at the Children's Hospital so that her life sounds, heartbeat, respiration, whatever it was, could be recorded at the hospital, is that right?

A. Yes, and it was downloaded, or it was connected to her by electrodes. Once we brought her home it was downloaded back to a doctor at the hospital, yes.

Q. Yes. You said, "Monitor is a good idea. Nothing can happen without the monitor knowing and since I'm not game enough to not plug it in because they'll want to know why I hadn't, everything will be fine this time."

A. Yes. When we first brought her home, the monitor was a good idea, and yes, I didn't wish to unplug it because yes, they'd want to know why. If there was no downloading they'd want to know why, what was going on.

Q. You don't say there, "I'm not game not to put it on in case Laura dies suddenly", you say "I'm not game not to put it on because they'd want to know why I hadn't."

A. Yes, it's an observation. An observation if I don't use this monitor people will want to know why.

Q. I would suggest to you that you knew that Laura was not in any danger of Sudden Infant Death Syndrome or other natural causes death, and the only reason you used the monitor was to keep them happy, people watching at the hospital or the family, or someone else, happy and reassured that Laura was on the monitor.

A. No.

Q. If you thought that she needed it, that there was danger, you would say "I'm not game not to plug it in because I don't want her to die, I don't want to lose her", wouldn't you?

A. Yes, absolutely.

Q. But you're saying there, "I'm not game not to do it because they'll want to know why".

A. Because that's an observation, they would want to know why.⁹⁷

⁹⁷ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T747.9-T748.14 [red pagination 756-757] (Cunneen SC).

20 September 1997 – Sat morn 3.15am

Sleep, who needs it. Yes I’m getting a little irritable now.

This is my punishment for the others to be continually woken up, because this time we know that we have a child with a sleeping disorder. Even though I’m sure they are all false alarms, the thought is still scary. Must admit the only thing this has taught me is how to go to sleep myself quickly. Except for this morning. Every little sound is disturbing me. Wonder if this could lead to me becoming an insomniac.

Am getting very stressed, because I can’t depend on Craig for any real help or support.

He doesn’t hear her or the alarms & I can’t even trust & depend on him to look after her properly. He refuses to bother to learn anything about her. He doesn’t pay attention when feeding her, hasn’t changed a nappy, doesn’t do washing or ironing only wakes up once in a while. His life continues as normal. Work, come home & I look after him, he doesn’t even cook tea every now & then unless I ask him to. And then it is begrudgingly.

What do I do. The only break I get is when I go to aerobics – 3½ hours a week. But there one times, is not enough.

I know my feelings are normal. I’m just venting. But at the moment, I sometimes wish I hadn’t made the decision to have her but then all I have to do is look at her and all that melts away.

Well I just pissed Craig off, he’s up and out of there now. Complaining he can’t sleep. I have to keep disturbing him because he snores & grinds teeth badly.

How dare he complain to me about lack of sleep – what the fuck would he know. Think he’ll have to sleep in other room. Just so He’s not disturbed- selfish prick. Well now I know where I stand. Craig is refusing to help & hasn’t even attempted to in any way. Just wants me to bear all the stress, so he can keep selling his cars & making money. I suppose the stress of having to provide for us is real, but its nothing compared to this.

Only real friend that helps me is Mel & even then I feel bad asking her too. What do I do. Well someone stirring. Slowly – will probably wake for a feed soon.

Kathy.⁹⁸

⁹⁸ Exhibit 2-AZ, Diaries tender bundle [red pagination 7132-7134].

Cunneen SC

Q. [Portion of the entry read]...the monitor which you were using with Laura was something that gave many false alarms, was it not?

A. Yes.

Q. So rather than relieve your stress, is it fair to say [Laura’s sleep monitor] added to your stress--

A. Yes.

Q. --because you had to get up when it went off as well as when Laura woke up?

A. Yes.

Q. Also in that area there you say, in relation to Craig, “How dare he complain to me about lack of sleep. What the fuck would he know. Think he’ll have to sleep in other room just so he’s not disturbed. Selfish prick.” So we get there an insight into the sorts of things that you felt in the early hours of the morning when you were awake without help?

A. Yes.⁹⁹

⁹⁹ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T748.16-T749.12 [red pagination 757-758] (Cunneen SC).

23 October 1997 – Thursday nite 9.30pm

Very tired today, I know it’s because my first period after 12 months has finally happened & I remember why being pregnant was good. Never having that depressed feeling come over you.

Laura is well, she’s so much fun now, talking & really quite amazing to watch how she learns & copes & communicates things every day she’s different.

She sleeps pretty good during the night too. Hell of a lot better that Sarah ever did I think that why I seem to be coping better this time. Sure I’m really tired by the evening. But not too bad during the day. Also exercising is helping me too release stress & energise me during the week, I was fat & lazy last time. I really not ready bit I am this time.

Mel helping me out works too.

Am going to take her with me to the gym next week. See how she adjusts to that. Hopefully she’ll get used to going & Ill be able to go every day then, well at least 5 times a week.

Not doing too well on my diet side though. Only thing lacking is my discipline, better find it soon or all will be a waste of time.

Bit worried that Craig & I aren’t spending available time together as a couple – hopefully once we start sex again.

Kathy¹⁰⁰

¹⁰⁰ Exhibit 2-AZ, Diaries tender bundle [red pagination 7137].

Cunneen SC

Q. [Portion of the entry read]...So you’re saying that because you’re able to exercise you can get rid of stress and you feel more ready for your experience as a mother compared to the last time, which was when you had the baby Sarah?

A. Yes.¹⁰¹

¹⁰¹ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T749.35-47 [red pagination 758] (Cunneen SC).

25 October 1997 – 10 pm Sat nite

John & Sue stay nite. Good night so far all heading for bed soon.

Just watched video of Sarah, little upsetting, but she did some funny things. Made us laugh, think John was a little upset but he hid it well.

I looked at it, but have to be honest & say I cherish Laura more, I miss her yes, but am not sad that Laura is here & she isn't. Is that a bad way to think, don't know.

I think I am more patient with Laura. I take the time to figure what is rong [sic] now instead of just snapping my cog. Also she is a far more agreeable child & easily flows most of the time.

Not sure how Craig feels about Sarah now. Know that even though he tried, he loves Laura just as hard - wasn't prepared for that. Thought he could remain stand offish, but couldn't.

I think Laura is beautiful compared to Sarah — she was cute but Laura has a special look about her. Her slight difference in looks gives her a beautiful face, not just pretty, cute & cuddly, gorgeous & beautiful. Well so far anyway.

Looking at the video, Sarah was boyish looking. Laura has definite feminine features, they are chalk & cheese. And truthfully just as well.

Wouldn't of handled another one like Sarah.

She saved her life by being different.

Kathy¹⁰²

¹⁰² Exhibit 2-AZ, Diaries tender bundle [red pagination 7138].

Maxwell KC

Q. This is October 97. At this stage, Laura's about two and a half months old, right?

A. Yep.

Q. And Sarah had died almost four years earlier on 30 August 1993, right?

A. Yep.

Q. Do you see, about halfway down the page, where you've said, "To be honest" - and say - I think you'd earlier, or that night, you'd watched a video of Sarah. Correct?

A. Yes.

Q. And you say then, "I looked at it, but have to be honest and say I cherish Laura more". You see that?

A. Yes.

Q. "I miss her, yes", you're referring there to Sarah?

A. Yes.

Q. "But am not sad that Laura is here and she isn't", you see that?

A. Yes.

Q. By the "she isn't", you're referring to Sarah?

A. Correct.

Q. So, you were not sad, on that night, that Sarah was dead?

A. No, I'm merely reflecting.

Q. See, what you've said - well, just look at it, because these are your words?

A. Yes.

Q. You say, "I miss her" - that's Sarah - "I miss her, yes, but am not sad that Laura is here and she isn't". So, what I'm saying to you is, there you're saying you're not sad that Sarah's not with you anymore?

A. No, what I'm saying there is, if Sarah had been with us, Laura wouldn't have. So, what I'm saying is, I'm cherishing Laura, she's with us now, and I can't be too upset that Sarah isn't.

Q. What, because Laura is?

A. Yes. Yeah, if Sarah had been alive, we may not have had Laura.

Q. But you see, there was plenty of time to have Laura, even if Sarah had lived, because it was four years after?

A. That's correct, but I also went through a time after Sarah died where I decided I was not having any more children.

Q. You go on to say, "I think I am more patient with Laura". You see that?

A. Yes.

Q. Does that mean you were less patient with Sarah?

A. That is reflective to me always thinking I'd done something wrong.

Q. Yes, well, whether it is or not, it seems to be saying that you were more patient with Laura than you were with Sarah?

A. Because at the time, I believed that, yes.

Q. You say, “I take the time to figure out what is wrong now, instead of just snapping my cog”?

A. Yes.

Q. What did you mean by “snapping” your “cog”?

A. “Snapping my cog”, to me, could have been simply as even showing a slight frustration.

Q. Well, could it have been more than “a slight frustration”?

A. No.

Q. Was there ever a time when you say that you almost purposely dropped Sarah on the floor?

A. I didn’t believe that that was Sarah, I thought you were referring to Laura there. Are you referring to Laura or are you referring to Sarah?

Q. Sarah.

A. Sarah. I don’t recall saying that..(not transcribable)..--

Q. You don’t recall. But you think you might have said it about Laura?

A. Mm.

Q. You say, in that entry and just going back, “I’m not sad that Laura is here and she, Sarah, isn’t. Is that a bad way to think? I don’t know”?

A. I’m questioning myself. It’s something I constantly did.

Q. Didn’t you know the answer to that question?

A. I didn’t know the answer to anything. I didn’t know the answers to why--

Q. But this is a specific question that you’re posing to yourself as the mother of Sarah, who had died, and of the mother of Laura, who was still alive, and you’re saying you’re not sad that Laura is here and Sarah is not here?

A. And--

Q. And then you say, “Is that a bad way to think?”

A. Yes, because, as I said, I was reflecting that if Sarah had been around Laura may not have been. So, I was therefore questioning was I even thinking straight and was that a bad way to think.

Q. I suggest to you, Ms Folbigg, that it is obviously bad for a mother to think she’s not sad that her dead daughter is not now alive. It’s obviously a bad way to think. What do you say about that?

A. I don’t think it’s obvious at all. There’s nothing obvious in my diaries, in total.

Q. Then, if we go to the end of that entry of - it’s the next page, you say at the bottom of that page, “Wouldn’t have handled another one like Sarah. She saved her life by being different”. Do you see that?

A. Yes.

Q. Now, these are diary entries that you've thought about, because they've figured prominently over the years in relation to you. So, you're familiar with that, is that right?

A. Yes.

Q. Aren't you saying there that if Laura had been like Sarah you wouldn't have handled it?

A. "Wouldn't have handled another one like Sarah", refers to Sarah in particular and I'm also, at the same time, reflecting the different style in parenting which, which I was trying to do. Sarah, I felt at the time that, I didn't handle very well. I was constantly doubting my ability as a mother. It was a constant thought.

Q. You say that Laura "saved her life by being different" to Sarah, is that right?

A. Yes, and that alludes to just the difference in my children. But it's simply just the difference in their characters and how they were.

Q. Because you had difficulties with Sarah, didn't you?

A. I had a sleeping issue with Sarah, yes.

Q. You felt that you were sleep-deprived with Sarah?

A. At times, yes.

Q. And that you had a "battle of wills" with Sarah, I think you've described?

A. "Battle of wills" was a term that was used by someone else, but, yes.

Q. It was a term that you have used in your diaries?

A. After it was mentioned by someone else that they thought that's what it was, yes.

Q. But it's a term that you wrote down in relation to your relationship with Sarah, that it was a battle of wills between you. That is correct, isn't it?

A. At time, yes.

Q. And because you didn't have that same battle of wills with Laura, that saved Laura's life, is that correct?

A. It's a belief I had at the time, yes.

Q. So, at the times that you were having a battle of wills with Sarah, were those the times when you "snapped your cog"?

A. No.

Q. Not--

A. No, not all, no.

Q. Not at all?

A. I wouldn't say not at all but, no.

Q. Was there ever a time when you were sleep-deprived and battling wills with Sarah that you "snapped your cog" as you refer to?

A. As in, being frustrated with her lack of sleep of routine, then, yes.

Q. Well, see, frustration is something that probably goes on in your mind, isn't it? It's a state of mind, is it not?

A. Frustration? Yes, yeah.

Q. "Snapping your cog" suggests some kind of action, doesn't it?

A. Not to me.

Q. Doesn't it suggest losing control?

A. It's a loss of control, yes. "Frustration", "loss of control", "anger", "snapping cog", all these references I don't differentiate between.

Q. But they're not one and the same concept, are they?

A. I believed at the time they were.

Q. You see, what we're talking about is the meaning of your use of words in these diaries, isn't it?

A. If you like, yes.

Q. And what I'm suggesting to you is that there's a distinction between feeling frustrated and snapping your cog. What do you say about that? They're different concepts, is the point I'm trying to put to you. What do you say about that?

A. At the time, I didn't believe - I didn't differentiate between them. If I was slightly frustrated, that equalled me being out of control in some fashion, which equalled me snapping my cog. There was no differentiation for me.

Q. I suggest to you that you used the term "snapping your cog" as a mitigating term for something that you had done to Sarah in order to stop her living. What do you say about that?

A. No, I won't agree with that at all.¹⁰³

Cunneen SC

Q. [Portions of the entry read]...You are making the direct comparison the way you were with each of your daughters and saying really, it's much easier with Laura because she's a more agreeable easier going baby than Sarah?

A. Yes.

Q. Then you say on the right-hand page: [Portion of the entry read]

A. I'm merely comparing my children, the differences between them, and they were chalk and cheese.

Q. Yes, so you say, and first of all you compared their agreeability and easy going nature. That's right isn't it?

A. Yes.

Q. Then you compared their faces, the looks of their faces?

A. Yes.

¹⁰³ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T635.9-T638.50 [red pagination 643-646] (Maxwell KC).

Q. And then you said that they are chalk and cheese and that must mean not just looks but personality does it or does it mean just--

A. Yes.

Q. --looks?

A. No, personality you know, it must be remembered though that Sarah was only eight months old. Her personality was just starting to develop and she had a very cheeky personality.

Q. Well, Laura at this stage was only two months old wasn't she?

A. Yes, and I was foreseeing that you know, I'm commenting more on her looks there rather than her personality but yes, I am saying that they're two different children. They're chalk and cheese.

Q. But if you were comparing two little girls' faces or appearances do you say they're chalk and cheese or more to the point I'm suggesting to you you're talking about their nature being chalk and cheese aren't you?

A. The nature as in referring to how easy a child Laura seemed to be at two months old, then yes.

Q. Yes, that's it then, how easy the child was?

A. Yes.

Q. One was very easy and one was very difficult, is that right?

A. Not very difficult.

Q. Well chalk and cheese sounds like two ends of the spectrum doesn't it?

A. Sarah was frustrating to me and I've already admitted that, as in, being able to have her fit a routine and sleep that I thought she would need and myself included. At two months of age Laura was already proving to have been totally different to that, that she didn't, that she settled easily and calmly and there was no issue in that regard. So, yes I guess they're two ends of the spectrum so I'll agree, yes.

Q. Indeed, Sarah was so difficult that you said of her, "Wouldn't have handled another one like Sarah."

A. Because again, I was doubting my abilities as to whether I would have been able to handle someone who was difficult.

Q. Well, it goes further than that doesn't it? You would have done something about a child who aggravated you and was frustrating you as much as Sarah did?

A. No.

Q. That's what you mean isn't it?

A. No.

Q. Well, why do you then say, "She saved her life by being different."?

A. That's a mystical representation. That's me reflecting on my beliefs as in karma and the children talking to each other and God and all of those sorts of beliefs that I had.

Q. That’s a fanciful answer which cannot be believed, I’d suggest to you.

A. It’s of no concern to me whether it can or cannot be believed. It was my belief at the time when I wrote this diary.

Q. You were saying there in the plainest of terms that because those two little baby girls were so different in their nature that the second one, Laura had saved her life by not being as frustrating to you as Sarah was?

A. No, that’s not what I’m saying at all.

JUDICIAL OFFICER

Q. Can you explain to me what you were saying? Do you say, “saved her life by being different” and you’re now saying that’s not what you were saying at all.

A. It’s--

Q. Can you explain to me what you were saying?

A. That sentence your Honour is where I switched from, I’ve been talking about comparing my children; how easy one is to the other and then I switched and said “she saved her life by being different” as in the thought of my beliefs when it came to a spiritual belief or clairvoyant sort of belief and that the children would have spoken to each other and, and all that sort of thing and but yes, Sarah, Laura being a bit different could, could save her life. I’m meaning could save her life, not that it did save her life because it didn’t.

Q. I’m sorry, I’m not familiar with the clairvoyant beliefs or what you’re talking about. Can you explain it to me in some way?

A. At the time, when writing these because I was searching for questions so hard and always wanting to know why I had a belief that fate, karma, God, a spiritual thing going on that there was another reason as to why all this was happening. And when I went to a clairvoyant, which was mentioned in the last 24 hours, that clairvoyant gave me the peace that my children and Sarah were happy and it was a belief that just was ingrained in me; that there was other things going on beyond my control and all the answers that I was seeking all the time, “she saved her life by being different” is my hope and dream that Laura being different would have saved her life but in the end it didn’t.

Q. Are you saying to me that you believe that there was some supernatural power that took the other three children away from you and you were concerned that that same supernatural power would take Laura away from you, and that she saved her life by being different?

A. Yes.

Q. On that basis?

A. Yes, along those lines, yes your Honour.

Q. Thank you.

CUNNEEN SC

Q. Or madam, were you blaming Sarah for her own death?

A. No.

Q. Laura had so far saved her life but Sarah had lost her life because she was different from Laura. That follows doesn't it?

A. No, not at all.

Q. It wasn't your fault. It was Sarah's fault.

A. No, no, it wasn't Sarah's fault. It wasn't my fault. I didn't know why.¹⁰⁴

¹⁰⁴ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T749.49-T752.49 [red pagination 758-761] (Cunneen SC).

29 October 1997 – Wed nite 9.48pm

Yes, heading to bed again. Always pooped by now.

Laura didn't sleep during day much at all. Hopefully will sleep tonight instead. Put her off until 3am this morning. Think she'll slowly start increasing it until she sleeps all night. Will probably shock me the night she does.

Hope Mel hasn't taken me taking her to the gym the wrong way. I just thought if I take her with me I can go to a class everyday & get back into shape. Not working so far because I keep eating wrong stuff & too much of it.

When will I learn & get serious about it all. Maybe my eating chocolate is a depression or stress related thing. Wonder if I starting having sex whether I'd feel better about myself & get serious about losing my excess kg or is it because I subconsciously think that I'm over 30 & a mother so I shouldn't be worrying about it so much. I am, what I am, but I can at least be the best looking 75kg person in town. The gym is taking what I've got up at least. My legs now have some shape not stumps so it's not all bad. At least a guy will still look at me, until they realize how big I really am. But who needs all that anyway Right?

Felt a little angry towards Laura today. It was because I am & was very tired. That's why I decided to have an easy day, except for a walk- no gym. Obviously my body decided enough to the week. Might go Friday. Will see, if so, just for the ½ hr step class not the rest. Too long a day & too much every [sic]

Wonder if Craig was serious about trip to Melbourne. Would be great to see Lea's face, but also scary, because it's a little to similar to what we did with Sarah. But Laura's different. Totally she doesn't push my Button anywhere near the extent she did. Which is good for her is all I can say.

Well better try for some sleep. She'll, Laura will stir soon

Craig hasn't hit me up lately? But then again, I'm not giving any signals. Crossed wires I suppose.

Kathy¹⁰⁵

Maxwell KC

Q. [Portion of the entry read]...So you say, “But Laura’s different totally. She doesn’t push my button anywhere near the extent she did.” So there the “she” is Sarah, correct?

A. Yes.

Q. Then you say, “which is good for her is all I can say”.

A. Yes.

Q. By that do you mean it’s good for Laura that she doesn’t push your button to anywhere near the extent that Sarah did?

A. It’s simply comparing my children and their characters and style.

Q. What did you mean by “which is good for her”?

A. Because it kept her mother calm and that was good for her.

Q. So the mother wouldn’t lose or snap her cog in other words?

A. Her - talking of third person - I felt at the time with Sarah that I didn’t handle things. This is also a diary that’s in retrospect thinking over things with a constant doubt to my ability of being a mother and with Laura being such a different child where she was quieter and she was calmer, I felt that that made a difference.

Q. Do you say that you didn’t smother Sarah, you didn’t kill her? That’s your position isn’t it?

A. Absolutely.

Q. Do you say that at the time you wrote these diaries you missed her desperately?

A. I miss all my children all the time.

Q. But I’m asking about Sarah. Do you say that at the time on 29 October 97 you missed Sarah desperately?

A. Yes.

Q. This is a child you say that died in an unexplained way but had nothing to do with you, correct?

A. Yes.

Q. You didn’t kill her is what you say?

A. No.

Q. But yet here you are four years after her death speaking about her, noting characteristics of her that pushed your button, that snapped your cog. Do you see anything kind of heartless about that?

...

A. No, as I’m simply - this is simply a diary where I’m reflecting and comparing and Sarah, it must be noted that Sarah was also the child I had the longest at the time, so she was the only child that I could even compare Laura to in any way whatsoever.¹⁰⁶

¹⁰⁵ Exhibit 2-AZ, Diaries tender bundle [red pagination 7140-7141].

¹⁰⁶ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T639.2-T760.14 [red pagination 647-648] (Maxwell KC).

Cunneen SC

Q. [Portion of the entry read]...When you felt, “a little angry towards Laura today”, what was it that made you angry?

A. It was just a comment on the fact that I was very tired and getting a little annoyed.

Q. There was nothing that the child did to make you angry?

A. No.

Q. It was just because you were tired you got angry with her?

A. I wouldn’t say I got angry. I, yes, all right yes. I might have got a little terse with her and a little annoyed so, and to me as I’ve said before, anger, terseness, crankiness all that sorts of things all means the same to me.

Q. You think that it’s nothing that she did, because you felt angry you directed it to her?

A. It’s simply, I’m simply stating a feeling that I had. Not that it was directed at her.

Q. Well, you said, “felt a little angry towards Laura.”?

A. But not directed as in an action. I’m getting the feeling that you’re saying I directed it as in an action in some way.

Q. Well, you’re not saying, “Gee I felt angry all day today.” You, yourself, have said it was towards Laura and I’m just asking you whether it was in response to something that Laura had done or whether you were spontaneously angry towards that child?

A. I was extremely tired and I’m simply saying that I’m angry about that, annoyed about that and what Laura would have done is inconsequential. It was just that I was extremely exhausted and tired.

Q. Why do you put Laura into it?

A. Because of caring for her and I may not have slept well that night and she may not have slept well that night. Anything could have been going on and I’m tired and I’m merely stating that.

Q. We must draw from that that if you are tired, if you haven’t slept then you may and have become angry towards your child for no reason to do with them at all?

A. No. I, I, I’m, I’m simply stating there that I’m tired and looking after a baby is, can be a tiring thing. And that’s all there is to it. There’s, there’s nothing complicated about it.

Q. Well, there’s nothing complicated about the fact that looking after a baby can be a tiring thing. I’m asking you about feeling angry towards Laura because you’re tired. Is that what you’re saying?

A. (No verbal reply)

Q. Are you blaming Laura for being tired?

A. No. I’m blaming myself for being tired.

Q. But you are acknowledging there - are you giving yourself a warning there that you felt a little angry towards Laura and you’d better watch it or something bad might happen?

A. No.

Q. You wanted to keep a record for yourself of when you'd had this feeling of anger towards her, didn't you?

A. No.

Q. Because you knew what to look out for with the dark moods?

A. No, that's, no.

Q. Further on there you say, "Wonder if Craig was anxious about trip to Melbourne. Would be great to see his face but also scary because it's a little...too similar to what we did with Sarah. But Laura's different. Totally she, she, totally, she doesn't push my button anywhere near the extent she did which is good for her is all I can say." You're saying there that Laura used to push your buttons is that right? Sorry, Sarah used to push your buttons and Laura doesn't do it to any much the same extent?

A. Yes, I'm talking about--

Q. How did Sarah push your button?

A. It was simply my frustration level would exasperate the situation with her when she wasn't sleeping and I became overtired.

Q. Then you would feel anger towards her?

A. Not anger towards her, anger towards myself that I wasn't being capable of meeting her needs and being able to figure out why she was so overtired and not being able to put her to sleep, yes.

Q. Something bad would happen to Sarah if she pushed your buttons would it?

A. No.

Q. Well, why do you say that the fact that Laura didn't push your buttons anywhere near the extent is "good for her is all I can say"?

A. Because it was good for her. We were having a nice calm life. She was a calm baby and everything was going very well. It was good for her.

Q. You mean there, don't you, it's good for Laura that she's not like Sarah because she would wind up, "pushing my buttons to the extent that I would do something to end her life."?

A. No, not at all.¹⁰⁷

¹⁰⁷ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T753.1-T754.50 [red pagination 762-763] (Cunneen SC).

3 November 1997 – Monday avo 6pm

Why is it when I’m so tired I’m feeling sick & shitty. I cant sleep, very depressed with myself at the moment. Feeling deprived of my freedom. I know that’s the price that you pay for having a baby, but I’d not be human if it didn’t get me down a little every now & then.

It’s because my release & enjoyment of the gym’s been taken away. I have to take her with me most times now, which means I cant enjoy myself & turn off like I usually do because she’s there & I worry about her.

Trick is I need to learn to have confidence in whoever is caring for her. The Cykik [sic] guy was right I truly am too over protective of her.

I need to get my life in order & my act together. Having her with me is just a side _____ that I have to get used to and enjoy having her being there waiting for me. Look to the future – it might only be a few years & I’ll have the days to myself again. When pre school starts, which is only 2-3 years away. I’ll have 2 days to myself. So realistically it’s not that long.

My inability to control my bad eating habits is driving me downhill as well. What I’ve eaten today is enough to power me all week. I just don’t seem to learn.

I need to set my goal, realise that sensible eating & hard work are the only way its going to happen. I say this over & over again, but this time I must, for my sake, Craig’s, Laura’s, mean it.

Starting tonight now. Smaller meals, no sugars, fats, oils, milks, cheese, all that stuff. I’ll do a test, see where I get to my the time or girls nite out happens. It will either work or I’ll of lost a few kgs at least or it wont & I’ll have to accept that this is it for me. Will have to go to the gym at least 3 times a week & really try for that walk each day if possible.

Someone’s awake, got to go. Lost it with her earlier. Left her crying in our bedroom & had to walk out. That feeling was happening & I think it was because I had to clear my head & prioritise. As I’ve done in here now.

I love her, I really do, I don’t want anything to happen.

Kathy¹⁰⁸

Cunneen SC

Q. ...Things aren’t so good that day because you say, “Very depressed with myself at the moment. Feeling deprived of my freedom. I know that’s the price that you pay for having a baby--” and so on. “Getting down” and so forth. You’re saying that, you’re commenting on a difficult day that day I expect are you?

A. Yes.

Q. Could we go onto the next page please. On the right-hand side of the page halfway down the page you say, “Someone’s awake, got to go. Lost it with her earlier. Left her angry” - no, sorry - “Left her crying in our bedroom and had to walk out. That feeling was happening. And I think it was because I had to clear my head and prioritise” - is that the word?

A. Yes.

Q. “As I’ve done in here now, I love her, I really do, I don’t want anything to happen.”

A. Yes.

Q. That feeling was happening ma’am, you are referring there to the dark moods that you’d experienced with the other children weren’t you?

A. I’m referring there to me not being able to understand what she needed and my frustration level raising.

Q. Well the feeling that you’re referring to is your feeling isn’t it?

A. Yes.

Q. Something inside you?

A. Yes, of me not being able to figure out what it was that she wanted, she was upset and crying and I couldn’t figure out why and the crying had become an all-day thing and incessant and losing it and leaving her on the floor in the bedroom was an exasperated frustrated feeling where I couldn’t figure out what it was she wanted and I walked out thinking okay let’s go outside, let’s prioritise, breathe and I can maybe help this child.

Q. So you succeeded there, because you did love Laura and you didn’t want anything to happen to her?

A. Yes.

Q. You walked away and left her so that nothing bad would happen to her?

A. No, that’s not correct.

Q. But you said “That feeling was happening”?

A. Yes, my upset feeling--

Q. “That feeling”?

A. --of not being able to figure out what my child wanted and how I could help her.

Q. It was that feeling that you had hoped before Laura’s birth to be able to identify when it was growing within you?

A. No.

¹⁰⁸ Exhibit 2-AZ, Diaries tender bundle [red pagination 7141-7142].

Q. Growing inside you?

A. No.

Q. In your head?

A. That comment in that diary is in reference to a particular episode where I was struggling, not understanding how I could help her, wasn't meeting her needs I got frustrated like every other mother would to leave her to it for a minute, came back in and helped solve the problem.

Q. You say you lost it with her, did you have some angry demonstration with her, did you--

A. No.

Q. --shout at her or--

A. No I simply walked in and put her on the floor.

Q. What does "lost it" mean?

A. Control of myself, I'm talking about myself there, not--

Q. What about "lost it with her"?

A. Well I did because I couldn't figure out what was going on, I had a frustrated moment with her, I couldn't figure out why she was crying so much, so "lost it" is in reference to me, okay I'm not handling this and you're not handling this, let's just put you here and I'll go out and figure it out and we'll come back and we'll fix this.

Q. Well she doesn't have to handle anything, she's only a baby isn't she?

A. Absolutely.

Q. So "lost it with her", did you shout at her?

A. No I'm not recalling that no.

Q. Did you growl at her?

A. No.

Q. Had anything made her cry in your bedroom?

A. I can't remember that no.¹⁰⁹

¹⁰⁹ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T755.2-T756.40 [red pagination 764-765] (Cunneen SC).

9 November 1997 – Sunday nite 8.45pm

Yes in bed pretty early. Big day. Didn't really sleep well because wasn't in own bed last night. Laura was ok.

Very stroppy this arvo & tonight but asleep now.

Teething? Is really dribbling & wanting to chew. Gave her some Panadol. Think it might of helped put her to sleep.

Craig was pretty drunk Friday nite. In his drunken stupor he admitted that he is not really happy. There's a problem with his security level with me. He has a morbid fear about Laura. ___ well I know there's nothing wrong with her. Nothing out of ordinary any way. Because it was me not them.

Think I handle her fits of crying better than I did with Sarah. I've learnt once its getting to me to walk away. Breath in for a while myself. It helps me cope & figure out how to help her.

With Sarah all I wanted was her to shut up. And one day she did. On the phone now catch later.

Kathy.¹¹⁰

¹¹⁰ Exhibit 2-AZ, Diaries tender bundle [red pagination 7143].

Maxwell KC

Q. [Portion of the entry read]...So, you're saying there that Laura, then aged about three months--

A. Yep.

Q. --that there was nothing wrong with her?

A. No, that's right.

Q. You'd done all the checks with the nurse and doctors and so on, that she was okay?

A. Yep.

Q. And you say, "nothing out of the ordinary anyway". What did you mean by that?

A. Well, she didn't have any major health issues or concerns.

Q. Well, nothing at all?

A. Basically, yeah.

Q. I'll go back a little bit, because you were talking about how Craig felt in relation to whether Laura was going to survive and you said, "There's a problem with his security level with me and he has a morbid fear about Laura, and he - well, I know there's nothing wrong with her, nothing out of the ordinary anyway". By that, you seem to be saying, "Well, he doesn't have anything to worry about", is that right?

A. That, that particular extract is two separate - they're separate thoughts there, they're not all the same thought. "There's a problem with his security level with me" is in reference to Craig's and my personal relationship. That's got nothing to do with Laura.

Q. I understand that, but you then say, "and he has a morbid fear about Laura"?

A. Well, we both did. We both were quite paranoid.

Q. No, but you're speaking about him there?

A. Yes. Yeah, I agree with that.

Q. You say, "and he has a morbid fear about Laura, he - well, I know there's nothing wrong with her"?

A. Yes, I was telling myself--

Q. So, by that, are you kind of commenting that there really isn't any need for Craig to have a morbid fear because there's nothing wrong with her?

A. You could look at it that way, yes.

Q. Well, isn't that the only way to look at it?

A. I'm saying that I thought Craig had a paranoid or morbid fear of losing Laura, exactly the same as I did.

Q. Well, I'm not asking - you see, you're not talking about yourself there, you're talking about Craig. Do you understand?

A. Yes, I know that.

Q. That's what I'm asking you about.

A. Yes.

Q. Do you understand that?

A. My thoughts were, at the time, that I felt that Craig had a fear, yes.

Q. But the--

A. And then, I'm saying to myself and convincing myself that there is no problem, Laura's fine.

Q. Well, you're not only convincing yourself, you're saying that you "know" there's nothing wrong with her?

A. Convincing myself, yes.

Q. And then you say, "nothing out of the ordinary anyway". So, by that, do you mean nothing enough that it might cause her to stop breathing in the middle of the night?

A. That's right.

Q. And then you say, "because it was me, not them". Do you say that then?

A. I said that then--

Q. And I'll ask you about it--

A. Yes.

Q. --before you - "because it was me, not them", the "them" you are referring to are your three dead children?

A. Yes.

Q. Is that right?

A. Yes.

Q. Aren't you saying there that they were all okay too?

A. No.

Q. You're not saying that?

A. No.

Q. Because you say - you're taking responsibility for their death there, aren't you?

A. Absolutely, I was their mother.

Q. And you say, "because it was me, not them", is it not implicit in that that there was nothing wrong with them either?

A. I'm blaming myself there. That sentence is totally me blaming myself.

Q. I see, that's you blaming yourself because you killed three children that didn't have anything wrong with them?

A. No.

Q. And that's what that means?

A. No.

Q. All right, well, we then go on. You say, “Think I handled her fits of crying better than I did with Sarah. I’ve learnt to - getting to me, to walk away and breathe in for a while myself. It helps me cope and figure out how to help her.” See that?

A. Yes.

Q. And then you say - and this is about your daughter who died, all right?

A. Yes.

Q. You say, “With Sarah, all I wanted was her to shut up”. Do you see that?

A. Yes.

Q. Were you sad that Sarah had died?

A. Yes, of course.

Q. But, you see, that seems somewhat - I’ve used this word before - a heartless way to describe this baby of yours who died, “All I wanted her to do was shut up”?

A. It’s not heartless at all.

Q. Okay.

A. There wouldn’t be a mother in this room who hasn’t - with their baby incessantly crying, hasn’t wished that they’d stop.

Q. And then you say, “All I want her to do is shut up, and one day she did”?

A. Well, she did, she died.

Q. So, one day you got what you wanted?

A. No, that’s not what I wanted.

Q. Am I misreading, am I misunderstanding that, am I?

A. Absolutely.

Q. You’re saying you wanted - “all” you wanted, was her to “shut up, and one day she did”. You’re the mother, you’ve described her death like that. What I’m putting to you is, do you not even concede that may be a heartless way of describing it?

A. Not from where I stood, no.¹¹¹

Cunneen SC

Q. ...on 9 November 97 you’re talking about Craig, you say “There’s a problem with his security level with me and he has a morbid fear about Laura”, so far have I read it properly?

A. Yes, security level as in our relationship and our marriage.

Q. And you’re saying there that Craig has a morbid fear about Laura, does that mean that Craig is constantly worried about Laura’s health and wellbeing, in view of what has happened with other children?

A. Yes, same as me yes.

¹¹¹ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T660.19-T663.18 [red pagination 668-671] (Maxwell KC).

Q. But you say “me, well I know there’s nothing wrong with her”, that’s right isn’t it?

A. (No verbal reply)

Q. “Me, well I know there’s nothing wrong with her.”

A. Well I did know at the time there was nothing wrong with her, she was a very healthy baby.

Q. “Nothing out of ordinary anyway” and then you say “Because it was me not them”?

A. Because again I always constantly blamed myself for everything and took the responsibility and onus of responsibility on the fact that I’d lost the last three as my inability and failure as a mother.

Q. Here is perhaps the clearest expression of the truth of what happened to your first three babies in any event, because Laura was still living at this stage, you are saying there that you know that there is nothing wrong with Laura and that Craig really doesn’t need to have this fear about her, aren’t you?

A. No, I would never presume to think that I should tell Craig he shouldn’t have a feeling of any sort.

Q. You’re saying, we didn’t say, we have a morbid fear about Laura, you said “He has a morbid fear about Laura”?

A. An observation yes.

Q. So he on the one hand has a morbid fear, “Me” meaning yourself, “Well I know there’s nothing wrong with her”?

A. In an attempt to try and ease his fear, yes.

Q. No, you are making the distinction, like the chalk and cheese distinction, that Craig, because he thinks his children are liable to die suddenly of natural causes, has a morbid fear about his fourth child, you on the other hand know there’s nothing wrong with her, that’s what you’re saying isn’t it?

A. Because it’s what I desperately wanted, for there to be nothing wrong with her.

Q. You’re saying there’s nothing wrong with her because it was “me not them”?

A. Two separate thoughts, one--

Q. In the same paragraph?

A. I do it all the time yes in the same paragraph, one is where I’m noting there is nothing wrong with my child, at that particular time she’s very healthy, I had hope for a future with her, the second thought I’m always blaming myself for everything, so if anything was to go wrong I would’ve instantly blamed myself anyway because I was her mother.

Q. But that paragraph says “Craig is worried about Laura dying suddenly, I, on the other hand, know that she won’t, because” in relation to the other children, it was me who killed them not them, that died?

A. No.

Q. That’s what that means, very plainly isn’t it?

A. No it’s not very plain at all, no.

Q. It is very clear in the context of these journals isn't it?

A. No.

Q. "It was me, not them"?

A. I always thought it was me, always blamed myself.

Q. And that's because it was?

A. No.

Q. Isn't it?

A. No it's not.

Q. Then you go on to say and it's not another thought at all, it's connected I suggest to you, "Think I handle her fits of crying better than I did with Sarah"?

A. Yes and that's, that was in a passage before where the children are totally two different children.

Q. "I've learnt to once getting to me, to walk away, I've learnt to once getting to me, to walk way", have I read that fairly?

A. Yes.

Q. So you've learnt that now for Laura?

A. Yes.

Q. And that means you didn't know that before, with Sarah?

A. I thought I didn't, no.

Q. You didn't walk away?

A. I didn't handle the frustration of the difficulty I was having with Sarah very well, so no.

Q. "It helps me cope and figure out how to help her", walking away helps you to manage-

A. Yes.

Q. --with the crying child?

A. As demonstrated in the entry before.

Q. Then you say "With Sarah all I wanted was her to shut up and one day she did"?

A. Because that's what happened, I'm merely making an observation that that's--

Q. With Sarah you didn't walk away did you?

A. Yes I did.

Q. With Sarah you wanted her to shut up, you wanted the battle of the wills to cease and you shut her up didn't you?

A. No, yes, I wanted maybe the battle of the wills to cease, yes, I wanted her to sleep better, I wanted to sleep better, I wanted our life to go as it should've.

Q. And you made her sleep didn't you?

A. No.

Q. You put something over her face so that she couldn't breathe?

A. No.

Q. And you killed her?

A. No.¹¹²

¹¹² Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T756.42-T759.15 [red pagination 765-768] (Cunneen SC).

Bub 4 mnths old

8 Nov [December] 1997 Monday nite 10pm

Had a bad day today. Lost it with Laura a couple of times. She cried most of the day. Why do I do that. I must learn to read her better. She’s pretty straight forwards. She either wants to sleep or doesn’t. got to stop placing so much importance on myself. And realise this not until she’s old enough to go & be with Craig more often.

Feeling better tonight. Didn’t have to worry about putting her to sleep. Craig did it. Took the stress off me.

Downloaded for the first time myself today. Stuffed it up but finally managed to do it. Well sleep time hopefully she’ll not stir too much I can do with sleeping longer than 1.30 in the morning.

I’d love to have some time alone with Craig. An overnight stay. Actually I’d love to have the mystery flight without Laura but that will never happen. We will never again do anything that doesn’t involve her.

Funny how, now she’s here, we cant seem to imagine a life without her dominating every move.

Must try to release my stress somehow. I’m starting to take it out on her. Bad move. Bad things & thoughts happen when that happen. It will never happen again.

Hope Craig likes his mower for xmas. I’ll be paying it off for the next 2 months.

Kathy¹¹³

¹¹³ Exhibit 2-AZ, Diaries tender bundle [red pagination 7150].

Cunneen SC

Q. May we move to 8 November 1997, it’s 8 December, it’s in the diary, perhaps it says 8 November but that’s where we’ve made an error. This one, it seems like it’s out of order but as you are saying “Bub is four months old”, it must be 8 December 1997, “Had a bad day today, lost it with Laura a couple of times, she cried most of the day, why do I do that, I must learn to read her better.” How did you lose it with Laura?

A. Walked away a few times, left her to cry.

Q. No but you’d learnt that’s the successful way of dealing with a frustratingly sleepless child haven’t you, by this?

A. Yes.

Q. You were back to your old ways of losing it with the child and that’s why you had a bad day, isn’t it?

A. No.

Q. What did you do to her that she cried most of the day because you say “Why do I do that”?

A. Why do I do that refers to why do I not cope, or why am I not handling this right now.

Q. “She cried most of the day, why do I do that”?

A. Yes, it’s a reference to going back to the very beginning where I’ve had a bad day and where I’ve left her to cry, lost it and why do I do that, I’m questioning myself on that.

Q. Yes, what do you mean by “lost it”?

A. Where I’ve walked away and left her to cry.

Q. No, “lost it” means losing your temper doesn’t it?

A. No not at all.

Q. You said “lost it with Laura a couple of times”?

A. Yes would’ve left her in her room to cry a couple of times.

Q. So you are saying to this Inquiry that when you say “lost it”, you mean that you just get up and leave her in her room?

A. Yes and we’d already had part of a diary that we discussed that, where I actually put Laura on the floor and walked away.

Q. You “lost it” before she started crying and then you worked out to walk away then, back on 3 November 1997. That was when “that feeling” was happening?

A. Yes.

Q. But, this day, you lost it with Laura a couple of times, not just once?

A. Yes.

Q. So, because of that, she cried most of the day, is that right?

A. No, I didn’t know why she was crying most of the day. There could have been any reason as to why she was crying most of the day, she was a baby.

Q. And when you said, “Why do I do that?”, what did you mean?

A. “Why do”, why – I’m asking myself, “Why am I – why am I not handling this?”.

Q. Well, you’re doing something to her, either angrily speaking to her or doing something to her physically, aren’t you?

A. No, absolutely not.

Q. Well, why is it that you say, on the next page – towards the end of the page, on the right-hand side – “Must try to release my stress somehow, I’m starting to take it out on her. Bad move. Bad things and thoughts happen when that happen (as said). It will never happen again”?

A. Because I was of the belief that my negative feelings in any way whatsoever impacted on my own child.

Q. How did you, on that day, start to “take it out on her”?

A. Because I wasn’t being the best mother to her that I could have been. I didn’t understand what was needed--

Q. In what way?

A. I wasn’t meeting her needs at the time.

Q. How were you--

A. She was crying, I couldn’t stop it, I didn’t know how or why.

Q. And you took it out on her?

A. I didn’t take anything out on her.

Q. Well, why did you say, “I’m starting to take it out on her”?

A. Because I - as I said, I had the belief that any negative emotion from me was impacting on her. I did not understand why she was crying. I even had started to think that maybe my being in that sort of not understanding mood was even making her cry. I got desperate as to - trying to understand why she was crying all day.

Q. When you say that you “lost it with Laura a couple of times. Why do I do that? Must try to release my stress somehow, I’m starting to take it out on her. Bad move. Bad things and thoughts happen when that happen. It will never happen again”, you’re expressing fear and worry about your own behaviour there, aren’t you?

A. No, I’m expressing fear and worry about any eventuality, at all, that could arise from Laura being unhappy or me being unhappy and, and then extending it to an extreme - in the extreme, saying “What if she then decides to leave as well?”.

Q. You were saying, “It will never happen again”?

A. Because I’m not wanting it to, that’s right.

Q. Because you know you are in control of what happens in relation to that child’s survival?

A. No.

Q. You’re trying to muster all your strength not to “lose it” to such an extent that that baby is killed by you?

A. No, that’s incorrect, no.

Q. What did you mean by, “I’m starting to take it out on her”?

A. My negative mood. Again, I thought, you know, my, my negative mood must be impacting her, she’s getting more upset, I’m getting more upset, this - I’m exasperating the situation myself.

Q. You were yelling at her, were you?

A. I don’t remember that, no. It doesn’t state in there that I’m yelling at her in anyway.

Q. What, you have no recollection of ever yelling at Laura in her life?

A. I have a recollection of yelling, yes. Not at Laura, no.

Q. Never at Laura?

A. Not as far as I remember, no.

Q. That’s not true, is it?

A. Yes, it is.

Q. Didn’t you give evidence only yesterday that you had yelled at Laura “angrily”?

A. I’m not remembering, sorry.

Q. Just yesterday, at page 668 of the transcript - I appreciate you wouldn’t have that in front of you, but I’m saying that for the benefit of the other people in the room - you said, at line 13, when asked by Mr Maxwell, “Lost it with her” 50 - and that’s about Laura - “means you yelled at her?”, and you said, “Yes”?

A. Okay, yes, I concede then, yes.

Q. So, have you forgotten today what you could remember yesterday?

A. In that point, yes, I did.

Q. Or are you just trying to distance yourself from any angry outburst of your children, even though it’s untruthful?

A. No.¹¹⁴

¹¹⁴ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T759.17-762.8 [red pagination 768-771] (Cunneen SC).

11 December 1997 Tuesday 9.43pm

Off to bed because I thought Craig was asleep. He woke up as I kissed his forehead, but I bet you he’s gone under again already.

He asked me what was wrong today, that I don’t seem happy. I told him I miss the gym & being able to exercise & enjoy it.

I guess I’ll have to find the will power to do it at home. Might go tomorrow & borrow Mel’s easy rider for awhile. Give myself a goal of next week. Watching what I eat & trying to do at least 20- 30 min per day on her easy rider.

Seem to be having trouble with Laura of an evening.

And he wonders why don’t like taking her out of the house after 6pm. At least she still kind of sleeps all night. Me, I still wake up from about 12.30 onwards, broken sleep is also making me very irritable & snappy.

I think Craig & I are having trouble. This stress of Laura is finally showing. In the one place we’re trying to keep it from our marriage.

In myself I’m scared I am over eating because of boredom, any time on my hands & my urge is to eat! Would be okay if I ate healthy stuff. Which I now start intending too.

Depression seems to get me more now too. Must control it, not it me

Kathy¹¹⁵

¹¹⁵ Exhibit 2-AZ, Diaries tender bundle [red pagination 7151-7152].

Cunneen SC

Q. On 11 December - would you turn to the next page please - you’re talking about your sleep. “Sleep is also making me very irritable and snappy”, that’s at the end of the first paragraph. “I think Craig and I are having trouble. This stress of Laura is finally showing. I’m the one” - “we’re trying to keep it from our marriage”, something like that. You say that, down the end of the page, “Depression seems to get me more now too. Must control it, not it me”?

A. Yes.

Q. Was that a time when you were seeking some help for depression?

A. I can’t remember. I don’t know.

Q. What would be the effect if your depression controlled you rather than you controlling it?

A. That I tended to withdraw into myself and tended to not be engaging with people.

Q. Was that an effect of the “stress of Laura”, that you mention in the same page?

A. The “stress of Laura” I’m referring to there is the constant vigilance that we had to have because she was on monitors and things.

Q. Although, you knew that they were not necessary?

A. I didn’t know that, no.

Q. Because it was you, not them?

A. That’s not what that means at all.¹¹⁶

¹¹⁶ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T762.17-42 [red pagination 771] (Cunneen SC).

15 December 1997 – Mon nite 10.14pm

Stayed up a bit late tonight. Really tired now though.

Laura had shots, seems to be okay, will see once Panadol stops. Has been her usual happy little self. Didn't ruff her up or anything. Seemed to sleep okay today I suppose.

Thought of a couple more presents for Craig – well. I forgot about his Nintendo, will see about getting him another game.

Don't have to spend for shots so will have some money this Tuesday. Hope it goes in on Wednesday night or I'm in a bit of a pickle have a hair cut with Shaz at 9am.

Have decided today was the start of a regular step exercise at home. While Laura sleeps. At least 20 minutes each day. I should be able to get back into shape. All I have to do it no more junk food. Will power it's what I want for xmas. I know one pressie I'm getting a cd for my car. Others. Not sure. Have to get Craig something else. Feel as though he'll be unimpressed with the mower.

Well enough.

Caz sent a beautiful angel teddy for Laura.

Both her and Craig are convinced that Laura's soul is not her own by the looks of it. Me well I'm sure she met everyone & they've told her, don't be a bad or sickly kid, mum may you know crack it they've warned her – good. But she's still her own little person & will always be. Must stop calling her Sarah, she's most definitely not her.

Kathy¹¹⁷

¹¹⁷ Exhibit 2-AZ, Diaries tender bundle [red pagination 7153-7154].

Cunneen SC

Q. [Portions of the entry read]...Now, may I ask you there, your references to “Don't be a loud or sickly kid”, are references to Sarah and to Patrick, aren't they?

A. Yes.

Q. So, this is where you're talking about Laura having, what, before her birth, met her siblings somewhere?

A. Yes, a belief, yes.

Q. And they told her, “Don't be a loud or sickly kid because mum may, you know, crack it”?

A. “Crack it”, is not cope with it, not be able to handle that. It would be upsetting.

Q. “They've warned her. Good”?

A. In reference to me believing that they've had a bit of a conversation.

Q. Well, warning is a strong conversation, isn't it?

A. No, not really. I'm simply stating, you know, they may have said to her, you know-

Q. We're warning you, don't be loud, don't be sickly or mum will crack it with you, and you'll end up here with us?

A. No, not at all.

Q. Of course, that's what it means, isn't it?

A. No.

Q. Craig and this kind lady who gave the gift, “They think that she's a lovely soul”. You, “Me, well, I'm sure she met everyone, and they've told her ‘Don't be a loud or sickly kid. Mum may’”--

A. Well, that's incorrect because the--

Q. --”crack it”?

A. That's incorrect, because I even said in the diary that they'd met everyone and I'm agreeing with that.

Q. They warned her about you?

A. No, that's not what I'm saying at all.

Q. Well, it is, it's precisely what you're saying. You're admitting to yourself, in your journal, that your previous children may have warned this one. It might be a joke, but it is a reflection of what happened, that if your other children were to meet this one who was still living, they'd warn her not to be loud or sickly, or she'd up dead like them?

A. No, not at all.

Q. It's all it can possibly mean, isn't it?

A. No.

Q. And then you say, “But she is still her own little person and will always be. Must stop calling her Sarah, she's most definitely not her”?

A. Yes. I made the error of calling her by the wrong name every now and then.

Q. And you added for good measure that, in the spirit of her being a much more agreeable person, chalk and cheese, “she’s most definitely not” Sarah?

A. Yes.

Q. Disparagingly to Sarah, wasn’t it?

A. No, not disparagingly at all.¹¹⁸

¹¹⁸ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T762.44-T764.27 [red pagination 771-773] (Cunneen SC).

17 December 1997 – Wed nite 10.30

Saw Tony & Gale & Teri tonight. Good to see them but reminds me that we have no friends that would just call in and see us for no other reason than a visit. Only people who see us always want something – one way or the other – must just be human nature. Still think that Craig & I are having trouble. Not enough to split us up but sex well that another novel. There doesn't seem to be the spark anymore. I just don't enjoy it anymore. I've even fantasised about movie stars etc. but it just doesn't do it for me. I'd rather sleep.

What do I do? I cant tell Craig. He'll take it as a personal insult. I think I've had too many kids. My libido just hasn't bothered to return.

Tell you what don't think anyone could read this & find out all my secrets.

I write like a 5 yr old.

Disgusting to look at

Kathy¹¹⁹

Cunneen SC

Q. On the bottom of the next page you say, “Tell you what, don't think anyone could read this and find out all my secrets. I write like a five year old. Disgusting” - what else does it say, “disgusting”--

JUDICIAL OFFICER: To look.

CUNNEEN SC

Q. You knew that it's not easy to pick up this diary and be able to decipher it very readily there didn't you?

...

Q. What is it Ms Folbigg, the last word before “Kathy”?

A. I actually can't decipher that myself, I don't know.

Q. All right, but whether it's true or not, whether anyone could make a good fist of it, you took some comfort there from the fact that it was difficult to read your writing and that--

A. No, I'm merely, I'm merely making an observation that my writing's really, really bad.

Q. And that that helped to conceal your secrets I'd suggest to you?

A. No, I'm merely stating it's a diary and that's where you put things like that.

Q. You said, “Don't think anyone could read this and find out all my secrets”.

A. Yes, it's a diary. No anticipating that anyone would read your diary.

Q. I would suggest that you took comfort from that and that's another reason why you committed to paper all these things that very openly expose what really happened to your children.

A. No.¹²⁰

¹¹⁹ Exhibit 2-AZ, Diaries tender bundle [red pagination 7154-7155].

¹²⁰ Exhibit 2-AZ, Diaries tender bundle [red pagination 7154-7155].

31 December 1997 - New Years Eve 11pm

Not far, 98 is a coming. Wow.

Got people here, but for some reason, am just tired & wish to be all alone.

Decided to write my last entry for 97 now.

Funny but if it wasn't for Laura, I'd feel as though I've wasted another year of my life. Everyone seems to be enjoying themselves. Pool is getting a real workout. Karen & Ray seem to of turned themselves back towards only because of Laura. Karen now thinks that we're normal people now.

Not sure about the friendship that is evolving with Sue Bailey. I know its because she looks & behaves like _____. Craig is just gravitating towards her, because she's a bit of a lost soul. Could just fall asleep quite easily here, but I better go out, rude if I didn't see new year in with 'our friends'. Getting Laura to be next year ought to be fun. She'll realise a party is going on. That will be it. Wonder if the battle of the wills will start with her & I then. We'll actually get to see!

She's a fairly good natured baby – thank goodness, it saved her from the fate of her siblings. I think she was warned.

Well enough, next entry. 98.

Kathy¹²¹

¹²¹ Exhibit 2-AZ, Diaries tender bundle [red pagination 7158].

Maxwell KC

Q. [Portion of the entry read]...So, the child is four months old?

A. Yes.

Q. And you're posing the question, if you start to have a battle of wills with Laura, like you did with Sarah?

A. Mm-hmm. That is--

Q. Yes, all right. And then, if you have a battle of wills with Laura, you'll "actually get to see". "Get to see" what?

A. Get to see how I cope with that as a mother.

Q. Now you say, "She's a fairly good-natured baby", is that correct?

A. Yes.

Q. And you say, "Thank goodness, it has saved her from the fate of her siblings". Correct?

A. Yes.

Q. You associate the death of her three siblings at times when you were stressed out?

A. No.

Q. You don't?

A. No.

Q. At times when you may have lost control?

A. No.

Q. You don't?

A. No.

Q. Not at all?

A. In a metaphysical way, in a--

Q. Well, no - all right--

A. Yeah.

Q. --what do you mean by "metaphysical"?

A. I mean, the next sentence in that is "I think she was warned", which I - you're - I'm gathering you're going to ask about.

Q. Well, let's just explore that.

A. It's all connected.

Q. Hang on, do you believe in the metaphysical?

A. I've always believed that there is a spiritual or something else going on, fate, karma, destiny.

Q. So, you're saying there then that, she's good because some higher being has warned her that if she's not good she'll lose her life?

A. No, I'm, I'm merely thinking to myself that, you know, this goes back to - right back to the, the clairvoyant sort of thing, where I'm thinking, did the other children have little chats to her, was she - you know, there was a discussion about whether Laura's soul was even her own, at one point, between us and other family members.

Q. So, did the other dead children have a discussion with the live one, Laura? Is that what you just said then?

A. It's, it's a thought of which I had, yes.

Q. And did you believe it?

A. At the time, yes.

Q. And so, what, they told her to be good and she'd live, is that how one interprets that? A. No, I, I, take that as though they told her if, if she was good, mum would be okay and mum wouldn't stress as much.

Q. Mum wouldn't get angry and snap her cog--

A. No--

Q. --is that what you meant?

A. No, I'm generalising, it's - no.

Q. What I'm putting to you is that, you knew you'd got angry with your children, the three children that died, before you wrote this. What do you say?

A. I believed and felt that my moods at any given time affected my children, yes. I believed, as far out there as it is, that whatever bad mood I might have been in was a negative thing I was putting onto my children and I didn't like it.

Q. And because you were in a bad mood, in some way that led to their death, but you can't really say how or why?

A. That's right, I'm always searching for why. It never stops.

Q. I suggest you know why, and that is because you smothered them.

A. No.

Q. That's what you're talking about in that entry.

A. No.

Q. Did you prefer Laura to the others?

A. It wasn't a case of preferring her.

Q. Did you like her more?

A. Not necessarily, no.

Q. Was she your favourite?

A. She was my favourite only because I had her the longest.¹²²

¹²² Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T663.20-665.29 [red pagination 671-673] (Maxwell KC).

Cunneen SC

Q. On 31 December 1997, on the right-hand side of the page you say about Laura, about the battle of the wills will start when Laura is a bit older - or “wonder if the battle of the wills will start with her and I then. We’ll actually get to see”.

A. Yes.

Q. “She’s a fairly good natured baby, thank goodness, it has saved her from the fate of her siblings. I think she was warned.”

A. And it goes back to what we were discussing before.

Q. Yes it does. She was saved from the fate of her siblings by the time of the last day of 1997, because she is a fairly good natured baby, and I’m suggesting to you that you are there plainly acknowledging that if Laura had been a catnapper like Sarah, or less agreeable as you say Sarah was, she would have met the fate of her siblings, that is to be suffocated by you.

A. No, not at all. That goes back to the discussion about the belief that, you know, my other children have spoken to her and--

Q. No it doesn’t ma’am, does it. Can you explain please why being a fairly good natured baby, thank goodness, has saved her from the fate of her siblings. How did those two things follow?

A. She was still alive and my other three were deceased, but I’m commenting and saying that she’s still here.

Q. What are you giving there, as the reason why she has not met the fate of her siblings?

A. I’m not giving any reason.

Q. Well you are, aren’t you? That “She’s a fairly good natured baby, thank goodness”.

A. That’s not a reason as such.

Q. You say it in terms, “She’s a fairly good natured baby, thank goodness, it has saved her from the fate of her siblings.”

A. Because again it goes to my extreme view and my extreme belief that something else had taken the other three of my children.

Q. You had.

A. No, not at all.

Q. Because they weren’t good natured enough for you. They didn’t behave well enough for you not to lose it with them. That’s right isn’t it?

A. No.

Q. They battled your wills and they kept you from sleep, they weren’t good natured enough.

A. No, not at all.

Q. And you could not tolerate them.

A. No, that’s certainly not.

Q. And you suffocated them.

A. No.

Q. “I think she was warned”, there’s the warning again.

A. And as discussed previously, the warning is we were talking about Sarah’s soul not being her own and the children all talking to each other.

Q. Yes, and the children saying to Sarah “Be good natured or you’ll be killed like we were”--

A. No.

Q. --“by your mother”.

A. No.¹²³

¹²³ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T765.19-T766.32 [red pagination 774-775] (Cunneen SC).

4 January 1998 – 10:49pm

Was okay day. Got to stop eating all day.

Stress & boredom? Got to exercise even if Lea & everyone is here or not.

Sarah’s missed. We watched her video. Made me realise how much I love Laura & cherish her like I never did the others. I don’t take her for granted. I think with age has come a lot more patience & resignation that I cant fix or change things. If she doesn’t sleep all night then so be it. Sure it shits me & makes me a little grumpy but I sort of just catch up during the day some time.

So far their visit has been okay. Got on a bit better with Bec today. Still think she takes Lea for granted big time.

Kathy.¹²⁴

¹²⁴ Exhibit 2-AZ, Diaries tender bundle [red pagination 7162].

Maxwell KC

Q. [Portion of the entry read]...Aren’t you saying there that you preferred Laura more than the others?

A. No. What I’m saying there is that I felt I hadn’t given enough to the others.

Q. But that’s not what you said is it?

A. It reads the same to me.

Q. Aren’t you at all times looking at words and sentences in these diaries and giving them different meanings?

A. No, I’ve always stated the same from the very beginning.

Q. When you say “I cherished her like I never did the others”, in plain English you’re saying you preferred Laura to the others. That’s true isn’t it?

A. What I’m saying is the others aren’t with me so therefore I cherish Laura, of course I do. But I was also lamenting the fact that I felt like I hadn’t given enough to the other three and I wasn’t good enough.¹²⁵

Cunneen SC

Q. [Portion of the entry read]...You are reflecting on a different path with Laura, more success, aren’t you?

A. Yes.

Q. More success than the others, and you say that you cherish and love Laura like you never did the others.

A. That’s how I felt at the time, that I hadn’t given enough to the others.

Q. But this is a bit different isn’t it? It’s not about how much you gave. It’s about the spontaneous love in you. You’re making the point that you feel love and a feeling of cherishing this child like you never did the others.

A. Because I didn’t feel that I did. As I explained before, Caleb I didn’t have long enough and was a new time mother. Patrick was sick and I lived in the moment with him trying to keep him alive, and Sarah, just when I thought I was having a bond and could feel this way, she died and left. Laura was here, Laura I had this connection with, Laura I bonded with, Laura I wanted, Laura I cherished, and yes, that’s all there.

Q. Laura was not even half the age of Sarah at this stage was she?

A. What’s that got to do with me bonding and cherishing her?

Q. You had time with all your children to love and cherish them I’d suggest to you.

A. Yes, and with Caleb, as I said, he was only four weeks old and I was a brand new mother and I was concerned about that, and with Patrick--

Q. You were concerned that you didn’t love him and cherish him?

A. Well he wasn’t around long enough for me to form a view either way.

¹²⁵ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T765.31-T666.5 [red pagination 673] (Maxwell KC).

Q. Are you saying that--

A. I'd only just gotten into being able to figure out just even how to care for him.

Q. Are you saying that you wanted Laura but you didn't want the other children?

A. No, that's not what's said there at all.

Q. You say, "I don't take her for granted". Did you take the other children for granted?

A. Caleb I fell pregnant fairly easily, Caleb was there. Patrick, there didn't seem to be an issue with me falling pregnant till he came along. Taking for granted, yeah I, I guess I did, I took for granted that those, those three pregnancies happened, my children were there. I wasn't taking Laura for granted because by that stage I'd lost those three so I was never going to take Laura for granted ever.¹²⁶

¹²⁶ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T766.34-T767.43 [red pagination 775-776] (Cunneen SC).

28 January 1998 – Wednesday 5.30pm

Very depressed with myself, angry & upset.

I’ve done it. I lost it with her. I yelled at her so angrily that it scared her, she hasn’t stopped crying. Got so bad I nearly purposely dropped her on the floor & left her. I restrained enough to put her on the floor & walk away. Went to my room & left her to cry. Was gone probably only 5 mins but it seemed like a lifetime.

I feel like the worst mother on this earth. Scared that she’ll leave me now. Like Sarah did. I knew I was short tempered & cruel sometimes to her & she left with a bit of help.

I don’t want that to ever happen again. I actually seem to have a bond with Laura. It can’t happen again. I’m ashamed of myself. I can’t tell Craig about it because he’ll worry about leaving her with me. Only seems to happen if I’m too tired. her moaning, bored, whingy sound drives me up the wall. I truly can’t wait until she’s old enough to tell me what she wants.

On a good note – Craig said last night that he accepts that I’m not going to be skinny again. That’s wonderful, but I know deep in my heart he wants his skinny wife back. Also if I stop caring about it, I’m going to end up really huge. I suppose I could just live with myself as long as I didn’t get any bigger than this.

Really looking forward to girls nite out, let off a bit of steam. Craig informed me last night that he sometimes just wants to be on his own, go for a drive in the mini. I said go for it, wonder if he will or not, he’s still so insecure with us.

Kathy¹²⁷

¹²⁷ Exhibit 2-AZ, Diaries tender bundle [red pagination 7170].

Maxwell KC

Q. Now we go to 28 January 98. At that point Laura was a little over five months old, correct?

A. Yes.

Q. Then at the top of the page you say, “I’ve done it”, do you see that?

A. Yes.

Q. “I lost it with her. I yelled at her so angrily that it scared her and she hasn’t stopped crying.” When did you lose it with her on that day do you know, how long before this entry?

A. No, I don’t remember.

Q. So this was 5.30pm.

A. Mm.

Q. Could it have been all day that she was crying?

A. I can’t tell you that.

Q. So this is something that really upset you?

A. Yes.

Q. Was it the first time that you’d lost it with her?

A. Yes.

Q. Could you see visions of the other three coming back because you’d lost it with Laura?

A. No, my immediate reaction was to be incredibly disappointed with myself.

Q. Because you’d lost it with the other three hadn’t you?

A. No.

Q. You hadn’t, no? Never felt angry towards Sarah?

A. Frustrated with Sarah, yes.

Q. Anger?

A. Not anger as such, no.

Q. Never anger?

A. No.

Q. Not even when you were sleep deprived and you had all this battling with wills, never angry at her?

A. No, not, not at Sarah, no.

Q. You’re not the kind of person to get angry with children, is that what you say?

A. No.

Q. You don’t say that?

A. No, I’m agreeing with you, I don’t get angry with children, yeah.

Q. In any event did you get angry with Laura on this day?

A. Incredibly frustrated with her that day.

Q. Did you get angry?

A. As I said before, I never differentiated between frustration and anger, they're the same thing. They were the same thing to me then.

Q. Frustration is just feeling perhaps a bit miffed about something hasn't gone right, but anger is a far stronger word where you actually feel antipathy towards another person or another thing. That's correct isn't it?

A. (No verbal reply)

Q. I put it to you it's a different state of mind, anger?

A. At that time in my life, as I said, I didn't think it was, I didn't think there was any difference between them.

Q. Anyway, you didn't use the word "frustration" in this entry did you?

A. No.

Q. You said, "I yelled at her so angrily that it scared her"?

A. Yes.

Q. So you've used the word "angrily"?

A. Yeah.

Q. Anger there. So it got so bad - so what was happening?

A. I don't remember.

Q. What did you yell at her?

A. I don't remember.

Q. How did you lose it with her?

A. It would have simply been I yelled at her.

Q. And she just started crying and didn't stop.

A. No, if I'd been yelling at her she was crying before that.

Q. Sorry?

A. If I've yelled at her it's because she's crying before that.

Q. So did you yell at her when she was crying?

A. Not all the time, no

Q. Sometimes?

A. No.

Q. Ever?

A. Only if she was frustrating to the point of me not being able to figure out how to help her, yes.

Q. So you'd yell at her?

A. Occasionally.

Q. In anger?

A. In frustration, as I keep saying, there's no difference to me.

Q. You say "lost it with her" means you yelled at her?

A. Yes.

Q. Where was this that this happened?

A. At home.

Q. In her room?

A. I don't recall.

Q. You said that then it got so bad that you nearly purposely dropped her on the floor.

A. That's an exaggeration.

Q. Is it the case that you nearly on purpose dropped her on the floor?

A. No. I - this is hard to explain. If you're that frustrated with a child and you can't figure out why they won't stop crying, you've got them in your arms, you go to put them on the floor, in my belief and my mind, putting her on the floor is almost dropping her on the floor.

Q. So you've just kind of had her an inch off the floor and you just nearly drop, is that what you mean?

A. Probably not even an inch but yes.

Q. At all times you're just minimising what these entries mean aren't you?

A. No, I'm trying to tell you exactly what was in my frame of mind when I wrote them.

Q. Any reading of that indicates that you're saying you nearly purposely dropped her from waist height onto the floor.

A. No, it doesn't - does it say anywhere there that it was from waist height?

Q. No it doesn't, but you're saying now that you know that it was just somewhere close to the floor, is that what you can recall can you?

A. Yes, yeah.

Q. I put it to you that's not correct.

A. Well I was there, that's correct.

Q. Then you go on to say, "I feel like the worst mother on this earth, scared that she'll leave me now, like Sarah did" do you see that?

A. Yes.

Q. Do you see that?

A. Yes.

Q. Then you say, “I knew I was short tempered and cruel sometimes to her and she left”, and you’re talking about Sarah there, correct?

A. Yeah, that’s Sarah.

Q. So you’re expressing this idea or thought that because you were short tempered and cruel to her, to Sarah, that she left this world?

A. Yes, that’s how weird my belief had gotten.

Q. What, she decided that she wanted to go into another world because she couldn’t put up with your short temperedness and cruelty towards her, is that it?

A. Cruelty, the word cruelty, I need to also clarify that to me that’s like if you leave your child to cry for too long, I figured that and deemed that as being cruel. I’m not talking cruel as in a cruel physical action on anything. Short tempered, yes, it goes with being frustrated. If you’re frustrated you get a little short tempered.

Q. So you weren’t using those terms in any - just a sort of minimal kind of way in the way you’ve described--

A. Yes.

Q. --short tempered and cruel?

A. Yes.

Q. But it was enough in your mind for her to get the idea, “Look, I don’t want to be around this mother anymore, I’ll simply die.” Is that what you’re trying to say?

A. Because by the time, by the time Laura came around that’s where most of my thoughts were. They were dark and they weren’t very pleasant.

Q. It just doesn’t make any kind of sense at all does it?

A. It made sense to me at the time when I was writing it.

Q. You see it’s a farcical explanation, wouldn’t you agree with that?

A. No.

Q. Then you say “with a bit of help”, do you see that?

A. Yes.

Q. So you’re saying there that you were that bit of help?

A. No, I’m saying that God, higher power, or another decision, or even my children Sarah deciding that she didn’t want to say was the bit of help, not me.

Q. What I’m suggesting to you is that that’s one of the closest places that you have come in the diaries to admitting your guilt of killing Sarah. What do you say about that?

A. I say it’s me admitting how badly responsible I felt, and I will always feel that way.¹²⁸

Cunneen SC

Q. [Portion of the entry read]...You were really worried about yourself that day weren’t you?

A. I was angry and upset and depressed, yes.

Q. Angry with yourself?

¹²⁸ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T766.7-T670.6 [red pagination 674-678] (Maxwell KC).

A. Yes.

Q. You were reproaching yourself?

A. Always.

Q. “I’ve done it. I lost it with her.” You were saying, weren’t you, all my good intentions since before I even became pregnant with Laura, all my affirmations, all my goodwill in the world has gone because I’ve lost it with her, I’ve done it.

A. If you’d like to put it that way, yes.

Q. What did you yell at her when you yelled at her angrily?

A. I don’t remember that.

Q. Words or noises?

A. Don’t remember, I can’t tell you.

Q. You can’t remember?

A. No. It’s 1998, no. I can’t remember what it was I yelled, if I yelled.

Q. “I restrained enough to put her on the floor and walk away”, so at least you were able to say that you had stopped yourself and gone away.

A. Yes.

Q. That must mean that “lost it” doesn’t mean walking away does it?

A. Why not?

Q. You lose it first and then if the child is lucky, you walk away?

A. Not if the child was lucky. It was - I walked away.

Q. On this occasion you restrained yourself enough to put her on the floor and walk away?

A. Yes.

Q. You said, “I feel like the worst mother on this Earth. Scared that she’ll leave me now like Sarah did. I knew I was short-tempered and cruel sometimes to her and she left with a bit of help.”

A. Well, I did feel like the worst, worst mother in the world.

Q. You were not saying you’re scared that Laura will make up her mind to die and go away. You were saying there in somewhat veiled terms but clear enough that you are scared that, “Laura will leave like Sarah did.” Laura had left, sorry Sarah had left, “with a bit of help”. You were expressing there your fear that you were going to kill Laura like you killed Sarah?

A. No.

Q. You were weren’t you?

A. No, I wasn’t.

Q. It’s very clear isn’t it?

A. It's not clear at all.

Q. Because you're not, you see you're not the worst mother. You say you feel like, "the worst mother on this Earth", you're not saying that because you've simply lost it with Laura and put her on the floor and left her?

A. Yes, I am.

Q. You're really saying you feel like the worst mother on this Earth because you know you were getting close to killing your fourth child the same way?

A. No, that's not true.

Q. "She'll leave me now like Sarah did." And there you, "I knew I was short-tempered and cruel sometimes to her and she left with a bit of help."

A. Because I thought, as I stated, I've already stated short-tempered and cruel could mean a variety of different things.

Q. I was going to ask you that; what did it mean with Sarah? How did you express your short-temperedness and cruelty to Sarah?

A. In being frustrated with her and not handling why she was crying or not being able to go to sleep.

Q. What cruel things did you say or do to her?

A. Not cruel as in inflicting harm in any way. I'm not talking by, cruel as in leaving them alone to, so you'd walk away or cruel as in not meeting their needs or cruel as in not understanding how to fix something and it, to me it all meant the same thing.

Q. "Cruel" is a very strong word for you isn't it?

A. Yes. It's a strong word I use in there yes.

Q. What did you do to Sarah?

A. I didn't do anything to Sarah.

Q. When you were short-tempered and cruel with her?

A. I didn't do anything to her.

Q. Well, you say, "I knew I was short-tempered and cruel sometimes to her." "To her"?

A. Yes, I was short-tempered. I was irritable. I was cranky.

Q. And cruel?

A. Not as in an action. No.

Q. "And she left with a bit of help." You mean she died don't you?

A. She died, yes.

Q. "Bit of help"?

A. From God, fate or something else. Not me.

Q. There's a sardonic element to that isn't there, "with a bit of help"? There's a black humour to that?

A. No, absolutely not. There's no humour in it at all.

Q. "She left with a bit of help"?

A. And it refers to my belief that and my belief that something else happened out of my control.

Q. Well, it means this doesn't it; she left. She died with help from you?

A. No, absolutely not.

Q. That's what it means?

A. No. That's not what it means at all.

Q. And then you say, "I didn't want that to ever happen again. I actually seem to have a bond with Laura. It can't happen again. I'm ashamed of myself."?

A. Yes, I didn't want anything like that to ever happen again. I did have a bond with Laura and I was ashamed of myself in respect that I thought I was a failure as a mother.

Q. You say in there, "I don't want that to ever happen again." That is Sarah, "leaving with a bit of help". That's what you mean there isn't it?

A. Yes.

Q. "I actually seem to have a bond with Laura", which suggests clearly, doesn't it, that you didn't have a bond with Sarah?

A. No. It doesn't suggest clearly at all. It's, it's stating that I've got a bond with Laura.

Q. "I actually seem to have a bond with Laura." There's an air of incredulity there that you can hardly believe yourself that you have struck up a bond with that child doesn't it?

A. Yes, I suppose so.

Q. Because you didn't have that bond with the others?

A. I've already been through all this as to how my bonds were created or not created with all three children.

Q. You didn't have any did you?

A. Not with, probably not with the last three no.

Q. Or a maternal instinct at all, did you?

A. I wouldn't say not at all but--

Q. Not until you had Laura did you?

A. Okay. Fine, I agree.

Q. "It can't happen again. I'm ashamed of myself. I can't tell Craig about it because he'll worry about leaving her with me."

A. Yes. It can't happen again. I don't want anything like that to happen again. I was ashamed of myself as in being a failure as a mother and not thinking I was good enough at this job.

Q. You were ashamed of yourself because you knew how close you had come to bringing about the result that Laura also left this world with a bit of your help?

A. No.

Q. Then you couldn't ask for help from Craig because of course he wouldn't leave her with you again would he?

A. No, that's saying I couldn't talk to Craig. Craig and I were having rather problems with talking to each other by then. We didn't converse very well with each other. I felt I couldn't talk to him about that because he wouldn't have understood the feelings I was having.

Q. The feelings you were having, "Only seems to happen if I'm too tired. Her moaning, bored whingy sound drives me up the wall. I truly can't wait until she's old enough to tell me what she wants."

A. Yes. Are you saying there wouldn't be a mother on this planet who if their child has got a moaning, whinging tone it doesn't drive them up the wall?

Q. What you are talking about, which only seems to happen is what can't happen again; being short-tempered and cruel and babies leaving with help?

A. No.¹²⁹

¹²⁹ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T767.45-T771.28 [red pagination 776-780] (Cunneen SC).

6 March 1998 Friday nite 10pm

Craig’s at a strip show, hope he unwinds a bit. Worry about him coming home. Got spare room ready for him.

Laura not well, really got on my nerves today, snapped & got really angry, but not nearly as bad as I used to get.

Am tired of getting spewed on, but alas, comes with the territory. Hope she’s alright tomorrow night or Craig wont be impressed at all. Really looking forward to it.

Hope Mel’s man lou can make it give her someone to relate to besides me. Be interesting is Debbie & _____anyway. I don’t think she would. enough. thinks her kids cant survive a night without her.

Me, I can’t wait too

Kathy¹³⁰

¹³⁰ Exhibit 2-AZ, Diaries tender bundle [red pagination 7176].

Cunneen SC

Q. [Portion of the entry read]...What did you do when you snapped?

A. I didn’t do anything.

Q. What do you mean that you snapped when Laura got on your nerves?

A. I was just annoyed and angry with myself for not being able to handle the situation and figure out what was wrong.

Q. What, you got really angry? How did it manifest itself?

A. It didn’t manifest itself in any way. It was just a feeling and an emotion I was having.

Q. How did you feel when you snapped?

A. I don’t know.

Q. You got really angry that day but, “not nearly as bad as you used to get”?

A. Yes.

Q. Laura was at that stage about eight months old?

A. Yes. Yes.

Q. She survived that day of course didn’t she?

A. Yes.

Q. I’d suggest that’s because you didn’t get, “nearly as bad as you used to get that day”?

A. No.

Q. When you say, “not nearly as bad as you used to get”, what used to happen when you used to get angry?

A. I used to allow them to cry in a room by themselves for a while.

Q. That’s not too bad is it? Everyone does that.

A. That’s correct but in my belief and view at the time, which was extreme, doing that as far as I was concerned was not a good thing to do.

Q. You snapped and got really angry but, “not nearly as bad” as you used to get?

A. Because I thought I was handling things a little bit better.

Q. Isn’t that a reference to the times when you got so angry that you killed your children?

A. No.¹³¹

¹³¹ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T771.30-T772.26 [red pagination 780-781] (Cunneen SC).

1 April 1998 Wed 10.50pm

April fools day, good day for me – meeting new people, friends good.

Craig has given me something to look forward to. Going out with him Sat night. Would like to lose some weight but ill be happy just to be out.

Not sure about Karen watching her, but they total stranger watches her at the gym, so I guess Karen doing it will be okay. Must keep in mind that Laura will eventually crash so it doesn’t matter.

To have dinner & spend time with my husband is what we need. It’s a good move, only thing that will spoil it is if he flirts with other women too. I’ll get really peeved. Tired, better see about some sleep. Tired all day today but I think its because my mind has just be overworking.

Thought to myself today difference with Sarah, Pat, Caleb to Laura, with Laura I’m now ready to share my life, I definitely wasn’t before very selfish maybe that’s why my mother didn’t have kids to successfully until she was older.

Only thing left undone in my life is my real father? But closure will never come with that, unless someone decides to be compassionate one day & tell me all about him.

Kathy¹³²

¹³² Exhibit 2-AZ, Diaries tender bundle [red pagination 7182].

Cunneen SC

Q. [Portion of the entry read]...The meaning seems clear. Doesn’t that mean that you weren’t ready to share your life at the time that you had your first three children because you were too selfish?

A. I was also very young when I had the first three children.

Q. Well, you don’t say anything about being young there. But you say you were very selfish and you weren’t ready to share your life.

A. But I did.

Q. Not for long did you?

A. That was of no fault of mine.

Q. But it was wasn’t it?

A. No, it wasn’t.

Q. It was your selfishness that was allowing you to lose control of yourself and to dispense with these children?

A. No.

Q. You were persuading yourself that really everything was all right now because you had a justification. You’d seen inside yourself and realised you used to be selfish but you’re not anymore. That, that’s what you were calming yourself with there, isn’t it?

A. No. I am merely making an observation as to my youth at the time when I had the children, possible selfishness at that age and my readiness to be and love Laura.¹³³

¹³³ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T772.28-T773.10 [red pagination 781-782] (Cunneen SC).

1999 Diary

1 January 1999 12:01pm Friday

Happy New Year!!! In bed. I fell asleep, Craig little tipsy in Family Room. Tired as.

Used to be a big deal. Not anymore. Once she's older (Laura) might be able to stay up past midnight Getting old. need sleep. Hope I feel more satisfied with myself & life this year. Certainly, going to put a real effort into loosing this weight now. So eating everything to start. No fats or sugars. more exercise or at least more effort so I get somewhere.

Resolutions 1. More tolerance where Laura is concerned 2. More acceptance of my life and lack of youth. 3. try to keep friends I've developed. 4. make effort with my marriage 5. get on with it enough - Kathy¹³⁴

¹³⁴ Exhibit 2-AZ, Diaries tender bundle [red pagination 7186].

Cunneen SC

Q. ...there's a journal entry by you for the first day of 1999. And you make your New Year's resolutions in the last paragraph and the first of them is what?

A. Sorry?

Q. In the last paragraph on that page, "Resolutions".

A. Resolutions.

Q. "Number 1, more tolerance where Laura is concerned."

A. Yes.

Q. Why was that your principal New Year's resolution, first of five?

A. She was now older, had personality of her own, and I think any parent needs to have a bit of tolerance as her child gets older and their personality emerges.

Q. Was something starting to worry you at that time about whether you could keep tolerating Laura?

A. No it's simply an observation as how my life is about to change as she gets older.

Q. Were you having some problems with controlling your stress or anger?

A. No not at all the time no.¹³⁵

¹³⁵ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T773.12-34 [red pagination 782] (Cunneen SC).

3 January 1999 – 9pm

Well, another day. Was okay. Have had unsatisfied feelings about my marriage. Can't do anything though, not until Laura is much older. For her I'll stay.

Its gotten to the stage that a word to describe how I feel about things would be "comfortable" Craig I can take or leave.

I suppose its how we are supposed to feel after 12 yrs ? is it. Isn't there more? or is that just in the movies and all that. maybe I'm just fantasizing. Don't know anymore.

Sometimes I feel I could just drain the bank accounts and leave. Leave Singleton, Craig and Laura behind. Start new, somewhere, But I'm not that brave a person. could go to queensland, but what would they say. would they attempt to send me back or get craig to come. Will never know,

Haven't even had a happy new new year from them. Although did get an xmas card. WOW.

I'm always wanting to run away. Maybe I have more mum in me that I give her credit for. Scary thought.

I suppose Im happy enough I think this all that there is supposed to be now. Watching Laura grow up and hopefully turn into a decent human being. We'll see?

Well, enough for now, bed time.

Back to a routine of gym and home tomorrow,

½ food

More exercise

cut out fats/sugars.

must do it no ifs buts or maybes. ½ my problems are a bad self image Only I can change that.

Kathy¹³⁶

Cunneen SC

Q. ...Two days later though you say don't you, "Sometimes I feel I could just drain the bank accounts and leave, leave Singleton, Craig and Laura behind, start new somewhere", that's three days into the New Year?

A. Sorry I'm just reading the whole thing, "Sometimes I feel I could just drain the bank accounts and leave", I'm actually discussing in that about unsatisfied feelings I'm having in my marriage.

Q. More than our marriage because you're going to leave Singleton, Craig and Laura behind?

A. Yes.

Q. And start new somewhere?

A. Yes.

Q. So less than two months after this, Laura was dead wasn't she?

A. Yes.

Q. And you had been writing in your private journal that you were considering leaving Singleton, Craig and Laura behind, having cleared out the bank account?

A. Yes.

Q. The love affair with Laura was over wasn't it?

A. No, the love affair with my husband was coming to an end.

Q. But you were going to leave Laura behind?

A. Yes, because I had a belief and a thought that Craig could be happy if I did that, my love affair with my marriage might have been starting to disintegrate and that's how I was feeling at the time, that it was and I had a spontaneous thought that I could leave, leave Laura with Craig, she would be well looked after, she would be happy, they could both be happy.

Q. And if you'd done that she'd still be alive today wouldn't she?

A. I'm not going to answer that, I can't say that. I've got no way of knowing that.¹³⁷

¹³⁶ Exhibit 2-AZ, Diaries tender bundle [red pagination 7187-7188].

¹³⁷ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T773.36-T774.21 [red pagination 782-783] (Cunneen SC).

19 June 1999 – 4am-

Can’t sleep. Tossing, turning. So much going through my mind. And none of it pleasant.

Another year has passed for me and each one is getting tougher. Trying to understand why the hell Im even on this planet. So many things point to the fact that Im not meant to be.

Unwanted at birth. A father who was so selfish, unthoughtful that he took my mother from me and ruined my life from that one action. Shuffled about for whatever reasons. A family that didn’t “care enough” to want to take responsibility for me and my upbringing. Continuous affirmations by them that they did try and love me etc aren’t working. Im slowly realising they are merely making themselves feel better and justifying there lack of action taken. What good is it all to me now. Im 32 hard and set in my way of thinking. Why couldn’t they of made this much of an effort when I was younger and more impressionable. I also blame government and department and beaucrocy that denied me all because “they” thought I’d be better off not knowing.

I feel my whole life is governed and controlled by anyone but me!

Last few days my heart has been breaking. soul torn apart. Depression is not far away I’m fighting, really I am. But the temptation just not to bother is so strong. The comfort zone of just letting myself slip anywhere but here and present time is so calling me.

The only thing that prevents me Craigs undying love and aderation, Even though I don’t and never will understand it. It just adds to my dilemma. Trying to figure out how he does it.

I know I love him. He has shown me what love is I just have so much trouble justifying to myself that I deserve it all. I just want to hide and watch the world go by it would be so much easier. But I know that Craigs life, wellbeing, happiness, security and mental state seem to depend on me. Is that a good thing? I think so, its preventing me from just dying inside. Which once my laura left is whats happened to a great extent anyway. I just want to cry allday and night. No on sees this but I think its all just getting a bit too much. I vowed Ide never write any of my feelings down on paper again. But it’s the only way I know how to release.

I know Craig will read this and Darling , don’t get it in your head that you have to help solve everything for me. You can’t and I don’t want you to. Ive just hit a bit of a black spot and you “can’t” help me get out of it. I have too!

Reassurance – Im not leaving you or slipping away. Just so unsure and confused and tired, tired of being sad all the time, in my heart, not in life as it has turned out.

Teneile is a breath of fresh air for me. A reminder how life can be so easy at times, with no real earth shattering dramas happening as yet. But sometimes I look at her and wonder if laura or any of my other children would have had the same outlook on life. It depresses and Saddens me to realise that none of them will ever reach this stage in life.

Only comfort I have is that where they are now they definetly have no stresses or decisions to make and eternity can be spent carefree and loved always. At least that’s what I have to believe for sanity I cling on to wouldn’t last very long.

I think that what has stirred all these emotions up is what I found out on Monday. Information is finally coming out and more and more I discover that they all, everyone of them are responsible for my predicament that I’m in now 30 years later. They all decided the life I was meant many cliffs that have to be faced. Very unfair.

I also believe that I managed to get back on the right Path somewhere along the way. I met Craig. So I have denied all that the family attempted to do. Happiness is here for me.

Maxwell KC

Q. That’s [...none of them will ever reach this stage in life...'] referring to your dead children, correct?

A. Yes.

Q. Would it be fair to describe this entry as a release or venting in the way that you spoke about at [ERISP question] 459?

A. I’d agree with that, yes.

Q. When did you write that entry?

A. As it turns out it was June 99.

Q. In the question to the police officers at 459, you’d indicated that you hadn’t written in a diary since 9 May, correct?

A. Yeah, that’s right. Yep, that is, or that was my intention at the time.

Q. But at the time of the interview, you knew you had written in a diary after 9 May 1999, didn’t you?

A. No, I didn’t recall writing in the diary.

Q. You see it’s a pretty significant kind of entry that. It goes over about, at least five pages, pretty heavy material isn’t it?

A. I’m not arguing with you on that. I’m--

Q. But are you saying that when you were answering questions about your disposal of the diaries, you didn’t remember that entry on 19 June, is that what you’re saying?

A. Correct.¹³⁹

Cunneen SC

Q. [Portion of the entry read]...You considered him selfish and unthoughtful for murdering your mother?

A. I had no other way to look at it, yes.

Q. You didn’t say he was an evil dreadful murderer?

A. I didn’t know him. Why, why would I say such words about someone I don’t even know?

Q. He was just selfish and unthoughtful in killing your mother.

A. Because just of the effect that that had. I didn’t know the man. I have no memory whatsoever of him, and as I said, he rarely popped into my thoughts, but when he did, it’s quite evident here when he did, my views were not that he was evil or any of those such things, it was simply the act of which he did I knew of, and the effects of that act on my life from then on.

Q. You said “ruined my life from that one action”.

A. Of course he did.

¹³⁹ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T626-T627 [red pagination 634-635] (Maxwell KC).

Were they punishing me for him taking mums life. I believe so. And they did for years. And they seem to be attempting to do it again. But this time they cant influence. Time, year etc have made it so Im capable of thinking for myself and sticking to the path Im now on. At least I hope I am strong enough. this little black spot grows bigger and comes more frequently now. But I think Im still on my destiny path. With Craig by my side. As it should be ? ? so many questions Being human sucks!

feel a little better now. lighter. have managed to expel a few demons hopefully it will be enough for a while.

I have so many problems and issues I feel like therapy for me will now go on for another 30 years before I'll begin to feel free of anything.

But this helps. Helps me decipher, locate and deal. Is that good? One of my problems is that Im just not sure of so many things anymore.

With youth comes Certainty. Age makes you doubt. Once you doubt thats when it all starts to unravel must get my certainty back or a least a little of it would help.

Well. 5am. Better try for some sleep.

Might have to get my own prescription refilled. They help block out a roving mind eg with Tuffy and mom. Wasn't good enough, in there view. And did everything to make sure I never get to follow my path that was chosen. my destiny if you will was changed by mere mortals, making decisions they had no right to make. I can't help but feel my life would have been so different and how it was meant to be if only Tom hadn't made a stupid mistake one night and "the family" hadn't interefered in the way that they did

I believe that each person is here for a reason. Paths of life are chosen. So me having to adjust and alter mine so drastically has upset things. Because I cant believe that if there is a higher power that selects theses paths for people. How could he choose this one for me. With so [remainder cut off]¹³⁸

Q. What part of your life did he ruin, your childhood for starters?

A. Agreed, yes.

Q. You think don't you that you received no love from the people who brought you up?

A. It was a belief I had, yes.

Q. You make some very pointedly deprecating remarks about the lady you called mum in these diaries.

A. Yes.

Q. But do you say that he ruined your life then when you were 32?

A. I am saying the life I led from his one action did ruin my life, yes. My life could have gone in many different paths and many different directions and I had no way of ever knowing what my future could have been, be it even if he hadn't done what he'd done, what was my future.

Q. Leaving aside for the moment the tragic death of your children, your life, your marriage with Craig was at times filled with love and pleasantness and goodness?

A. Yes, and I've never - never said otherwise.

Q. You proudly spoke often in your diaries of what a lovely home you had and how well it was decorated and how it was rather nicer than other people's and you were proud of it?

A. Yes.

...

Q. What was the predicament that you were in "30 years later"?

A. That's referring to just how I felt my life hadn't worked out how I thought it was supposed to work out.

Q. Was it the - may I suggest to you that the only bad thing really was that your - that's massively significant you're referring there to the death of your children aren't you?

A. No, that passage is referring to information that I had come across in relation to my father and the events surrounding him.

Q. The predicament that you were in at that time was that you were becoming aware that there were questions about your involvement in the deaths of your children?

A. No. The predicament, the word "predicament" is, is in relation to me finding out information regarding my father and what's the surrounding situation with him. And the predicament is my feeling that the actions of him and his situation as I stated ruined my life and sent it on paths that it may not have gone and my predicament is along the lines of my insecurities and, and the problems with which I was always having. I was lamenting as to whether that could have had anything to do with the way I was thinking about things.

Q. The predicament was four dead babies and the focus of the legal system was turning around to you, wasn't it?

A. No, it wasn't. Not what that entry's about at all.

Q. In that passage, you attribute the moral blame for the killing of your children to your father and "every one of them" that set your life on a course where you ended up killing your children?

A. No. Incorrect.¹³⁹

¹³⁸ Exhibit 2-AZ, Diaries tender bundle [red pagination 7192-7200].

¹⁴⁰ Exhibit 4, Transcript of the 2019 Inquiry, 30 April 2019 T705.32-T707.34 [red pagination 714-716] (Cunneen SC).

July 1999 10pm – Thursday night

Decided to start writing in a diary again. Have missed being able to vent regularly. I just pray it doesn't come back to bite me like my 97 one has.

Am feeling good about craig and I. Sexual exploits seem to of drifted by unattended this week. My fault I have had a lot on my mind and physically have been really pushing myself. Lack of sleep hasn't made it a though either, must remember to pay more attention to it. Craigs needs. He places so much importance on sex and a relationship he hasn't really changed at all. Not in any major way. Me I have wondered if Im changing at all myself?

The flat has been an issue between us. For once Craig was being the sensible, objective one and I was clinging onto a lost ideal of it all. Maybe because we've slipped back a little. To be expected. Courting ca only go on for so long and the real world with all its pressures finds a way in. But I still think that we've both learnt and implemented enough safety actions to keep us strong together.

My reasons for wanting to keep the flat were selfish.

My own private space – That can be make anywhere. Our new bedroom will become my sanctuary if needed. writing in here will help me sort and think again as well. Craig should have one. Venting, even writing it down can ease and release tension so easily. But this time Im not going to use it as a means to avoid communicating with him. I did before. My journal became my friend and confident. Change will be that if he wishes to read it that's ok and Ill already know of any concerns in here because I'll of already told him.

Rest day tomorrow. Sleep in if possible. no gym. That will be hard, maybe by the evening, Think I'm well and truly addicted and obsessed.

Can't wait for our work to commence on the house. I have such positive vibes about it. Our new furniture, Kitchen and little things will help me adapt this place as my home again. A feeling I haven't had for the longest time.

Also looking forward to becoming a jenel princess hopefully for the mayoral Ball – on the 7th. The day will comemarate a loss for us, but the thought of pampering ourselves and formally dressing up and parading, Stroking our ego's for the evening will help me cope. Cant talk for Craig. To remember, something beautiful, well, it was beautiful, but you know what I mean. Will never forget her, as I haven't all the others. But, new memories will eventually help heal the pain and shape our lives to come.

So many things I'de like to do with Craig by my side. Skiing, snow, snuggling by fire side.

Beach, tanning, swimming. Life of decadent holidaying (everyones fantasy im sure)

Bed and breakfast in different wineries.

Nice dinning and companions, friends etc

Im sure it will happen oneday. Horse riding – (even though craig hates horses)

Motorbike riding – different buzz Camping – (to an extent) near a beautiful river etc

Well enough for now 10.10pm¹⁴¹

Maxwell KC

Q. [Portion of the entry read]...When did you write that entry?

A. July 99.

Q. When in July?

A. Thursday night at 10pm.

Q. What date in July?

A. I don't recall. If I haven't written it, I don't remember.

Q. This entry was part of the diary that you produced when the police came to execute the search warrant at your flat wasn't it?

A. I didn't produce that diary no.

Q. Isn't it the case that you were taken back to the matrimonial home with the police after your interview and the police officer said, "What we are actually doing here is we are here to look for diaries like we did at the last flat. Are there any diaries here?" And you said, "Yeah one that I bought yesterday." Do you remember saying that?

A. Yes.

Q. You went into the main bedroom of the house and retrieved from the built-in wardrobe a personal diary from 1999?

A. No, that's incorrect. There was a diary that I was writing in that was very visible on my bedside table.

Q. I've just read there from the evidence given at your trial on 28 April, by the police officer, 28 April 2003, transcript 965, line 30 to 966 line 1. You can accept that the police officer gave that evidence that you said, "Yeah, I bought one yesterday." Did you say that?

A. Yes.

Q. And that you went into the house and retrieved a personal diary from 1999 and gave it to them?

A. I'm not recalling that. I'm recalling a diary that was presented at the trial and given into evidence found by detectives at my house and I questioned as to where he found that diary. That's the one that I'm remembering.

Q. Well, in any event the entry of July 99 that I've just referred to is under your hand, correct?

A. Yes.

Q. And it's in a 1999 diary that the police obtained somehow?

A. Yes.

Q. You say you're not sure whether you gave it to them or not?

A. Correct, yeah.

Q. I suggest to you that this entry dated July 99, 10pm Thursday night was an entry that was made before you gave the record of interview. What do you say?

A. I'm not sure what to say about--

¹⁴¹ Exhibit 2-AZ, Diaries tender bundle [red pagination 7202-7205].

Q. Well, do you know or not?

A. No, I don't.

Q. What you start out by saying is, "Have missed being able to vent regularly." Was that true?

A. Yes, I used to use, that's what I used to use my diaries for, yes.

Q. But you see the reason that you say you got rid of the diaries was because you didn't want to vent and put down, write down thoughts that would depress you?

A. That's--

Q. That's what you said in 459 of the interview isn't it?

A. Yes, and that was the intention when I said it. I wasn't going to.

Q. Do you say that you changed your mind?

A. Yes.

Q. You needed to vent again?

A. Yes.

Q. Coming back to your answer at 459, regarding your reason for disposal of the diaries and also that you hadn't written in one since 9 May, just coming back to that concept, were you aware that a search warrant would be executed on your house at the time you were giving the interview?

A. No.

Q. This was a big surprise to you?

A. Correct.

Q. The answer you gave that you hadn't written in one since 9 May was false, wasn't it?

A. It was what I had intended. It was my intention at the time, so I'm not going to say it was false.

Q. The answer that you gave in the interview that you hadn't written in a diary since 9 May was false wasn't it?

A. Considering there are now diaries stating so, then all right, yes I would agree.

Q. You gave a false answer to that question?

A. I gave an answer that I believed at the time to be correct.

Q. But now you realise it was wrong?

A. Well, obviously yes.

Q. I put it to you that you knew that you had written in a diary since 9 May at the time you gave that answer to the police?

A. No, I'm not going to agree to that.

Q. You gave that answer about not wanting to write anymore as a reason that you'd got rid of the diaries didn't you?

A. I'm not going to agree to that either. The words--

Q. You see--

A. The - I'm sorry, the word "disposal" and "get rid of" is constantly used and I am going to object to that because they're, it wasn't, they weren't a planned decision to get rid of anything.

Q. But you threw them out?

A. To throw something out, if you're finished with something what you do with it, you throw it out.

Q. All right, well let's just use that term, your term, you threw it out right?

A. Mm.

Q. Part of the reason that you threw it out was that you didn't want to write in them anymore?

A. At that particular time, yeah.

Q. But in fact, you had written in them hadn't you?

A. Obviously, yes.

Q. What I'm suggesting to you is that you threw out the diaries for a different reason. What do you say?

A. That my reason stands. I threw the - they weren't a purposeful thing done. They were simply thrown because I'd finished with them. That's how I viewed my diaries; once full I was finished with them.

Q. No, they were thrown you say because what you wrote in them was about how crappy life was and how it depressed you. That's the reason you gave?

A. Yes.

Q. As at some time in July 99 that reason had changed. That was no longer a reason is that right?

A. That's correct. I changed my mind.

Q. See, what I'm suggesting to you is that you lied in that answer to the police about the reason you got rid of your diaries?

A. No, I didn't lie.

Q. I'm suggesting to you that you got rid of your diaries because there was significantly incriminating material in the diaries. What do you say about that?

A. Won't agree with that at all, no.¹⁴²

Cunneen SC

Q. You wrote this, did you not, in July 1999?

A. Yes.

Q. The second sentence, "I just pray it doesn't come back to bite me, like my one has". "Decided to start writing in a diary again, have missed being able to vent regularly" - sorry, the third sentence, "I just pray it doesn't come back to bite me, like my 97 one has"?

¹⁴² Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T698.48-T699.13 [red pagination 708] (Cunneen SC).

A. And that's a reflection on the fact that the previous diary had been used in the manner that it had been used.

Q. As evidence of the truths that are contained within it?

A. As evidence of using someone's thoughts in a manner that I - didn't seem appropriate, as far as I was concerned.¹⁴³

¹⁴³ Exhibit 4, Transcript of the 2019 Inquiry, 29 April 2019 T698.48-T699.13 [red pagination 708] (Cunneen SC).

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