



CORONERS COURT OF QUEENSLAND

FINDINGS OF INQUEST

CITATION: **Inquest into the death of Hugo Alexander McGregor**

TITLE OF COURT: Coroners Court

JURISDICTION: TOWNSVILLE

FILE NO(s): 2023/1311

DELIVERED ON: 23 September 2026

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6 May 2025

Inquest
23 – 26 September 2025

Submissions following inquest
11 November 2025 – 2 April 2026

FINDINGS OF: Stephanie Gallagher, Deputy State Coroner

CATCHWORDS: Coroners: inquest, health care related death, child birth, neonatal resuscitation, whether augmentation of labour was appropriate, whether timing of caesarean section was appropriate, death from hypoxic ischaemic encephalopathy.

REPRESENTATION:

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Lawyers

RN Dolfin and RN Potts:

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Introduction

1. Hugo Alexander McGregor (“**Hugo**”) was the child of Andre and Jenna McGregor. Hugo was born following an emergency caesarean section on 11 March 2023 at the Mackay Base Hospital (“**MBH**”).
2. At birth, Hugo’s condition was extremely poor. He required immediate resuscitation. While the resuscitation of Hugo was successful, he did not make a meaningful recovery, and was assessed to have severe hypoxic-ischaemic encephalopathy (“**HIE**”) soon after his birth. He was transferred to the Townsville University Hospital (“**TUH**”) then tragically died, within a week of his birth, on 16 March 2023.

Coronial Jurisdiction

3. The coronial jurisdiction was enlivened because Hugo’s death was a ‘reportable death’ under the *Coroners Act 2003* (“**the Act**”).
4. Pursuant to section 28(1) the Act, I considered that it was in the public interest to hold an inquest into Hugo’s death.
5. An inquest is intended to provide the public with transparency regarding the circumstances of the death, and to answer any questions which may have arisen following the death.
6. In accordance with section 45(2) of the Act, the Coroner is required, if possible, to find (i) who the deceased person is; (ii) how the person died (iii); when the person died (iv); where the person died; and (v) what caused the person to die. In accordance with section 45(5) of the Coroners Act, the Coroner must not include in findings, statements that a person is or may be guilty of an offence or may be civilly liable for something.
7. In keeping with the therapeutic nature of the Coronial jurisdiction, and by operation of law, the focus of the coronial process is on discovering what

happened, not on ascribing guilt, apportioning liability or attributing blame to any person or party.

8. The relevant standard of proof is that of the balance of probabilities, with reference to the *Briginshaw*¹ standard. Accordingly, the more significant the issue for determination, the clearer and more persuasive the evidence must be for the Coroner to be sufficiently satisfied on the balance of probabilities that the issue has been proven:

But reasonable satisfaction is not a state of mind that is attained or established independently of the nature and consequence of the fact or facts to be proved. The seriousness of an allegation made, the inherent unlikelihood of an occurrence of a given description, or the gravity of the consequences flowing from a particular finding are considerations which must affect the answer...In such matters 'reasonable satisfaction' should not be produced by inexact proofs, indefinite testimony, or indirect inferences.²

9. In adjudicating the significance of the evidence, the impact of hindsight bias and affected bias must also be considered.³ As outlined in 'The Australasian Coroners Manual':⁴

Hindsight bias is the tendency after the event to assume that events are more predictable or foreseeable than they really were. What is clear in hindsight is rarely as clear before the fact...It is an obvious point, but one that nonetheless bears repeating, particularly when coroners are considering assigning blame or making adverse comments that may damage a person's reputation. ... Coroners should attempt first to understand the circumstances as they appeared at the relevant

¹ *Briginshaw v Briginshaw* (138) 60 CLR 336

² *Briginshaw v Briginshaw* (138) 60 CLR 336, 362 – 363 (Dixon J)

³ Findings of the inquest into the death of Pasquale Roasario Giorgio, [140] – [142]

⁴ Hugh Dillon and Marie Hadley, *The Australasian Coroner's Manual* (The Federation Press, 2015) 10

time to the people who were there. ... Hindsight, of course, is a very useful tool for learning lessons from an unfortunate event. It is not useful for understanding how the involved people comprehended the situation as it developed. This distinction needs to be understood and rigorously applied.

10. A pre-inquest conference (“**PIC**”) was held on 6 May 2025. In advance of the PIC, a draft list of proposed issues for inquest was circulated to the parties, inviting submissions on their content. No matters of substance, or any additional issues, were raised by the parties. Accordingly, the issues for inquest were as follows:

- “1. The findings required by s. 45(2) of the *Coroners Act 2003* (Qld) (“**Coroners Act**”), namely the identity of the deceased person, when, where and how the person died, and what caused the person’s death; and
2. Consideration of the circumstances surrounding the birth of Hugo McGregor, including:
 - (a) whether the decision to commence Jenna McGregor on the Syntocinon infusion at 15:00 hours on 11 March 2023 to induce labour, as appropriate in all the circumstances;
 - (b) whether or not the clinical indicia was such that the caesarean section should have been performed prior to 16:00 hours on 11 March 2023, and, if so, what impact would that have had on Hugo McGregor chances of survival;
 - (c) whether the care and treatment administered to Jenna McGregor following the decision to proceed to caesarean section was appropriate in all the circumstances;
 - (d) whether there were any missed opportunities that may have changed the outcome for Hugo McGregor;
3. Consideration, prospectively, as to whether any clinical indicators existed which indicated that Hugo McGregor would be born in the condition in which he was born;

4. Whether any changes to practices, procedures or policies could reduce the likelihood of deaths occurring in similar circumstances.”
11. It is convenient to address here submissions made on behalf of Hugo’s family inviting me to consider whether the circumstances of Hugo’s death engage the *Human Rights Act 2019* (Qld) (**‘HRA’**). As has been noted, no matters of substance or additional issues were raised at the PIC by the parties, including whether there were any matters requiring consideration relating to the application of the HRA. Accordingly, whether the HRA is engaged, or whether there were any potential breaches of human rights that may have caused or contributed to Hugo’s death, were not the subject of any evidence in the course of the investigation or at the inquest. The Queensland Human Rights Commission, nor the parties, were given an opportunity to make submissions on this point, as it was not raised by the family prior to their written submissions received at the conclusion of the inquest. In the circumstances, I do not intend to address the matter further. I do observe that this Court has previously considered the application of the HRA to the Coroner’s Court, and determined that to make any findings identifying potential human rights breaches by public entities is expressly prohibited by *Coroners Act 2003* (Qld) and is outside the proper remit of the Coroner’s Court.⁵ I adopt that reasoning.

The inquest

12. Oral hearings commenced in Townsville on 23 September 2025 and concluded on 26 September 2025. The brief of evidence was tendered and the inquest heard evidence from eleven witnesses. Those witnesses included those who provided care to, or otherwise had some involvement with, Jenna and Hugo from the commencement of Jenna’s labour until Hugo’s birth: Dr Robert Thompson, from the Proserpine

⁵ *Findings of the Inquest into the death of Selesa Tafaiifa*, at [8] – [26].

Hospital (“**PH**”), Registered Midwife (“**RM**”) Sharni Dolfin, RM Jessica Potts, Dr Sumera Khan, Dr Smriti Joshi and Dr Sarah Koker.

13. The inquest also received expert evidence, in the form of reports and oral evidence from two neonatologists, Associate Professor Luke Jardine and Dr Philip Henschke, and three obstetricians and gynaecologists; Dr Tom Cade, Associate Professor Gino Pecoraro OAM and Professor Edward Weaver OAM.
14. Written submissions were provided following the inquest, the last of which was received on 2 April 2026.

Factual findings

15. I largely adopt Counsel Assisting’s summary of the following factual findings with reference to the contemporaneous medical records which were not materially challenged by the parties during the hearing, and on the basis that I accept each of the witnesses who gave evidence as honest and reliable. I will address the evidence which informs my findings in relation to the coronial issues, further below.
16. Jenna discovered she was pregnant with Hugo in about June 2022. Her pregnancy was uncomplicated and without any medical issues. Throughout her pregnancy Jenna received antenatal care from the Midwifery Group Practice at the PH, the closest hospital to where she lived with her husband. Jenna’s pregnancy was uncomplicated, and there were no indicia that her labour would be difficult.
17. On 10 March 2023, while at home, Jenna experienced a spontaneous rupture of membranes. After making telephone contact that evening, Jenna presented at PH at approximately 02.05 hours on 11 March 2023. Some time after Jenna’s arrival, RM Chelsea Robb performed a vaginal examination (“**VE**”) which revealed Jenna was 1 cm, dilated, with a 1cm

long cervix and Hugo's head at a station of 1 cm above the ischial spines.⁶

18. Dr Thompson, the rural generalist senior medical officer at PH, was of the opinion Jenna was still in the early stages of labour and would likely give birth sometime during the afternoon or evening of 11 March 2023.⁷ The likely timing of birth presented an issue with Jenna remaining at PH. From 08.00 hours the hospital would be without anaesthetic cover. The relevant doctor who was rostered had taken unwell and there was no appropriate replacement available.⁸ Anaesthetic cover was necessary for any person in labour. To not have such cover presented a safety risk. This was communicated to Jenna.⁹
19. MBH was the referral hospital from PH.¹⁰ Both hospitals are operated by the Mackay Hospital and Health Service ("**MHHS**"). It was Jenna's preference to be transferred to Townsville University Hospital.¹¹ It was established in evidence that patients do not necessarily have a choice in the hospital they are admitted to in these circumstances. It is only if the referral hospital declines the referral, or if there is a specific obstetric reason why the referral hospital cannot accept the transfer, that another option might be explored.¹² That did not occur in this case. MBH accepted the referral and Jenna was transferred.
20. Jenna arrived at MBH at approximately 06.00 hours on 11 March 2023. RM Stephane Ryan cared for Jenna until her shift concluded at approximately 07.00 hours. RM Ryan performed a VE at approximately 06.35 hours, identifying that Jenna appeared to be 6 to 7 cms dilated, but noted that Jenna was not tolerating the VE well and ceased the examination.¹³ At around this time, RM Ryan performed a handover to

⁶ B38, at [20].

⁷ B38, at [20].

⁸ B38, at [22].

⁹ Statement of Jenna McGregor, Exhibit B43 at [36].

¹⁰ T2/28, lines 45 to 50.

¹¹ B43, at [33] – [34].

¹² T2/28, lines 45 to 50; T2/29, lines 1 to 21 and lines 34-50.

¹³ B36, at [9].

RM Jessie Potts who was rostered for the day.¹⁴ As part of the handover, RM Ryan mentioned that she had observed the foetal heart rate (“**FHR**”) to be tachycardic (when the FHR exceeds 160 bpm).¹⁵ The response to this was to apply cardiotocography (“**CTG**”). Whilst familiarising herself with Jenna, conscious that she had not previously cared for her, RM Potts also accessed Jenna’s records from PH. She recalled these documents were limited.

21. Other than Jenna experiencing pain, there was nothing remarkable about the progress of Jenna’s labour in the morning of 11 March 2023, including the FHR. To address Jenna’s pain, RM Potts discussed several options with her. These included sterile water injections, warm water immersion, nitrous oxide gas, morphine and an epidural.¹⁶ Water immersion was attempted, commencing with a shower while a bath filled and then a transfer to the bath.¹⁷ Jenna used nitrous oxide while in the bath. She then requested an epidural.¹⁸ The progress notes entered by RM Potts at 09.10 hours record Jenna requesting an epidural.¹⁹ Further notes, entered by RM Potts at 09.31 hours record that an anaesthetist on call was advised of Jenna’s request for an epidural.²⁰ Dr Khan was consulted by RM Potts about the epidural. Dr Khan was content for this to occur.
22. The records indicate that an epidural was sited at approximately 11.20 hours.²¹ The delay was likely the result of operational requirements at MBH that day. Dr Cade, one of the experts who gave evidence instructed directly by Hugo’s family, considered that delays are “not unusual” in “public hospitals due to workload and staffing”.²² Consistent with this, 11 March 2023 was a busy day at MBH. There were back-to-

¹⁴ T1-26, lines 29-34.

¹⁵ T1-26, lines 36-44.

¹⁶ T1-28, lines 1-5.

¹⁷ B34, at [18].

¹⁸ T1-29, lines 17.

¹⁹ JP-01.

²⁰ JP-02.

²¹ B34.3 Attachment JP-03.

²² Dr Cade T3/51, lines 1 to 3.

back emergency cases in theatre. This impacted the availability of anaesthetic staff to perform epidurals.²³

23. To administer the epidural, the CTG was removed. It was recommenced at about 11.52 hours.²⁴ The FHR entered an accelerative trace between 11.54 hours and 12.06 hours but settled back to baseline by 12.07 hours.²⁵ Between 12.12 hours and 12.15 hours a decreased variability in the FHR was observable on the CTG. However, this variability improved. A vaginal examination was conducted at 12.28 hours. It recorded Hugo's head was in -2 station which meant it was high in Jenna's pelvis. Jenna was 6cms dilated, <1 effaced and still in active labour.²⁶ The notes entered by RM Potts record "nil concerns at this time."²⁷
24. At approximately 14.06 hours, RM Potts observed a further accelerative trace on Jenna's CTG which she raised with Dr Khan. RM Potts sought permission to commence a fluid bolus which Dr Khan advised her to do. The intended purpose was to keep Jenna hydrated and to reduce the FHR back to baseline.²⁸ The conversation with Dr Khan is recorded in the progress notes entered at 14.12 hours. The complete entry for this time is as follows:²⁹

"Anaesthetics called – Jenna experiencing breakthrough pain.
Asked to r/v
Urine concentrated – IVT bolus 250mls commenced as per discussion with O=G
Discussed contractions reducing, spacing out – Once pain is well controlled from epidural – for synt infusion. Discussed same with Jenna."

25. This entry records Jenna's continued pain. There was an issue with the effectiveness of the epidural. There is some evidence that the initial settings were changed only to be readjusted back to their original

²³ B27, at [14].

²⁴ B34 at [37] and [39].

²⁵ B34, at [41] T1/33, line 20-23.

²⁶ B34, at [44].

²⁷ B34.6 Attachment JP-06.

²⁸ B34, at [47] T1/35, line 43 to T1/36, line 2. B27 at [19].

²⁹ E1.2 at page 21.

settings. The pain was undoubtedly extremely unpleasant for Jenna. There is however no evidence, and therefore no explanation, as to why the epidural was not effective.

26. Within this entry, the reference to “synt infusion” is a reference to Syntocinon,³⁰ a drug used to stimulate uterine contractions.³¹ I will address the evidence about the use of the drug, and its appropriateness, further below. However, I accept, from this note, and the subsequent order made by Dr Khan, that Syntocinon was discussed between RM Potts and Dr Khan; and, further, that the use of Syntocinon was discussed with Jenna by RM Potts.
27. Consistent with what the 14.12 hours entry records, Dr Khan issued a medication order for Syntocinon at 14.10 hours.³² It was for the standard dose and in accordance with the hospital policy.³³ Dr Khan cannot specifically recall viewing Jenna’s CTG before making the order, however, it was Dr Khan’s usual practice to do so. Dr Khan also recalled checking Jenna’s CTG during her labour as well as speaking with Dr Kew about it,³⁴ and gave evidence to the effect that she would not prescribe syntocinon unless the CTG was reassuring.³⁵
28. At 15.00 hours RM Potts observed that Jenna’s contractions were once in 10 minutes whereas they should have been progressing into 4 or 5 contractions in 10 minutes. At around this time, Syntocinon was administered.³⁶ Antibiotics, benzylpenicillin sodium, were administered to Jenna at 15:38 hours.³⁷ There is no issue that this was done in accordance hospital policy because Jenna’s labour had, by this time, been in progress for 18 hours. At 15.52 hours the Syntocinon infusion

³⁰ The substance is also referred to oxytocin. The difference between the two is that oxytocin is a naturally occurring hormone and Syntocinon is a synthetically produced product: see T3/21, lines 40 to 46 and T3/22, lines 1 to 6.

³¹ T3/22, line 9.

³² E1.2 at page 206.

³³ T1/63, line 25 – 50.

³⁴ B27 at [21].

³⁵ T1/64, lines 38-49 to T1/65, lines 1 to 15.

³⁶ B27 at [55], JP-07; the medication administration records show a start time of 15:03: E1.2 at page 55.

³⁷ E1.2 at page 53.

was increased.³⁸ This was broadly in accordance with policy³⁹ and the medication order placed by Dr Khan.⁴⁰

29. At 16.01 hours, the FHR fell and was bradycardic. RM Potts was at Jenna's bedside. She was joined by RM Dolfin who had observed the drop in the FHR from the nearby nurses' station. Attempts to change Jenna's position did not improve the FHR. The Syntocinon infusion was ceased and the Staff Assist alarm activated. In response to the alarm, RM Barnes, RM Milborrow and Dr Khan attended Jenna's room. Dr Khan performed a vaginal examination. During that examination, Dr Khan observed fresh bleeding and advised Jenna was 4 to 5cms dilated. While performing the vaginal examination, Dr Khan attempted to attach a foetal scalp electrode, a device which would assist monitoring the FHR. The attempt was not successful.⁴¹ Dr Khan had expected Jenna to be fully dilated. That she was not and, even ignoring the bradycardia, it meant that a vaginal birth was not possible.⁴² Dr Khan informed Jenna this. The decision was made for an emergency caesarean section.⁴³
30. At around 16.08 hours, Dr Khan gave a verbal order for Terbutaline to be administered, as she was considering hypertonus as a cause for Hugo's bradycardia.⁴⁴ Terbutaline stops muscles from contracting and causes the uterus to relax.⁴⁵ The drug was administered by RM Barnes at around the time the verbal order was made.⁴⁶ The notes record that the drug was administered intramuscularly but does not record the dose.⁴⁷
31. The standard policy in effect at MBH at the time provided for a dose of 250 mcg to be administered either subcutaneously or intravenously.⁴⁸ As to the dose, Dr Khan's evidence at the inquest on this issue was,

³⁸ B27 at JP-07; E1.2 at page 54.

³⁹ E1.13.7 at page 7.

⁴⁰ Exhibit E1.2 at page 206.

⁴¹ T1/66, line 40.

⁴² T1/66, lines 30 to 37.

⁴³ T1/66, lines 35 to 38 and 42 to 44.

⁴⁴ B27 at [35] – [36].

⁴⁵ T3/22, lines 35 to 36.

⁴⁶ B29 at [20]; B34 at [67]. T1/11, lines 38-39.

⁴⁷ JP-07.

⁴⁸ E1.13.4.

understandably, affected by the passage of time, in that she did not have a clear recollection about the dose to be given.⁴⁹ However, her statement which was provided closer in time to the events, detailed that she “clearly recall[ed] giving a verbal order for 250 mcg subcutaneous terbutaline”⁵⁰. The midwives who gave evidence and were present when the terbutaline was administered gave clear evidence of their recollection that the administration was subcutaneous.⁵¹ The recollections by Dr Khan and the midwives who gave evidence are consistent with what the policy at MBH would have required at the time.

32. On the balance of the evidence, I find that the terbutaline was administered subcutaneously, and that the administration route was recorded in error. I accept Counsel Assisting’s submission that no criticism can be made of this documentation error, particularly given the urgency of what was occurring. As to the dose, I accept that the dose given was likely 250 mcg in accordance with the policy. I am also satisfied that even if it was given intramuscularly, there is no evidence that such a course was of any consequence.
33. By 16.11 hours, Jenna was being moved to the operating theatre. Hugo had been bradycardic for approximately 10 to 11 minutes.⁵² The distance from Jenna’s room to the operating theatre was approximately 800 to 900 metres. It required transit through various corridors and use of an elevator.⁵³ RM Potts, RM Barnes and RM Dolfin moved Jenna. Dr Khan was present during transit. On the journey she contacted Dr Kew and the anaesthetist. More than one contact was made with Dr Kew. It was likely that after the initial contact, Dr Kew was contacted by RM Dolfin⁵⁴, as Dr Khan had prepared herself for theatre. In any event, Dr Kew advised Dr Khan (either directly or via RM Dolfin) to commence the procedure. This was appropriate as Dr Khan was the only person

⁴⁹ B27.1 at [5]; T1/67-68.

⁵⁰ B27.1 at [5].

⁵¹ RM Dolfin, T1/11, lines 40 -50, T1/12 lines 1-15, and RM Potts T1/43, lines 38 to 45.

⁵² T1/66/46-50.

⁵³ T1/12, lines 37 to 40; T1/22, lines 31-34; and T1/44, lines 17 to 21.

⁵⁴ B29 at [28].

available to perform the caesarean; the situation was urgent, and time was also critical.⁵⁵

34. At around 16.20 hours, approximately 19 minutes after bradycardia was observed, the FHR was lost. RM Potts recalls they could not ascertain Hugo's heart rate from the lift. In other words, it is likely that the FHR was lost prior to arriving at the operating theatre.⁵⁶ By the time Jenna reached the operating theatre Hugo had been bradycardic for about 18 minutes.⁵⁷
35. Upon arriving at the operating theatre, the anaesthetic team had prepared to perform a spinal anaesthetic. There was some disagreement as between the RMs involved and the anaesthetic team as to whether a spinal or a general anaesthetic was appropriate.⁵⁸ The anaesthetic team proceeded as they had planned and an initial attempt at spinal anaesthetic was made. Once it failed, a general anaesthetic was administered. None of the witnesses could recall precisely the time that elapsed between the failed attempt at a spinal anaesthetic and the administration of a general anaesthetic. It was likely no more than a matter of minutes.⁵⁹ The disagreement between the RMs involved and the anaesthetic team was unfortunate and ideally should have been avoided. It likely arose because the RMs were aware that the epidural administered had not been successful and, additionally, because it was considered that the general anaesthetic could speed up Hugo's delivery.⁶⁰ Ultimately however, it was the anaesthetic team, not the RMs, who were qualified to make the clinical decision to attempt a spinal anaesthetic. Any delay caused by the failed attempt, was unlikely however, to have had any material impact on Hugo's condition when born, or on his prognosis, for reasons I address further below.

⁵⁵ T1/69 lines 25 to 49 to T1/70 lines 1 to 10.

⁵⁶ T1/44, lines 41 to 43.

⁵⁷ B27 at [41].

⁵⁸ B34 at [73]; T1/14, lines 5 to 15.

⁵⁹ T1/14, lines 27 and 30 and 34 to 35; and see T1/70, lines 36-40; B27 [46].

⁶⁰ T1/28, lines 14 to 21.

36. At 16.28 hours, Dr Khan put knife to skin.⁶¹ Hugo was born at 16.32 hours.⁶² He was pale, floppy and with no signs of life.⁶³ Jenna did not experience significant bleeding during the procedure.⁶⁴
37. Prior to Hugo's birth, Dr Koker, the Paediatric Registrar of MBH, had arrived in the operating theatre. She recalls arriving at about 16.20 hours.⁶⁵ When she arrived, Dr Koker was informed by RM Dolfin what was occurring. This included that the FHR had been lost prior to the attempt at spinal anaesthetic. Dr Koker informed RM Dolfin that she was going to prepare to intubate Hugo.⁶⁶ In preparation for this, and prior to Hugo's birth, Dr Koker devised a plan as to what was to occur. This included speaking with RM Potts and RM Dolfin as to their experience in the procedure and allocating to them the roles that each would perform. It was agreed that RM Dolfin would auscultate the heart rate with a stethoscope and then provide chest compression. RM Potts, who had not assisted with an intubation before, would assist. Dr Koker guided RM Potts through the process.⁶⁷
38. When he was born, Hugo was placed in a PANDA cot. In accordance with the resuscitation plan outlined, after Hugo was born, RM Dolfin commenced chest compressions. These ceased when Dr Koker commenced intubation. This occurred at approximately 45 seconds to 1 minute of life.⁶⁸ The first attempt was abandoned because the suction was not functioning.⁶⁹ Suction was required because Dr Koker observed, having inserted the laryngoscope, that Hugo's throat or vocal cords were obscured by blood.⁷⁰ Dr Koker made the decision to abandon the first attempt as by the time it became apparent the suction was not working

⁶¹ B34 at [79];

⁶² JP-07.

⁶³ B29 at [29]; B17, at [24].

⁶⁴ T1/78, line 39; see also B34 at [79].

⁶⁵ B17 at [18].

⁶⁶ B17 at [19].

⁶⁷ T2/10, lines 10 to 45.

⁶⁸ T2/12, lines 1 to 2.

⁶⁹ T2/11, lines 1 to 5.

⁷⁰ T2/10, lines 30 to 35.

and Hugo had been without chest compressions for about 20 seconds.⁷¹ A neo-puff was then applied and RM Dolfin resumed chest compressions. The suction issue was then corrected and Dr Koker commenced suction at four and a half minutes of life.⁷² Intubation was then achieved.

39. There was a minor delay with the endotracheal tube ("**ETT**"), as it had, in the moment, been dropped on the theatre floor. The clinical decision was made to use the ETT given Hugo's clinical condition.⁷³ A Pedi-Cap, a device used to detect carbon dioxide and the best guide to confirming the correct placement of the ETT, was applied.⁷⁴ A dose of adrenaline was also drawn up but ultimately not administered because a heart rate of 80 bpm was detected in Hugo at 16.38 hours (approximately 5 minutes 30 seconds of life⁷⁵). At this point, chest compressions ceased.⁷⁶ Dr Koker made an adjustment to the ETT. It was then secured to Dr Koker's satisfaction.⁷⁷ Hugo's heart rate continued to be monitored. At 8 minutes of life, it was 120 bpm, and a nasogastric tube was inserted.⁷⁸
40. Dr Joshi, a paediatrician, arrived in theatre at approximately 16.42 hours, when Hugo was at 10 minutes of life.⁷⁹ Upon arrival, Dr Joshi observed that Hugo was receiving adequate ventilation,⁸⁰ had a good rise and fall of his chest, with no spontaneous breathing effort observed. His heart rate was approximately 110 bpm.⁸¹ Dr Joshi arranged for Hugo to be transferred to the special care nursery ("**SCN**"). This was a priority to enable Hugo, who was not making any spontaneous breathing effort at this time, to be placed on a ventilator.⁸² In preparation for Hugo's

⁷¹ B17 at [29].

⁷² T2/12, lines 4 to 5.

⁷³ T2/12, lines 18 to 28 and lines 37 to 46.

⁷⁴ T2/13, lines 1 to 7 and lines 20 to 30; B17 at [34].

⁷⁵ T2/14, lines 1 to 5.

⁷⁶ T2/14, line 4; B17 at [36].

⁷⁷ T2/14, line 40.

⁷⁸ B17 at [40]; T2/15, lines 3 and 5.

⁷⁹ B24 at [13]; T2/82, line 23.

⁸⁰ B24 at [14]; and T1/89, lines 15 to 21.

⁸¹ B24 at [14]; T2/83, lines 4 to 10.

⁸² T2/83, lines 15 to 17.

transfer to the SCN, it was apparent that the air cylinder on the PANDA cot was empty, however, a decision was made not to replace the cylinder as Hugo was still receiving 100% oxygen at that time.

41. Arrangements were also made for Hugo to be transferred to TUH owing to the major concerns held, by Dr Joshi and others, that Hugo had moderate to severe hypoxic ischaemic encephalopathy (“HIE”). NeoRESQ were contacted to facilitate the transfer. Hugo continued to receive treatment while at MBH. Passive cooling was undertaken, a standard practice for infants who have suffered severe HIE.⁸³ At approximately 1 hour of life, Hugo began seizure activity, common in infants who have suffered HIE. For this, he was administered phenobarbitone and a morphine infusion. Sarnat scores, used to assess HIE, were completed at 1 hour of life. The severity of Hugo’s HIE was scored as severe.⁸⁴
42. Hugo was transferred to TUH at approximately 22.00 hours on 11 March 2023. Imaging showed changes consistent with severe HIE and his prognosis was considered very poor. Following discussions with his family, palliative care was provided and Hugo died at the TUH at 06.45 hours on 16 March 2023.
43. An autopsy was performed by Dr Rebecca Williams, Forensic Pathologist on 17 March 2023. She provided an autopsy report dated 26 October 2023 where she determined the cause of death to be hypoxic-ischaemic encephalopathy due to perinatal asphyxia. It was noted in the report that the placenta showed acute chorionitis (indicative of infection) and low-grade chronic villitis of unknown aetiology.⁸⁵

Consideration of Issues 2(a), 2(b) and 3

44. It is convenient to deal with these issues together:

⁸³ B24 at [24].

⁸⁴ B24 at [27].

⁸⁵ A3 at page 14.

Whether the decision to commence Jenna McGregor on the Syntocinon infusion at 15:00 hours on 11 March 2023 to induce labour, was appropriate in all the circumstances; and

Whether or not the clinical indicia was such that the caesarean section should have been performed prior to 16:00 hours on 11 March 2023, and, if so, what impact would that have had on Hugo McGregor chances of survival.

Consideration, prospectively, as to whether any clinical indicators existed which indicated that Hugo McGregor would be born in the condition in which he was born.

45. Consistent with the submissions of parties, in considering the expert evidence on the obstetric issues, I have largely preferred the opinions of Dr Cade and Professor Weaver. A/Professor Pecararo emphasised in both of his reports and his oral evidence that he had some difficulty with the interpretation of the records in this case due an element of unfamiliarity with the way the information was displayed on the relevant platform used by MBH.⁸⁶

Progress of labour

46. Hugo's family have submitted that the vaginal examination conducted by RM Potts at around 12.30 hours ought to have been cause for concern regarding the progress of Jenna's labour. This submission is premised on my accepting that there had been a lack of dilation observed by RM Potts at that time, given the findings on vaginal examination by RM Ryan at 06.35 hours which showed a dilation of 6 to 7cms. I am urged to interpret the results of the examination as representing arrested progress in labour or the possibility of obstructed labour. The submission relies on the opinion of Dr Cade, who considered there had likely been

⁸⁶ G2, G2.3; T3/35 lines 25 -40.

insufficient or no progress in labour by 12.30 hours, and that a caesarean section should have been considered at that time.⁸⁷

47. In his oral evidence, Dr Cade ultimately accepted the possibility that the difficult vaginal examination on admission by RM Ryan was unreliable or inaccurate, consistent with his written report where he noted that the difference between that and the 12.30 hours examination were likely due to inter-observer variability.⁸⁸ Dr Cade had also highlighted that in the constraints of a public hospital system, with various shift changes, it would not be unreasonable to assume a previous examination may have been incorrect, saying that there were no clinical circumstances suggestive of labour being obstructed.⁸⁹
48. It was Professor Weaver's opinion that after Jenna's arrival to the PH and over the following six hours, Jenna's labour did not progress well, but that this was common in occipito-posterior positions in women undergoing their first labour, and occurs in approximately 10 per cent of labours. This is because uterine contractions can become less strong, leading to slow labour progress.⁹⁰ This process is commonly corrected through the augmentation of labour contractions with syntocinon (oxytocin), which strengthens the contractions and in turn can correct the baby's position.⁹¹
49. In Jenna's case, Professor Weaver's evidence was that the commencement of syntocinon at 15.00 hours was done in accordance with the relevant Queensland Health guidelines and that the decision was contemporary and reasonable.⁹² At that point in time there was, in Professor Weaver's opinion, a 70 percent chance that Jenna could still have a natural birth despite the slow progress.⁹³ Dr Cade also accepted

⁸⁷ G1 at page 3 -4.

⁸⁸ T3/51 L45 to T3-52 L38; G1 at page 3.

⁸⁹ G1 at page 4.

⁹⁰ G4 at page 6.

⁹¹ Professor Weaver G4 at page 6; T3/8, lines 5 to 10 and 25 to 30.

⁹² G4 at page 5 – 7.

⁹³ T3/15, lines 3 to 5.

that there was a reasonable possibility of a vaginal birth with augmentation with syntocinon in the case of inefficient uterine activity, compounded by malposition.⁹⁴

50. The opinions of Dr Cade and Professor Weaver differ in respect of whether a caesarean section should have been considered prior to the syntocinon commencing, which I will address further below. However, Dr Cade's opinion was ultimately consistent with Professor Weaver in that it was reasonable to commence syntocinon at the time that it was, and that the CTG was completely reassuring at that time.⁹⁵ Dr Cade expressed some views about needing to exercise caution and careful observation in the circumstances of commencing syntocinon. There is no evidence before me that that was not done, and I find that the relevant protocols and guidelines were followed in respect of commencement of the syntocinon, and the monitoring of Jenna and Hugo thereafter.⁹⁶
51. The submissions on behalf of the family suggesting any inappropriateness of the syntocinon commencement and titration are premised on the assumption that the labour had arrested or was obstructed prior to the commencement of syntocinon. Dr Cade did not maintain that view in his oral evidence. I accept that the progress of labour was slow. There was no other evidence which would support a finding that the labour was either obstructed or had truly halted, at the time the use of syntocinon was considered and then commenced.
52. I am satisfied that the initial vaginal examination on admission to the MBH can be considered unreliable and inaccurate due to the circumstances of both Jenna's discomfort and the subjectivity of assessment. This is a circumstance which cannot be avoided in any health system whereby shift changes mean different midwives can undertake consecutive examination which can lead to variability in

⁹⁴ T3/43 lines 40-45.

⁹⁵ G1 at page 4.

findings or examination. There is no other evidence that progress in labour had truly halted. There was no evidence of obstructed labour. Accordingly, I am satisfied that the slow progress in labour was a consequence of this being Jenna's first labour, compounded by Hugo's occipito-posterior position, consistent with common experience of labours of this kind. The expert evidence before me was ultimately consistent with a finding that it was reasonable and appropriate to commence syntocinon at 15:00 hours, and I find accordingly.

Epidural

53. Submissions made on behalf of Hugo's family invited me to consider that a delay in Jenna receiving an epidural was a contributing factor to Hugo's death.⁹⁷ Professor Weaver was clear in his evidence that the commencement of syntocinon and the appropriateness of same is not dependent on having an epidural. This is dependent on the mother's preference.⁹⁸ Here, Jenna did have an epidural and efforts were made to ensure that the epidural was effective. The evidence was clear that the delay to place the epidural was not significant and was a consequence of operational requirements at MBH that day, which the experts agreed was not unusual. The commencement and titration to effect of the epidural ultimately informed the timing for the commencement of the syntocinon which Professor Weaver agreed was reasonable.⁹⁹ Dr Cade expressed a clear view in his report that the issue with the epidural was corrected and did not contribute to Hugo's death.¹⁰⁰ I therefore do not consider that the epidural had any material consequence to Hugo's condition at birth.

CTG monitoring and increase in syntocinon

54. Professor Weaver gave comprehensive evidence about the circumstances in which reduced variability apparent on a CTG would be

⁹⁷ Submissions on behalf of the McGregor family, at page 10.

⁹⁸ T3/24 lines 30 – 45.

⁹⁹ T3-24 line 50; T3-25 lines 1 - 5.

¹⁰⁰ G1 at page 3.

concerning for a lack of oxygen in a baby.¹⁰¹ His opinion ultimately was that while there was evidence, at times, of reduced variability on Hugo's CTG, it ultimately corrected and there was then evidence of accelerations when the syntocinon was started, which was a sign that Hugo was well oxygenated.¹⁰²

55. It is uncontroversial that the syntocinon was increased at around 15:52 hours and a significant bradycardia event occurred at 16:01 hours prompting the subsequent emergency response. Dr Cade in his oral evidence expressed a view that just prior to 15:53 hours, there was a hypertonic contraction, and that in the circumstances of this labour, the syntocinon needed to either be reduced or ceased at this time,¹⁰³ and that the syntocinon was a likely cause of Hugo's subsequent bradycardia. Dr Cade accepted in oral evidence that the identification of this one feature on the CTG as being hypertonic was possibly affected by hindsight bias,¹⁰⁴ and Counsel Assisting submitted that I should prefer Professor Weaver's opinion on this issue on this basis.
56. However, I am assisted by Dr Cade's acknowledgement in his written report that following what he considered was a hypertonic contraction at around 15:53 hours, there was no evidence of hyperstimulation with reference to the brief period of a normal CTG shortly thereafter.¹⁰⁵ This is entirely consistent with Professor Weaver's view that prospectively, there was no reason to cease the syntocinon infusion earlier than it was. In his oral evidence, he too emphasised that there were accelerations observed on the CTG following the syntocinon, which is a sign that Hugo was, at that time, well oxygenated.¹⁰⁶
57. I accept Counsel Assisting's submission that while the CTG prior to the bradycardia episode was not completely normal, it was not manifest the

¹⁰¹ T3/15 lines 25 - 50, T3/16 lines 1 -25.

¹⁰² T3/16 lines 20-25.

¹⁰³ T3/47, lines 5 – 20.

¹⁰⁴ T3/52, lines 39 to 50 to T3/53, lines 1 to 7.

¹⁰⁵ G1 at page 6.

¹⁰⁶ Professor Weaver T3/16, lines 22-25.

sorts of abnormalities expected before Hugo experienced bradycardia the nature of which were “profound and persistent”.¹⁰⁷ The reason why it was not completely normal was the decelerations. But these were not concerning and the CTG was not “*ominous for ... significant foetal compromise*”.¹⁰⁸ This was the view of Professor Weaver, and shared by Dr Cade, who also considered that while there were changes in variability, and these were to be noted, they were not long enough to be “*extremely concerning*”.¹⁰⁹ It is also consistent with Associate Professor Pecoraro’s opinion that he could not say that there was any foetal distress prior to the bradycardia at 16:01 hours.¹¹⁰

58. Hugo’s family have submitted that the bradycardia precipitating the emergency response should not be considered as ‘sudden’ as Counsel Assisting has invited me to find in respect of the cause of Hugo’s death.
59. Consistent with the evidence of each of the experts who gave evidence, I accept Professor Weaver’s opinion that there were no indications prospectively that Hugo was in trouble until the time when he developed the sudden and profound bradycardia at 16:01 hours,¹¹¹ and therefore that there were no prospective indications prior to that time that he would be born in the condition in which he was born. I am accordingly satisfied that the expert evidence was sufficiently consistent for the bradycardia (**‘the sudden bradycardia’**) to be appropriately characterised as sudden.

Whether a caesarean section should have been performed earlier

60. Consistent with the evidence and my findings on the matters above, I am satisfied that, prospectively, there was no clinical indicia to have performed a caesarean section prior to the onset of bradycardia at 16.01 hours.

¹⁰⁷ Professor Weaver T3/6, lines 36 to 46.

¹⁰⁸ Professor Weaver T3/7, line 18 and lines 20 to 22.

¹⁰⁹ Dr Cade T3/46, lines 1 to 5.

¹¹⁰ T3/32, lines 7 to 9.

¹¹¹ T3/13, lines 40 to 45 and T3/14, lines 7 to 9.

61. In Professor Weaver's view a caesarean section should not have been offered at 12.30 hours, because the labour process has not been exhausted at that time, and there were compelling reasons for why the labour was progressing slowly, namely the position of Hugo and this being Jenna's first labour. At that time there was a good chance Hugo's position would change such that a vaginal birth could still occur. There were also considerations as to the drawbacks of an intrapartum caesarean.¹¹² Professor Weaver also considered that there were no indications, prospectively, that Hugo was in trouble until he developed profound bradycardia.
62. Professor Weaver went so far as to say that if a decision had been made at 12.30 hours that the labour progress has been exhausted, without a trial of syntocinon, he would criticise such care.¹¹³
63. Dr Cade's evidence was that he "personally" would have offered a caesarean section at 12.30 hours. This opinion was qualified by his acceptance that a trial of oxytocin was a possibility at this point in time and that it was not unreasonable to do so. As I have addressed earlier in these findings, his view about consideration of a caesarean section at this time was premised on the basis that the serial vaginal examinations were performed by the same person (and therefore consistent and accurate), and that it could therefore reliably be determined that labour had truly arrested. Given my earlier finding that these circumstances do not apply here, Dr Cade's view about consideration of caesarean section at 12.30 hours falls away.
64. The expert evidence was ultimately consistent in that there were prospectively, no clinical indicia requiring a caesarean section to have been performed prior to the sudden bradycardia observable at 16.01 hours.

¹¹² Professor Weaver T3/11, lines 27 to 47.

¹¹³ T3/11, 35- 40.

Consideration of Issue 2 (c)

whether the care and treatment administered to Jenna McGregor following the decision to proceed to caesarean section was appropriate in all the circumstances

65. Following the sudden bradycardia (at 16:01 hours), emergency procedures were undertaken including the alerting and attendance of additional staff and prompt assessment by the obstetric PHO, Dr Khan. There was no criticism of those caring for Jenna following standard emergency protocols in respect of ceasing the syntocinon, repositioning of Jenna, administering of a fluid bolus and assessment for feasibility of performing a vaginal delivery.
66. The focus of the evidence in respect of this issue was the administration of terbutaline and whether it was consistent with the requirements for effective in-utero resuscitation.
67. Given the consequence of any finding as to the causal nexus of the in-utero resuscitation and my determination of Hugo's cause of death, it is convenient to address here the expert evidence as to the likely physiological sequelae from the period immediately preceding the sudden bradycardia to the time of Hugo's delivery.

Hugo's deterioration

68. The sudden bradycardia (which occurred at 16:01 hours) was described by Professor Weaver as an '*unexpected profound and persistent*' fetal bradycardia.¹¹⁴ The evidence has established that there was no prospective indication on the CTG or otherwise which could have foreseen this bradycardia, and therefore, the increase in the syntocinon at 15:52 hours was appropriate. Professor Weaver explained in his evidence the likely physiological sequelae which was impacting Hugo at

¹¹⁴ G4 at page 8.

the relevant times, and was likely to have been further compounded by the syntocinon (oxytocin):¹¹⁵

So I think probably through the labour – and this was not able to be seen on the fetal monitoring because it didn't ever show it – but I think the baby, Hugo, was developing a little bit of – he was becoming a bit acidotic. And then when the oxytocin was increased, what oxytocin does is it can interfere with how the uterus relaxes in between the contractions. So that probably – if the uterus isn't relaxing as well as it should between contractions, that can then cause less oxygen to go to the baby, more accumulation of carbon dioxide, the acidosis will worsen, and that's why he crashed.

So the – the oxytocin was – isn't – is it the sole cause, no. But it was probably the precipitating thing that – that caused the bradycardia. So it just made him just get – I would say – a little bit less oxygen, because the – the – the uterine muscle wasn't relaxing as well as it could between contractions, so allowing the placenta to work to its optimum.

69. Professor Weaver explained that the condition of acidosis was, in Hugo's case, a scenario that arose due to an accumulation of carbon dioxide which healthy fetuses (such as Hugo) can cope with for 'quite a while' because they can buffer the excess of carbon dioxide with bicarbonate, which produces hydrogen ions and then causes acidosis.¹¹⁶ Any lack in oxygen would not be exhibited on the CTG because he was a healthy fetus and would be able to cope for an indeterminate time.¹¹⁷ This occurs in the context of labour, which he described as a 'stress test' for a baby, where placental function becomes slightly impaired with contractions, especially those augmented with syntocinon.¹¹⁸ However, if

¹¹⁵ T3/9, lines 30 – 45.

¹¹⁶ T3/9 lines 5 – 26.

¹¹⁷ Professor Weaver G4 at page 9.

¹¹⁸ G4 at page 9.

the acidosis develops, it can become sufficiently bad such as to cause a sudden, profound bradycardia or a 'crash' as he referred to it.¹¹⁹ This occurred because the hydrogen ions have a depressant effect on the fetal heart muscle causing the bradycardia.

70. The autopsy revealed chronic villitis and developing chorio-amnionitis within the placenta, both of which were likely to impair placental function, and the latter to increase metabolic demands on the fetus.¹²⁰ These factors made it more likely that, once Hugo's capacity for physiological buffering was exhausted, he would develop a sudden bradycardia.¹²¹
71. Dr Cade's opinion was that the cause of Hugo's sudden and acute deterioration could only be explained by uterine hyperstimulation and a hypertonic contraction which then caused an ischaemic insult, on the basis that he could not find any other reason to explain it.¹²² Dr Cade though noted that he did not have access to the postmortem findings, and that the extent and suddenness of the injury may have been exacerbated by underlying compromise due to a degree of placental insufficiency and a protracted active stage of labour.¹²³ Dr Cade ultimately accepted in his evidence that his view about a hypertonic contraction at around 15:53 hours was likely affected by hindsight bias and that, the CTG was not concerning for the period following that up until 16:01 hours.¹²⁴ Indeed, in his original report Dr Cade noted that there was no evidence of hyperstimulation given the period of normal CTG after the increase of syntocinon at 15:53 hours.¹²⁵
72. It was submitted to me by Counsel Assisting that Dr Cade's acceptance of possible hindsight bias is a reason why I should accept Professor Weaver's opinion on this topic. I accept that submission however,

¹¹⁹ T3/9 lines 5 – 26.

¹²⁰ These are features which can only be determined following microscopic examination of the placenta.

¹²¹ Professor Weaver G4 at page 9.

¹²² T3/42 lines 10 – 30.

¹²³ G4 at page 6.

¹²⁴ T3/52, lines 39 to 50 to T3/53, lines 1 to 7.

¹²⁵ G1 at page 6.

ultimately I consider that the experts' opinions are largely consistent on this point in that, the deterioration was sudden and unexpected, and likely affected by underlying placental insufficiency at the time.

73. Consistent with Professor Weaver's opinion, I am satisfied that during labour, Hugo became progressively acidotic but that this was not reflected in the fetal monitoring. Accepting this, I find that while the syntocinon was not the sole cause of the bradycardia, when it was increased, this further impaired the gas exchange between contractions, causing an accumulation of carbon dioxide, worsening of acidosis, and ultimately, a sudden bradycardia or 'crash' at 16:01 hours.
74. It was explained by Professor Weaver that where there are changes suggestive of a developing metabolic acidosis, a fetal scalp blood analysis is an appropriate test for determining whether a baby is becoming acidotic. However, in this case, I accept Professor Weaver's opinion and find that there was no clear indication from the CTG trace to warrant doing a scalp lactate,¹²⁶ prior to the sudden deterioration at 16:01 hours at which time the decision to proceed to a caesarean section was promptly made and effected. In these circumstances, a decision to do a scalp lactate at that time would not have expedited the delivery or changed the decision-making in any way, such that it did not present any opportunity for outcome changing care.

In-utero resuscitation

75. Terbutaline is administered as part of the protocol for 'in-utero resuscitation' for acute fetal distress, and works by relaxing the uterus and promoting placental perfusion.¹²⁷
76. As noted earlier in the findings, I am satisfied that the terbutaline was administered subcutaneously. The evidence of Dr Cade was that he would have given the terbutaline intravenously rather than

¹²⁶ T3-9 lines 45 - 50, T3-10 lines 1 - 25

¹²⁷ T3/22, lines 30 – 40 to T3/23, lines 5 – 30.

subcutaneously (or intramuscularly), but he ultimately described this as a 'minor point' in his oral evidence.¹²⁸ Professor Weaver gave evidence that the administration of terbutaline subcutaneously is in accordance with the current evidence-based teaching, and that this route is the most efficacious for promoting uterine relation and promoting placental perfusion.¹²⁹ It was uncontroversial that the standard practice in Queensland is for it to be given subcutaneously, consistent with the policies in effect at MBH at the time. Accordingly, I accept Professor Weaver's opinion that the subcutaneous route the terbutaline was administered (as I have found it to be) in this case, is consistent with best practice and was accordingly appropriate.

77. As to the likely efficacy of the in-utero resuscitation with terbutaline in this circumstances of this case, Professor Weaver explained:¹³⁰

... there'll – there'll be a point where the – where the – the metabolic acidosis is such that it causes such profound depression of the – of the fetal [heart] and the fetal myocardium that it's just not possible to reverse it in a – in a – you know, with the – with the measures available with the baby in utero.

78. The time of action or effect of terbutaline is understood to be around five minutes.¹³¹ In consideration of all the evidence before me, it is open for me to find that the while the terbutaline was administered appropriately, it did not work as it was intended to, as Hugo's condition did not improve post administration, and he remained bradycardic until delivery. Professor Weaver gave evidence that it was quite possible that the terbutaline did work in the sense that it relaxed the uterus, but that the metabolic acidosis was effectively not capable of being reversed, and

¹²⁸ T3/53 line 8.

¹²⁹ T3/23 lines 10 - 15.

¹³⁰ T3/24, lines 15 – 22.

¹³¹ T3/24 lines 25 – 30.

the harm to Hugo had already been done by the time it was administered.¹³² Dr Cade largely agreed with this proposition.¹³³

79. I am satisfied that the most likely scenario is that Hugo's failure to recover after the administration of terbutaline can be attributed to the significant acidosis which was not capable of being reversed at that time. The evidence demonstrates that in Hugo's case this was not a situation which was capable of being detected due to the lack of clinical signs which may have warranted further intervention prior to 16.01 hours. Even had the drug worked, there was a possibility Hugo would still have been born in the condition in which he was.¹³⁴

Time to delivery

80. While not a focus of the evidence at the inquest, there was evidence before the court, including in the MBH's Root Cause Analysis report, of communication issues and escalation delays in regard to the decision to proceed to a category one caesarean section as part of the emergency response.
81. The expert evidence however, indicates that the time from the bradycardia to delivery was relatively quick, especially in consideration of the distance travelled from birth suite to the operating theatre at MBH.¹³⁵ In particular, the effect of Professor Weaver's evidence was to emphasise that there must be a balance between getting the baby out as quickly as possible and providing safe care to the mother, such that the initial focus of addressing a fetal bradycardia should be in-utero resuscitation, consistent with what was done in this case.¹³⁶
82. I have addressed earlier in these findings that while any communication issues in respect of the decision for a spinal or general anaesthetic were

¹³² T3/24 lines 10 – 25.

¹³³ T3/53 lines 20 – 25.

¹³⁴ T3/24, lines 13 – 16.

¹³⁵ A/Prof Pecararo, G2 at page 3; Professor Weaver, G4 at page 6.

¹³⁶ T3/5, lines 35 – 50 to T3/6, lines 1 – 30.

not ideal, there was no evidence that this had any material impact for Hugo.

83. Ultimately, the balance of the expert evidence supports a finding that the care provided to Jenna following the decision to proceed to caesarean section was appropriate in all the circumstances, and that delivery was achieved in a reasonable time following what was a sudden and unexpected deterioration.

Consideration of Issue 2 (d)

whether there were any missed opportunities that may have changed the outcome for Hugo McGregor

84. The evidence has established that prospectively, there was no clinical indicia present for the duration of the labour prior to 16:01 hours which indicated that Hugo McGregor would be born in the condition in which he was born.
85. The evidence of the expert neonatologists, Associate Professor Jardine, and Dr Henschke, informs my consideration of the events following the delivery of baby Hugo, including whether the resuscitation could have offered any opportunities for a different outcome.
86. Associate Professor Jardine identified that there were three potential issues with the resuscitation process: (i) the malfunctioning suction equipment; (ii) use of a non-sterile endotracheal tube ('ETT'); and (iii) inadequate gas supplies. I accept Counsel Assisting's submission that his opinion, which is informed by the questions asked of him by the parties, must be that none of these matters was, ultimately, of any consequence for Hugo.¹³⁷
87. In respect of the malfunctioning suction equipment, and the associated period of delay in suctioning, the effect of A/Prof Jardine's evidence was that in circumstances where there was effective ventilation as deemed

¹³⁷ T2/34, lines 40 to 46 and T2/35, lines 1 to 14.

by the paediatric registrar, the suction was not required as a matter of necessity but rather to aid the view of the vocal cords for intubation. In those circumstances, a delay in suction would have no effect on the resuscitation.¹³⁸

88. As to the use of a non-sterile ETT, there was no evidence or suggestion that this had any consequence for Hugo's outcome. A/Prof Jardine's evidence was that in consideration of the circumstances in this case, he agreed with the clinical decision to continue ventilating baby Hugo with the non-sterile ETT. He explained:¹³⁹

...the most important thing was to keep that airway open and keep delivering the 100 per cent oxygen. Um, the team was aware that it was a contaminated tube. There was clearly a hand-over process that informed the retrieval team that it was a contaminated tube. And it looks like the tube was changed at an appropriate time, um, down the track and the baby also received antibiotics to cover the risk of infection.

89. In relation to the gas supplies, I accept Counsel Assisting's submission consistent with the evidence of A/Prof Jardine that the decision not to replace the air cylinder prior to transferring Hugo to the Special Care Nursery was of no clinical significance because Hugo was receiving 100% FiO₂ (oxygen), and therefore, did not require any air from the air cylinder.¹⁴⁰
90. Associate Professor Jardine's opinion was that the initial resuscitation of Hugo followed Queensland Clinical Guidelines on Neonatal Resuscitation and indeed that Hugo's response – increased heart rate and oxygen saturation - demonstrates that it was not only appropriate but it was also successful.¹⁴¹ This is consistent with the opinion of Dr Henschke who considered that Hugo's post-delivery care was reasonable and appropriate and did not in any way contribute to Hugo's

¹³⁸ T2/33, lines 45 – 50 to T2/34, lines 1 – 30.

¹³⁹ T2/35, lines 5 – 15.

¹⁴⁰ T2/15, lines 30 to 45.

¹⁴¹ G5 at page 4.

death.¹⁴² As to the issues A/Prof Jardine identified with the resuscitation, I am satisfied that these were of no clinical significance to Hugo's condition and therefore bore no impact on his outcome.

91. Dr Henschke's evidence was of particular assistance in respect of his opinion regarding Hugo's prospects of survival following the sudden bradycardia. He explained that: ¹⁴³

...the onset of cardiac arrest, um, in most circumstances in the foetus or the newborn is directly related to oxygen deprivation to the heart muscle. And so therefore the longer the period of bradycardia the more likely it is that the baby will go into cardiac arrest. And once the baby is in full cardiac arrest the longer it takes to reverse that and re-establish, ah, adequate circulation that compounds, ah, the injury that the baby's already sustained.

92. In Dr Henschke's opinion, from at least 16.20 hours, and possibly a number of minutes before that, when a heart rate was no longer detectable, it was unlikely that if Hugo survived, he would recover without substantial brain injuries.¹⁴⁴ There was no expert evidence that there was any material delay in affecting the decision for a caesarean section following the bradycardia at 16.01 hours, nor was there any criticism of the transfer to theatre, save for the attempt at a spinal anaesthetic prior to a general anaesthetic. This delay is immaterial in consideration of Dr Henschke's opinion about the insult already sustained by that time.
93. In consideration of all of the evidence before me, and consistent with the findings I have already made, I am satisfied that there were no missed opportunities that may have changed the outcome for baby Hugo. I accept that it is theoretically possible that had he been delivered earlier, he may have been born in better condition. However, the expert evidence is clear that the care provided to both Jenna and Hugo was reasonable and appropriate, and there were no prospective reasons to

¹⁴² G3 at page 28.

¹⁴³ T2/45, lines 20 to 37.

¹⁴⁴ G3 at page 30.

warrant an earlier delivery or any additional intervention or escalation beyond what was done. I therefore find that Hugo's death was not preventable in the circumstances as they presented themselves to the clinicians caring for him and his mother.

Consideration of Issue 4

Whether any changes to practices, procedures or policies could reduce the likelihood of deaths occurring in similar circumstances

94. Consistent with my findings that Hugo's death was not preventable in the circumstances, I do not consider that there are any changes to practices, procedures, or policies which could reduce the likelihood of deaths occurring in similar circumstances.
95. Notwithstanding that, I have given consideration to the evidence of Professor Weaver which addressed what could have been the benefits of clinicians 'partnering' with a woman in the course of her labour and delivery to try and meet the woman's needs, and to assist her in remaining informed and involved in her care. He explained his view that it would be important for a woman transferred between hospitals as in the circumstances of Jenna's case, to be seen by an obstetrician and discuss with her the plan for the labour and how that is likely to proceed.¹⁴⁵
96. While it has been demonstrated there was no clinical indicia requiring that a caesarean section be considered or performed at 12.30 hours, Professor Weaver gave evidence about the benefits of having a rapport with women throughout the duration of labour and consulting with them about whether they are happy to continue in labour, and that preferably these discussions would include a face to face review by the on-call obstetrician. In his oral evidence, Professor Weaver proffered this view with the caveat that for Jenna to have received care from junior staff and overseen by an obstetrician was certainly not 'bad' care, and that this is

¹⁴⁵ T3/11 lines 10 - 27.

a common model of obstetric care in Australia.¹⁴⁶ I accept that view and it accords with the model of care seen in the great many number of obstetric cases that come before the court.

97. While Professor Weaver ultimately opined that any deficiencies in the 'partnering' with Jenna in this case did not have any impact for Hugo, he emphasised that there is good evidence of the benefits of partnering with women in labour by clinicians the patients know and trust, and that this is seen to generally improve a range of outcomes.¹⁴⁷ There are obvious limitations to this approach in a public hospital, and it cannot always be achieved. However, the Court has received into evidence the changes implemented at MBH since Hugo's birth, which includes the now embedded practice of obstetric ward rounds which allows for early review of the woman and input from the obstetric team, as well as a process for obstetric review to occur following admission.¹⁴⁸ I commend those changes and am satisfied that it appropriately addresses any concern that may arise more generally with consultant-level oversight of the progress of labour and the opportunity to partner with women so that they feel supported and informed throughout.
98. In respect of any criticisms of various aspects of the circumstances of Hugo and Jenna's care by the hospital's own review process (in this case, a Root Cause Analysis), many of those matters were not the subject of evidence heard at the inquest as they were not ultimately raised by the experts as causally relevant to Hugo's death. I do observe in any event that the Court has received into evidence the changes made at MBH in pursuit of the recommendations made following a Root Cause Analysis after Hugo's death, including with respect to workforce improvements, obstetric consultant input, and staff culture.¹⁴⁹ I have given consideration to those changes and am satisfied that they are

¹⁴⁶ T3/11 lines 20 – 25.

¹⁴⁷ T3/12 lines 10 - 25

¹⁴⁸ B44 at [12] – [16].

¹⁴⁹ B44, B45 and B46.

appropriate and that there are no further recommendations this Court could make with respect to the maternity services at MBH or the management of labour pursuant to the relevant policies and guidelines more broadly.

Recommendations and Comments

99. Section 46 of the Act provides that a coroner may comment on anything connected with a death that relates to public health or safety, the administration of justice, or ways to prevent deaths from happening in similar circumstances in the future. I have considered whether any such comment or recommendation is warranted, particularly in relation to the management of labour at MHHS.
100. Submissions have been made on behalf of Hugo's family inviting me to make comments and recommendations aimed at addressing what they consider were failures in escalation of care that resulted in Hugo's death. Many of the recommendations are inconsistent with the findings I have ultimately made.
101. I accept the submissions made on behalf of MHHS that the need for, nor the utility, practicality or advisability of those measures have been the subject of evidence in this inquest, and that accordingly, it would be inappropriate for any such recommendations to be made.
102. Consistent with my findings in relation to issue 4, I am satisfied that there is no recommendation I could meaningfully make that would go beyond what is already being undertaken by MHHS and that would serve to avoid or minimise the risk of a similar event occurring in the future.
103. I therefore make no recommendation pursuant to s.46 of the Act.
104. A family statement was read at the conclusion of the evidence, which made clear that Hugo was loved and cherished by his parents from the moment of his conception, and by his grandparents and extended family

who had long hoped to meet him. Although he was with them for only five days, his parents spoke of the immense love he inspired, the memories they will forever treasure, and the lasting place he holds in their family. I offer my sincere condolences to Hugo's parents and family.

Findings pursuant to s.45 *Coroners Act 2003*

I make the following findings pursuant to s 45 of the Act:

Findings required by s. 45

Identity of the deceased – Hugo Alexander McGregor

How he died – Hugo died at TUH following an emergency caesarean section which was performed after he suffered sudden and profound bradycardia.

Place of death – TUH, 100 Angus Smith, Drive, Douglas Qld.

Date of death – 16 March 2023

Cause of death – Hypoxic-ischaemic encephalopathy caused by a sudden and profound onset of bradycardia.

I close the inquest.

Stephanie Gallagher
Deputy State Coroner
BRISBANE