JURISDICTION	: CORONER'S COURT OF WESTERN AUSTRALIA
ACT	: CORONERS ACT 1996
CORONER	: SARAH HELEN LINTON, DEPUTY STATE CORONER
HEARD	: 7 - 9 FEBRUARY 2023
DELIVERED	: 7 JULY 2023
FILE NO/S	: CORC 1500 of 2019
DECEASED	: REINDL, ASHLEE JADE

Catchwords:

Nil

Legislation:

Nil

### **Counsel Appearing:**

Mr W Stops assisted the Coroner.

Mr I Murray (Blumers) appeared on behalf of the family of the deceased. Ms J Lee (Australian Nursing Federation) appeared on behalf of Ms Lorraine Reid.

Mr G Donaldson SC (instructed by Dominion Legal) appeared for Joondalup Hospital Pty Ltd.

### **Case**(s) referred to in decision(s):

Nil

Coroners Act 1996 (Section 26(1))

#### **RECORD OF INVESTIGATION INTO DEATH**

I, Sarah Helen Linton, Deputy State Coroner, having investigated the death of Ashlee Jade REINDL with an inquest held at the Perth Coroner's Court, Court 85, CLC Building, 501 Hay Street, Perth on 7 to 9 February 2023, find that the identity of the deceased person was Ashlee Jade REINDL and that death occurred on 27 October 2019 at Joondalup Health Campus from fetal demise due to placental abruption and sepsis secondary to chorioamnionitis, with meconium aspiration, with a background of delayed maturation of the placenta, in the settings of induced labour for a prolonged pregnancy in the following circumstances:

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# **INTRODUCTION**

- 1. Ashlee Reindl (Ashlee) was born on 27 October 2019 and died on the same day, shortly after she was delivered by caesarean section at Joondalup Health Campus (JHC). Ashlee was her parents' fourth child. All of their other children had been born healthy following uneventful pregnancies and vaginal delivery without complication. This pregnancy had also been uneventful and the initial plan for an induced vaginal delivery had seemed straightforward, so Ashlee's death was entirely unexpected.
- 2. Ashlee's death was reported by staff from JHC to the State Coroner as a sudden and unexpected reportable death. Ashlee's parents, Jodie and Jono Reindl (Mr and Mrs Reindl), asked that an inquest be held into their daughter's death as they had many concerns about decisions that were made, and opportunities that were missed, during the labour and birth. They were also concerned that understaffing and equipment shortages may have played a role in the decision-making during the labour, and this may have contributed to the subsequent tragic events.
- 3. This matter was referred to me for consideration in early November 2021. On 15 November 2021, I ordered an inquest be held, pursuant to s 24 of the *Coroners Act 1996* (WA) to explore the issues raised by Ashlee's parents and to consider whether Ashlee's death was preventable.
- 4. I held an inquest on 7 to 9 February 2022. As well as considering a significant amount of documentary material that was provided leading up to the inquest, I heard oral evidence at the inquest from a number of midwives and doctors involved in Mrs Reindl's labour at JHC. In addition, the forensic pathologist who performed the post mortem examination on Ashlee, Dr Nina Vagaja, gave evidence about her cause of death, Dr David Owen gave expert evidence about the obstetric care given to Mrs Reindl leading up to Ashlee's birth and Dr Cliff Neppe, as a Deputy Director of Medical Services at JHC and a member of the SAC1 team for this case, gave evidence on behalf of JHC in regard to the changes that have been made at JHC since Ashlee's sudden and unexpected death. Dr Neppe is also a highly qualified obstetrician, so he provided his opinion in support of, and to complement, Dr Owen's conclusions.
- 5. At the conclusion of the inquest, it had become apparent that there was relevant information that had not been provided to Dr Vagaja that might change her opinion on the cause of death. Following the inquest, the additional information was provided to Dr Vagaja, and she then provided a supplementary post mortem examination report with an amended cause of death.
- 6. As a result of this significant change in the evidence, all parties were offered an opportunity to provide written submissions to the Court on the additional evidence and in relation to any possible adverse comments or findings. There were some issues in relation to the submissions from JHC being settled due to illness. I allowed for additional time for the submissions to be provided on that basis. All submissions were in by early June 2023, and I have given them due consideration before completing my findings.

# BACKGROUND

- 7. As noted above, Ashlee was the fourth child of her parents, Jodie and Jono Reindl. Mrs Reindl did sadly suffer a number of miscarriages prior to becoming pregnant with Ashlee, but they had also successfully had three other children who were all born after uncomplicated pregnancies. Mrs Reindl had gone past her due dates with each of these earlier pregnancies, and one of her children needed to be induced, but there were no problems as a result. All three children were born by vaginal delivery. Mrs Reindl only required Entonox (nitrous oxide gas) for pain relief during each labour.<sup>1</sup>
- 8. Mrs Reindl's pregnancy with Ashlee was classified as a low risk pregnancy. Her antenatal care was provided by her general practitioner and a midwife. The pregnancy was uncomplicated and Mrs Reindl did not develop any risk factors.<sup>2</sup>
- 9. Mrs Reindl's estimated due date with Ashlee was 19 October 2019. As with her other pregnancies, she went past this date. After a week had passed and Mrs Reindl still hadn't spontaneously gone into labour, arrangements were made for her to be induced at JHC. Mrs Reindl felt well during the week leading up to her attending hospital and had no concerns about the health of her baby.<sup>3</sup>
- 10. Mrs Reindl was admitted to the hospital on the afternoon of Friday, 25 October 2019, at 41 weeks' gestation for a planned induction of labour. Her cervix was not favourable for labour and the baby's head had not moved down into the pelvis at that stage. Mrs Reindl was administered a gel medication, Cervidil, to assist with preparing her cervix for labour.<sup>4</sup>
- 11. Mrs Reindl was transferred to the Birth Suite at around 3.00 pm on Saturday, 26 October 2019. At 4.30 pm, a medical officer reviewed Mrs Reindl and found Ashlee's head was still too high to safely rupture the membranes. Input was sought from Consultant/Senior Medical Officer (SMO) Dr Robert Wanat (Dr Wanat) and a plan was made to commence an intravenous infusion of Syntocinon (a synthetic version of the natural hormone oxytocin, that causes the uterus to contract more strongly and more frequently) to induce uterine contractions, with the hope the tightening's or contractions would push Ashlee's head further into the pelvis. The plan was to perform an artificial rupture of membranes later that evening to start the process of labour.<sup>5</sup>
- 12. At this stage, Mrs Reindl had not felt any contractions and was not in any pain or discomfort. After the Syntocinon drip commenced, Mrs Reindl recalled she started to feel contractions pretty much straight away, but they were bearable and she was not initially in any discomfort.<sup>6</sup>

<sup>&</sup>lt;sup>1</sup> Exhibit 1, Tab 11.

<sup>&</sup>lt;sup>2</sup> Exhibit 1, Tab 13.

<sup>&</sup>lt;sup>3</sup> Exhibit 1, Tab 11.

<sup>&</sup>lt;sup>4</sup> Exhibit 1, Tab 11 and Tab 15.

<sup>&</sup>lt;sup>5</sup> Exhibit 1, Tab 23.

<sup>&</sup>lt;sup>6</sup> Exhibit 1, Tab 11 and Tab 15.

- 13. At 8.20 pm that evening, an ultrasound scan confirmed the umbilical cord was not below the baby's head and a controlled rupture of membranes was performed by Obstetric Registrar Dr Megan Johnston (Dr Johnston), with clear liquor noted. Precautionary plans had been put in place for a possible caesarean section, if any complications arose, but there were no issues. Everything appeared normal at that time, so the plan for attempting a vaginal delivery continued.<sup>7</sup>
- 14. Dr Johnston had paused the Syntocinon infusion during the procedure, and she chose to recommence it at the initial starting rate. Dr Johnston explained she did this as rupturing the membranes can cause a hormonal change within the mother and she was aware Mrs Reindl had delivered three babies previously, so she didn't want to overstimulate the womb. By reducing the amount of synthetic hormone back to a low starting dose, Dr Johnston indicated it allowed them to see how the uterus responded to the rupture of membranes.<sup>8</sup>
- 15. At 9.45 pm, a cardiotocography (CTG) reported a normal baseline and normal variability with variable decelerations. Variable decelerations refer to repetitive or intermittent decreasing of the fetal heart rate with rapid onset and recovery. It commonly occurs simultaneously with contractions. The midwife who had taken over Mrs Reindl's care for the night shift, Registered Midwife Jordan Jefferson (formerly Niven) (RM Jefferson), assessed the results as abnormal, as decelerations were present, but she felt it unlikely to be indicating fetal compromise as such decelerations are not uncommon throughout labour and there were other reassuring factors. RM Jefferson described the decelerations as uncomplicated variables, which were something to note down at the time and watch carefully as they can turn into complicated variables or late decelerations, or may be coupled with other concerning features that raise the overall level of clinical concern. Therefore, RM Jefferson intended to watch, wait and monitor the situation.<sup>9</sup>
- RM Jefferson recalled that Clinical Midwife Lorraine Reid (CM Reid) came into 16. Mrs Reindl's room around that time. CM Reid was the midwife coordinator on the night shift and in that role she was supervising three other midwives on duty in the Birth Suite. The Birth Suite at JHC includes eight birth suite rooms and one assessment room with two beds. Usually a midwife was allocated to one labouring woman and it was intended the midwife would remain with the woman at all times, where possible. CM Reid did not have her own patient load as she would come in to assist the other midwives with care or step in to relieve them if they required a break, as well as taking calls and managing the activity in the Birth Suite generally. CM Reid could not recall how many women were on the Birth Suite at the start of her shift on 26 October 2019 but she did recall having some involvement in Mrs Reindl's labour. CM Reid recalled that at handover at the start of her shift she had been told by the departing midwife coordinator that there were some variable decelerations on Mrs Reindl's CTG and that the head was high. CM Reid had seen the variables on the trace for herself during the handover.<sup>10</sup>

<sup>8</sup> T 15 – 17.

<sup>&</sup>lt;sup>7</sup> T 10 - 15; Exhibit 1, Tab 10, Tab 15 and Tab 23.

<sup>&</sup>lt;sup>9</sup> T 241; Exhibit 1, Tab 19.

<sup>&</sup>lt;sup>10</sup> T 118 – 120; Exhibit 1, Tab 24.

- 17. After she entered Mrs Reindl's room, CM Reid palpated Mrs Reindl's abdomen to see how high the head was up and to make sure that it hadn't actually come out of the pelvis. It was also noted that Mrs Reindl's pad had a small amount of fresh blood.<sup>11</sup>
- 18. The JHC CTG policy required a CTG Report Sticker to be completed two hourly, with a 20 minute segment of CTG trace. RM Jefferson completed the 9.45 pm CTG Report Sticker and recorded that Mrs Reindl was contracting two times in ten minutes and her contractions were moderate in strength. The fetal heart rate was 140 bpm and variability was normal, with nil accelerations, although there were variable decelerations.<sup>12</sup> As mentioned above, RM Jefferson's overall impression of the CTG at that time was that it was abnormal (due to the presence of decelerations) but was unlikely to be indicative of compromise (due to the other reassuring factors of the CTG and the general obstetric picture of a normal fetal heart rate and normal variability.
- 19. The JHC policy also required the CTG Report Sticker to be reviewed by a senior midwife, and in this case CM Reid reviewed the CTG and the CTG Report Sticker and agreed with RM Jefferson's conclusions. RM Jefferson then relayed the CTG results to Dr Johnston, who was present at the birth suite at the time. RM Jefferson explained that she could have increased the Syntocinon without consulting Dr Johnston at that stage, as it was a low level, but she sought ought higher advice just because of the trace.<sup>13</sup> Dr Johnston indicated that she was happy for the Syntocinon infusion to be increased but to go slowly.<sup>14</sup> RM Jefferson noted it was therefore only increased by 6ml/hr, which is half the usual titrated increase, as Mrs Reindl "was being managed carefully in light of the variable decelerations."<sup>15</sup>
- 20. CM Reid recalled that she helped reposition Mrs Reindl to try to get her in a position that might help the baby's head descent into the pelvis. She also adjusted the CTG equipment to ensure it was in the optimal position to pick up the fetal heart rate.<sup>16</sup>
- 21. RM Jefferson continued to monitor Mrs Reindl and noted that her contractions had increased in frequency at around 10.25 pm and her impression of the CTG was much the same. At 10.52 pm, RM Jefferson performed a vaginal examination with consent, on the instructions of CM Reid and in light of the variable decelerations on the CTG. The results of the examination did not reveal any changes and RM Jefferson did a 'stretch and sweep' to see if it might improve the dilation of the cervix and tickled the baby's head to see if it might result in acceleration of her heart rate, but this did not occur. RM Jefferson advised Dr Johnston, who gave instructions to increase the Syntocinon to 24 ml/hr, which was done at 11.00 pm.<sup>17</sup>

<sup>15</sup> Exhibit 1, Tab 19 [24].

<sup>&</sup>lt;sup>11</sup> T 120; Exhibit 1, Tab 19.

<sup>&</sup>lt;sup>12</sup> Exhibit 1, Tab 19.

<sup>&</sup>lt;sup>13</sup> T 243.

<sup>&</sup>lt;sup>14</sup> T 243.

<sup>&</sup>lt;sup>16</sup> Exhibit 1, Tab 19 and Tab 24.1.

<sup>&</sup>lt;sup>17</sup> Exhibit 1, Tab 19 and Tab 24.1.

- 22. RM Jefferson was still monitoring the CTG and at around 11.20 pm she observed the fetal heart rate decelerated down to 105 bpm. In response, RM Jefferson repositioned Mrs Reindl and the fetal heart rate then recovered with the change in position.<sup>18</sup> RM Jefferson described it in her evidence as a mild variable, although it was deeper than what it had been previously. However, as the heart rate returned to baseline after she repositioned Mrs Reindl, RM Jefferson was not concerned and was reassured baby Ashlee was coping with the labour at that point.<sup>19</sup>
- 23. Just before midnight, another CTG Report Sticker was completed by RM Jefferson. A similar assessment was made to earlier, noting the CTG was abnormal due to the presence of variable decelerations but she felt it was unlikely to be indicative of compromise due to the other reassuring factors such as the normal heart rate and normal variability. CM Reid also reviewed the trace and agreed with RM Jefferson's interpretation again. RM Jefferson also increased Mrs Reindl's Syntocinon infusion by a further 6 ml/hr under Dr Johnston's instructions.<sup>20</sup>
- 24. RM Jefferson recalled that Mrs Reindl appeared comfortable at that time and was not feeling any pain, only tightness. Her contractions were moderate and lasted around 60 seconds. RM Jefferson still noted some blood-stained liquor on her pad, which she showed to Dr Johnson, who concluded it was likely from irritation from the vaginal examination.<sup>21</sup>
- 25. Not long after midnight, RM Jefferson noted the fetal heart deceleration down to 95 bpm, so she again asked Mrs Reindl to move. Again, the fetal heart rate recovered. RM Jefferson made a note that she would continue to monitor Mrs Reindl closely.<sup>22</sup>
- 26. At about 12.30 am, Mrs Reindl showed the first signs of feeling discomfort. She complained of feeling nauseous, but declined anti-emetic medication, and RM Jefferson observed further scant pink liquor on Mrs Reindl's pad. Mrs Reindl was contracting four to five times in 10 minutes by then and the fetal heart rate was 140 bpm, with normal accelerations but still some variable decelerations. Ms Jefferson's overall impression continued to be that the CTG was abnormal but unlikely to be indicative of fetal compromise.<sup>23</sup>
- 27. At 12.55 am, Mrs Reindl was still feeling nauseous and she was administered some anti-emetics. RM Jefferson noted that Mrs Reindl's pad was blood stained a few minute later and she showed the pad to CM Reid and Dr Johnston. RM Jefferson recalled it was agreed that there was a minimal amount of blood and that the CTG trace looked reassuring. At about 1.15 am, Mrs Reindl went to the toilet and RM Jefferson recalled she began to use Entonox (nitroux oxide gas) for pain relief around

<sup>&</sup>lt;sup>18</sup> Exhibit 1, Tab 19.

<sup>&</sup>lt;sup>19</sup> T 248 - 249.

<sup>&</sup>lt;sup>20</sup> Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>21</sup> Exhibit 1, Tab 19.

<sup>&</sup>lt;sup>22</sup> Exhibit 1, Tab 19.

<sup>&</sup>lt;sup>23</sup> Exhibit 1, Tab 19.

this time. She was still receiving the Syntocinon infusion, which was at 30 ml/hr by this time.  $^{\rm 24}$ 

#### EARLY CONCERNING SIGNS ON 27 OCTOBER 2019

- 28. At 1.40 am on Sunday, 27 October 2019, Mrs Reindl was noted to be contracting well. The CTG was documented again as abnormal, but it was considered by the registered midwife, RM Jefferson, that it was unlikely the results were indicative of fetal compromise. As had occurred earlier, CM Reid reviewed the CTG trace and CTG Report Sticker that RM Jefferson had prepared, and she again agreed with RM Jefferson's conclusion. RM Jefferson notified the Obstetric Registrar, Dr Johnston, and the situation was discussed with Mrs Reindl, with a plan made to continue to monitor the labour.<sup>25</sup>
- **29.** RM Jefferson recalled that Mrs Reindl continued to cope very well with only using the Entonox.<sup>26</sup> However, Mrs Reindl recalled that by about 2.00 am she had become unwell. She had been vomiting, which she had never done before in any of her other labours, and also felt very hot and clammy. Mrs Reindl recalled the midwives told her the vomiting was due to the Syntocinon and reassured her that "it was all part of the induction process."<sup>27</sup> CM Reid had relieved RM Jefferson at around 2.30 am so she could take her break, and RM Jefferson did not return to care for Mrs Reindl until around 3.30 am.<sup>28</sup>
- **30.** CM Reid took Mrs Reindl's temperature at 2.30 am and realised it was raised at 37.5°C. Evidence was given that a slightly raised temperature is common in a labouring woman due to the physical effort. CM Reid thought Mrs Reindl might be dehydrated from working hard in labour and feeling nauseous and this could have been an explanation for her raised temperature, so she increased Mrs Reindl's intravenous fluids. CM Reid's entry in the medical progress notes referred to "fetal heart rate variability now reduced,"<sup>29</sup> which CM Reid said was not a great sign but by itself was normal and not overly concerning. The Syntocinon was increased due to the clinical impression that her contractions were decreasing or 'fizzling out' and Dr Johnston was made aware.<sup>30</sup>
- **31.** During this time, Mrs Reindl indicated she had the impression there was no concern about her lack of progression or that she was feeling unwell. She presumed it was all going to plan and the midwives gave her the impression her body knew what it was doing and things would occur naturally.<sup>31</sup>
- **32.** CM Reid conducted a vaginal examination on Mrs Reindl at 3.00 am and took her observations. It was noted that the fetal heart rate dropped to 80 bpm and then within

<sup>&</sup>lt;sup>24</sup> T 250; Exhibit 1, Tab 19.

<sup>&</sup>lt;sup>25</sup> Exhibit 1, Tab 10 and Tab 19.

<sup>&</sup>lt;sup>26</sup> Exhibit 1, Tab 19.

<sup>&</sup>lt;sup>27</sup> Exhibit 1, Tab 11 [42].

<sup>&</sup>lt;sup>28</sup> T 251.

<sup>&</sup>lt;sup>29</sup> T 125.

<sup>&</sup>lt;sup>30</sup> T 125 – 126, 130; Exhibit 1, Tab 10, Tab 11 and Tab 24.1.

<sup>&</sup>lt;sup>31</sup> Exhibit 1, Tab 11.

a minute it increased to 150 bpm. CM Reid said in evidence that the fact it returned to baseline very quickly was positive but she wanted to make sure that that it was not reoccurring. CM Reid stimulated the baby's head during the vaginal examination and saw and heard a fetal heart acceleration, which she found reassuring.<sup>32</sup>

- **33.** CM Reid recalled that at some stage during the shift she tried to get more information about Mrs Reindl's previous labours and whether they were also slow to progress, but she does not remember being able to obtain much relevant information either directly from Mrs Reindl or the available hospital files.<sup>33</sup>
- 34. Matters continued on in the same vein, with RM Jefferson returning from her break at about 3.30 am and then monitoring Mrs Reindl in consultation with CM Reid when necessary. The CTG continued to be abnormal due to the early variable decelerations but both midwives felt it was unlikely to be indicative of any fetal compromise. At 4.00 am RM Jefferson increased the Syntocinon infusion by another 6 ml/hr to 48 ml/hr in consultation with CM Reid. It was done in an attempt to assist contractions, due to the slow progress of the labour.<sup>34</sup>
- **35.** Mrs Reindl recalled that her husband had been watching the level of Syntocinon from about 3.00 am, as he was aware that the Syntocinon level was now a lot higher than it had been at the start. She recalled he began to question this, although he did not verbalise this to anyone as he trusted the staff.<sup>35</sup> Dr Johnston gave evidence that she would consider a higher dose of Syntocinon to be from 60 mls/hr, as from that level and above it generally requires medical discussion, although the protocol allows the dose to be increased up to 108 mls/hr. Mrs Reindl's dose was still below the level of 60 at this time.<sup>36</sup>
- **36.** Around this time, Mrs Reindl began to feel increasingly unwell. At 4.15 am she had a small vomit, so at 4.30 am Mrs Reindl was given an anti-emetic for her vomiting. RM Jefferson took Mrs Reindl's observations and noted they were all within normal limits. Following a discussion with CM Reid, her Syntocinon was increased again by RM Jefferson to 60 ml/hr due to Mrs Reindl's incoordinate contractions and slow progress. CM Reid also suggested RM Jefferson should encourage Mrs Reindl to keep well hydrated.<sup>37</sup>
- **37.** It appeared to the midwives that Mrs Reindl was still in the latent phase of labour, and had not progressed to the active phase of labour, at this time.<sup>38</sup>
- **38.** CM Reid remembered that the Birth Suite became very busy at about 4.00 am onwards. The phone was ringing out as she was inundated with a number of calls from women in the community who were calling with questions and required

<sup>&</sup>lt;sup>32</sup> T 127; Exhibit 1 Tab 24.1.

<sup>&</sup>lt;sup>33</sup> T 131 - 132; Exhibit 1, Tab 24.1.

<sup>&</sup>lt;sup>34</sup> Exhibit 1, Tab 10 and Tab 19.

<sup>&</sup>lt;sup>35</sup> Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>36</sup> T 22.

<sup>&</sup>lt;sup>37</sup> Exhibit 1, Tab 10, Tab 11, Tab 19 and Tab 24.1.

<sup>&</sup>lt;sup>38</sup> T 131.

triaging over the phone, and she was also required to be present at two different deliveries to assist midwives where the patient had a postpartum haemorrhage.<sup>39</sup>

- **39.** Another CTG trace and CTG Report Sticker were completed by RM Jefferson in consultation with CM Reid at 6.00 am. The results were consistent with their earlier conclusions that the CTG was abnormal but unlikely to indicate fetal compromise.<sup>40</sup>
- **40.** It was put to CM Reid at the inquest that the expert evidence of Dr Owen was that there were increasing signs of fetal compromise on the CTG from 3.30 am. On that basis, she was asked if she felt there had been a missed opportunity for her to escalate the matter further. CM Reid said it was hard to say at the time, given she was busy and you have to take into account a lot of factors in reading the CTG, but in retrospect she agreed that she wished she had taken the opportunity to escalate further. CM Reid noted that it had been difficult to review the CTG reports as extensively as she would have liked because she was so busy that morning, but on her brief review and in discussion with RM Jefferson, she had seen nothing alarming at the time.<sup>41</sup>
- **41.** Until this time, it does not appear that anyone had raised their concerns about the persistently abnormal CTG trace with Dr Johnston. Dr Johnston had access to the CTG from the doctor's suite, when she was there. However, she gave evidence she was often off the ward as well as having many other duties while on the birth suite, and it had been a busy night requiring her to go from task to task during her shift, so she did not always have the opportunity to check it herself. Dr Johnston said if there had been increased concern she would have expected the midwifery staff to raise it with her, and she would probably have examined Mrs Reindl personally, but that did not occur.<sup>42</sup>
- 42. At 6.30 am, RM Jefferson took Mrs Reindl's temperature and noted it had increased to 37.7°C. She told Dr Johnston, who ordered intravenous paracetamol, which RM Jefferson administered shortly afterwards.<sup>43</sup> Dr Johnston explained in evidence that she classed it as a low-grade maternal fever and something to keep an eye on as it was not clear at that stage if it would be sustained. If it was a true fever, the temperature would continue to go up, and if it reached 38 degrees, Dr Johnston gave evidence at that stage she would screen and treat it.<sup>44</sup>
- **43.** Shortly after, at 6.35 am, a CTG showed absent variability, no accelerations and variable decelerations, suggesting possible fetal compromise. RM Jefferson stated she recognised the results were possibly indicative of compromise and that the oxygenation of the baby was not the best. As a result, at 6.45 am she performed an early vaginal examination. RM Jefferson explained babies have sleep cycles and she thought she might be able to wake baby Ashlee up a bit and improve the variability

<sup>&</sup>lt;sup>39</sup> T 130 – 131; Exhibit 1, Tab 24.1.

<sup>&</sup>lt;sup>40</sup> Exhibit 1, Tab 19.

<sup>&</sup>lt;sup>41</sup> T 144, 147.

 $<sup>^{42}</sup>$  T 43, 51 – 53.

<sup>&</sup>lt;sup>43</sup> Exhibit 1, Tab 10 and Tab 19.

<sup>&</sup>lt;sup>44</sup> T 33 – 34.

on the trace.<sup>45</sup> The vaginal examination revealed the cervix was 5 cm dilated and 90% effaced but the baby's head was still high and there was now some swelling of the baby's scalp. She stimulated the baby's scalp and the CTG showed an acceleration of her heart, which RM Jefferson stated she found reassuring.<sup>46</sup>

- 44. Nevertheless, RM Jefferson said she was concerned and made Dr Johnston and CM Reid aware of the above findings and the poor progress of Mrs Reindl's labour. She then stated she awaited a plan for her management, assuming the Registrar would discuss the case with the Consultant.<sup>47</sup> CM Reid remembered that, due to being busy at that time, she was not particularly involved in this conversation and only really overheard the discussion between RM Jefferson and Dr Johnston.<sup>48</sup> CM Reid gave evidence that the Birth Suite was "super, super busy" <sup>49</sup> around this time. She recalled being surprised to hear that Mrs Reindl still hadn't progressed to active labour but left it to the doctor to investigate further.<sup>50</sup>
- **45.** Dr Johnston gave evidence she was also surprised at the slow progress of Mrs Reindl's labour at that time, noting the cervix was not fully effaced and she was only 5 cm dilated. Dr Johnston said she made the decision at this time to re-examine Mrs Reindl herself to confirm these findings.<sup>51</sup>
- 46. At 7.00 am, Mrs Reindl's contractions were six in ten minutes and the CTG was still indicative of possible fetal compromise. In response RM Jefferson shifted Mrs Reindl's position in an effort to improve the tracing. She made a plan to monitor Mrs Reindl's contractions for the next 10 minutes and decrease her Syntocinon infusion if her contractions remained the same. It doesn't appear that any change was made to the Syntocinon infusion before RM Jefferson handed over Mrs Reindl's care to the on-coming morning staff member, Registered Nurse and Midwife Amy Mitchell (RM Mitchell) at 7.20 am.<sup>52</sup>
- 47. RM Mitchell had graduated from Edith Cowan University as a midwife in 2017 and had commenced practising as a midwife at JHC in 2018, but she had only worked there for four months before she went on maternity leave. RM Mitchell had returned to work at JHC in 2019, but it is fair to say she was effectively only really working as a graduate midwife at this time, although she had been a nurse since 2013.<sup>53</sup>
- **48.** There was an initial group handover at the birth suite nurses' station from about 7.00 am to 7.30 am with the midwife coordinators and all the midwives before the individual patient bedside handover. RM Mitchell gave evidence she was quite concerned about the CTG trace for Mrs Reindl during the handover at the nurses' station due to the lack of variability on the trace and the shallow decelerations with each contraction. RM Mitchell said she voiced her concerns at the time, given the

<sup>&</sup>lt;sup>45</sup> T 252 - 252; Exhibit 1, Tab 19.

<sup>&</sup>lt;sup>46</sup> T 253; Exhibit 1, Tab 19.

<sup>&</sup>lt;sup>47</sup> T 254, 268 - 271.

<sup>&</sup>lt;sup>48</sup> Exhibit 1, Tab 10 and Tab 24.1.

<sup>&</sup>lt;sup>49</sup> T 133.

<sup>&</sup>lt;sup>50</sup> T 146.

 $<sup>^{51}</sup>$  T 34 – 35.

<sup>&</sup>lt;sup>52</sup> Exhibit 1, Tab 10 and Tab 19.

<sup>&</sup>lt;sup>53</sup> T 165; Exhibit 1, Tab 20.

possibility the trace indicate an issue with the baby's wellbeing and oxygenation. RM Mitchell was told Dr Johnston was aware of the trace. RM Mitchell noted that Dr Johnston was sitting at the doctor's desk outside Mrs Reindl's room and was able to see the CTG on the computer monitor. Dr Johnston advised her that she would do a vaginal examination at 7.45 am if there was no improvement in the CTG trace.<sup>54</sup>

- **49.** RM Mitchell recalled then receiving a bedside handover from RM Jefferson at around 7.25 am. Mrs Reindl was lying in the left lateral position and had the Syntocinon infusion running at 60 ml/hr and also receiving IV fluid. She was told Mrs Reindl had been given the anti-emetic Maxolon for nausea/vomiting. RM Mitchell recalled that she noted the CTG at the time of handover showed the fetal heart rate to be 135 bpm and there was decreased variability, nil accelerations and variable decelerations. Mrs Reindl was contracting five times in 10 minutes and was using Entonox with good effect.<sup>55</sup>
- **50.** At 7.45 am, close to an hour after fetal compromise had been indicated on the CTG, and after the midwives had done a handover, Mrs Reindl was personally reviewed by the Obstetric Registrar, Dr Johnston. This was one of the last tasks Dr Johnston performed before the medical staff handover. Dr Johnston performed a vaginal examination and noted that the cervix was still only 5 cm dilated and the baby's head had descended slightly. The vaginal examination results indicated that there had been minimal progress over the past hour. Dr Johnston did not perform a fetal blood scalp sample at this time, which might have assisted to check the health of baby Ashlee and provide objective evidence of whether the labour should continue. Dr Johnston agreed in evidence she could have done so, if she had thought it appropriate, but it was not something she thought necessary at the time and it was not suggested in her subsequent discussion with her consultant.<sup>56</sup> Dr Johnston did recommend an epidural and RM Mitchell recalled that Mrs Reindl was happy for the anaesthetist to be called for epidural administration.<sup>57</sup>
- **51.** RM Mitchell gave evidence she understood the epidural was recommended as often it can calm the woman if she is feeling a little bit stressed and help them to relax, which can increase the progress of the labour. The plan was to give Mrs Reindl a little more time, and with the help of the epidural it was hoped she would then progress quite quickly given this was not her first child.<sup>58</sup>
- **52.** Mrs Reindl stated that she was feeling terrible by this stage. She knew she was not progressing and there was discussion about putting in an epidural. Mrs Reindl recalled she said to the midwife prior to getting the epidural, "if I am going to have an epidural, I may as well just have a 'c section', I've had enough."<sup>59</sup> Mrs Reindl stated she believed the midwife understood this and told her she would organise the epidural.

<sup>&</sup>lt;sup>54</sup> T 167 – 169, 188; Exhibit 1, Tab 20.

<sup>&</sup>lt;sup>55</sup> Exhibit 1, Tab 20.

<sup>&</sup>lt;sup>56</sup> T 54 – 55, 57.

<sup>&</sup>lt;sup>57</sup> Exhibit 1, Tab 20.

<sup>&</sup>lt;sup>58</sup> T 172.

<sup>&</sup>lt;sup>59</sup> Exhibit 1, Tab 11 [58].

- 53. Mrs Reindl said in her statement that she later came to understand that the midwife did not pass on her request for a caesarean section to any of the new staff coming in to take over her care.<sup>60</sup> Mrs Reindl understood the new doctor who would be taking care of her was advised she was being prepared for an epidural and he did not come in and check on her or examine her for an hour or so into his shift.<sup>61</sup> It's not clear who Mrs Reindl is referring to, but I note Dr Erin Stanes (Dr Stanes) was the oncoming Registrar
- 54. RM Mitchell makes no mention of a discussion about a caesarean section at this time in her statement. She was asked at the inquest about this conversation and she said she did not recall a conversation with Mrs Reindl about a caesarean section. RM Mitchell said that generally if a caesareans section was mentioned by a labouring woman, she would advise the doctors as it is a decision left to the medical team. Since the doctor was present and they were already chatting about the epidural, RM Mitchell felt it may have been brought up in that conversation without requiring her to then take the matter further. In a later internal investigation, Dr Johnston said she recalled that a caesarean section was discussed between her and Mrs Reindl, so it would seem this conversation probably did occur in that context.<sup>62</sup>
- **55.** RM Mitchell also gave evidence it is also really helpful for a woman to get an epidural before a caesarean because it meant it may avoid requiring a general anaesthetic, and she agreed it's possible this might have come up in conversation with Mrs Reindl.<sup>63</sup>
- 56. Dr Johnston gave evidence at the inquest that she did recall there was some discussion about a caesarean section being one option at the time of her examination of Mrs Reindl. However, she could not recall the specifics of the discussion she had with Mrs Reindl and her husband.<sup>64</sup> Dr Johnston said in her evidence that in the end, what option was taken was not her decision, as she then discussed the options with the on-call Consultant/Senior Medical Officer (SMO), Dr Robert Wanat (Dr Wanat), who made the ultimate decision.<sup>65</sup>
- 57. Dr Wanat had been on call all weekend and was aware that Mrs Reindl was at the hospital and that she had had been on a Syntocinon infusion and had her waters broken the night before.<sup>66</sup> Dr Wanat was present on the Birth Suite on the Sunday morning when Dr Johnston approached him shortly after reviewing Mrs Reindl at 7.45am. Dr Wanat had not had any discussions with any doctors or midwives about Mrs Reindl overnight, so he was not aware of what had been happening with her labour since the rupture of her membranes the previous evening. Dr Johnston remembered that she took Mrs Reindl's Birth Record document out of her room and discussed Mrs Reindl's progress and the management options with Dr Wanat at the

<sup>60</sup> Exhibit 1, Tab 11 [60].

<sup>&</sup>lt;sup>61</sup> Exhibit 1, Tab 11.

<sup>&</sup>lt;sup>62</sup> T 173; Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>63</sup> T 196 - 199.

<sup>&</sup>lt;sup>64</sup> T 37.

<sup>&</sup>lt;sup>65</sup> T 38 – 39, 40.

<sup>&</sup>lt;sup>66</sup> T 75.

doctor's station near the handover board and computer. The doctors' station was located right outside Mrs Reindl's room.<sup>67</sup>

- **58.** Dr Johnston recalled they looked at Mrs Reindl's CTG while they discussed her progress.<sup>68</sup> Dr Johnston said she discussed the option of a caesarean or an epidural with Dr Wanat and the reason she then wrote down an epidural in the medical records is because that was the outcome of that discussion.<sup>69</sup>
- **59.** Dr Wanat gave evidence he thought his discussion with Dr Johnston at that stage was to do some kind of planning around the continuation of labour for handover to the day registrar. It was in this context that they were discussion Dr Johnston's examination of Mrs Reindl and the progress of her labour. It does not seem that any particular concerns were being raised with him at that time.<sup>70</sup>
- Dr Wanat stated that he was very surprised to learn during that discussion that 60. Mrs Reindl had not yet delivered, given she had given birth to three children previously. Normally he would have expected a woman in her position to have a quicker labour. Dr Wanat noted the clinical signs at that time, as he was told them, were that Mrs Reindl was still in the latent stage of labour and not in the active or established stage of labour. He observed that sometimes induced labours can progress more slowly than natural labours, so he was not overly concerned about the slower than expected labour. Dr Wanat could see Mrs Reindl's CTG trace from the monitor at the doctors' station and he thought the baseline fetal heart rate and beat to beat variability was reassuring and he was not concerned about the variable decelerations that were present. Dr Wanat noted the CTG observations are not diagnostic in themselves and need to be considered together with the overall picture of the patient. After considering the whole clinical picture, he thought it was possible Mrs Reindl, as a multiparous patient, could progress to deliver in the next couple of hours, as often multiparous patients' labour can change quickly and they deliver very rapidly. This was particularly so once the epidural was initiated.<sup>71</sup>
- **61.** Similarly, Dr Johnston recalled that she discussed with Dr Wanat the options of a potential caesarean section at that stage or of inserting an epidural and continuing to monitor and review and they were mindful of the fact that Mrs Reindl was multiparous (had already had three children) and that things can change rapidly with multiparous patients. Dr Johnston stated that Dr Wanat recommended that Mrs Reindl have an epidural, that the Syntocinon be continued and that she be re-assessed in two to three hours. Dr Wanat indicated that he thought Mrs Reindl might quickly move into established labour after an epidural block was inserted, as sometimes epidurals can speed up the process of labour by assisting to relax the patient.<sup>72</sup>
- 62. Dr Wanat did not personally review Mrs Reindl himself at that time. He said in evidence that at that time of the handover it was already organised for an epidural

<sup>&</sup>lt;sup>67</sup> Exhibit 1, Tab 23 and Tab 29.

<sup>&</sup>lt;sup>68</sup> Exhibit 1, Tab 23 and Tab 29.

<sup>&</sup>lt;sup>69</sup> T 38 – 39, 40.

<sup>&</sup>lt;sup>70</sup> T 77.

<sup>&</sup>lt;sup>71</sup> T 77; Exhibit 1, Tab 23 and Tab 29.

<sup>&</sup>lt;sup>72</sup> Exhibit 1, Tab 23.

and a block to be inserted as Mrs Reindl had started to have painful contractions and was transitioning into the active phase of labour. Dr Wanat understood the anaesthetist was already in Mrs Reindl's room inserting the epidural at the time of his discussion with Dr Johnston, so he did not enter Mrs Reindl's room as he did not want to interrupt the anaesthetist during that process.<sup>73</sup>

- **63.** Dr Johnston gave evidence her discussion with Dr Wanat occurred at about 8.00 am and the decision must have filtered very quickly to the anaesthetist, although she did not recall exactly when they came. The notes suggest the epidural had been successfully inserted by 8.38 am, so it was obviously before then.<sup>74</sup>
- 64. After her discussion with Dr Wanat, Dr Johnston recorded the management plan in Mrs Reindl's medical notes and also noted that there should be active management in the third stage of her labour (ie. interventions designed to facilitate the delivery of the placenta by increasing uterine contractions and to prevent primary postpartum haemorrhage by averting uterine atony).<sup>75</sup> Dr Wanat had suggested the management plan should be reviewed in two to three hours and, if there was no progress, then Mrs Reindl should proceed to have a lower segment caesarean section at that time.<sup>76</sup>
- **65.** Dr Wanat was asked at the inquest why he did not recommend simply performing a caesarean section at that time? Dr Wanat explained that he believed the insertion of the epidural would relax Mrs Reindl sufficiently for labour to progress more quickly and he thought the CTG trace was acceptable at that time, so he was hopeful Mrs Reindl might be able to quickly deliver vaginally.<sup>77</sup>
- **66.** There was no discussion between Dr Johnston and Dr Wanat at that time to indicate there was any urgency to progress Mrs Reindl's labour. Dr Johnston confirmed if there had been, then a caesarean section could have been performed quite quickly.<sup>78</sup>
- 67. It was noted in the internal review that the Registrar/SMO opinion at that time was apparently that labour had not yet commenced given the slow progress, failure to dilate and that only Entonox was in use for analgesia.<sup>79</sup>
- **68.** From Dr Wanat's perspective, he said he was busy on the floor walking around the ward and his impression was Dr Johnston was speaking to him to simply confirm her care plan and the continuation of the labour. He had formed the impression from what he had been told that Mrs Reindl had moved into the active phase of labour and there was no particular concerns raised that might change the plan. He knew Syntocinon would be paused while the epidural was inserted, then recommenced, but he did not consider ceasing the Syntocinon altogether as there was a risk the contractions might slow down or stop altogether if that occurred, especially after an epidural block is in place.<sup>80</sup>

<sup>&</sup>lt;sup>73</sup> T 77 - 78; Exhibit 1, Tab 23.

<sup>&</sup>lt;sup>74</sup> T 41, 174.

<sup>&</sup>lt;sup>75</sup> Exhibit 1, Tab 29.

<sup>&</sup>lt;sup>76</sup> Exhibit 1, Tab 23.

<sup>&</sup>lt;sup>77</sup> T 78.

 $<sup>^{78}</sup>_{79}$  T 41 – 42.

<sup>&</sup>lt;sup>79</sup> Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>80</sup> T 79 – 80, 82.

- **69.** Like Dr Johnston, Dr Wanat was asked whether he considered directing that a fetal blood scalp test be performed at that stage. Dr Wanat responded that on the basis of the CTG finding at that time, there was no indication to do that test.<sup>81</sup> However, Dr Wanat agreed in questioning that in hindsight, based upon all the features of the case that are now known, there was probably enough evidence in and around the time of 7.30 am onwards to perform a fetal blood scalp test, which is likely to have shown acidosis, and this would have prompted a caesarean section at an earlier time.<sup>82</sup>
- **70.** RM Mitchell recalled Mrs Reindl used the toilet just before 8.00 am and the CTG was put on standby and the Syntocinon was ceased so that she could do so. The CTG was reconnected straight after Mrs Reindl returned from the toilet and the fetal heart rate was recorded at 150 bpm at that time.<sup>83</sup> The anaesthetist then arrived, and after a discussion with Mrs Reindl, at 8.20 am an epidural was inserted. The Syntocinon had been ceased since Mrs Reindl went to the toilet, but it was recommenced a little after the epidural had been successfully inserted, just after 8.38 am. It was recommenced at a lower rate of 36 ml/hr, as it was policy to recommence at a lower rate, usually around the halfway mark, which is 36 ml/hr.<sup>84</sup>
- **71.** The CTG was also restarted after the epidural was inserted and RM Mitchell recorded it showed variable decelerations, normal variability and a fetal heart rate of 150 bpm. The anaesthetist was apparently still in the room at this time, to check the epidural was working and that Mrs Reindl's blood pressure was appropriate.
- 72. At 8.30 am, Mrs Reindl's temperature had further increased to 38.5°C and so she now had a fever. RM Mitchell agreed in evidence the raised temperature was a possible sign of infection, or alternatively labour obstruction. Mrs Reindl also had low blood pressure, which can happen with an epidural, so RM Mitchell sought to increase her fluids to bring Mrs Reindl's blood pressure up. The anaesthetist was present at this time and was assisting with monitoring Mrs Reindl's blood pressure. It increased with the extra fluid support. RM Mitchell continued to monitor Mrs Reindl's temperature after that and took the next temperature reading much sooner than the two hours.<sup>85</sup>

#### **EVENTS LEADING UP TO EMERGENCY C-SECTION**

73. As the staff shift changeover had been occurring around this time, as well as RM Mitchell taking over Mrs Reindl's care, Clinical Midwife Melinda Wise (CM Wise) replaced CM Reid and Dr Stanes took over as the Registrar on the Birth Suite for the day shift from Dr Johnston. Dr Stanes was a Service Obstetric Registrar and she held an Advanced GP Diploma in obstetrics at the relevant time.<sup>86</sup>

<sup>&</sup>lt;sup>81</sup> T 80.

<sup>&</sup>lt;sup>82</sup> T 88.

<sup>&</sup>lt;sup>83</sup> Exhibit 1, Tab 20.

<sup>&</sup>lt;sup>84</sup> T 174; Exhibit 1, Tab 10 and Tab 20.

<sup>&</sup>lt;sup>85</sup> T 175 – 176, 200.

<sup>86</sup> Exhibit 1, Tab 25.

- 74. Dr Johnston recalled that Dr Wanat and herself both took part in the handover. She could not specifically recall who else took part in the handover, but the Oncoming Day Shift Registrar, Dr Stanes, recalled she was also present along with the coordinating midwife of the day at the doctor's station. All of the patients were handed over that time, including Mrs Reindl. The plan for Mrs Reindl's care was handed over to the oncoming day staff, including Dr Stanes.<sup>87</sup>
- **75.** Dr Stanes understood from the handover that an artificial rupture of membranes had occurred at 8.00 pm the previous evening. Mrs Reindl had made slow progress since then while on the Syntocinon infusion, and Dr Johnston's impression was that Mrs Reindl was just getting into labour and was not yet in the active, or established, stage of labour at that time. Dr Stanes understood the plan for Mrs Reindl was to get an epidural inserted to assist her to relax (which was already occurring at that time) and then to reassess her in two to three hours. No concerns about the overnight CTG, or any other obviously concerning features about Mrs Reindl's labour, were communicated at the handover.<sup>88</sup>
- **76.** After the handover, Dr Stanes commenced a round of the post-natal, antenatal and gynaecological patients on the ward with the RMO.<sup>89</sup>
- 77. At 8.55 am, RM Mitchell performed another set of observations, approximately 20 minutes after the last set, and noted Mrs Reindl's temperature was now 39.1°C in her left ear and 39.9°C in her right ear. Mrs Reindl's other observations were stable. RM Mitchell was concerned at the high temperature reading, which had increased in that short period of time. RM Mitchell said she popped her head out the door to see if the midwife coordinator, CM Wise, was nearby, but she had gone to attend an emergency. She saw Register Midwife Linda Pinnock (RM Pinnock), who suggested she call the Resident Medical Officer. RM Mitchell immediately rang the RMO, who was still on the ward round. The RMO said she would come over as soon as she had completed the ward round and assess Mrs Reindl and possibly chart some intravenous antibiotics.<sup>90</sup>
- **78.** Mrs Reindl was contracting five to six times in 10 minutes. The Syntocinon infusion, which had remained at 36 ml/hr, would normally have been increased at this time, but due to the number of Mrs Reindl's contractions it was not increased. RM Mitchell said in evidence that she was hoping that without an increase in the Syntocinon, the contractions would drop back down to four to five contractions in 10 minutes. The CTG showed that at 9.00 am the fetal heart rate was 135 bpm, which was not concerning. RM Mitchell recalled the trace also had normal variability and no accelerations, but the variable decelerations remained.<sup>91</sup>
- **79.** At 9.15 am, the variable decelerations became deeper and went down to 80 bpm on one occasion. RM Mitchell stated she continued to monitor the CTG closely for the next five minutes as she was concerned about the depth of the decelerations and the

<sup>87</sup> Exhibit 1, Tab 25 and 29.

<sup>&</sup>lt;sup>88</sup> T 97Exhibit 1, Tab 25.

<sup>&</sup>lt;sup>89</sup> Exhibit 1, Tab 25.

<sup>&</sup>lt;sup>90</sup> T 177 – 178, 216 – 217..

<sup>&</sup>lt;sup>91</sup> T 178; Exhibit 1, Tab 10 and Tab 20.

loss of contact. She tried to reposition Mrs Reindl to try to improve the contact. <sup>92</sup> The coordinator, CM Wise, was in another Birth Suite for an emergency, so she could not discuss the results with her, but RM Mitchell asked another midwife to ensure that CM Wise was made aware of the CTG trace at 9.20 am.<sup>93</sup>

- **80.** Mrs Reindl recalled that once the epidural was administered, she had been told to have a rest and let the epidural do its job. She was aware they had turned off the Syntocinon when the epidural was inserted, and that it was turned back on again half an hour or so later. Someone told Mrs Reindl that they hoped that with the epidural relaxing the lower half of her body, labour would occur naturally, but that did not occur.<sup>94</sup> Mrs Reindl and her husband were presuming that she was waiting to be taken for a caesarean section, but then realised that the midwives were focussed on her increasing fever. Mr Reindl thought perhaps the delay in commencing the caesarean was due to her fever, and so they simply waited and trusted the staff to do their jobs.<sup>95</sup>
- **81.** The RMO attended at around 9.20 am and after assessing Mrs Reindl, advised Dr Stanes that Mrs Reindl was febrile. Dr Stanes gave evidence that a "fever in labour is going to be chorioamnionitis until proven otherwise,"<sup>96</sup> so she instructed the RMO to take blood cultures and order triple antibiotics (amoxycillin, gentamicin, metronidazole), which is standard procedure for a patient who has a fever during labour. The RMO went to Mrs Reindl's room to undertake this task. It does not appear the RMO was consulted about the concerning CTG at that time.<sup>97</sup>
- 82. RM Mitchell had pressed the nurse call button to get help from a colleague as the clinical midwife was dealing with an emergency. At 9.25 am, a message was passed back to RM Mitchell that CM Wise had advised to stop the Syntocinon because of the baby's heartrate on the trace, which RM Mitchell then did. The CTG trace at this time showed the fetal heart rate was 140 bpm and while there was normal variability and nil accelerations, the decelerations were continuing. The decelerations were going down to around 50 to 70 bpm before returning to baseline. This was a significant drop and the heart rate was not coming straight back up. RM Mitchell said she had seen traces that were worse than this, and it could have been a positional issue, but it was "not a great trace"<sup>98</sup> and caused her sufficient concern that RM Mitchell recalled she pressed the Staff Assist button and both RM Pinnock and Dr Stanes responded. RM Pinnock recalled she had come into the room so RM Mitchell could go on a break.<sup>99</sup> In any event, both RM Pinnock and Dr Stanes were present in Mrs Reindl's room by around 9.27 am, together with RM Mitchell.<sup>100</sup> Dr Stanes understood she had been asked to attend to review Mrs Reindl because of concerns about variable decelerations on the CTG trace.<sup>101</sup>

<sup>&</sup>lt;sup>92</sup> T 180.

<sup>93</sup> T 180; Exhibit 1, Tab 10 and Tab 20.

<sup>&</sup>lt;sup>94</sup> Exhibit 1, Tab 11.

<sup>&</sup>lt;sup>95</sup> Exhibit 1, Tab 11.

<sup>&</sup>lt;sup>96</sup> T 100.

<sup>&</sup>lt;sup>97</sup> Exhibit 1, Tab 20 and Tab 25.

<sup>&</sup>lt;sup>98</sup> T 182.

<sup>&</sup>lt;sup>99</sup> Exhibit 1, Tab 21.

<sup>&</sup>lt;sup>100</sup> T 181; Exhibit 1, Tab 20.

<sup>&</sup>lt;sup>101</sup> T 181 – 183; Exhibit 1, Tab 25.

- **83.** RM Mitchell performed another vaginal examination at 9.30 am to determine dilatation. Mrs Reindl's cervix was 8 cm dilated and the swelling of her cervix at that time had decreased, which was a positive finding and a sign that there was no obstruction.<sup>102</sup> RM Pinnock took over Mrs Reindl's care not long after that time while RM Mitchell went on her tea break. RM Mitchell recalled there was discussion about attaching a fetal scalp electrode as she was leaving the room.<sup>103</sup>
- **84.** Dr Stanes recorded her review in the medical records at 9.35 am and noted that she had been asked to see Mrs Reindl due to concerns about the CTG, which showed complicated variable decelerations with each contraction. However, there was normal variability in between the decelerations, which was reassuring. Dr Stanes said in evidence "it wasn't an overtly pathological trace," <sup>104</sup> so at the time she did a few things to see if the cause of the decelerations was reversible. She was informed the Syntocinon, which can cause decelerations, had only recently been turned off, so Dr Stanes considered that might be one cause for the readings. Dehydration can also be a cause of variable decelerations, so Mrs Reindl was started on intravenous fluids. They also tried to reposition Mrs Reindl to see if that helped. Dr Stanes noted Mrs Reindl's temperature was elevated at 39 degrees. She also noted the findings of the midwife's vaginal examination and identified no findings suggesting an obstructed labour.<sup>105</sup>
- **85.** Dr Stanes thought Mrs Reindl's labour was now progressing, noting she had progressed from five to eight cm dilation in about an hour. Dr Stanes was aware that "often women like this will labour very fast once they have entered the latter stages of labour." Accordingly, while Dr Stanes said her impression was that the delivery would need to be expedited, the best method of doing that was yet to be determined and she had not ruled out vaginal delivery. Dr Stanes made a plan to keep the Syntocinon off, continue intravenous fluids, obtain the blood cultures and then administer triple intravenous antibiotics (which the RMO had already initiated and RM Pinnock had gone to obtain from the store cupboard), to apply a fetal scalp clip because there was some loss of contact during the decelerations and the clip makes the readings more accurate. RM Pinnock assisted in applying the clip. Dr Stanes planned to review Mrs Reindl again in thirty minutes. If the decelerations were persistent, Dr Stanes then planned to consider fetal blood scalp testing.<sup>106</sup>
- 86. RM Mitchell recalled that Dr Stanes was really trying to help Mrs Reindl have a vaginal birth, probably more so because of her previous successful vaginal birth history and the fact that she had three other children she would need to care for at home after the birth. RM Mitchell accepted that Mrs Reindl herself was not insistent on a vaginal delivery and had no ideology about it being necessary, but indicated that it was always better to try to avoid major abdominal surgery and the risk and

<sup>&</sup>lt;sup>102</sup> T 183.

<sup>&</sup>lt;sup>103</sup> T 183; Exhibit 1, Tab 20.

<sup>&</sup>lt;sup>104</sup> T 99.

<sup>&</sup>lt;sup>105</sup> T 98 – 100, 110 - 111; Exhibit 1, Tab 25.

<sup>&</sup>lt;sup>106</sup> T 98, 100, 105, 111, 219 - 220; Exhibit 1, Tab 21 and Tab 25.

recovery implications it carries, with the main priority of course always being to keep both mother and baby safe throughout.<sup>107</sup>

- **87.** Dr Stanes was asked at the inquest whether, in hindsight, she thinks that there were signs at this stage that perhaps should have led her to decide to perform a caesarean section at that time? Dr Stanes gave evidence she had thought about this a lot and still feels that there was potential for a rapid vaginal delivery and a caesarean could be hazardous if the baby descended into the pelvis, so she believes at 9.30 am it was potentially premature to go to a caesarean section based upon the knowledge she had at the time.<sup>108</sup> However, Dr Stanes also explained that she had not been given information at the handover about the prolonged abnormalities on the CTG trace, her ongoing low-grade fever and vomiting and Mrs Reindl's own request for a caesarean section because she was exhausted. Dr Stanes said in evidence if she had known that there had been ongoing concerns, she thinks she might have acted differently at 9.30 am.<sup>109</sup>
- **88.** Having put her plan into action, Dr Stanes went to perform other duties. RM Pinnock stayed in the room caring for Mrs Reindl. She had the antibiotics ready to administer when RM Mitchell returned from her break, as they had to be checked and signed off by two midwives before they could be administered.<sup>110</sup> Dr Stanes was not contacted about further concerns in relation to Mrs Reindl between 9.30 am and 10.00 am.
- **89.** Dr Stanes returned to review Mrs Reindl at about 10.00 am, as planned, although RM Pinnock recalled she also asked Dr Stanes to come and examine Mrs Reindl around this time as she was concerned about the position of the baby.<sup>111</sup> Dr Stanes noted there were still variable decelerations on the CTG, but she believed there were also reassuring features present. Dr Stanes felt that Mrs Reindl's labour was progressing and that delivery vaginally would likely be imminent. However, she also felt the delivery might still need to be expedited. Dr Stanes therefore examined Mrs Reindl herself to determine the fetal position and the likelihood of an imminent vaginal delivery.<sup>112</sup>
- **90.** Dr Stanes' vaginal examination revealed that Mrs Reindl was 9 cm dilated but the position of the baby was not favourable for immediate vaginal delivery. There were no signs that labour was obstructed or that the baby would not fit through the pelvis. It was noted that Mrs Reindl had a proven pelvis as she had delivered three children vaginally previously. Given this history and the fact she had dilated quite quickly from 5cm to 9cm, Dr Stanes thought Mrs Reindl could deliver rapidly, with or without assistance. The baby's head was still too high at that stage to perform an instrumental delivery, so Dr Stanes attempted to push away Mrs Reindl's cervix, as this can sometimes increase the speed to full dilation and thus expedite delivery. However, she was unable to do so.<sup>113</sup>

 $<sup>^{107}</sup>$  T 204 – 205.

<sup>&</sup>lt;sup>108</sup> T 106.

 $<sup>^{109}</sup>$  T 107 – 108.

<sup>&</sup>lt;sup>110</sup> Exhibit 1, Tab 21.

<sup>&</sup>lt;sup>111</sup> T 222 – 223; Exhibit 1, Tab 21.

<sup>&</sup>lt;sup>112</sup> T 112; Exhibit 1, Tab 25.

<sup>&</sup>lt;sup>113</sup> T 106; Exhibit 1, Tab 25.

- **91.** Dr Stanes had noted during the vaginal examination that the discharge had an offensive smell, which was consistent with the impression of chorioamnionitis.<sup>114</sup> Thick Meconium was also present when Dr Stanes performed the vaginal examination. Dr Stanes noted that meconium in isolation is not always concerning, but it can be an indication of fetal distress in combination with other factors and is non-reassuring.<sup>115</sup>
- **92.** Dr Stanes performed a quick ultrasound to confirm her vaginal examination findings regarding the position of the baby's head were correct. Given the CTG changes, and noting the presence of meconium, Dr Stanes also wanted to confirm Ashlee's condition, to see if there was time for her to descend into the pelvis and a vaginal delivery to occur. This was done through a fetal scalp gas.<sup>116</sup>
- **93.** Dr Stanes accepted in her evidence that, with the benefit of hindsight, it would have been a very reasonable decision to simply move to a caesarean section without taking the 10 minutes or so to complete the fetal blood sample testing, but at the time she believed it would assist her to determine the urgency of the situation, noting Mrs Reindl was very close to delivering vaginally.<sup>117</sup>
- **94.** RM Mitchell returned from her break at 10.00 am, at which time Dr Stanes was reattaching the fetal scalp electrode that had been dislodged during Dr Stanes' vaginal examination. RM Mitchell noted some meconium on the sheet underneath Mrs Reindl, which suggested the baby might be under stress, and she was aware Dr Stanes had noted a foul-smelling vaginal discharge. Antibiotics were then administered to Mrs Reindl intravenously at 10.10 am to treat any infection.<sup>118</sup> RM Pinnock had left the room around this time to attend to other duties.
- **95.** After the fetal scalp electrode was applied to Ashlee's head, the fetal blood sampling was then performed. The fetal scalp gases showed a low pH level of 7.13 (acidosis) and raised lactate of 8.3. A second result was 7.107. These results, which came back at 10.22 am, were relayed to Dr Stanes by the midwife coordinator. The results were very concerning and suggested to Dr Stanes that delivery needed to be done immediately.<sup>119</sup>
- **96.** Based on the fetal blood gas results, in combination with the other information, Dr Stanes made a diagnosis of fetal distress and maternal sepsis (probably chorioamnionitis) requiring delivery. Dr Stanes gave evidence that she quickly weighed up in her mind whether she could give the baby a few minutes to descend and be delivered vaginally, which could be faster and safer than a caesarean section at that stage of dilatation, but then she made the decision to call a Category 1 caesarean section (an emergency caesarean section due to immediate threat to the life

<sup>&</sup>lt;sup>114</sup> T 112.

<sup>&</sup>lt;sup>115</sup> T 112; Exhibit 1, Tab 21 and Tab 25.

<sup>&</sup>lt;sup>116</sup> T 102.

<sup>&</sup>lt;sup>117</sup> T 102, 106 - 107.

<sup>&</sup>lt;sup>118</sup> T 184.

<sup>&</sup>lt;sup>119</sup> T 103.

of the baby or mother).<sup>120</sup> Dr Stanes informed Dr Wanat, who agreed with both the decision and the category. It was arranged he would attend, which was usual procedure. Dr Stanes also called the anaesthetist.<sup>121</sup>

- **97.** There was some evidence about whether Dr Stanes could have ordered a ONET caesarean section, which can in theory lead to a faster delivery, but I accept that in this case there was no real practical difference between the two options as the staff performed most of the additional parts of an ONET delivery anyway.<sup>122</sup>
- **98.** RM Mitchell said that the doctor calls the theatre to advise of a caesarean section and they fill in some paperwork and then the midwives do everything else necessary to get everybody ready. RM Mitchell indicated there is a lot to get done in a short space of time. RM Mitchell notified the paediatric team of the presence of meconium and fetal bradycardia, so that they were on notice, and preparations then began to take Mrs Reindl to theatre. Dr Stanes had to get Mrs Reindl's consent to undergo a caesarean section before she was transferred.<sup>123</sup>
- **99.** In her statement, Mrs Reindl indicates she understood that the order for a caesarean section at this time was not considered to be urgent, so she and her husband were not concerned at this point. They were left with a nurse who had recently graduated and they perceived no sense of urgency or fretting from the other staff as they left.<sup>124</sup> However, it is clear from the staff perspective that they were working with urgency, although they may not have wished to panic Mr and Mrs Reindl.
- **100.** Later medical review suggested that changes consistent with placental abruption commenced on the CTG at this time, but Dr Stanes had left the room to scrub for the delivery and the nursing shift coordinator had left to attend another patient, so it's not clear these changes were observed.<sup>125</sup>

#### **EMERGENCY C-SECTION PERFORMED**

101. RM Pinnock had been asked by CM Wise to attend Mrs Reindl's non-elective caesarean section with RM Mitchell as RM Mitchell was a graduate midwife. RM Pinnock changed into theatre scrubs and entered Mrs Reindl's room. The CTG was still insitu and the anaesthetist was there. The anaesthetist had arrived on the birth suite to give the epidural a top up. RM Pinnock stated she saw complicated variables on the CTG and an absence of variability and she became very concerned about the trace at that stage. She went outside to inform Dr Stanes of her concerns. Dr Stanes was outside on the phone informing the necessary people about the emergency caesarean section. RM Pinnock recalled Dr Stanes came back into the room but by this stage Mrs Reindl was ready to be taken to theatre.<sup>126</sup>

<sup>&</sup>lt;sup>120</sup> T 113.

<sup>&</sup>lt;sup>121</sup> Exhibit 1, Tab 10 and Tab 23.

<sup>&</sup>lt;sup>122</sup> T 104.

<sup>&</sup>lt;sup>123</sup> T 185 – 187; Exhibit 1, Tab 20.

<sup>&</sup>lt;sup>124</sup> Exhibit 1, Tab 11.

<sup>&</sup>lt;sup>125</sup> Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>126</sup> Exhibit 1, Tab 21.

- 102. RM Pinnock said she asked Dr Stanes if she wanted to give Terbutaline at that stage, as it can help where the uterus might be over-stimulated as it will give the uterus a rest. Dr Stanes said she did not, as she did not want to risk Mrs Reindl bleeding. Instead, she told RM Pinnock to put it on the tray just in case.<sup>127</sup>
- **103.** The anaesthetist noted that the midwife appeared concerned about the CTG so he assisted to push the bed to theatre immediately, bypassing the holding bay.<sup>128</sup> It was Mrs Reindl's perception that the anaesthetist was the person who escalated the situation and called for an emergency c-section.<sup>129</sup>
- 104. Dr Stanes' evidence was that she was informed that the fetal heart rate had dropped, so she requested an immediate transfer to theatre. The anaesthetist was aware of the urgency and assisted to push Mrs Reindl's bed to theatre, rather than waiting for an orderly to assist, and due to the urgency of the situation the holding bay was bypassed and they went straight into theatre.<sup>130</sup> Dr Stanes believes the placental abruption occurred on the way to theatre, when the fetal heart rate dropped dramatically.<sup>131</sup>
- **105.** Mrs Reindl arrived in theatre at about 10.47 am. The CTG was applied at some time between 10.48 and 10.50 am and immediately the baby's heart rate was noted to have dropped to 61 beats per minute.<sup>132</sup> This information was immediately relayed to the attending team by RM Pinnock as it was a very concerning reading.<sup>133</sup>
- **106.** On arrival to theatre, Dr Stanes stated she was advised the fetal heart rate was now 50 beats per minute. Dr Stanes asked theatre staff to contact Dr Wanat to attend urgently due to fetal concerns, as well as the possibility of post-partum haemorrhage as Mrs Reindl had a number of risk factors for such an event. Dr Stanes stated she thought it was still possible Mrs Reindl might deliver vaginally, so she did a very quick vaginal examination to ensure she could not delivery baby more quickly vaginally and to confirm the baby's head was not too low in the pelvis, before determining to proceed with the caesarean section. The meconium was thick at this stage, which was a concerning feature, so Dr Stanes communicated to the anaesthetist an urgent need to deliver. The anaesthetist advised the epidural block was adequate, so Dr Stanes proceeded with an urgent caesarean section.
- 107. Dr Stanes commenced the caesarean section at 10.55 am. Dr Stanes immediately saw that Mrs Reindl's uterus was Couvelaire and fresh blood was visible on uterine entry. A Couvelaire uterus is a rare kind of severe placental abruption. It occurs when the placenta peels away from the uterus and the blood that should be going to the baby builds up in the uterus and the pressure of the uterine contractions is so great that it cause extravasation, where the blood is forced through the muscle layer of the uterus

<sup>&</sup>lt;sup>127</sup> T 226 - 227; Exhibit 1, Tab 21.

<sup>&</sup>lt;sup>128</sup> Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>129</sup> Exhibit 1, Tab 11.

<sup>&</sup>lt;sup>130</sup> Exhibit 1, Tab 20.

<sup>&</sup>lt;sup>131</sup> T 114 - 115.

<sup>&</sup>lt;sup>132</sup> Exhibit 1, Tab 10 and Tab 21.

<sup>&</sup>lt;sup>133</sup> T 228; Exhibit 1, Tab 21.

<sup>&</sup>lt;sup>134</sup> Exhibit 1, Tab 20.

into the abdominal cavity.<sup>135</sup> It is life-threatening.<sup>136</sup> Dr Stanes' immediate impression was that there had been a placental abruption. It had not been evident clinically leading up to that time, so Dr Stanes had not been expecting to see evidence of a placental abruption prior to commencing the caesarean section.<sup>137</sup>

- 108. Ashlee was delivered at 10.56 am. Ashlee was delivered in poor condition and through thick meconium. She was noted to be pale, floppy, with no heart rate and with no blood in the umbilical cord. She was immediately handed to the Consultant Paediatrician, Dr Gareth Kameron (Dr Kameron), for full resuscitation to commence. A neonatologist (a paediatrician who specialises in new born babies) was also called in to assist.<sup>138</sup> There were signs of chorioamnionitis, which is an infection of the membranes and chorion of the placenta. Dr Stanes also advised them of her concerns regarding the placental abruption, to assist them in treating Ashlee.<sup>139</sup>
- **109.** Mrs Reindl had a large post-partum haemorrhage following delivery, secondary to poor uterine tone and trauma. Dr Wanat arrived in theatre after Ashlee's delivery and assisted with the management of Mrs Reindl's post-partum haemorrhage, although the bleeding had already been successfully controlled by Dr Stanes by the time of his arrival. Mrs Reindl required a transfusion of blood and blood products. Dr Stanes was advised to leave work due to distress and Dr Wanat continued in her role for the rest of the day.<sup>140</sup>

#### **RESUSCITATION EFFORTS**

- 110. Immediately after delivery, at 10.56 am, Ashlee was assessed as flat, very floppy with no muscle tone, extremely pale and with no pulse or signs of breathing. Resuscitation of Ashlee commenced with intermittent positive pressure ventilation followed by intubation. Repeated doses of adrenaline were given. A pulse was first detected in the umbilicus somewhere between 9 and 11 minutes and a full return of spontaneous circulation, with a heartbeat and pulse, was achieved after 12 minutes. Dr Kameron gave evidence his initial thoughts were that Ashlee had lost blood towards her mother and so they needed to build up her circulation with fluids and blood and replenish her clotting factors, which was done. Dr Kameron was unaware of the placental abruption at the time, but agreed this could certainly have been a cause for Ashlee's blood loss.<sup>141</sup>
- 111. Ashlee was transferred to the Special Care Nursery for ventilation and ongoing support. Ashlee was given antibiotics as soon as practical after she was stable to treat any possible infection and all possible reversible causes for her condition were looked at and treated.<sup>142</sup> Dr Kameron gave evidence that with hindsight, knowing now the presence of chorioamnionitis, he assumes many of Ashlee's issues were

<sup>&</sup>lt;sup>135</sup> T 332; Exhibit 1, Tab 20.

<sup>&</sup>lt;sup>136</sup> T 332.

<sup>&</sup>lt;sup>137</sup> T 116 – 117; Exhibit 1, Tab 20.

<sup>&</sup>lt;sup>138</sup> Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>139</sup> Exhibit 1, Tab 20.

<sup>&</sup>lt;sup>140</sup> Exhibit 1, Tab 10, Tab 20 and Tab 23.

<sup>&</sup>lt;sup>141</sup> T 290.

<sup>&</sup>lt;sup>142</sup> T 277 – 279, 286 - 288; Exhibit 1, Tab 10.

probably secondary to sepsis, in addition to her original blood loss. This was because babies who have a purely hypoxic insult very rarely have major blood pressure issues, whereas babies who have overwhelming sepsis will quite commonly have blood pressure issues, which was the case for Ashlee.<sup>143</sup>

- **112.** Dr Kameron also noted that in hindsight, there was the presence of meconium found in Ashlee's lungs, which can cause a lot of inflammation. Therefore, Dr Kameron expressed the opinion in hindsight that meconium aspiration and sepsis were significant features in Ashlee's death, in addition to the obvious blood loss issue he was focused on around the time of her birth. All of these features were treated during her resuscitation, although sepsis and meconium aspiration were not at the forefront of the paediatric team's minds.<sup>144</sup>
- 113. At 12.50 am the Newborn Emergency Transport Service (NETS) arrived to transfer Ashlee to Perth Children's Hospital. However, she was too unstable to be moved, so a decision was made that she should remain at JHC. Ashlee received further intensive treatment over the next three hours, with no signs of improvement. Ashlee was given blood products, medication but she showed no improvement. Ashlee was noted to be pale with no active movement, bradycardic, hypoxic and in severe lactic acidosis despite maximum ventilation. At no time did she take a breath on her own, and it was apparent to doctors that she was unlikely to survive.<sup>145</sup>
- 114. Discussions took place between the NETS Director and Deputy Director, the JHC neonatologist and paediatrician and Ashlee's parents about Ashlee's poor prognosis. It was explained to Ashlee's parents that Ashlee would have suffered irrecoverable brain damage due to her length of time without oxygen and her chances of survival were very small. A collaborative decision was then made to withdraw active treatment. Ashlee passed away in her parents' arms just after 3.30 pm on Sunday, 27 October 2019.<sup>146</sup>
- **115.** Mrs Reindl had to remain in hospital for another week as she required treatment for sepsis and blood loss. She was eventually discharged home on 1 November 2019.<sup>147</sup>

#### POST MORTEM EXAMINATION

- 116. There was some complexity to establishing the cause of death for Ashlee.
- 117. Forensic Pathologist Dr Vagaja made a post mortem examination of Ashlee on 29 October 2019 and a limited examination of the placenta was made on 14 November 2019 with the assistance of a paediatric pathologist, Dr Disna Abeysuriya (Dr Abesuriya). Following these examinations, the cause of death was undetermined pending further investigations.

<sup>&</sup>lt;sup>143</sup> T 290.

<sup>&</sup>lt;sup>144</sup> T 296 - 297.

<sup>&</sup>lt;sup>145</sup> T 281; Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>146</sup> Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>147</sup> Exhibit 1, Tab 11.

- 118. Dr Vagaja provided an opinion on the cause of death on 16 August 2021, following receipt of the further investigations. At that time and based on the information then available to her, Dr Vagaja expressed the opinion the cause of death was <u>fetal demise</u> <u>due to combined effects of sepsis secondary to chorioamnionitis, delayed maturation of the placenta and meconium aspiration in the settings of induced labour for post <u>dates pregnancy</u>, although Dr Vagaja later indicated the pregnancy did not fall precisely within the definition of 'post dates' at that time, as technically this occurs at 42 weeks.<sup>148</sup></u>
- **119.** As a result of questioning of experts about the cause of death at the inquest, it became apparent that not all relevant information had been provided to Dr Vagaja before she formed her opinion in August 2021. In particular, relevant information about the placental abruption, that was identified during the emergency caesarean section, had not been provided. This prompted further investigation and consideration of additional information by Dr Vagaja after the inquest, at the Court's request.
- 120. After a review of the SAC1 clinical incident report (as set out below), the clinical notes detailing the hospital admission of Ashlee's mother Jodie and Dr Owen's expert opinion report (also set out below), Dr Vagaja advised that she now had information that a massive placental abruption was diagnosed during the emergency caesarean section that was performed to deliver Ashlee. Ashlee was delivered floppy and without a heartbeat. No blood was present in the umbilical cord. This information was all relevant to establishing Ashlee's cause of death.
- 121. As a result of this additional information, Dr Vagaja's final opinion on the cause of death was provided on 27 February 2023. The amended cause of death was given as fetal demise due to placental abruption and sepsis secondary to chorioamnionitis, with meconium aspiration, with a background of delayed maturation of the placenta, in the settings of induced labour for a prolonged pregnancy.<sup>149</sup>
- 122. The parties were provided with Dr Vagaja's 2<sup>nd</sup> Supplementary Report including the amended cause of death and were given an opportunity to put questions to Dr Vagaja through Counsel Assisting, as well as to return to court to continue the inquest if required. No request was made to pose questions to Dr Vagaja or to return to court for further evidence to be taken, and no challenge has been made by the parties to the amended cause of death.
- 123. The most significant change to Dr Vagaja's opinion as to the cause of death is the addition of placental abruption as a reason for the fetal demise. Dr Vagaja explained that placental abruption is a premature separation of placenta from the uterus. In cases where abruption is severe or complete, there is complete cessation of blood supply to the placenta. Instead of being passed through the placenta, the blood oozes and pools in mother's uterus, whilst the fetus is deprived of oxygen and nutrients, whilst removal of waste products and carbon dioxide cannot be achieved. These functions are essential to the survival of the fetus. A massive placental abruption would have had a catastrophic effect on Ashlee and would have been a significant

<sup>&</sup>lt;sup>148</sup> Exhibit 1, Tab 3.1 and Tab 3.3.

<sup>&</sup>lt;sup>149</sup> Exhibit 1, Tab 3.5.

contributor to her demise. Therefore, placental abruption is now included in the cause of death.  $^{150}$ 

- 124. This is consistent with the opinion expressed by the independent obstetric expert, Dr Owen, at the inquest. Dr Owen noted the level of acidosis seen in baby Ashlee was to a degree not usually seen just with chorioamnionitis, and he considered the placental abruption must have been a factor, noting the cause of death was likely multifactorial.<sup>151</sup>
- 125. Dr Vagaja also explained that the presence of chorioamnionitis may have increased the risk of placental abruption in this case. Chorioamnionitis independently caused a limitation to the function of the placenta, was a source of sepsis in Ashlee and was a risk factor for intrauterine death.<sup>152</sup> Dr Vagaja noted the hospital's own internal SAC1 investigation presumed the chorioamnionitis was the main contributor to the abruption. In correspondence, Dr Vagaja explained that chorioamnionitis often occurs in pregnancies with pre-labour rupture of membranes (PROM), which occurred in this case. Mrs Reindl did not show any signs of infection prior to the PROM, and the amniotic fluid was clear at the time the membranes were artificially ruptured, which suggests the infection was probably caused by the artificial rupture of membranes (or aggravated if there was a subclinical infection – an infection not noticeable clinically at the time). Dr Vagaja noted that the paediatric pathologist who examined the placenta, Dr Abeysuriya, was of the opinion the infection was most likely of the intrauterine ascending type, rather than introduced into the uterus from the mother's blood. The majority of chorioamnionitis are of this intrauterine ascending type, and it essentially means the infection is introduced into the uterus from the vagina, once the protection of the membranes is removed.<sup>153</sup>
- 126. In addition, delayed maturation of the placenta was an independent abnormality which diminished the functions of the placenta, resulting in a physiological disadvantage to the fetus in the settings of an adverse intrauterine event. Delayed maturation of the placenta is not, however, a risk factor for placental abruption, nor chorioamnionitis.<sup>154</sup> Dr Abeysuriya expressed the opinion that it was unlikely the delayed maturation of the placenta would have been fatal on its own, although it became relevant under the increased physiological stress in the presence of the severe chorioamnionitis as it made it more difficult for the baby to fight or survive the chorioamnionitis.<sup>155</sup>
- 127. Dr Vagaja also observed that it was probable that the meconium which was aspirated was also infected. This would have added to the infective load imposed on Ashlee, while meconium aspiration can in any event cause inflammation in the lungs and respiratory problems.<sup>156</sup>

<sup>151</sup> T 314.

<sup>&</sup>lt;sup>150</sup> Exhibit 1, Tab 3.5, p. 4.

<sup>&</sup>lt;sup>152</sup> Exhibit 1, Tab 3.5, p. 4.

<sup>&</sup>lt;sup>153</sup> Exhibit 1, Tab 3.3.

<sup>&</sup>lt;sup>154</sup> Exhibit 1, Tab 3.5, p. 4.

<sup>&</sup>lt;sup>155</sup> Exhibit 1, Tab 3.3 and Tab 3.4.

<sup>&</sup>lt;sup>156</sup> Exhibit 1, Tab 3.3.

- **128.** Fetal hypoxia (lack of oxygen) can occur due a variety of abnormalities and in this case, Dr Vagaja identified that the crucial abnormalities resulting in Ashlee's death occurred *in utero* and these were: (i) the placental abruption, (ii) sepsis secondary to chorioamnionitis, and (iii) meconium aspiration. Dr Vagaja expressed the opinion the massive abruption would have been a primary contributor, particularly at the complete stage, and the chorioamnionitis was a secondary contributor, which possibly gradually worsened as the infection increased in severity. The delayed maturation of the placenta would have further limited the ability of the placenta to cope with the adverse physiological effects of the chorioamnionitis, and with partial/evolving abruption.<sup>157</sup>
- **129.** Dr Vagaja advised she was unable to determine whether uterine hyperstimulation contributed to the fetal hypoxia in this case and indicated this would require a clinician's opinion.<sup>158</sup> This opinion was provided by the independent obstetric expert, Dr Owen, and is set out later in this finding.

### **INTERNAL SAC1 INVESTIGATION**

- **130.** Following Ashlee's death, the hospital initiated a Root Cause Analysis (RCA) investigation into the circumstances leading up to the death as it fell into the category of a sentinel event or Severity Assessment Code 1 (SAC1) clinical incident, where the death was considered attributable to health provision (or lack thereof) rather than the patient's underlying condition or illness. The RCA team consisted of an Obstetrician, Neonatologist, two Midwives, an Anaesthetist, a Senior Consultant for Patient Safety, a Consultant for Patient Safety and a Clinical Risk Co-ordinator. The investigation was completed in December 2019 and the report was signed on 18 December 2019.<sup>159</sup>
- **131.** Dr Cliff Neppe is a Fellow of the Royal Australian and New Zealand College of Obstetricians and Gynaecologist (RANZCOG) and the Deputy Director of Medical Services at JHC. Dr Neppe was the Obstetric and Gynaecology Head of Department at JHC at the relevant time in 2019. Dr Neppe, as an Obstetrician, was a member of the RCA team of health practitioners who reviewed the circumstances surrounding Mrs Reindl's labour and delivery and Ashlee's death and prepared the SAC1 report.<sup>160</sup>
- 132. Dr Neppe provided a report to the Court and also gave evidence at the inquest. Dr Neppe advised that at the time the review panel conducted their investigation and completed their report and recommendations, the cause of baby Ashlee's death was not known. The review panel thought it likely that her death was caused by a placental abruption (as Dr Vagaja eventually found) and that her condition was sadly irreversible as a result of that. The review team also recognised that Mrs Reindl's temperature in labour probably represented chorioamnionitis, although it had not been confirmed at the time of their review, which was a predisposing factor to

<sup>&</sup>lt;sup>157</sup> Exhibit 1, Tab 3.5.

<sup>&</sup>lt;sup>158</sup> Exhibit 1, Tab 3.5.

<sup>&</sup>lt;sup>159</sup> Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>160</sup> Exhibit 3.

placental abruption.<sup>161</sup> Mrs Reindl's blood cultures grew *Clostridium perfringens* (commonly associated with food poisoning) and *Streptococcus parasanguinis*, which are unusual organisms in an obstetric setting and are typically found as gut bacteria. They can cause chorioamnionitis, although are not common causes.<sup>162</sup>

- 133. The investigation noted that the induction of labour commenced on a Friday and occurred over a weekend, which is a time of lower staffing levels at the JHC. This is routine practice at JHC due to the availability of staffed birth suites. During labour, the review panel considered there was evidence of hypertonic contractions of Mrs Reindl's uterus that were not recognised/acted upon. This was most evident on the CTG after 5.00 am. These contractions can occur due to inappropriately high levels of oxytocin (Syntocinon). The RCA team agreed that Mrs Reindl's overall progress to Syntocinon was suboptimal, particularly given her previous birth history, but this may not have been appreciated by the treating team.<sup>163</sup>
- 134. The investigation also found that progress of labour was slower than normal and the significance of this was not appreciated. There was a perception by staff that labour had not commenced due to Mrs Reindl not requiring significant analgesia; however, it was not factored in that Mrs Reindl had only used Entonox (nitrous oxide gas) during her earlier three labours. The staff involved did not consider whether the cause of failure to progress might be an obstructed labour.<sup>164</sup>
- **135.** The review team found that the interpretation of CTG's was inaccurate, with a number of them more concerning than was documented by the clinical team. As a result of the lack of recognition, actions were not taken to confirm fetal wellbeing and this led to a delay in escalation of interventions.<sup>165</sup>
- **136.** The panel also noted a communication breakdown occurred in that the senior medical officer was unaware that Mrs Reindl had requested a caesarean section at the time that she requested an epidural. In addition, while the decision to call a category 1 caesarean section was appropriate at the time of the call at 10.25 am, the review panel considered there was sufficient information to make a decision to deliver by category 1 caesarean section at 7.45 am. Dr Neppe also gave evidence at the inquest that this was his own personal opinion.<sup>166</sup> Delivery at this time may have made a difference to the outcome.<sup>167</sup>
- 137. In any event, a Category 1 caesarean section should have been called at 10.12 am, but obtaining the fetal blood sample resulted in a delay. There was also an opportunity to escalate the Category 1 caesarean section after 10.25 am, which might have resulted in a speedier delivery,<sup>168</sup> although Dr Neppe gave evidence at the inquest that in practice, there is little difference between the two and where there is a

<sup>&</sup>lt;sup>161</sup> Exhibit 3.

<sup>&</sup>lt;sup>162</sup> Exhibit 1, Tab 10 and Tab 15.

<sup>&</sup>lt;sup>163</sup> Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>164</sup> Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>165</sup> Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>166</sup> T 376.

<sup>&</sup>lt;sup>167</sup> Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>168</sup> Exhibit 1, Tab 10.

decision to urgently deliver a baby, the staff will do their best to deliver the baby as quickly as possible irrespective of which of these two categories is called.<sup>169</sup>

- **138.** Dr Neppe gave evidence at the inquest that he and the other members of the panel understood that they were able to reach these conclusions with the benefit of hindsight and retrospect scope and without any "white noise"<sup>170</sup> surrounding the decision making, so they understood why the clinicians involved in the care did not make that decision at that moment in time given the situation they were faced with, the activity on the ward, and the knowledge they had at the time. Nevertheless, the panel were firm in their opinion they would have performed a caesarean section at 7.45 am in the same situation.<sup>171</sup>
- **139.** The following staffing issues were also noted:
  - The Senior Medical Officer was on a 72-hour shift, on duty and on call;
  - There was only one Obstetric Registrar and one RMO to cover 8 birth suites and 4 bed assessment unit, postnatal and gynaecology ward (35 patients) and perform ED gynaecology reviews on the nightshift.<sup>172</sup>
- 140. The panel felt that Ashlee's death was most likely caused by placental abruption around 10.24 am. Leading up to the abruption, there had been a delay in intervention resulting in a prolonged period of observation and augmentation. The risk of abruption may have potentially been increased because of the chorioamnionitis and heightened level of contractions as a result of the Syntocinon, which occurred over this period. No concerns were raised about the neonatal resuscitation, which sadly was unsuccessful.<sup>173</sup>
- 141. Following the SAC1 investigation, recommendations were made to: $^{174}$ 
  - Review the Syntocinon infusion guideline to introduce triggers for senior medical review where there is a failure to progress as expected in women who have previously had children.
  - Reinstate RANZCOG 'face to face' training for midwifery staff.
  - Review the current policy and procedures in relation to CTG reporting and linking assessments to trigger meaningful clinical reactions in response to concerns.
  - Review medical staff rostering.
  - Introduction of routine bedside handover by doctors and nurses twice a day on the birth suite.
  - Review Category 1 c-section process to achieve maximum speed and safety.
- 142. The Executive concurred with all of the recommendations.<sup>175</sup>

<sup>&</sup>lt;sup>169</sup> T 379.

<sup>&</sup>lt;sup>170</sup> T 376.

<sup>&</sup>lt;sup>171</sup> T 376.

<sup>&</sup>lt;sup>172</sup> Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>173</sup> Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>174</sup> Exhibit 1, Tab 10.

<sup>&</sup>lt;sup>175</sup> Exhibit 1, Tab 10.

#### **REVIEW OF CARE BY DR DAVID OWEN**

- 143. Dr David Owen (Dr Owen) is a Consultant Obstetrician and Gynaecologist. He is the current Medical Director of SHQ (Family Planning WA) and the Consultant Lead of WANDAS (Women and Newborn Drug and Alcohol Service) and formerly the Medical Director of Obstetrics and Gynaecology and Head of Obstetrics at King Edward Memorial Hospital. As well as his experience working in Australia, Dr Owen also has extensive experience working in obstetrics and gynaecology in the United Kingdom.<sup>176</sup> Dr Owen was asked to review the medical records in this case and provide an opinion about the quality of the medical treatment and management of Ms Reindl's labour. There was no dispute about Dr Owen's relevant expertise to provide such an opinion in this case.
- 144. Having reviewed the records provided, Dr Owen expressed the opinion that Mrs Reindl's induction of labour was appropriate as her pregnancy was over term at 41 weeks, and her initial management accorded with accepted obstetric practice. However, Dr Owen expressed concerns regarding the subsequent management of Mrs Reindl's labour, as time progressed.<sup>177</sup>
- 145. Dr Owen observed that the fetal heart rate monitoring (CTG) started to display evidence of possible fetal compromise in the early hours of 27 October 2019 and by 3.30 am it was showing signs of '*likely fetal compromise*', but the midwives concluded that while the CTG was abnormal, it was *unlikely to demonstrate fetal compromise*. This continued over the following hours. Dr Owen's conclusion about the CTG monitoring was supported by the findings of the SAC1 review panel.
- 146. Dr Owen observed the rate of oxytocin (Syntocinon) infusion was increased over time to augment the strength of uterine contractions in view of the slow progress and only stopped when the epidural was inserted at about 8.20 am.<sup>178</sup>
- 147. In Dr Owen's opinion, the CTG demonstrates changes of greater concern from 6.00 am onwards, but unfortunately "there was misinterpretation of the CTG resulting in injudicious increases in the rate of oxytocin infusion *possibly* causing uterine hyperstimulation (uterine tachysystole)."<sup>179</sup> Dr Owen expressed the opinion that the CTG "was frankly abnormal from 6.00 am to 8.00 am"<sup>180</sup> and by 7.30 am there should have been obstetric review of the abnormal CTG. Moreover, he believes there were sufficient grounds for a fetal blood sample to be attempted from that time onwards.
- 148. Dr Owen believes that if a fetal blood sample had been taken between 7.30 am and 8.00 am, "it is highly likely it would have demonstrated some degree of fetal compromise."<sup>181</sup> Furthermore, Dr Owen stated that if a sufficient sample of fetal

<sup>&</sup>lt;sup>176</sup> Exhibit 1, Tab 18.

<sup>&</sup>lt;sup>177</sup> Exhibit 1, Tab 18.

<sup>&</sup>lt;sup>178</sup> Exhibit 1, Tab 18 [2.02].

<sup>&</sup>lt;sup>179</sup> Exhibit 1, Tab 18 [2.18].

<sup>&</sup>lt;sup>180</sup> Exhibit 1, Tab 18 [2.19].

<sup>&</sup>lt;sup>181</sup> Exhibit 1, Tab 18 [2.20].

blood had not been able to be obtained at that time, a decision to perform a category 1 caesarean section would have been indicated before 8.30 am.<sup>182</sup>

- 149. Dr Owen gave evidence that the fetal blood sample eventually taken was probably not accurate and likely underestimated or underreported the significance of the situation. However, even the results that were obtained, in particular the very high lactate level of 8, showed there was some chronic hypoxia occurring at that point and that this had "pertained for some time, not just in the last half hour."<sup>183</sup>
- **150.** Dr Owen was asked his opinion as to whether Mrs Reindl should have been reviewed by a consultant obstetrician during her labour. In his report, Dr Owen expressed the opinion that slow progress in labour with an abnormal CTG warranted senior obstetric review and restarting the oxytocin infusion at 8.38 am, without senior obstetric review, "was ill-advised."<sup>184</sup> Further, Dr Owen indicated he believes it should be mandatory for obstetric consultants to review all women on delivery suite at least twice daily, ideally including midwives and the senior co-ordinating midwife on the labour ward. He believes in this case the CTG should have been reviewed by the whole team at handover, by both the incoming and outgoing obstetric registrars together with the consultant (Senior Medical Officer),<sup>185</sup> which might have led to further steps being taken.
- **151.** A key question put to Dr Owen in the preparation of his report was whether Ashlee's death was preventable. Dr Owen stated it is not possible to say with absolute certainty that Ashlee's death was preventable, but "on the balance of probabilities, had a caesarean section been performed earlier that morning, it is likely that [she] would have survived."<sup>186</sup> Dr Neppe was also asked his opinion, and he agreed with Dr Owen that it could not be said with any degree of certainty, but "one would have thought the potential outcome would have been better."<sup>187</sup> Dr Neppe explained that "fetal death is not something we see on a day-by-day basis and we are so fortunate to live in this wonderful state where fetal deaths are so rare," so a fetal death is not expected at JHC in the ordinary case and on the balance of probability "one would have expected Ashlee to have survived had she been born at that earlier time".<sup>188</sup> based on what usually occurs in these cases, even with a pathological CTG trace.
- **152.** Dr Owen commented that there were a number of missed opportunities to intervene much earlier, and by the time the fetal blood sample was performed at 10.00 am, there was sufficient CTG abnormality to justify proceeding immediately to theatre.<sup>189</sup> Having reviewed the materials, Dr Owen stated that he could only surmise that the staff involved were so focussed on attempting to achieve another vaginal birth for Mrs Reindl, who had three previous vaginal births, that "they failed to undertake an objective assessment of their management; slow progress in labour despite increased

<sup>&</sup>lt;sup>182</sup> Exhibit 1, Tab 18 [2.20].

<sup>&</sup>lt;sup>183</sup> T 342.

<sup>&</sup>lt;sup>184</sup> Exhibit 1, Tab 18 [2.21].

<sup>&</sup>lt;sup>185</sup> Exhibit 1, Tab 18 [3.01].

<sup>&</sup>lt;sup>186</sup> Exhibit 1, Tab 18 [4.01].

<sup>&</sup>lt;sup>187</sup> T 383. <sup>188</sup> T 388.

<sup>&</sup>lt;sup>189</sup> Exhibit 1, Tab 18 [4.02].

intravenous infusion of oxytocin, combined with a deteriorating CTG in a multiparous woman."  $^{190}$ 

- **153.** I note this focus on a vaginal delivery did not appear to be shared by Mrs Reindl, at least by the time of her review by Dr Johnston at 7.45 am, yet her willingness to consider a caesarean section did not prompt a reconsideration of her management.
- 154. Dr Owen concluded that there was a lack of senior obstetric review during the handover on the Sunday morning and while he has no doubt that the staff involved were well-intentioned, "there was a degree of tunnel vision" that meant that other options to a vaginal delivery were not considered, contributed to by an "under-declaring of sustained CTG abnormality."<sup>191</sup> Dr Owen commented that this is something he has seen from time to time in his obstetric practice, but usually the hierarchical structure with escalation from fresh eyes corrects for such deficiencies in clinical oversight. By this, Dr Owen means that with senior medical review, there is a better chance that the 'tunnel vision' can be corrected.
- **155.** Dr Owen commented that it appeared to be a series of human errors that "precluded timely obstetric intervention,"<sup>192</sup> rather than any one act by any one person.
- **156.** In reference to the need for senior medical review by an obstetric consultant, Dr Owen noted that the consultant (SMO) was on a 72-hour shift on duty and on call, which he described as "excessive and difficult to justify these days."<sup>193</sup>
- **157.** Dr Owen had been given an opportunity to review the RCA investigation report, and he indicated that he agreed with all of the recommendations of the RCA panel, including the need for a review of medical staff rostering and their handover procedures, as well as a critique of their guidelines pertaining to the use of oxytocin (Syntocinon) in the induction and augmentation of labour.<sup>194</sup> He noted that most of his opinions in his report were not controversial, given they largely reflected the conclusions of JHC's own root cause analysis.<sup>195</sup>
- **158.** At the inquest, Dr Owen gave evidence that he believed what occurred had an element of 'confirmation bias,'<sup>196</sup> as the JHC medical and midwifery staff were approaching Mrs Reindl from the perspective of a woman who has previously had three normal deliveries before, so they assumed she would be able to have a normal delivery again. When she showed slow progress, it should have alerted them to the possibility something was wrong as a woman who has had three normal deliveries and is on oxytocin should be making rapid progress. This should have then prompted senior medical review. Instead, the hospital staff simply tried to find reasons to confirm their belief that Mrs Reindl should have a normal delivery. Dr Owen commented that he felt very sorry for the staff involved, as clearly no one meant to

<sup>&</sup>lt;sup>190</sup> Exhibit 1, Tab 18 [4.03].

<sup>&</sup>lt;sup>191</sup> Exhibit 1, Tab 18 [4.04].

<sup>&</sup>lt;sup>192</sup> Exhibit 1, Tab 18 [4.04]

<sup>&</sup>lt;sup>193</sup> Exhibit 1, Tab 18 [5.01].

<sup>&</sup>lt;sup>194</sup> Exhibit 1, Tab 18 [5.03].

<sup>&</sup>lt;sup>195</sup> T 309.

<sup>&</sup>lt;sup>196</sup> T 309.

do any harm, but their mistake was not stepping back and looking at the whole clinical picture.<sup>197</sup>

- **159.** Dr Owen concluded the staff increased the Syntocinon and caused some hyperstimulation in their efforts to progress the labour, rather than stopping to consider why the labour was not progressing. The CTG showed signs of possible distress, which when considered in the whole context, should have signalled a change of approach at an earlier stage. There were signs the fetus was not being given an opportunity to re-oxygenate and recover due to the hypertonic contractions, which can be observed with the heartrate decelerations, which should have signalled concern.<sup>198</sup>
- 160. Dr Owen also noted hyperstimulation was a possible cause, or could at least have contributed, to the very large placental abruption that occurred. He explained that the force of the uterine contractions were so strong that the blood that should be going to the baby in the womb was forced through the uterus, causing a Couvelaire uterus, which was a highly significant placental abruption that was life-threatening for mother and baby.<sup>199</sup> Even as a very experienced Consultant Obstetrician, Dr Owen candidly gave evidence that if he was faced with that situation, "it would scare me."<sup>200</sup> Dr Owen commented that this was a case of a baby that should have been delivered hours earlier, and then the uterus continues to be subjected to oxytocin, which makes him suspect it was implicated in some way. Chorioamnionitis is also associated with placental abruption, although in Dr Owen's experience it is rare for that to be the sole cause.<sup>201</sup>
- 161. Dr Owen explained at the inquest that the placental abruption could have been evolving for a period of time with the hyperstimulation, rather than being a single catastrophic event. Although he could not put a time on it, Dr Owen observed that with the baby's PH of 6.7 and hugely raised lactate levels seen later, it was not "just something that happened in five minutes"<sup>202</sup> and had been building up. Dr Owen explained that the abruption could have started earlier on and then when they gave Mrs Reindl the epidural and restarted the oxytocin again, there might have been a small abruption at that stage, with a large serious Couvelaire abruption then occurring much later. Dr Owen noted that a smaller abruption can occur without CTG abnormality and if there is no vaginal bleeding, then it is what is known as 'concealed'. If there is no vaginal bleeding and the CTG is normal, the concealed placental abruption can be very difficult to detect clinically.<sup>203</sup>
- 162. When the abruption becomes bigger, it may be reflected in CTG abnormality, but it can be quite late, which is why Dr Owen described these concealed placental abruptions as the more dangerous ones. Dr Owen gave evidence the bleeding associated with the Couvelaire uterus is significant, and the baby would not be

<sup>200</sup> T 332.

<sup>&</sup>lt;sup>197</sup> T 309 - 310.

<sup>&</sup>lt;sup>198</sup> T 310 – 311.

 $<sup>^{199}</sup>$  T 312 – 313, 334.

<sup>&</sup>lt;sup>201</sup> T 312 - 313. <sup>202</sup> T 333.

<sup>&</sup>lt;sup>1</sup> 335. <sup>203</sup> T 315 – 316, 320.

getting blood supply, so it would be expected to be evident on the CTG, however, by that time a catastrophic placental abruption has occurred.<sup>204</sup>

- **163.** In any event, there were possible concerns about compromise on the CTG from just after 3.00 am and there is then a clear deterioration on the CTG from 6.00 am. The whole clinical picture from that time was warranting senior clinical review and action should have been taken, even without an abruption being suspected.<sup>205</sup>
- 164. The general expert obstetric evidence was that a decision to deliver should have been made at least by 7.45 am, noting that whatever the aetiology, the CTG was indicating there was a sick baby that needed delivery, for whatever reason, from that time. Dr Owen also gave evidence he would not have done a fetal blood gas, but simply proceeded straight to a caesarean section. He explained that the decision to do a fetal blood sample causes delay and can alter outcomes. There is also emerging evidence to suggest they can also be inaccurate. Accordingly, he advises against them being performed in similar circumstances, consistent with emerging practice in the United Kingdom.<sup>206</sup>
- 165. Dr Owen commented that, on the basis of the generally agreed opinion that delivery should have occurred at around 7.45 am, then Ashlee should have been delivered hours before she actually was.<sup>207</sup> Dr Owen gave evidence that no one cay say with absolute certainty whether this would have made a difference to the ultimate outcome, but in his opinion "we may not have had a Couvelaire uterus and the baby could have survived, potentially yes."<sup>208</sup> Dr Owen indicated he has been in that situation with women before with CTG's like this and he has delivered them and the babies have done well afterwards, so he wouldn't have expected Ashlee to die if the category 1 caesarean section had been carried out earlier. However, Dr Owen emphasised that no one can say for certain what the outcome would have been if things had been done earlier.<sup>209</sup>
- **166.** In relation to the handover and lack of personal obstetric review by Dr Wanat at the relevant time, Dr Owen noted that the Syntocinon had been stopped while the epidural was being inserted, so it was likely that the baby was having a break from the contractions and the CTG would have become less abnormal. Therefore, what Dr Wanat would have seen at that time was probably falsely reassuring.<sup>210</sup>
- 167. It was noted that Mrs Reindl had commented to staff around this time that she was exhausted and asking for a caesarean section. Dr Owen commented that "it's quite telling that someone who has had three normal deliveries before obviously knew something was wrong and was asking for caesarean section."<sup>211</sup>

<sup>207</sup> T 319.

<sup>&</sup>lt;sup>204</sup> T 315 – 316, 320, 340.

<sup>&</sup>lt;sup>205</sup> T 315 - 316.

<sup>&</sup>lt;sup>206</sup> T 315 – 316, 334.

<sup>&</sup>lt;sup>208</sup> T 319.

<sup>&</sup>lt;sup>209</sup> T 320, 336.

<sup>&</sup>lt;sup>210</sup> T 323.

<sup>&</sup>lt;sup>211</sup> T 323.

- 168. In conclusion, Dr Owen emphasised that what appeared to be lacking in this case was any staff member stopping for a moment and considering the whole clinical picture for Mrs Reindl, including her previous birth history, her slow progress after induction, her number of contractions and opportunity for the baby to recover as reflected on the CTG.<sup>212</sup> Taken as a whole, there were sufficient signs to elevate concern and require senior medical review of Mrs Reindl, which might have led to an earlier decision to proceed to caesarean section. This could possibly have led to a different outcome for Ashlee and her parents. While there was a discussion about Mrs Reindl's slow progress at the time of the medical handover, the senior medical officer did not personally review Mrs Reindl and the staff that were personally involved in her care did not appreciate the urgency of the situation until it was too late.<sup>213</sup> Dr Owen was at pains to reiterate that he was not critical of the midwives and other individuals involved and commented that he was aware of the good reputation of Joondalup labour ward and the midwives there. Dr Owen gave his opinion with the benefit of hindsight and from a systemic perspective, with a desire to ensure that lessons can be learned from this tragic case.<sup>214</sup>
- 169. In that regard, I also note that Dr Owen commented that the requirement for Dr Wanat, as the on call consultant (SMO) to carry out a 72-hour shift on duty was "excessive and difficult to justify these days."<sup>215</sup> Therefore, Dr Owen was sympathetic about the demands placed on Dr Wanat to be present and examine every patient personally over such a long shift and noting his explanation that the epidural was being inserted at the relevant time he would otherwise have examined Mrs Reindl on the morning in question. There was evidence given that following these events, procedures were changed to ensure the SMO did not have to be on duty for such a long period.

#### **CHANGES IMPLEMENTED AT JHC SINCE 2019**

- **170.** Dr Owen expressed the opinion in his report that there should be obstetric consultant review of the women on the birth suite at least twice daily. I was informed by senior counsel for JHC that this change was introduced at JHC shortly after these events, not as a result of Dr Owen's report but arising from the hospital's own internal review.<sup>216</sup> Dr Owen also recommended that this review should also include midwives and the shift coordinator, and I am advised this is also now done.<sup>217</sup> These are important changes that may well have made a difference in this case, and will certainly improve safety for other mothers and babies in the future.
- 171. Dr Neppe explained further at the inquest that a bedside review by a consultant now takes place after the handover huddle at 8.00 am and 6.00 pm every weekday. That's also followed up by telephone afterwards. The consultant is also on the birth suite between 8.00 am and 6.00 pm without other duties on weekdays, to ensure they have overarching responsibility for labouring patients wherever possible. It does not apply

<sup>&</sup>lt;sup>212</sup> T 350.

<sup>&</sup>lt;sup>213</sup> T 355.

<sup>&</sup>lt;sup>214</sup> T 354.

<sup>&</sup>lt;sup>215</sup> Exhibit 1, Tab 18 [5.02].

<sup>&</sup>lt;sup>216</sup> T 305; Exhibit 1, Tab18 [3.01].

<sup>&</sup>lt;sup>217</sup> T 305; Exhibit 1, Tab18 [3.01].

on weekends due to resourcing issues, but there is a full consultant ward round on both the Saturday and Sunday morning and the important individual bedside handover at that time. The weekday oversight provides important educational training for the training and service registrars and RMO's for the night time and weekends.<sup>218</sup>

- **172.** At the relevant time, doctors were provided with face-to-face CTG training but midwives had reverted to an online training course. There was evidence from experienced midwives that the online training was definitely inferior to the face-to-face training. As a result, a decision was made to move to face-to-face training for the midwives at JHC as well as the medical staff. JHC arranged, as a matter of urgency, for every single clinician (medical and midwifery) to have the opportunity to undergo the face-to face training and it was then intended to be ongoing.<sup>219</sup>
- 173. I am advised that the hospital policy is now to provide the CTG training course offered by Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) to all medical and midwifery staff, as recommended by its own SAC1 investigation and consistent with the independent opinion of Dr Owen. The course provides CTG training in a three year cycle, with face-to-face training in the first year, and online fresher courses in the second and third year, then cycling back to face-to-face training again. Unfortunately, there have been some problems with the implementation of the course delivery by the College due to COVID-19, but JHC is committed to continuing with the RANZCOG training for all medical and midwifery staff.<sup>220</sup> Dr Neppe explained that an important feature of all the doctors and midwives completing the same training is that they are "talking the same language"<sup>221</sup> when discussing case and CTG readings, so there is less scope for confusion or misinterpretation.
- **174.** CM Reid gave evidence she believes the change to face-to-face training "will make a huge difference"<sup>222</sup> to the ability of the midwives to interpret CTGs, and it was also supported by other midwives who gave evidence.<sup>223</sup>
- 175. Joondalup Health Campus Executive and staff expressed their sincere condolences to Jodie and Jono Reindl for the loss of their baby girl, Ashlee, at the inquest and again in their submissions. It will never fill the gap in their family, but I accept that the hospital as a whole, and the individual staff, deeply regret the ongoing pain the Reindl family is suffering and have reflected on these sad events and tried to learn lessons from this tragic case. Senior staff attended the inquest at various stages and have engaged constructively with the coronial process. It may be small comfort to Ashlee's parents, but it at least gives hope for other parents, and it may help Mr and Mrs Reindl to know that Ashlee's death has been treated with the utmost seriousness and regret and has led to positive change for the future.

 $<sup>^{218}</sup>$  T 379 – 381.

<sup>&</sup>lt;sup>219</sup> T 149, 382.

<sup>&</sup>lt;sup>220</sup> T 305 – 306.

<sup>&</sup>lt;sup>221</sup> T 382.

<sup>&</sup>lt;sup>222</sup> T 148.

<sup>&</sup>lt;sup>223</sup> T 169, 273.

#### **COMMENTS FROM ASHLEE'S PARENTS**

- **176.** Following the tragic loss of their baby daughter, Ashlee's parents had a number of meetings with staff from JHC. They raised their concerns about an inappropriate comment made by a paediatrician when Ashlee was being extubated, which was acknowledged by the relevant staff member and addressed. In the final 'face to face' meeting between JHC staff and Mr and Mrs Reindl, the JHC staff were unable to provide an explanation for some of the events that occurred and, in particular, why Mrs Reindl's request for a caesarean section was not acted upon. They recalled that it was acknowledged that the placental abruption likely occurred during the transfer to theatre, so any earlier steps to deliver Ashlee may have resulted in a different outcome.<sup>224</sup>
- 177. On 3 January 2020, Ashlee's parents were provided with a summary of the SAC1 report. After reading the report, Ashlee's parents came to understand that there were many errors with the CTG interpretations that also could have potentially avoided this tragic outcome. Whilst they acknowledge that no one person is to blame, Mr and Mrs Reindl feel that "the ongoing actions and overall ignorance to the situation" by the collective health staff contributed to the outcome and that "Ashlee's death could have and should have been prevented."<sup>225</sup>
- **178.** Ashlee's father also wrote to the State Coroner requesting an inquest into his daughter's death.<sup>226</sup> Mr Reindl referred to Mrs Reindl's statement provided to police and the JHC SAC1 report and stated that the couple understood there were multiple hospital staff errors that contributed to Ashlee's death. They also understood from discussions with the JHC staff that "understaffing and equipment shortages also played a role in decision making and what actions could be taken at different parts of the event."<sup>227</sup>
- **179.** Following the inquest, Ashlee's parents submitted that the evidence showed that due to both individual and systemic failings at JHC, Ashlee's birth was not expedited despite clear evidence of fetal distress, which placed both Ashlee and Mrs Reindl's lives at risk and tragically eventuated in Ashlee's death. There was evidence that there were several factors that contributed to a failure to consider the overall clinical picture, which ultimately caused the medical and midwifery staff to miss an opportunity around 7.45 am to order an urgent caesarean section, which could have meant that Ashlee was delivered at around 8.15 am, instead of 10.56 am. That period of more than two and a half hours was critical in terms of the developing situation of chorioamnionitis and associated evolving sepsis and a placental abruption that ultimately led to Ashlee's death, in combination with some other factors.<sup>228</sup>
- **180.** The family accepted in submissions that the efforts to resuscitate Ashlee after delivery "were adequate and heroic,"<sup>229</sup> but sadly were always doomed to fail.

<sup>&</sup>lt;sup>224</sup> Exhibit 1, Tab 11.

<sup>&</sup>lt;sup>225</sup> Exhibit 1, Tab 11.

<sup>&</sup>lt;sup>226</sup> Exhibit 1, Tab 12.2.

<sup>&</sup>lt;sup>227</sup> Exhibit 1, Tab 12.2.

<sup>&</sup>lt;sup>228</sup> Closing Submissions on Behalf of Ashlee's Family filed 27 April 2023.

<sup>&</sup>lt;sup>229</sup> Closing Submissions on Behalf of Ashlee's Family filed 27 April 2023, [16].

## **COMMENTS ON HEALTH CARE**

- 181. It was apparent from the evidence of the witnesses that the midwives and doctors involved in this case were all suitably qualified and conscientious. The plan initially made for Mrs Reindl to be induced and proceed with a natural delivery was reasonable and carried out with appropriate care. Unfortunately due to the circumstances in which the staff were working and perhaps some unconscious confirmation bias based upon Mrs Reindl's history, when things started to occur that signalled that plan should change, they were not identified at an early stage.
- 182. When it was identified at around 6.30 am that there were concerning signs of fetal distress and maternal temperature, it did properly prompt a medical review. However, it occurred around the difficult time of morning handover, which was identified by Dr Neppe as a well-recognised challenging time for hospitals.<sup>230</sup> Mrs Reindl's case was discussed with a Registrar, who properly consulted the Senior Medical Officer who was present for the ward round. However, due to the timing of events, the SMO did not personally review Mrs Reindl, which was a missed opportunity to identify that there was a serious situation developing. It was generally agreed by the expert evidence that this was the time, at around 7.45 am, when a change in plan might have averted later events. Instead, it was decided that Mrs Reindl was safe to continue labouring, with the assistance of an epidural, in the hope that this would quickly progress her labour and result in the vaginal delivery as planned.
- **183.** There was general evidence from the midwives and doctors involved in Mrs Reindl's care that she had been slow to progress in labour, but in the late morning it seemed like she was finally in active labour and they expected her to deliver vaginally quickly. There was evidence from a number of the witnesses that a woman who has given birth vaginally before can go from literally four centimetres to fully dilated and having a baby within minutes, so it didn't seem unrealistic to think Mrs Reindl could delivery vaginally quickly once she finally started to move into active labour.<sup>231</sup>
- 184. However, as Dr Owen pointed out, it seems that the practitioners involved had formed a sort of tunnel vision as time went on, and did not stop to reflect on why this labour was progressing so slowly and to consider the possible warning signs that were before them. I acknowledge it is difficult for midwives and doctors working in a busy obstetric practice, with multiple demands on their time, to always have time to stop and reflect and consider the bigger picture and weigh up the risks. The staff at JHC are also working within a hospital environment where unexpected fetal death is fortunately rare. However, it is important that complacency does not creep in, as a primary reason why we have such good maternal/fetal outcomes is because of the many tools available in our health system to assist practitioners to monitor pregnancy and labour and identify and manage risks, as well as senior obstetricians and midwives who can provide support and advice based upon their years of experience Opportunities need to exist for that advice to be accessed by more junior staff.

<sup>&</sup>lt;sup>230</sup> T 384.

<sup>&</sup>lt;sup>231</sup> T 146, 197.

- **185.** The changes JHC have made to the roster for the consultant obstetrician/SMO, reducing the weekend shift and ensuring they are present on the birth suite more often and without other duties and distraction, is a good step towards creating that opportunity for staff to access that senior advice. Nothing can replace that experience or "time in the saddle."<sup>232</sup>
- 186. The changes to CTG training are also important. I accept that CTG interpretation is an inexact science and a tool for guidance of fetal condition rather than a diagnostic tool. Different clinicians may interpret CTG differently and make different decisions based on context. However, the overwhelming expert evidence at the inquest was to the effect that the CTG was sufficiently concerning from at least 7.45 am, within the context of what else was known about Mrs Reindl's labour, to have prompted an urgent delivery of baby Ashlee. That early decision may well have made all the difference in this case. Regrettably, for various reasons, many of which are understandable, that decision was not made and by the time the caesarean delivery was performed, Ashlee's death was inevitable. It can be hoped that better and more consistent training on CTG interpretation, that allows midwives and doctors to talk the same language and gain the same level of understanding, may avert a similar situation in the future.
- **187.** I accept the submission made by counsel from the ANF on behalf of CM Reid, that every midwife goes to work intending to do their absolute best to provide outstanding care to their patients. Similarly, doctors who work in the obstetric field are on the whole passionate and dedicated practitioners whose priority is to ensure a safe delivery with a well mother and well baby at the end. Staffing levels, environmental considerations and hospital policies are the ever present backdrop to how these health professionals go about that work and it is important to consider their conduct in that context.<sup>233</sup>
- **188.** Unfortunately, it is well known that Western Australia, along with the rest of the world, is struggling with a shortage of suitably qualified health practitioners, particularly midwives. The submissions filed on behalf of JHC<sup>234</sup> refer to these ongoing staffing challenges, that were acknowledged by Dr Owen in his evidence and were present at the relevant time in 2019 and remain in 2023. Tragic events like these weigh heavily on the staff involved. I do not wish to add to the burden of any individual practitioner, and in my view there is no one person on whom the responsibility for this matter rests. It was a collective decision-making, as it should have been, and unfortunately despite the training and experience of all involved, mistakes were made and warning signs were missed.
- **189.** I am satisfied JHC took immediate and appropriate steps to internally investigate Ashlee's sudden and unexpected death and did so in a thorough and thoughtful manner. The issues identified resulted in changes to staffing, CTG training and handover procedures. Our independent expert, Dr Owen, was complimentary of these changes and they aligned with his own recommendations. Ashlee's family have not

<sup>&</sup>lt;sup>232</sup> T 387.

<sup>&</sup>lt;sup>233</sup> Closing Submissions on behalf of Midwife Lorraine Reid, filed 28 April 2023, [5] – [6].

<sup>&</sup>lt;sup>234</sup> Closing Submissions on behalf of Joondalup Health Campus filed 9 June 2023.

urged any further recommendations be made. Accordingly, I simply acknowledge the important changes that have been implemented by JHC and made no additional recommendations.

### CONCLUSION

- **190.** Mr and Mrs Reindl were the proud parents of three children and were happily expecting their fourth child in October 2019. They had every reason to expect their baby would be delivered safe and well when Mrs Reindl attended JHC for a planned induction of labour due to Mrs Reindl pregnancy being post-dates. Things initially seemed to be going to plan, but overnight from 26 to 27 October 2019, Mrs Reindl's labour did not progress and she became increasingly exhausted and unwell. There were signs from the early hours of the morning that baby Ashlee was also in distress, which increased at around 6.30 am. By that time, Mrs Reindl was willing to consider a caesarean section delivery, and the evidence indicates that by 7.45 am, this should have been the recommendation of the medical staff. Unfortunately, this did not occur until hours later.
- **191.** I am satisfied that Ashlee died as a result of a placental abruption and sepsis secondary to chorioamnionitis, with meconium aspiration against a background of delayed maturation of the placenta. The placental abruption likely evolved over a period of time, as did the chorioamnionitis and resulting sepsis, before there was a catastrophic full placental abruption shortly before delivery. As a result, Ashlee had been deprived of vital blood and oxygen for a period of time before birth, which caused her to be born in a lifeless state. Although she eventually regained a heartbeat following prolonged resuscitation, she had suffered irrecoverable brain damage due to her length of time without oxygen and she died the same day she was born.
- **192.** I am also satisfied that if Ashlee had been delivered at around 8.15 am, there is a very high chance she would not have died. I reach that conclusion based on the expert opinions of Dr Owen and Dr Neppe, who both gave evidence that Ashlee's chance of survival would have greatly improved if a decision had been made to deliver her at around 7.45 am, which could have then been achieved within half an hour. While neither doctor could say definitively that Ashlee would have lived, they both agreed that a death in such circumstances would have been unexpected and Dr Owen noted that in similar cases he has been involved in, the baby lived. The hospital's own internal investigation panel also conceded delivery at this time may have made a difference to the outcome, without putting it higher.<sup>235</sup>
- **193.** Given my conclusion, it appears that Ashlee's death was preventable. This inquest has explored the reasons why her death was not prevented and the changes that have been implemented at JHC since Ashlee's death, to improve staffing and systems to try to prevent a similar death occurring in the future. Given those changes, voluntarily implemented at JHC, I have made no further recommendations for changes to be made. I hope it may give Ashlee's family some small comfort to know lessons have been learned from her tragic death and changes made to improve outcomes for other families, although nothing will bring back to them their baby girl.

<sup>&</sup>lt;sup>235</sup> Exhibit 1, Tab 10.

**194.** As the evidence supports the conclusion that the Syntocinon that formed part of the induction of labour may have played a role in the placental abruption, which led to the death, I find the death was by way of Misadventure.

S H Linton Deputy State Coroner 7 July 2023