Neutral Citation Number: [2022] EWHC 2590 (KB)

QB-2021-000005

IN THE HIGH COURT OF JUSTICE
KINGS'S BENCH DIVISION

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 18th October 2022

Before:

MR JUSTICE RITCHIE

- -

BETWEEN

CDE
(SUING BY HER MOTHER AND LITIGATION FRIEND FGH)

Claimant

- and -

SURREY AND SUSSEX HEALTHCARE NHS TRUST

Defendant

E.A. GUMBEL KC (instructed by Fieldfisher Solicitors) for the **Claimant**
NEIL SHELDON KC (instructed by Capsticks Solicitors) for the **Defendant**

Hearing dates: 3-10 October 2022

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APPROVED JUDGMENT

The Parties

1. The Claimant is a child and is represented by her mother as her litigation friend.

2. The Defendant is an NHS Healthcare Trust.

Bundles

3. For the trial I had the following bundles: - a trial bundle, a bundle of authorities from both parties, a bundle of the Claimants' mother's medical records, an application bundle and five other bundles of medical notes relating to the Claimant herself.

4. During the course of the trial a core bundle of medical notes was put together which included pages 14, 53, 54, 80, 81, 82, 83, 84, 85, 86, 87, 254, 278.1, 278.2 and 279 of the Claimant's mother's medical records. With the exception of page A14 in the Claimant's records no other records were referred to during the trial. I was also provided with a transcript of the evidence for each day, written opening submissions and written closing submissions from the Claimant and the Defendant.

5. I was provided with the original Antenatal Notes Book with a pink cover which I handed back at the end of the hearing.

Terminology

6. I will use the following abbreviations in this judgement:
   - 6.1 CP: cerebral palsy.
   - 6.2 PHI: acute profound hypoxic ischemia.
   - 6.3 PH: polyhydramnios.
   - 6.4 FHR: foetal heart rate.
   - 6.5 MRI: magnetic resonance scan.
   - 6.6 BPM: beats per minute.
   - 6.7 ADU: antenatal day unit.
   - 6.8 ANW: antenatal ward.
   - 6.9 LW: labour ward or delivery suite.
   - 6.10 C-section: caesarean section.
   - 6.11 CTG: cardio tachograph.
   - 6.12 M: the Claimant's mother.
   - 6.13 Dr. E.: Doctor Emmanuel Ekanem.
   - 6.14 TPTL: threatened pre-term labour.
   - 6.15 RCA: root cause analysis.

Background

7. This was the trial of liability relating to a tragic medical event which occurred on the 4th of June of 2018. That was the date on which the Claimant was born by caesarean section. She was in a very poor state having suffered PHI before, during and after her birth.

8. Dr. Mike Pike (a paediatric neurologist) has advised that the Claimant suffers from quadriplegic cerebral palsy with severe global developmental delay. She suffers seizures and is fed by gastronomy tube. She is categorised as level 5 on the Gross Motor Function Classification System, which is the most severe. She has oromotor and airway protection difficulties and is unable to self feed. She suffers microcephaly.

9. By the close of the trial the Claimant asserted that the Defendant should have carried out the emergency c-section between four and seven minutes earlier than it actually did.

10. The Defendant asserted that any breaches that are proven by the Claimant, some of which were admitted by the end of the trial, did not cause any or any additional damage and asserted that the claim fails for lack of factual causation.

The Issues

11. Although the issues on the pleaded cases were broad and varied, by the time of closing submissions the issues were as follows:

    11.1 Did the Defendant fail to provide a reasonable standard of care to the Claimant by failing to transfer the Claimant's mother to the LW 40 to 50 minutes earlier than in fact occurred?

    11.2 Did that failure lead to delay in the performance of the emergency c-section which the Defendant carried out to deliver the Claimant at 1808?

    11.3 Did any such delay increase the PHI suffered by the Claimant and so cause the cerebral palsy or materially contribute to it?

The applications

12. By a notice of application dated the 20th of September 2022 the Claimant sought to amend her particulars of claim and offered to pay the costs. I granted the application for the reasons set out in the transcript.

13. By a notice of application dated the 26th of September 2022 the Claimant sought an anonymity order. This was unopposed and no press were present at the hearing which was in open Court and made no representation. I granted the application and as a result this judgment is anonymised in relation to the Claimant's and the Claimant's parents' names. It is for that reason that I refer to the Claimant's mother as "M".

14. By an application dated 26 September 2022 the Defendant applied to rely on a further witness statement from Dr. E. and to reamend the defence and offered to pay the costs thereof. I granted those applications as well.

Pleadings and chronology of the action

15. In early 2021 the Claimant issued proceedings alleging that as a result of a uterine bleed suffered by her mother she was born with severe cerebral palsy caused by PHI

before and around the time of her birth. It was alleged that the injury was caused or materially contributed to by the Defendant's negligence. Specifically that the Defendant failed to review the Claimant's mother who should have been transferred from the ANW to the LW immediately after the review which should have taken place between 1710 and 1723 hours on the 4th of June 2018.

16. It was asserted that a decision would have been made for the Claimant to be delivered by a category one c-section due to her mother's excessive pain and the probable CTG trace. It was pleaded that delivery should have occurred within 30 minutes of the decision for a c-section and that the delivery would have occurred by 1753 hours, the decision having been made at 1723. It was asserted that had delivery occurred by that time the Claimant would have avoided all injury.

17. In relation to causation the Claimant asserted that Miss Nicks, a consultant on the LW, heard that the Claimant was suffering bradycardia when the CTG machine was eventually connected to M. It was asserted that any delay in carrying out the c-section materially contributed to the cerebral palsy even if medical science cannot say by how much the delay contributed to the functional disability of the Claimant if there was negligent and non-negligent PHI.

18. In the original defence the Defendant admitted duty and denied breach. It was pleaded that on the ADU Dr. E. examined the Claimant after a CTG had been running for a long time and decided that M should be "kept in", which meant admitted to the ANW. It was expressly pleaded that Dr. E. carried out a second examination at 1650 hours on the 4th of June 2018 and wrote a 7 point plan in M's medical notes which included admission, blood and urine testing, CTG monitoring, referral to the diabetic team and pain monitoring.

19. Further the Defendant pleaded that at 1710 a bed became available on the ANW and so M was transferred there and arrived at 1720. It was pleaded M reported light headedness and the midwife was concerned and so asked Dr. E. for a further review. It was pleaded that Dr. E. consulted with a consultant called Miss Srivastiva who advised that M should be transferred to the delivery suite and that as a result of that advice the midwife stopped her preparation to apply a CTG to monitor the Claimant's FHR and rang the LW. The midwife was informed that the LW was very busy and that they needed to clean rooms.

20. It was pleaded that at 1730 the midwife rang the LW again and that M was then transferred to the LW but that this process was slow and took 20 minutes because the transfer from the bed to the wheelchair was difficult.

21. Then at just after 1750 on the LW a CTG was started and Miss Nicks, the consultant obstetrician on duty, entered the room, did an examination and an ultrasound, found the FHR to be around 50 BPM (bradycardia) and made an immediate decision for an

emergency c-section. The bell was pulled at 1755, the surgeon's knife went to the mother's skin at 1805 and the Claimant was delivered at 1808.

22. It was pleaded that the Defendant carried out a root cause analysis investigation and reported the findings after the incident. In that RCA report the Defendant asserted that the failure to carry out a risk assessment of M and the baby at 1730 was a "missed opportunity" however the Defendant pleaded that no breach had occurred. The Defendant denied that Dr. E. had done anything wrong. The Defendant denied that Midwife Reeves should have carried out a CTG on the ANW because she had been told to transfer the mother to the LW. The Defendant asserted that any CTG at that time would have been normal in any event. The Defendant pleaded in relation to causation that it would have taken time to set up the CTG and then to see a sufficient trace to make any decision. The Defendant denied that before 1750 the CTG would have indicated a need for an emergency c-section.

23. Overall the Defendant stated that c-section was achievable within 30 minutes of a decision so any CTG trace leading to a decision for c-section after 1723 would not have led to a birth by 1753 as the Claimant asserted.

24. Further in relation to causation the Defendant admitted that if the Claimant had been born at 1753 she would have avoided permanent brain injury and that also her condition would have been materially better if she had been born between 1753 and 1800 hours. However no admission was made in relation to birth between 1800 hours and 1808 hours.

25. The defence was dated March 2021. One year and three months later, in June 2022 the Defendant's case was substantially changed. The Defendant deleted that part of the pleading which asserted that Dr. E. had carried out a second examination of M at 1650 hours on the 4th of June 2018. The Defendant pleaded expressly that the note made by Dr. E. at 1650 hours was a rewritten note relating to the earlier examination he had carried out at 1551 hours. The Defendant pleaded in addition that the last two lines of that note had <u>**not**</u> been written at 1650 but had been written at a later time. At paragraph 11 (iii) the Defendant pleaded that Dr. E. had noted at 1650 that part of his plan was to require "*CTG monitoring*".

26. In her amended particulars of claim the Claimant sought to deal with the new evidence provided by Dr. E. which had led to the amended defence. At paragraph 5.2 the Claimant alleged that the Defendant's witnesses did not give a consistent chronology of events. The Claimant asserted that the duty consultant "Miss Sivarajan" (sic) must have given her decision that M should be sent to LW before her handover to Miss Nicks at 1700 hours, which should have led, with competent care, to M being transferred to the LW soon after 1700 hours and then being hooked up to a CTG within 5 to 10 minutes. It was asserted that the "but for" CTG would, on the balance of probabilities, have been abnormal and after full assessment a decision should have

been made to deliver her by category one c-section which should have been achieved within 30 minutes and in any event by 1803 hours.

27. Further alterations were made in paragraph 5.2a which raised alleged failures on the ANW involving failure to set up a CTG trace and failure to assess M. A further amendment was to assert that delivery would have been achieved by either 1753 or 1803 at the latest.

28. Finally at paragraph 5.6 the Claimant alleged that if a CTG trace had been attached at anytime before 1743 when the bradycardia started then the bradycardia would have been noticed earlier and delivery would have occurred within 13 minutes, so 7 minutes of delay would have been avoided, saving 7 minutes of PHI and brain injury. The Claimant asserted that this would have made a material difference to the outcome.

The Evidence

29. I heard evidence from the following witnesses of fact:
   - 29.1 The Claimant's mother and father.
   - 29.2 Midwife Reeves.
   - 29.3 Dr. E.
   - 29.4 Miss Helen Nicks.

30. I heard evidence from the following expert witnesses for the Claimant:
   - 30.1 Miss Angela Helleur, a consulting midwife.
   - 30.2 Miss Jasmine Leonce, a consultant obstetrician.
   - 30.3 Professor Mitchell, a neonatologist.

31. The reports of Dr. Pike, a paediatric neurologist and Dr. Connolly a neuro-radiologist were put in evidence in written form by agreement.

32. I heard evidence from the following expert witnesses for the Defendant:
   - 32.1 Miss Janet Edwards, consulting midwife.
   - 32.2 Mr. Derek Tuffnell, consultant obstetrician.
   - 32.3 Dr. Jane Hawdon, consultant neonatologist.

33. I also read the report of Dr. Marcus Likeman, paediatric neuro radiologist which was admitted in writing by agreement.

Evidence from the medical notes

34.

Date/time	*Event/entry in notes*
4 June 2018 1455	The Claimant's mother attended the Hospital at 36 weeks and 1 day gestation complaining of abdominal pain since 10 am (ie for about 5

	hours). Midwife Reeves noted on the Admissions sheet that the Claimant's mother's abdomen was too tender to palpate. Her BP was 108/71. She was Polyhydramnious. A CTG was started at 1504 and run until 1543 and assessed as normal and reassuring: Contractions 3:10. Baseline rate: 130. Variability >5bmp, Accelerations present, Decelerations absent. The midwife noted "? Pre-term labour"
1551 Internal page 29	The Claimant's mother was examined and assessed by an obstetric SHO, acting up as registrar, Dr E., his note recorded: " *Emmanuel E* *...G1 P0 36+6* *poly AFI 28.5* *generalised abdo pain* *obs (N) SROMº, PU BO* *OGTT 7-8 ↑* *TORCH screen (N)* *obs (N)* *CTG – Tightening* *3:10* *B – 140* *A – Present* *D – Nil* *O – (N)* *(see diagram) tender generally* *VE – Cervix, posterior* *1cm dilated, soft* *2cm long* *station -3* *△ TPTL* *Plan – keep in* *- Analgesia.* *Bedside…scan – Ceph* *- Poly…"* I note here that on the original notes a line was scored through all of this entry and the words: "please turn to page 56" added.
1645 Drugs chart	*"cocodamol Ekanem TPTL 30/500g PO"*
1650 Internal page 56	A further note was made by Dr E. "GIP 36+1 *…Poly AFI 28* *Generalised abdominal pain.*

	pain is sharp, SROMº *LUTSº, Nil bowel symptoms* *obs (N)* *Urine not yet done* *TORCH screen (N)* *SGTT 7.8* *CTG – Tightening 3:10* *B – 140* *V - >5 Bedside scan* *A – Present cephalic* *D – Nil* *O – (N)* *O/E (see diagram) Tender – generalized* *Tensed* *VE – Consent + Chaperone* *Cervix – Posterior, 1cm dilated* *Soft, 3cm long* *station -3* *△ TPTL* *Plan: 1. keep in. Inform SCBU; NNU* *2. FBC + CRP* *3. Urine dip + MCS* *4. Analgesia* *5. BM monitoring* *6. Diabetic team review* *7. Re-Speculum if pain worsens "* *Miss Sivarajan informed* *Plan: Transfer to LW." Emmanuel E 292"* I have highlighted parts of this note in yellow for reasons which will be explained below.
1720	Note made by Midwife Reeves: *"Transfer to ward pain has increased 3-4:10 D/W SPR Emmanuel for Transfer to D/S. LWC informed awaiting a room on D/S" M Reeves*
1750	Midwifery note: *"Transfer to D/S care handed to RM Sam Bond" Reeves*
1750	Consultant's note: *"Miss Nicks WR*

	37 yr CiPo 36+1 *Rh-* *Post TlL* *Polyhydramnious* *Admitted TPTL* *SGTT* △ *GDM Booked" S Bond*
1751	*"Introductions made, Alison in a lot of pain – entonoox provided" S Bond*
1753	*"CTG commenced, FH 112 bpm ? MP or Brady…" S Bond*
17.53	CTG trace: *"transfer to theatre 7 – crash C-section. Baby del w forceps by C section* *Poor tone + zero resp* *Effort CPR commenced* ⟹ *SBU* *W good heart rate"*
1754	Midwifery Note: S. Bond, Registered Midwife: "*H Nicks scanned – brady 98/66.*"
1755	*"Emergency call bell rung, attempted* *to cannulate – unsuccessful – plan: to theatre – GA.*"
1800	Midwifery note: "*Into theatre CRASH c section* *foetal brady on scan* *"M"*[my alteration] *onto table team present – cannulation* ✓"
1801	*"Cleaning by Reg Heath"*
1804	*"Catheterisation by Cons Nicks"*
1805	*"GA successful…CTS"*
1807	*"Mec stained liquor"*
1808	*"Forceps applied* *Baby del → paeds"*
1809	*poor tone + pale in colour* • *42 ventilation breaths* • *56 chest rise noted* • *1.29 unable to hear FH* • *1.42 mins from birth CPR commenced by paeds* *+ RM Bond 2222* *Neonatal emergency* • *2.17 HR <60bpm* *suction – tone remains* *poor pale in colour* • *2.40 CPR continues* • *3.11 FH = <60bpm*

	• *3.36 suction continues HR > 100bpm* *becoming pinker in colour* *continues (with) ventilation breaths* • *4:12 No respiratory effort* *0 resp effort 0 tone* *1 for colour good chest* *effort (with) ventilation breaths* • *5.40 ventilation breaths continue* *HR 57bpm* *Sats 88% FH 152bpm* • *7.11 0 resp effort 0 tone* • *8.32 Sats 91% 154bpm"*
1816	*"Mum ? ruptured uterus* *Code blue 2222 – 1810* - *See obs heam proforma SB"*
2141	A retrospective note made by the Obstetric consultant, Ms. Helen Nicks records: *"Cons Nicks…* *Patient transferred to LW as ↑* *pain.* *Came to r/v on WR - ? bradycardia* *heard.* *In pain – reports intermittent* *ºPVB* *O/e. cool peripherally* *P 110* *tense uterus* *VE Cx Post 1cm dilated* *-2 2cm long* *scanned FH ~ 50* *Decision for cat c/s under GA → L lat & transferred* *Imp - ? abruption. Verbal consent only husband in room…* *Into theatre @ 1800* *Scanned RH bradycardic* *= 50* *Team scrubbed* *Catheterised 1804* *GA 1805* *Sec by Reg Heath* *By forceps 1808 high head* *Sig amount of blood in* *Maternal abdomen prior to*

	Opening uterus *Faudbed, interior extensioned* *+ 2l of blood evacuated from* *Abdomen ? rupture ? from liver/spleen* *Uterus closed 1 layer after mop* *Synto 40 iv.* *Code blue 1810, ruptured venous malformation.* *Clot evacuated and no further* *bleeding seen in upper abdomen* *varicosity ariant interior charped* *.....* […… parts omitted by me] *Severe endometriosis …*
5 June 2018	The neonatal intensive care discharge summary records: "*Neurology* *...severe perinatal asphyxia, HIE Grade 2 – Moderate Neonatal Encephalopathy.* *4/6: Suspected HIE secondary to perinatal asphyxia. HIE score 10. Discussed with tertiary unit. Cooled at 20:30hrs. Target temp achieved at 2130hrs.* *…born via emergency C-section for prolonged bradycardia.* *She was born in poor condition, floppy with no respiratory effort. Initial HR was <60. She received 5x inflation breaths but HR remained <60. CPR was hence commenced at 30 seconds of life. She required 2 cycles of CPR before HR picked up to >100.* *She was intubated with a size 3Fr, 9cm at the lips for poor respiratory effort.* *Cord gas was poor – venous (pH 6.8, C02 16.2, BE incalculable, bicarb incalculable); arterial (pH <6.8, C02 19.6, BE incalculable, bicarb incalculable). First venous gas: pH 6.99, C02 4.5, BE -22.4, bicarb -22.4, lact 16.1.* *First HIE score was 10. She was discussed with the tertiary unit who advised that she was cooled. Active cooling started at 2030hrs, target temperature achieved at 2130hrs…"*
15 June 2018	The MRI brain scan was reported to show: *"There is extensive high signal change throughout the subcortical white matter, basal ganglia and brainstem. There is evidence of restricted diffusion in the midbrain and pons as well as the subcortical white matter and thalami bilaterally. There is a small focal haemorrhage within the left thalamic region.* *Overall appearances are suggestive of profound hypoxic ischaemic injury- Is this in keeping with the clinical picture?*"

18 July 2018	The Claimant required insertion of a nasojejunal tube as she was unable to feed orally.
29 January 2019	Defendant RCA Investigation Report.

35. The starting point for my decision making on what occurred before and after the Claimant's birth is the medical notes. These medical notes were made by trained professionals who realised or should have realised that their medical notes represent the primary contemporaneous record of the events and that each separate note should be timed and signed so that other clinicians can understand what has occurred and when it occurred and who was involved in the treatment of M and the baby and the details thereof.

Root Cause Analysis Report

36. The Defendant's patient safety team carried out an investigation into the events leading up to the catastrophic brain injury suffered by the Claimant. It produced a report entitled root cause analysis (RCA) investigation report dated the 29th of January 2019.

37. On the face of that RCA report it states that it was distributed to the parents, the lead clinician in obstetrics and gynaecology, the chief of the Division for Women and Child Health, the chief nurse, the divisional chief nurse and head of midwifery and the CQC. It is apparent from the report that the team thought that their level of investigation was "comprehensive" and they stated as much on page one. It was noted that their investigations had included an initial duty of candour conversation with the parents and a follow up letter in June 2018, the obtaining of information through a multidisciplinary review, the obtaining the clinical records, the obtaining staff statements, the obtaining patient information and looking at the national and local trust guidelines and policies.

38. In the RCA bundle were various documents and witness statements which were produced and obtained for the investigation. These included a witness statement from Midwife Kate Harnden, a witness statement from Dr. Ian Heath, a witness statement from Midwife Marissa Reeves dated 2nd October 2018 and a statement from Miss Helen Nicks, consultant, dated 24th July 2018.

39. I note that no witness statement was obtained from Dr. E or from Miss Srivastiva.

40. The patient safety team made findings in the RCA report. These included a finding that not only did Dr. E. carry out his examination and review of M at 1551 hours but also that he carried out a second examination and review at 1650 hours. They concluded that he made appropriate plans at those times. They concluded that M was transferred to the ANW at 1710 and that during the transfer M's clinical condition changed and she experienced a fleeting episode of light headedness and required assistance by wheelchair. She also suffered increased pain. They concluded that at

1720 the pain increased further and that at that time, following a discussion with Dr. E., an appropriate plan was made to transfer M to the LW. They concluded that at that time the LW was experiencing high levels of activity and there was a 30 minute delay transferring the patient. They concluded that at 1730 Midwife Reeves chased the LW because M was becoming increasingly vocal with distress. They concluded that because M's clinical condition had changed (increasing pain) this was a "missed opportunity" to look at the patient with fresh eyes and take baseline observations to ensure maternal and neonatal well-being. The patient safety teams' factual findings thereafter are not relevant to my decisions.

41. They concluded that the care service delivery problems were two fold. Firstly: abnormal glucose tolerance test results were not recognised or managed in accordance with the trust policy. Secondly: poor record keeping occurred. The patient safety team therefore reminded all maternity staff to comply with the elements of basic record keeping and the standards thereof set out in the "division specific clinical guidance for recordkeeping". They summarised that records must be written as contemporaneously as possible and be a complete record of care documented. These findings on clinical record keeping were important and I agree with and endorse them in this judgment.

42. The patient safety team added a contributory factor finding that the absence of a comprehensive risk assessment at 1730 when M's analgesia requirements changed had led to a "missed opportunity" to confirm foetal and maternal well-being. They considered that had an abnormality been detected this would have initiated conversion to continuous CTG monitoring and obstetric review enabling an appropriate plan of management to expedite delivery if foetal distress was suspected.

43. The root cause which the patient safety team identified was an abnormal uterine venous malformation exacerbated by severe endometriosis with spontaneous rupture in early labour. The lessons learnt were the importance of ongoing risk assessment including the identification of emerging risk factors and timely referral to an obstetrician.

44. As will become apparent later in this judgment the way that Dr. E. had written the clinical notes and in particular the note of 1650 had misled the patient safety team at the hospital into thinking he had carried out a second examination at that time. As we shall see below, in evidence in this civil action Dr. E. admitted that he did not carry out any second examination and that the detail and the content of his note of 1650 hours contained errors, new information not provided at the time of his actual examination and further information added afterwards, without any time being noted at the time the additional information was written into the note. I will make various decisions on the facts later but flag up those matters here.

Witness evidence gathered by the RCA team

45. A written statement from Dr. Ian Heath, who was an ST4 in obstetrics and gynaecology, was provided to the patient safety team. It was undated and unsigned.

46. In my judgment witness statements provided to investigators for serious incidents like this one should be dated and signed.

47. Dr. Heath stated that on the 4th of June 2011 (this must be a typo for 2018) at around 1700 hours (another typo – I shall explain below) he noted that M was in a wheelchair and coming onto the LW. She appeared to be in severe pain and was taken to a delivery room but he was not formally asked to review her at this time. He was present during the ward round with Miss Nicks and the LW coordinator and confirms Miss Nicks' evidence about what happened from 1750 onwards on the LW. He was sent to the obstetric theatre and asked the staff there to stop what they were doing to make way for the emergency crash c-section for M. He carried out the c-section.

48. I comment here merely that he must have made an error as to the time that he noted the mother coming onto the LW. As I shall find below M did not arrive on LW at 1700 but according to the clear clinical records, at 1750 hours.

49. The witness statement provided to the root cause investigation team from Kate Harnden, midwife, was dated and signed but does not assist on the issues that I have to deal with.

50. A witness statement was not obtained from M for the RCA.

51. A witness statement was obtained from Midwife Reeves and this was signed and dated the 2nd of October 2018. She qualified in 2016 and was a band 6 midwife employed by the Defendant. She was working on the ADU and was responsible for the care of M.

52. She stated specifically in that signed witness statement: "*I write this statement from memory and having reviewed the maternal records of*" M. She summarised M's attendance at the ADU at 1455 hours and her own examination of M. She summarised that she put a CTG trace on M and ran it through 2 cycles both of which showed no abnormal readings. She gave evidence that Dr. E. attended the ADU and examined and reviewed M.

53. She asserted in this witness statement that a vaginal examination was attempted by the registrar but M was unable to tolerate this due to pain so Entonox was provided and then the vaginal examination was then done by the registrar. Stopping here, there was no note of the difficulty or pain or Entonox made either by Dr. E. or Midwife Reeves in the clinical notes.

54. She gave evidence that the cervix was 1 centimetre dilated and there was no per vagina bleeding. The registrar took the decision to admit the mother to the ANW and advised pain relief. Midwife Reeves asserted that M refused pain relief until later when the pain got worse. In the next paragraph in that early witness statement Midwife Reeves asserted that she discussed pain relief with M later and M then agreed to take co-codamol. She went on to assert that there was no bed available on the ANW at that time.

55. Midwife Reeves then in the next paragraph asserted that 30 minutes later she checked on M who reported that her pain had improved and she was feeling *"more comfortable*".

56. Stopping here, I have seen the clinical records which state that painkillers were given at 1645 by the midwife to M, the prescription having been written by Dr. E. So if Midwife Reeves' evidence was correct then the alleged comments by M – made half an hour later (that her perception of pain was improving and so he was feeling "more comfortable)" - would have been made at 1715 hours. For reasons which will become apparent later in this judgment that timing is clearly not correct. In addition the conversation that Midwife Reeves asserts she had with M was not recorded in the clinical notes and in fact there is no record anywhere in the notes that M said her pain had improved at any time.

57. In the next paragraph in the witness statement Midwife Reeves asserted that at 1710 a bed was available on the ANW and she moved M to the ward by foot, but that during the transfer M had a "*fleeting episode of light headedness"* which she suspected to be related to codeine. Midwife Reeves helped M into a wheelchair with assistance from another midwife and the ward clerk and she noted that M's pain had increased but was still intermittent and *"not observed to be severe*". In the light of the facts which will be set out below this comment is unlikely to be accurate in my judgment.

58. Midwife Reeves went on to write in the witness statement provided to the patient safety team that the specialist registrar was present on the ward during the transfer and she asked him to review M again because she was concerned that it took 10 minutes to transfer M to bed 4C on Rusper Ward (the ANW).

59. Midwife Reeves went on to assert in the witness statement that at 1720 she was about to start a CTG when registrar E. called the ANW and a message was passed to her that he had had a discussion with the consultant and she (the consultant) wanted M to go to the delivery suite. Midwife Reeves asserted she called the LW coordinator who advised they were unable to take M for "*5 minutes whilst they cleaned a room and sorted a midwife".* Again, if this actually happened, it is a disappointment that there is no note in the clinical notes of the contents of that conversation namely: the five minutes for cleaning of the room and finding a midwife.

60. Midwife Reeves went on to say that at 1730 she called the LW coordinator again because she was concerned that M was becoming *"slightly vocal with contractions"*. Again, in the light of what I set out below, the way those words are written: namely concentrating on contractions, is telling. For the reasons set out below I do not accept that what Midwife Reeves was writing in that witness statement was an accurate recollection of what was actually going on at the time.

61. Midwife Reeves went on to suggest that it took a considerable time to transfer M from the bed to a wheelchair and asserted *"during the transfer to delivery suite"* M *"did not vocalise any pain"*.

62. Midwife Reeves asserted that at 1750 they arrived in room 2 on the delivery suite and she handed over to Midwife Samantha Bond. Midwife Reeves then attempted to put on the CTG to assess the Claimant's FHR but had difficulties distinguishing between the M's heart rate and the FHR. Fortunately the consultant, Miss Nicks, entered the room, picked up that the baby was suffering bradycardia, carried out a quick ultrasound and made a quick decision for a crash caesarean.

63. Miss Nicks provided a witness statement to the patient safety team for the RCA report, which was signed and dated the 24th of July 2018, a month and half after the events. This was in the format which that one would expect for a patient safety investigation. It was based on the clinical notes and her recollection of events. She was the consultant on call from 1700 hours on the 4th of June 2018 and she discussed M with Miss Srivastiva at consultant handover. Miss Srivastsiva had been the consultant on call up to 1700 hours. Miss Nicks was not informed that M had experienced increased pain. She was simply informed of the number of weeks of pregnancy, gestational diabetes and Polyhydramnios leading to threatened preterm labour.

64. Miss Nicks was doing her routine ward round on the LW and at about 1750 hours came to be outside the room into which M had just previously been transferred. She was writing her notes in the corridor at 1750. She heard what she suspected was a foetal bradycardia and so she and her team entered the room at 1752. She recalled that M reported intermittent pain and she scanned the foetal heart with an ultrasound machine and noted the FHR was 50 BPM. She did a vaginal examination prior to transferring to theatre (I note that she does not suggest there was any difficulty with that or that M required any special pain relief for it over and above the Entonox she had just been given before Miss Nicks entered the room). The cervix was posterior and 1 cm dilated and 2cm long. She made an urgent decision for a crash c-section at 1755. The rest of that statement does not need to be repeated here for the purpose of my decisions on breach and causation.

Witness statements for the civil trial and live evidence

65. **M** was born in 1980 and gave evidence in chief through her witness statement. Her evidence in relation to the 4th of June 2018 was that she was suffering abdominal pain and lower back pain and could not lie on her back. She called her husband, he came home, they called the midwifery team at the Defendant's hospital and were asked whether her waters had broken or she was suffering any bleeding. Neither had occurred. She was advised to stay at home but if the pain increased to come to hospital. The pain did increase and so they went to the Defendant's hospital.

66. M walked into the hospital. She was examined by the midwife at around 1455 who put on a CTG and later informed her that it was normal. On her recollection she was examined by Dr. E. before 1600 hours. He examined her cervix and did an ultrasound. She was offered pain relief but refused it. She was informed she and the baby were fine and her bloods were taken by a student nurse.

67. No mention was made in M's witness statement of the vaginal examination being too painful or that she was given Entonox to assist with that. I tie this with the absence of any clinical note about that assertion made by Midwife Reeves and I consider that it runs contrary to Midwife Reeves' evidence that M refused any pain relief pills at that time.

68. M recalls being transferred to the ANW and her evidence was that she was in increasingly severe pain and was very vocal. She was struggling to walk. The pain became "unbearable" and she struggled to get into the wheelchair or to put her feet on the foot rests. She was told by the midwife that she could not stay in the corridor and was eventually wheeled off to the ANW making a lot of noise so that the nurses looked "horrified". Once she got to the ANW she was put at the end of a quiet ward and she specifically recalled asking the midwife whether the CTG should be put back on. She was told it was "normal practice" not to do so. She was in terrible pain and could not understand why she was not being escalated. She says something inside her wanted to explode and she told the midwife but no monitoring occurred. Eventually she was taken to the delivery suite and given gas and air. I particularly note that this is the first time that she recalled being given gas and air (Entonox). She recalled being told that the baby's heart rate was low and she passed out.

69. After the event she had meetings with a midwife who said to her that she could bring a claim against the trust and suggested she contact AVMA.

70. In cross examination M stated that when she had finished her urine sample she was transferred to the ANW. It was a one minute walk but it took her considerably longer. In relation to the second transfer to the LW she accepted that she was exhausted by that stage and less vocal.

71. The Claimant's father gave evidence through his witness statement in chief. He confirmed his wife's evidence. He confirmed that his wife became vocal when being

transferred to the ANW. He confirmed that his wife was in so much pain that she shouted "*I can't get into the wheelchair*". Everyone was staring at M who was making such a noise on this transfer to the ANW.

72. In cross examination he confirmed there was only one assessment by Dr. E. and he confirmed that he and his wife asked for a CTG trace on the ANW but this was refused by the midwife.

73. It was not put either to the Claimant's mother or father that M was not vocal or in severe pain during the transfer to the ANW, a matter which I will return to below when considering the evidence of Midwife Reeves.

74. The Defendant's witnesses of fact gave evidence as follows.

75. **Midwife Reeves'** witness statement for the civil litigation was signed in October 2021. In that statement, which pretty much followed the witness statement she had given to the RCA investigation team in 2018, she asserted that after Dr. E's assessment on the ADU he decided that M should be admitted to the ANW. M initially refused pain relief but accepted it later. She herself went to clear a bed in the ANW to make space for M. She repeated her evidence that 30 minutes after giving co-codamol to M she returned to speak to M who reported feeling *"more comfortable"*. This alleged conversation was not recorded in the notes. She repeated in her witness statement that during the transfer to the ANW the mother suffered "*some light headedness*". She accepted M needed the help of two midwives and a ward clerk to get into the wheelchair and to take her to the ANW. She accepted that M's pain had increased but asserted that it was intermittent and "*not severe*".

76. For the reasons that I will set out below and have already flagged up above I do not accept Midwife Reeves' evidence about the intensity of M's pain during this transfer. Midwife Reeves accepted that it took 10 minutes to transfer M to the ANW. In the witness box she drew a plan of the ANW which showed that it was perhaps only 40 or 50 paces away from the ADU.

77. Midwife Reeves asserted that during the transfer Dr. E. was nearby and that she had reported to him about M's increased pain. This assertion does not sit easily with her assertion that the increased pain was intermittent and *not severe*. Midwife Reeves asserted that she felt that M needed another review because of the events during the transfer. Again this does not sit easily with her assertion that M had mere light headedness and intermittent but not severe pain. Nor does it fit with the assertion that 30 minutes after 1645 when co-codamol was given to M, Midwife Reeves was told by M that she was "more comfortable".

78. By 1720 Midwife Reeves asserted that she was about ready to start a CTG in the ANW when Dr. E. called the ward (not that he arrived at the ward personally) and a

message was passed to her that the consultant had decided that M should go to the LW. It was for this reason that she did not start a CTG or carry out any assessment of M herself. She asserted that she then called the LW and the coordinator advised her to wait five minutes for a room to be cleared and for midwife availability.

79. This is another piece of evidence the detail of which was not noted in the clinical records. What was noted was a discussion with the LW. The note made said *"awaiting a room on D/S"*. Having seen Midwife Reeves give evidence I reject the embellishment of "five minutes" and the "waiting for the room to be cleaned". It seems to me more likely, if she was told that, that she would have been preparing M for transfer to the LW in view of the fact that it took 10 minutes to go 50 paces into the ANW and the journey to the LW was substantially longer. It involved leaving the ANW, going through a set of doors and going down various corridors.

80. In her witness statement Midwife Reeves estimated that she arrived at the LW with M at 1740 hours and it took a long time to transfer M to the bed in the LW. She asserted that the note that she made about this, which was timed 1750 hours, failed to include detail that the arrival was actually at 1740 hours. I note that she failed to record that it took about 10 minutes to get the mother onto the bed. On balance I reject that evidence as not being in accordance with the clinical notes she made or the evidence of Samantha Bond written in the clinical notes.

81. In summary in her witness statement Midwife Reeves denied negligence because she denied failing to inform the obstetricians of M's increase in pain and she denied failing to carry out a CTG on the ANW, asserting that she planned so to do but was told that she should transfer M to LW just as she was starting to do so. It was her evidence that any CTG would have delayed the transfer.

82. Before she gave evidence I had concerns about Midwife Reeves' written evidence that M was more comfortable 30 minutes after the administering of pain relief at 1645 which did not fit with the increase in pain at 1710 hours.

83. In my judgment the defects in the evidence in chief of Midwife Reeves were worrying. She downplayed the pain suffered by M on transfer to the ANW and yet asserted that she informed Dr. E. of the increased pain and requested a further obstetric review. She asserts that she planned to do a CTG, which would not usually be required immediately on the ANW - the usual course is 4 hourly unless the mother had suffered a substantial increase in pain. She then stopped that plan at 1720 hours when she was informed that M was to go to the LW. Yet on her own timings M was on the ANW for 20-30 minutes before arriving at the LW and no assessment was done and no CTG was done. Those are the timings made by Midwife Reeves in the clinical notes.

84. In addition I had concerns before she gave evidence about the assertion by Midwife Reeves that M arrived at the delivery suite at 1740. No note was made of arrival at that time. On the contrary, the clinical records stated that arrival occurred at 1750 hours.

85. I permitted short examination in chief of Midwife Reeves because of my concerns about her written evidence. She confirmed her evidence in her witness statement.

86. In cross examination Midwife Reeves informed the Court that the ADU had four beds and the ANW had a central office and toilets and 2 bays containing six beds and two side rooms, so that 14 patients could be on the ANW and four patients could be in the ADU. She asserted that for mothers on the ANW observations would usually be four hourly in the absence of problems, however if there was a problem she would do an assessment straight after the problem. She informed the Court that there were 5 CTG machines on the ANW and ADU. The CTGs are accessed by rolling the CTG cabinet to the bedside, putting the two sensors on the mother's abdomen, one for the mother's heart and one for the child's heart and then putting two straps around the mother's abdomen, then inputting data and turning the machine on.

87. Midwife Reeves said that after Dr.E.'s first examination his plan was "keep in" plus "analgesia" – a two point plan. She understood that to mean transfer to the ANW. She accepted that she had failed to make any note of the visit which she asserted she made to M 30 minutes after providing analgesia during which she asserted M stated that she was "*more comfortable*". She accepted that it was important to document when pills were refused or given and when patients reported increased or reduced pain and that she had failed so to do.

88. Midwife Reeves had no idea why at 1650 Dr. E. had chosen completely to rewrite his notes of the examination he had earlier made of M. She accepted that the timing of the transfer to the ANW was written by her originally as "1620" which she then crossed out and changed to "1720" but she could not explain why she had done that. She accepted that on paper Dr. E's second note of his examination of M was written above her note timed at 1720 relating to the transfer. In relation to the amount of pain on transfer to the ANW and the volume of M's screaming Midwife Reeves asserted she did not recall screaming but she accepted it was obvious M's pain had increased. She accepted she had written in the notes at 1720 that M's pain had increased.

89. During cross examination Midwife Reeves dropped what might be described as a "bombshell". She informed the Court and the parties for the first time that after the Claimant was delivered seriously injured she had sat down and handwritten notes for herself which she had not put into the clinical notes. She kept these solely to herself. At that stage I adjourned for 10 minutes for defence counsel to be able to investigate her additional new assertion that she had transcribed the handwritten notes which she had kept secret onto a computer.

90. Inquiries were to be made about which computer and whether that could be produced. On the resumption of the hearing I permitted defence counsel to examine Midwife Reeves in chief to explain. She stated again that she had made the secret contemporaneous record in handwriting because she knew it had been a serious incident. Later she had been asked to write a statement by the RCA team but she did not recall when that was. She asserted that she then typed up the handwritten note onto a computer and it became the written witness statement she gave to the patient safety team for the RCA report. She then shredded the secret handwritten note.

91. In further cross examination Midwife Reeves asserted that she did not think it was normal practice to put a handwritten note into the patient's notes. However she accepted that it would have been helpful for all the additional detail and information which she had put in her handwritten note (which had been later transcribed into her statement for the patient safety team) into the clinical notes at the time. She also accepted in cross examination that the assertion made in her witness statement to the patient safety team as follows: *"I write this statement from memory and having reviewed the maternity records of"* M was not true. For it was her evidence to the Court that she had written the statement from her secret handwritten note which she had subsequently shredded.

92. Midwife Reeves then went on to assert that she had never been shown the RCA report or the conclusion therein which reminded clinical staff of their obligations to make proper clinical notes.

93. Midwife Reeves accepted that she made no clinical note in relation to the alleged visit to M 30 minutes after M had taken pain relief tablets in which she alleged M said that she was "*more comfortable"*. Putting together the evidence that Midwife Reeves has given to this Court on this asserted event: it was half an hour after the giving of Co-codamol which occurred at 1645 (as shown in the notes) that Midwife Reeves asserts that M said her pain was "more comfortable". That would be at 1715 hours. Yet on Midwife Reeves' own timescale that would have been halfway through the transfer to the ANW when the pain was increasing. Midwife Reeves could not explain how that could have occurred when her own evidence was that during that transfer M was suffering light headedness and at least some increase in pain.

94. I therefore reject the evidence given by Midwife Reeves that she returned to M 30 minutes after giving pain relief and that M reported being more comfortable. She did not note this and on balance it did not occur.

95. In addition, Midwife Reeves accepted that she made no note of her asserted follow up call to the LW chasing for a bed which she asserts took place at 1730 hours. I also reject Midwife Reeves' evidence that M arrived on the LW at 1740 hours. This was not in the clinical notes.

96. I found Midwife Reeves' approach to clinical note taking, the writing of secret witness notes which she omitted to add to the clinical notes and her verbal evidence in general to be unreliable. Save where I have set out below in my findings of fact that I accept her evidence there are substantial parts of her evidence that I reject because they lack credibility and were not evidenced by the clinical notes or because they are illogical or self serving.

97. **Miss Helen Nicks.** Although originally the parties had agreed that Miss Nicks would not need to give evidence and her witness statement could stand as her evidence, in the light of the issues both on the pleadings and arising from Dr. E.'s evidence about his asserted "2 part note", Miss Nicks was called. She confirmed her evidence in chief in her witness statement to the patient safety team which matched her evidence in her civil litigation witness statement. She was the consultant on call on the LW from 1700 hours on the 4th of June 2018. She executed the handover from Miss Srivastiva in the handover room. This handover usually took around 30 minutes. It was regularly interrupted for emergencies. She was told about M but she was not told about any severe pain suffered by M on transfer to the ANW nor any increased pain nor was she informed that M was to be transferred to the LW as a result of a decision already taken by Miss Srivastiva.

98. Miss Nicks was carrying out her ward round at 1750 hours and was standing outside the room into which M had been transferred. She heard what appeared to her (from the sounds being made by the CTG transducer) to be bradycardia. She entered the room at 1752, the CTG trace started at 1753 (the sound was being emitted before the trace started) and bradycardia was becoming apparent. She carried out an ultrasound and confirmed bradycardia. She also did a quick examination of M. Then at 1755 she had decided a crash super-fast caesarean was needed under general anaesthetic. Her working diagnosis was a partial abruption of the placenta. Doctor Ian Heath was sent off to prepare the theatre. The knife went to skin at 1805 and significant blood was found in the abdomen before the uterus was opened. The Claimant was born at 1808 with meconium stained liquor. Miss Nicks searched for the source of the bleeding and stopped it.

99. Miss Nicks commented that had a CTG been instigated earlier on the LW she could not say whether the emergency caesarean section would have occurred earlier save that a useful trace to diagnose bradycardia would take about 3 minutes and the decision would have been made after that.

100. In cross examination Miss Nicks confirmed that she was not informed by Miss Srivastiva of M's substantial or any increase in pain before or during transfer to the ANW. She considered it was not information that was likely to have been within the

knowledge of Miss Srivastiva at the time of handover because Miss Srivastiva would have told her if she had known.

101. In cross examination Miss Nicks stated that she would have taken action earlier in the LW if M had been brought in earlier and the bradycardia had started earlier. She stated M's clinical presentation was worrying, she looked in pain, was shocked and pale. In relation to severe abdominal pain suffered by a mother Miss Nicks stated that some mothers have painful contractions but if M was having constant pain that would be different. When Miss Nicks assessed M she considered it was likely she was suffering an abruption.

102. Miss Nicks informed the Court that it was likely that if Dr. E. had gone to Miss Srivastiva before the handover and informed her of increased pain, Miss Srivastiva would have told Miss Nicks at handover about any increased or severe pain. She stated that if the information had come to them in the handover room during handover then she did not recall that occurring. If Dr. E. had sought her out and informed her after handover then she would have known about the substantial increase in pain of M but she did not know of it before, during or after handover.

103. In my judgment Miss Nicks saved the Claimant' life and saved M's life. She acted with hugely impressive speed and professionalism when M's condition and the baby's condition was brought to her attention on the LW. I accept Miss Nicks' evidence generally. I found her to be a credible and impressive professional witness. However the mystery as to why Miss Srivastiva failed to pass on to Miss Nicks her decision that M should be sent to the LW remains.

104. Miss Srivastiva did not provide a witness statement patient safety team for the RCA or to this Court.

105. In contrast to Miss Nicks, **Dr. Emmanuel Ekanem** did not provide a witness statement to the patient safety team for the RCA report. 2 years and 4 months after the Claimant's birth, in October 2021, he provided a witness statement for the civil litigation. He was at that time a registrar at the United Lincolnshire NHS Trust. He qualified in 2007. He has obtained MROG and MRCPI. He completed his training in Nigeria. He was working for the Defendant in June 2018 but left the Defendant trust in August 2018. In his witness statement, which stood as his evidence in chief for the main part (although I allowed some further evidence in chief in the witness box) he asserted that he was an SHO in June of 2018. He examined M on the ADU. His notes were made at 1551. His plan made after that examination had two points: "keep in" and "analgesics".

106. In his witness statement he stated that at 1650 hours he recognised that he had written his previous note in the "wrong place" so he *rewrote* it in the antenatal records. He asserted that the second note was "*a copy*" of the first.

107. An objective reading of the second note shows that it was not a copy of the first. It had errors in it. The figure for "Poly" was 28 instead of 28.5. He added the words *"pain is sharp"*. He added the words "*urine not yet done*". He added information obtained from the midwifery records but not from his examination namely that the CTG FHR variability was over 5. He added that M's abdomen was "*tensed"*. He added that the vaginal examination involved "*consent and a chaperone"*. These are all notes that he had not made before. He miss-transcribed the length of the cervix as "3cm" when he had previously written "2cm". He made no note of the assertion which Midwife Reeves subsequently made that the vaginal examination was so painful that the mother had to be given Entonox before she could withstand it. In relation to his plan, the copy note changed that plan from the original two point plan to a seven point plan. Worse than that, in his witness statement he wrote that point 5 of the plan was: *"CTG monitoring"*. A plain reading of his new note at 1650 shows that he did not wright that, he wrote *"BM monitoring"*. I have highlighted the differences in yellow in the clinical notes table above.

108. At paragraph nine of his witness statement he wrote that *"I did not see the need for her to be transferred to the LW as she was not in established preterm labour and therefore the plan at that stage was to transfer her to a bed only antenatal ward."*

109. Dr E. then went on to assert in his witness statement that from his review of the medical records he could see that Midwife Reeves made him aware of M's pain increase following her transfer to the ANW. He wrote that he then informed the day consultant Miss Srivastiva of this. He accepted that unfortunately he had not documented what time he had spoken to the consultant. However he asserted that this all happened after the "copy note" that he had written at 1650 hours had been completed. Midwife Reeves's evidence about the time of transfer to the ANW was 1710-1720. By that time Miss Srivastiva was off duty and Miss Nicks was on duty.

110. Looking at the clinical notes there is a note at 1720 which was written by Midwife Reeves to say that she had made Dr. E. aware of M's increased pain and that Dr. E. had achieved a discussion with the consultant who had made a decision to transfer M to the LW.

111. On the first day of the trial I gave permission for the Defendant to rely on a second witness statement from Dr. E. This was sworn on the 22nd of September 2022. He asserted in that witness statement that he had made a typographical error in paragraph eight of his first witness statement when transcribing the 1650 note into the witness statement. He had written "*CTG monitoring"* whereas he should have written "*BM monitoring"* which means blood glucose monitoring.

112. I consider this to have been more than a typographical error. Typing *"CTG monitoring"* into his own witness statement, drafted no doubt with the assistance of

experienced solicitors and swearing at the end of that witness statement that the facts in it were true is a serious matter. Considering that this case is about a very seriously injured baby and that the allegation was that the hospital failed to carry out earlier CTG monitoring which would have avoided the injury, it seems to me that it was obvious that CTG monitoring was at the heart of the case. So to make such an error in his sworn witness statement which was only corrected a couple of weeks before trial is in my judgment a seriously poor reflection on Dr. E.'s credibility and attention to detail.

113. In his verbal evidence in chief Dr. E. informed the Court that he is now an ST7 at Kettering General Hospital. He confirmed that his first witness statement was true (although it was not in relation to the CTG monitoring note). He asserted that he did not speak to the consultant before the transfer to the ANW. He asserted that he did so after the transfer. He asserted that the last two lines of the note written which he himself timed on the face of the notes as 1650 hours were not in fact written at 1650 hours but were instead written substantially later in the day, but he had failed to record the new time when he had made that part of the note.

114. In cross examination Dr. E. stated that he was not worried about abruption when he first examined M. His concern had been threatened preterm labour. He informed the Court that on the ANW twice daily CTG monitoring and four hourly observations would be normal. However he accepted that if anything changed, for instance if there was an increase in maternal pain, then a further examination would need to be carried out of the cervix of the mother and he would expect to be asked to review her including carrying out a vaginal examination.

115. When questioned about his note made at 1650 he accepted that it was strewn with errors. He asserted he had not added any extra information, but when he was taken through the note he accepted that he had in fact added extra information and so it was not a copy of the original note. He had added: *"pain is sharp"*, he had added the variability of the FHR, he had added that the urine had not been done yet. He had added the word "*tensed"* in relation to M's abdomen. He accepted that he had added "*inform SCBU*" to the alleged copy.

116. He also accepted that the fact that he had written the timing of the copy note at 1650 was confusing for clinicians treating M. He did not write that the 1650 note related to the earlier examination. Dr. E. accepted that anyone looking at the notes would assume that there had been a second clinical examination. Eventually he accepted that his 1650 note was clinically misleading.

117. Under questioning about how he had informed Miss Srivastiva of M's condition he could not recall how. In relation to the contents of the last two lines of the note which he had timed at 1650 he asserted that he had not written in those lines that he had informed Miss Srivastiva of *increased pain* suffered by M and so the objective

interpretation of his note was that he had informed the consultant of the above written contents of the 1650 note which did not make any mention of increased pain.

118. However he maintained in his evidence that in fact he did inform Miss Srivastiva of M's increased pain. This line of cross examination questioning to some extent resolved in my mind the mystery of the failure of Miss Srivastiva to inform Miss Nicks of M's increased pain. If he did not tell her at this time she would not have told Miss Nicks.

119. He could not explain why, if his evidence that he made a two part note was true, he had failed to sign the first part of the 1650 note at the finish thereof. Also he could not explain why he did not add a new time for the last two lines which, in evidence, he asserted were the second part which he had written later, not at 16.50.

120. He could not explain why there was only one signature for what he was suggesting to the Court were two separate notes.

121. Dr. E. said that he was not asked to contribute evidence to the RCA investigation. The first time that he had been asked to give evidence was in the autumn of 2021 when he made his first witness statement.

122. The effect of Dr. E.'s note written at 1650 is evidenced objectively by what clinicians, the RCA safety team, the Defendant, the Defendant's lawyers and the Claimant's lawyers understood and did after reading it. All considered that there had been a second examination at 1650 by Dr. E. The RCA report was founded on that misunderstanding. Leading counsel pleaded that in the defence. Yet Dr. E. asserted that the earlier note which he had made at 1551 showed that the later 1650 note was a copy by the scoring out and the addition of the words "please turn to page 56". It clearly did not give that impression in real life.

Findings of fact on Dr. E.'s 1650 note

123. I find as a fact that the 1650 note was different from the note made at the time of Dr. E.'s only examination of M at 1551. It was fuller, it contained errors and it contained a 7 point plan when the earlier note only contained a 2 point plan.

124. In my judgment Dr. E.'s evidence to this Court lacked credibility, consistency, logicality and insight. I consider that Dr. E. was not a witness upon whose evidence this Court can safely rely. I consider that the safest course is to rely on the clinical notes, including those made by Dr. E. contemporaneously, instead of his evidence.

125. I reject Dr. E.'s evidence that the note made at 1650 was made in two parts at two different times. I find as a fact that the note written at 1650 was made at 1650 in its totality, timed at the top of the note and signed at the bottom of it including the last two lines. The consequences of this finding will be considered more below.

Findings of fact

126. On the factual evidence provided to this Court I make the following findings of fact on the balance of probabilities, taking into account the evidence of the witnesses of fact and the clinical records and also taking into account here the expert evidence which I shall summarise later.

127. M attended at the Defendant's hospital on the 4th of June 2018 having suffered from abdominal pain since 10:00 am that morning. The pain had increased such that she had called her husband and he had come back from work. They had called the Defendant's hospital and were advised to stay at home but to come into the hospital if the pain increased. The pain did increase and they arrived at the hospital before 1455.

128. At 1455 Midwife Reeves examined M on the ADU and made the clinical notes (typed out above).

129. Approximately one hour later, at 1551 hours, Dr. E. examined M and looked at the CTG trace and observed that the latter was normal and that M's abdomen was generally tender. He carried out a vaginal examination with the Claimant's father present and found the cervix to be 1 centimetre dilated and 2cm long. He made a plan for M to be admitted to the antenatal ward and to be given analgesia (a two point plan). He also carried out a bedside scan. M was not given gas and air for the vaginal examination. No plan was made at that stage to transfer M to the LW. M was offered analgesia but refused at that stage because her pain was manageable.

130. Just under one hour later, at 1645, M's pain had increased and so she was offered and accepted co-codamol by Midwife Reeves. This was recorded on the drugs chart as having been delivered at 1645 hours and was prescribed by Dr. E.

131. It was not a coincidence that at 1650 hours, 5 minutes after prescribing analgesia for M, Dr. E. decided to re-write his notes of his examination an hour earlier. It was probably catalysed by the moderate pain increase requiring analgesia.

132. Dr. E. put the date and time at the top left of his new note as: "1650" and then wrote a substantially similar but also partly different set of notes in the antenatal clinical records. In particular he noted the mother's "*pain was sharp*". He noted that the abdomen was "*tensed*". He made various errors in his second set of notes of the single examination that he had carried out. He did not make clear that no new examination had occurred. He expanded his two point plan to become a seven point plan including "*inform the SCBU*", carrying out a considerable number of tests and at plan point 7: "*re speculum if pain worsens*". He had now recognised and developed his focus on the pain. It seems to me that this finding is wholly consistent with the fact that M's pain had increased moderately by that time and he knew it. In addition and as a result of that by 1650 he had been to discuss matters with Miss Srivastiva who had taken the

decision to transfer the mother to the LW. He then signed the unitary note which he had made at 1650 which covered all of those matters. He had not told Miss Srivastiva of any *severe* increase in pain for none had occurred by that time.

133. For a reason that has not been adequately explained by Midwife Reeves or Dr. E. M was not transferred to the LW but instead was transferred to the ANW contrary to the plan set out in the clinical notes to transfer to her to the LW.

134. During the transfer M suffered severe pain and made that verbally plain. She had difficulty getting into the wheel chair. 3 staff members assisted her.

135. I find that the transfer to the ANW occurred at some stage after 1650 and before 1720. I say that because Midwife Reeves informed the Court that she wrote up the note at 1720 saying in evidence that her words meant that by then M had been transferred. I use the past tense because Midwife Reeves explained this in evidence. She also noted M's pain had increased. It was also noted that there had been a discussion with Dr. E. and that a decision had been made for transfer to the LW. The note also recorded that the LW had been informed and that a room was "awaited".

136. Half an hour had already passed between the decision of the consultant, which was recorded at 1650 in the clinical notes, that M should have been transferred to the LW and the incorrect transfer to the ANW contrary to the consultant's instruction. 1.5 hours had passed since the last CTG and assessment of M.

137. I accept the evidence both of Midwife Reeves and of Dr. E. that they were present when the transfer took place between the ADU and the ANW and that they saw and heard what M went through. I reject the evidence of Midwife Reeves and Dr. E. that M was only suffering a slight increase in pain and light headedness. I accept and prefer the evidence of M and the father that she was in severe pain, had difficulty getting into the wheelchair and putting her feet on to the pedals and that she was loud and vocal to such an extent that others in the ADU became aware of her vocalisation

138. From 1720 to 1750 the clinical notes are silent and blank. So by 1750 two hours had passed since M had been on a CTG and assessed by an obstetrician and nothing had been done in response to her increased pain save for analgesia.

139. During this period M had asked for a CTG and this had been refused. She was in severe pain but M was not reviewed by an obstetrician. Her transfer to the LW was delayed and no explanation for the delay was put in the clinical records. Even after the event no retrospective note was written by Midwife Reeves or Dr. E. I compare this with the immediate retrospective written by Miss Helen Nicks into M's clinical records.

140. I find that M arrived on the LW just before 1750. She was in pain and visibly so, as Dr. Heath noted. Introductions took 1 minute and then she was hooked up to the CTG by Midwife Reeves which took one minute.

141. By 1751 the transducer was sounding out the baby's heartbeat which was bradycardic and at the same time Samantha Bond, the LW midwife, was outside the room talking to Miss Nicks who was on her ward round with Dr. Heath. Miss Nicks wrote the start of her note at 1750 and then heard the bradycardia at 1751 and went into the room at 1752. The CTG trace started to come out indicating bradycardia at 1753 and Miss Nicks examined M, did a quick ultrasound and diagnosed bradycardia. At 1755 the emergency bell was pulled the decision having been taken to do a super-fast crash c-section.

142. The Claimant was delivered at 1808.

143. It took 17 minutes from the start of the CTG transducer sounding out the bradycardia to achieve the Claimant's birth.

144. It took 13 minutes from the decision to operate to achieve the birth.

The expert evidence

Midwifery experts

145. **Midwife Angela Helleur** reported in February 2022 for the Claimant. Her CV discloses that she is a senior and experienced midwife and she was the chief nurse and executive director at Lewisham NHS Trust. She has also been involved in developing national guidelines. She is a visiting lecturer in midwifery.

146. Her overall conclusion having read the clinical notes and the witness statements and other experts' reports was that there was delay in M being transferred to the LW because the urgency of transfer was not appreciated as it should have been with competent care. She was critical of Midwife Reeves who, in her opinion, failed to take account of the significant increase in pain during M's transfer to the ANW; failed to obtain obstetric review or immediate transfer to the LW by 1720 hours and failed to start a CTG on the ANW.

147. Midwife Helleur worked on the basis that M suffered a significant increase in pain during transfer to the ANW. However she was misled by the note made by Dr. E. at 1650 and thought a second review may have occurred at that time. She left it to the Court to determine whether the note made at 1650 by Dr. E. was a one part note all made at one time or a two-part note made at two separate times. I have already made the factual finding above. It was a one part note.

148. Midiwife Helleur identified the factual issue between Midwife Reeves and the Claimant's parents relating to the level of complaint of pain at the time of transfer to

the ANW. She advised that a woman with a sudden increase in the intensity of her pain should be of concern to a midwife. She advised that if the Court accepted the mother and father's account of the increase in pain Midwife Reeves should have called for an immediate assessment by the registrar or effected a transfer to the LW. If transfer to the LW was unavailable then Midwife Helleur advised that assessment by CTG should have been carried out as soon as possible on the ANW. She was firm in her opinion that Midwife Reeves should have decided to start a CTG in the light of any delay in the ability of the LW to accept a transfer.

149. Midwife Helleur criticised Midwife Reeves' recordkeeping in her evidence in chief verbally provided to the Court. She would have expected better notes and a retrospective record from Miss Reeves. She advised that if M had been transferred to the LW earlier she would have been hooked up to a CTG and she would have had a midwife assessment and full obstetric assessment and the midwife would have been with M most of the time thereafter. The midwife would have looked at the baseline rate of the FHR, the baseline variability, looked for accelerations and decelerations and have been ready to warn the consultant or registrar on duty of any suspicious readings from that trace. An isolated deceleration would not have been of concern but a pattern of decelerations would have been of concern to a midwife.

150. Midwife Helleur had been involved in emergency abruption cases during her clinical experience and informed the Court that sometimes she saw warnings on the trace before bradycardia but sometimes not.

151. In cross examination Midwife Helleur stated that sudden pain requires urgent assessment and obstetric review. A call to the LW would be required and it would not be correct practice to keep the mother on the ANW. She advised that a midwife should not keep a mother on the ANW with decelerations on the trace.

152. In cross examination she gave evidence that if the trace was sufficiently ominous the midwife would inform the LW that M needed to be transferred urgently. She advised that in an emergency the LW can shuffle things around. She advised that the 20 minutes of delay between the LW stating it could accept M and M arriving on the LW was too long. The evidence of delay was based on the timings given by Midwife Reeves between 1730 and 1750 in the clinical notes. Midwife Helleur did not accept Midwife Reeves' witness statement evidence (not set out in the clinical records) that M left the ANW at 1730 and arrived at the LW at 1740 and that it took 10 minutes to get M from the wheelchair onto the bed. In answer to a question from the Court she stated that she would expect, depending on the geography, that M would be transferred between the ANW and the LW within 5 to 10 minutes. So it was Midwife Helleur's evidence that if the CTG had been of concern on the ANW by around 1735 she would have expected M to have been on the LW by 1740 to 1745 and that the CTG would have been started and the review started soon thereafter.

153. Midwife Helleur stated in cross examination that if the delay in transfer to the LW was to be only 5 minutes she would not have expected Midwife Reeves to start a CTG, but if the delay was to be longer she would have expected Midwife Reeves to have started a CTG.

154. **Midwife Janet Edwards** reported for the Defendant in February 2022. She advised that if the Court accepted the parents' evidence about the pain on transfer to the ANW it was the duty of Midwife Reeves to ask for an obstetric review. She supported Midwife Reeves' decision to wait until transfer to the LW rather than to start a CTG based on Midwife Reeves' evidence. Thus overall in her report Midwife Edwards did not consider that there had been any breach of duty by Midwife Reeves on the evidence put before her.

155. Midwife Edwards gave short evidence in chief on the main issues. She did not consider that Midwife Reeves breached her duty of care to M on the ANW by failing to start a CTG or carry out any assessment.

156. In cross examination midwife Edwards changed her opinions on substantial matters. She stated that she had retired in 2018 from clinical practice. She accepted the conclusions in the RCA report that the clinical notes were not as full as they should have been. She accepted Midwife Reeves should have noted her asserted visit to M to ask about whether the co-codamol had reduced her pain. She should have noted the urine sample taken from M. She should have noted the details of the delay when no bed was available on the LW.

157. In relation to the complete lack of entries between 1720 and 1750 Midwife Edwards accepted that good practice would be to record the details of any phone call to the LW chasing up the transfer.

158. Midwife Edwards accepted that there was an absence of a comprehensive risk assessment by the midwife on the ANW and accepted that such absence was a breach of the duty of care owed by the midwife to M. In relation to M's evidence that she suffered severe pain and was very vocal about it on transfer to the ANW Midwife Edwards advised that such an increase in pain would require communication with the LW due to the urgency. She accepted that she had not made any such criticism of Midwife Reeves in her report and could not explain why she had failed to do so despite having seen the RCA report.

159. I found the evidence of Midwife Edwards to be less impressive than that of Midwife Helleur and where their evidence clashes I accept the evidence of Midwife Helleur. In particular because Midwife Edwards' opinion that Midwife Reeves breached her duty of care in note taking and in failing to assess M on the ANW was not mentioned in her report or her evidence in chief.

160. In the midwives' joint report dated June 2022 they agreed that it was appropriate to transfer the mother to the ANW after Dr. E.'s first examination if there was no change before the transfer. However, as I have found about above, there was a change before the transfer, M needed analgesia for the increased pain and the consultant had decided that M should be transferred to the LW.

161. The midwives noted the conflict of evidence concerning the pain shown by M during the transfer to the ANW. They accepted that the evidence of M and the father implied placental abruption which would have been an emergency. Miss Edwards accepted that if there was an increase in pain before or during the transfer to the ANW she would have expected the transfer to have been to the LW.

162. On the findings of fact that I have made above there was an increase in pain on the ADU and the consultant had decided to transfer M to the LW by 1650.

163. As a result of the midwifery evidence the Defendant conceded in closing submissions that there was a breach of the duty of care owed to M and hence the Claimant by Midwife Reeves. The detail of that admission was not explained.

Findings on the midwifery evidence

164. I find that after the decision had been taken to transfer M to the LW at around 1650 Midwife Reeves failed to implement that decision. Instead she continued with the earlier "two point plan" constructed by Dr. E. at 1551. She did not follow the seven point plan which included the decision of the consultant to transfer M to the LW made before 1650 hours. That failure to follow that decision was a breach of duty.

165. Consequently I find that the Defendant breached its duty of care by failing to transfer M to the LW within a reasonable period of time after the decision was taken by the consultant and written into the notes by Dr. E.

166. I did not hear evidence about the occupancy of the LW between 1650 hours and 1715 hours on the 4th of June 2018. There was a note in M's clinical records timed at 1720 in which Midwife Reeves recorded that she was awaiting a room in the delivery suite but no time for that wait was indicated. Therefore I have no evidence about the occupancy of the delivery suite between 1650 and 1715. I infer that the LW would have been able to accommodate M by 1710-1715.

167. I consider that the evidence of Midwife Helleur on this was the most credible. The time that should have been taken for a transfer to the LW ordered by a consultant as a result of moderately increased pain should have been no more than around 10 minutes.

168. In any event by 1710 when M was being transferred, wrongly in my judgment, to the ANW and was, as I have found, suffering increasingly severe pain which she

vocalised, then transfer to the LW should have occurred urgently with an urgent phone call. In any event I consider that M should have been on the Defendant's LW by 1715 or 1720 hours at the latest.

169. I consider that the failure of the Defendant, through Midwife Reeves, and Dr. E. to transfer M to the LW by 1715 or 1720 at the latest was a breach of the duty of care. This led to delay in a full obstetric assessment of M and her baby's condition and to a delay in commencement of a CTG trace.

170. I also find that Midwife Reeves' clinical note taking was inadequate in that she failed to note important details relating to M which she asserted later were set out in her secret handwritten notes.

Obstetric experts

171. **Miss Jasmine Leonce** reported for the Claimant in February 2022. She considered that Dr. E.'s two-part plan at 1551 was appropriate, namely transfer to the ANW. However, she considered that once the revised note was written at 1650 and the plan (by that stage a seven point plan) had been changed to transfer M to the LW after a discussion with a consultant, that plan was suitable given the (moderate) increase in pain.

172. In relation to M's treatment on the ANW she considered that a CTG should have been commenced at around 1710 hours, before transfer to the LW, or at approximately 1720 hours when M should have arrived at the LW and would have been displaying severe pain. At that time a reasonable obstetrician would have needed to think of non-obstetric causes for the pain other than TPTL.

173. She noted that Dr. E. and Miss Srivastiva were both aware of an increase in pain suffered by M but there was delay in transferring M to the LW and a delay in reviewing M and the baby, which was not prioritised. She noted that Miss Nicks was not told of any increase in pain. She advised that by 1720 hours the CTG should have been started, especially taking into account the severity of the pain increase. If started at the LW at 1720 Miss Leonce considered that the CTG would have picked up foetal heart rate abnormalities leading to senior obstetric review by 1723.

174. If that obstetric review had taken place on the ANW it would have led to transfer to the LW followed by earlier c-section by 1753. Likewise Miss Leonce implied that the delivery would have occurred by that time if, not earlier, if M had been on the LW.

175. Miss Leonce went on to advise that if the FHR had fallen below 100 beats per minute a decision for caesarean section would have been made at 1723 with delivery by 1736, it taking only 13 minutes in reality for the delivery when it actually occurred.

176. Miss Leonce advised that there was no reason to suspect vascular rupture initially. Nor was there any previous c-section. She considered that it was likely that rupture occurred when the pain worsened at around 1710 hours. She advised that young women coped well with such bleeds.

177. Her conclusion was that a lack of competent care led to the failure to carry out any CTG on M and the FHR for 40 minutes between 1710 and 1750. She advised that a CTG starting at 1720 would have led to obstetric review by 1723 and caesarean section and delivery by 1753. That comment related to a CTG on the ANW. Alternatively she advised that CTG started at 1710 would have led to transfer to the LW and if the foetal heart rate was under 100 a delivery by 1736.

178. As a result of the factual findings I have made above and will make below, some of the report of Miss Leonce, at least by way of timings, has less relevance to my final decision but other parts remain relevant. I shall return to this below.

179. **Mr. Tuffnell** reported for the Defendant in February 2022. He is an obstetrician and gynaecologist who worked between 1994 and 2019 in the NHS at Bradford hospitals NHS Trust.

180. He advised that in retrospect the pain suffered by M was not pre-term labour. It was caused by a very rare bleed from the blood vessels of the uterus into the abdominal cavity.

181. Prospectively he advised that clinicians assessing M would think about preterm labour or placental abruption. However the first CTG carried out in the ADU showed that the FHR was normal and he considered that the plan to admit M to the ANW was appropriate at that time.

182. He noted that after Dr. E. had had the discussion with the consultant (Miss Srivastiva) and a decision had been made that it was more appropriate to transfer M to the LW the coordinator was not in fact able to accommodate M. Working on Midwife Reeves' evidence he noted that at 1730 Midwife Reeves had become concerned about increased maternal pain and M becoming vocal and the transfer to the LW had occurred from that time but took 20 minutes. He noted that M arrived on the LW at 1750.

183. Mr. Tuffnell commented on the timings set out in the particulars of claim and considered that they were not realistic. He considered what would have occurred on the "but for" scenario. In relation to M arriving on the ANW at 1720 he thought the CTG would have been applied by 1725 and that it would have taken 5 to 10 minutes to analyse it, so by 1730 to 1735 the obstetrician would have been called.

184. He gave evidence about what the CTG would have shown if started at 1720. He considered that the baseline would probably still have been normal but that after a period there may have been *reduced variability* and that it is possible that there would have been *some decelerations*. He advised that it is more likely that there would have been a *pattern of gradual deterioration towards the bradycardia*. He considered that no decision would have been made at 1723 for emergency c-section.

185. In relation to medical causation he was surprised that the Claimant had deteriorated so much at birth when M's blood pressure was still recorded as normal at the start of the c-section operation. He advised that normally one would expect the placenta to be perfusing normally with normal maternal blood pressure and vital signs. At the start of the operation M's BP was normal. Therefore he theorised that there was a rapid deterioration in the baby's condition once decompensation was reached after the baby's compensatory system failed. He considered that it was likely that decompensation was reached close to when Miss Nicks spotted the reduced FHR.

186. Overall Mr. Tuffnell did not consider that there had been any breach by the obstetricians employed by the Defendant.

187. In the two joint obstetric reports, one based on an agenda from the Claimant and another based on an agenda from the Defendant the obstetricians advised as follows.

188. They agreed that before an increase in the maternal pain it was reasonable to plan to transfer M to the ANW. However after an increase in the maternal pain it would have been appropriate to transfer M to the LW. In relation to the note made at 1650 which stated "*transfer to the delivery suite*", Mr. Tuffnell stated that timing depended upon room availability and that there was no urgency at that stage although he accepted that this was a factual matter for the Court. Miss Leonce advised that with an increase in pain there was a need for transfer to the LW.

189. On the basis that M had been transferred to the LW, after the consultant had advised such, both obstetricians agreed that CTG would have started within 5 to 10 minutes of M entering the LW room. Then, if no bradycardia had commenced, it would have taken 5 to 10 minutes for the midwife to assess the CTG and if it was suspicious to call for and achieve an obstetric review.

190. Both obstetricians agreed that once bradycardia was appearing on the trace it would take probably only three minutes for that to be properly identified (as distinct from a deceleration).

191. In response to a question relating to what a CTG started much earlier would have shown before bradycardia Mr. Tuffnell considered that it was unlikely that it would have led to a crash c-section decision. Miss Leonce could not put it higher than saying

that such a CTG "could" have led to a category one c-section. I note here that she did not say that it would have done so on the balance of probabilities.

192. Both obstetricians agreed that a decision made before the trace showed bradycardia that M should have a c-section would have led to a c-section being completed within 30 minutes.

193. Both agreed that once bradycardia had been identified the time to c-section would have been only 13 minutes - a super-fast c-section, which was in fact what happened on the day.

194. In relation to the note made at 1650 there is an answer in the joint report given at paragraph 10 (d) which I do not understand. The question was *"Given the notes of 1650 set out a plan for the Claimant's mother to be transferred to the delivery suite should the transfer have been to the delivery suite rather than the antenatal ward?"* the answer given was "*we agree no"*. That was not the evidence that either of them gave in the witness box. Therefore I discount that written answer. In any event as a result of the factual findings that I have reached above that answer is undermined.

195. The obstetric experts pretty much agreed that, give or take 5 minutes, had it been correct practice to transfer M to the ANW (and I have found that it was not correct so to do) then it would have taken 5-10 minutes to set up the CTG, but neither could advise on the balance of probabilities what the CTG would have shown.

196. In the joint report the obstetric experts agreed that the plan to transfer M to the LW advised by the consultant was appropriate. In relation to what the CTG trace might have shown on the LW starting at 1720 hours they agreed it would take 5 to 10 minutes to set up the CTG and then 10 minutes to provide an assessable trace. So that would have taken the Claimant and M to approximately 1740 hours before any decision would have been made.

197. Both agreed that there would not have been any bradycardia between 1720 and 1738 hours. The obstetricians agreed that the start of bradycardia would have been 1743 hours and they took that from the paediatric experts' reports.

198. I shall return to this later but that was an error which they both corrected in evidence. They should have stated "1746 hours".

199. Mr. Tuffnell postulated that the cause of the bradycardia was maternal blood loss and dropping placental perfusion due to the mother's body compensating for hypovolaemia (reduced blood volume). Miss Leonce agreed that the gradual loss of blood from the uterus would lead to a gradual decompensation and then an acute decompensation culminating in bradycardia due to hypoperfusion of the placenta. She also advised that blood in M's abdomen would have caused pain. In relation to the

cause of M's bleed both agreed that this was very unusual. Both agreed that the foetus must have been affected before M's own blood pressure dropped.

200. As to the likely contents of the trace before bradycardia they partially disagreed on whether the CTG would have been abnormal prior to the bradycardia. Mr. Tuffnell thought the trace would have been normal. Although he accepted there may have been reduced variability, he thought it unlikely there would have been decelerations. Miss Leonce stated that the contents of that trace were "*unknowable*" however she advised that with placental hypoperfusion the trace might have shown a high baseline and reduced variability and decelerations but on the balance of probabilities she could not give that evidence.

201. In relation to the question whether a category one c-section decision would have been taken based on the CTG before bradycardia both agreed that 20 to 30 minutes of baseline reduction and variability alone would not be sufficient but a very slow recovery with repeated decelerations with hardly any baseline would call for a category one c-section. If the decision had been taken on the ANW for a category one c-section both agreed that it would have taken 30 minutes for the c-section to be completed. Both agreed that obstetric assessment of M and the baby at 1720 hours would have been pretty much normal and Miss Leonce postulated the possibility of some CTG trace indications.

202. Miss Leonce gave evidence in chief just on the main issues and was then cross examined.

203. In cross examination she highlighted the difference between generalised or constant pain and intermittent pain, the latter would be a greater indication of preterm labour pains.

204. Miss Leonce would have expected intermittent pain if it was caused by TPTL. With generalised pain the obstetrician would be thinking about something else. She advised that the significant increase in pain on transfer to the ANW was a substantial change. The diagnosis needed to be rethought. The thought process would focus more on abruption as the possible cause rather than on progressing labour (TPTL).

205. The necessary management have been be to have transferred M to the LW as soon as possible for fear of abruption and a 30 minutes delay would not be acceptable. This was because if it was a feared abruption, delivery would need to be expedited at the LW. Also a CTG would be needed and then potentially urgent theatre. The ANW was not the best place to deal with that.

206. In cross examination Miss Leonce accepted that she was less experienced in medico-legal work than Mr. Tuffnell. However she had thought carefully about the difference between probability and possibility before giving evidence. She accepted in cross

examination that she and Mr. Tuffnell had made a mistake in their understanding of the paediatric expert's evidence about the start time of the bradycardia. It should have been 1746 not 1743.

207. Miss Leonce accepted in cross examination that if the CTG had been started at 1720 it would have taken five to ten minutes to set up and five minutes for an interpretable trace (10 minutes according to Mr. Tuffnell), then the decision would have been made to call the registrar which would not have occurred until 1740. She also accepted that once the registrar was called it would take a period of time for him or her to make a decision. On those timings the decision to do a category one c-section, which would have taken 30 minutes to complete, would have had no "bringing forwards" effect on the time of birth at all.

208. Defence counsel wholly properly put to Miss Leonce in cross examination that if M has been connected to a CTG on the LW, on the but for scenario, the following timings would have been "reasonable": (transcript page 181-184 day 2).

208.1 Bradycardia would have started at 1746.

208.2 It would have taken 3 minutes for the midwife to recognise the bradycardia and call the obstetrician = 1749.

208.3 It would have taken 3-5 minutes for the obstetrician to arrive, = 1754.

208.4 It would have taken 3-5 minutes for the obstetrician to assess matters and take the decision = 1759.

208.5 That decision time is four minutes after the actual decision time and hence there would have been no difference in the outcome.

Miss Leonce agreed with those timings on that postulation.

209. In his live evidence Mr. Tuffnell explained the organic process which he believed had taken place whereby M's blood pressure was maintained despite the uterine bleed but the perfusion of blood into the baby's body had been reduced and then had stopped. He referred to the research done by *Myers* on primates in the 1970s (I cite the reference in full below). He explained his theory was that for this extremely rare event, which he had never seen before in his long clinical practice, there is no reason to postulate chronic earlier hypoxia and he considered that the hypoxia to the baby occurred in a way which could be akin to "falling off a cliff edge". It was for that reason that he considered that the CTG of the FHR would have been normal before the bradycardia started.

210. He advised that had M been received at the LW at around 1710 she would have been reviewed by an obstetrician and the CTG would have been started and reviewed. M would have had a vaginal examination. M was not in labour and he considered that there would have been no FHR changes on the CTG.

211. He confirmed his view that the time to make a decision to do a super-fast c-section once the bradycardia had started and been shown on the trace would have been around 9 minutes.

212. Mr. Tuffnell considered that once M's pain had increased at 1710 hours the differential diagnosis would have moved towards placental abruption or the risk thereof and away from TPTL.

213. He corrected his error about the start of the bradycardia, moving it from 1743 to 1746 and explained that he had misunderstood the paediatric evidence.

214. Under cross examination Mr. Tuffnell accepted that if this Court were to find that the note made by Dr. E. at 1650 included the instruction by a consultant to transfer M to the LW then the midwife (and I infer Dr. E.) should have complied with the consultant's instruction.

215. I judge that when faced with the change of evidence of Dr. E,, and the note he made at 1650 being interpreted as just one note, not two, and when challenged on the basis that M should have been transferred to LW at 1650 on the basis that the consultant had made the decision by then, Mr. Tuffnell's answers became slightly vague.

216. He eventually accepted the questions put to him by Miss Gumbel that if Dr. E. had simply told Miss Srivastiva about the contents he had written in his 1650 note and she had decided that M should go to LW based on that, it would have been a reasonable decision.

217. He advised that the decision made by Miss Srivastiva should have been communicated to staff and that Midwife Reeves should have dealt with it urgently. He advised that if there had been availability on the LW, M should have been transferred there. He would have expected transfer within approximately 10 minutes. After the transfer he would have expected an obstetric examination. I have found as a fact that at around 1710 M's pain increased so such an increase would have taken place at the LW on the but for scenario. Mr. Tuffnell considered that an obstetrician would have carried out an assessment and the CTG would have been left running on the LW. He accepted that at that stage the obstetrician would have been aware of the lack of labour pain and the increase in acute pain.

218. Under cross examination in relation to his statements in his report that the "but for" CTG would have shown a "*gradual deterioration towards bradycardia*" Mr. Tuffnell began to change his evidence away from that and towards no abnormality. He ended up by stating that the FHR trace would not have shown sufficient changes to lead to a decision for c-section. Mr. Tuffnell accepted that M, at the stage just before the bradycardia, would have lost a considerable amount of blood into her abdominal cavity and would herself have been showing signs as a result. But he was not prepared

to accept more than modest changes on the CTG trace. He pointed to M's blood pressure being normal at the start of the c-section operation and her pulse being slightly raised at 110.

219. In re-examination Mr. Tuffnell explained that the "gradual deterioration" he had predicted in his report on the "but for" CTG trace related to the FHR shifting gradually within the normal range of 110 to 160.

220. Mr. Tuffnell gave evidence to the Court that a 40 minute delay in the transfer of M to the LW was not acceptable and he would expect 10 to 20 minutes. He would expect midwives to ring the LW and chase.

Assessment of the expert obstetricians

221. I found both obstetric experts impressive and consider that did their best to assist the Court.

222. Miss Leonce had less experience of giving evidence and reporting in the medico-legal field and Mr. Tuffnell had huge experience in the field.

223. Miss Leonce is still in NHS practice and was very balanced and measured in her approach to all matters. Whereas Mr. Tuffnell shifted his evidence when pressed on certain paragraphs in his report which were potentially adverse for the Defendant.

224. Where the evidence of these experts is in conflict, on balance, I prefer the evidence of Miss Leonce. However I reject the evidence in her report about the likelihood of a decision to do a category 1 c-section being made by 1723 on a "but for" CTG. I do so because by the time of the joint report her evidence on that had changed in any event.

Findings on the obstetric evidence

225. In combination with my findings of fact above I make the following additional findings arising from the expert evidence of the obstetricians on the balance of probabilities.

226. On the obstetric evidence I make provisional findings on the balance of probabilities that a CTG trace applied to M's abdomen to measure M's heart rate and the FHR at around 1710 to 1720 would have appeared normal at the start. As that trace continued up until 1748-1749 I find that it would have become more suspicious but not sufficiently suspicious to lead to a category one c-section decision. As to my final findings on what the CTG would have shown as the time approached 1748-1749 I will make those below after reviewing whether the other expert evidence will alter my provisional findings.

227. I make these finding because the experts did not advise on the balance of probabilities that the CTG trace wherever it was applied (ADU or LW) would have been sufficiently and significantly suspicious to have justified such a decision.

228. In addition I find that the obstetric care provided to M was of an inadequate standard and hence was a breach of the duty owed to M and the Claimant. That was because, despite the note made at 1650 by Dr. E. that the consultant had decided that M should be transferred to the LW, no transfer took place for 1 hour and during that 1 hour of delay no assessment took place and no chasing took place by the acting obstetric registrar@ Dr. E.

229. In addition the acting obstetric registrar, Dr. E, failed to inform the consultant on duty from 1700, namely Miss Nicks, of M's increased pain which occurred at 1710.

230. In addition the acting registrar wrote misleading notes which gave the impression that he had carried out a second review of M at 1650 when he had not.

231. I find on the balance of probabilities, that the acting obstetric registrar was aware that M was languishing in the antenatal ward for an hour after the decision had been taken for her to be transferred to the LW and did nothing about that.

232. I find that that there was inadequate care given to M between 1650 and 1750 and that no reasonable obstetric department would have done the same.

233. I find on the obstetric evidence that M should have been transferred to the LW within 10 to 20 minutes of the decision made by the consultant at 1650 hours. M should therefore have arrived at the LW by 1710 hours on 4 June 2018.

234. Soon after arrival on the LW on the but for scenario, M would have been assessed by an obstetrician and a vaginal examination would have shown the cervix was only 1 cm dilated. A CTG would have been attached. M's BP would have remained normal. The obstetric registrar would have had placental abruption as the more likely diagnosis than TPTL.

235. As to causation and/or what would have happened "but for" the breaches by the midwife and the acting obstetric registrar, likewise I shall make those decisions after a review of the other expert evidence.

Expert neonatal, radiology and paediatric neurology evidence

236. **Professor Mitchell**, a consultant neonatologist, reported for the Claimant in February 2022. His report related to timing and causation.

237. Much like everyone else he was misled by the entry made by Dr. E. at 1650 in the clinical records. He noted the Claimant's very poor state at birth and the need for

resuscitation: at first with a face mask, then by chest compression and then the achievement of more than 100 beats per minute at 3 minutes and 36 seconds post birth recorded by stop watch timing. The Claimant still had no respiratory effort at that stage. Her APGAR scores were low at 0:1; 4:5; 4:10.

238. He advised that the Claimant had suffered severe acidosis. He advised that cooling was provided to the Claimant after the insult and that in some cases this cooling spares some of the secondary brain damage which generally occurs after the primary brain injury caused by the PHI has ceased.

239. He provided the opinion that the injury shown on the radiology and the severity and distribution of symptoms permitted him to say that it is likely that the Claimant suffered 25 minutes of PHI. He advised that the last 15 minutes were damaging.

240. Working back from his estimated endpoint of the PHI of 1811, he considered that the PHI started at 1746 (1811 – 25 minutes) and the damaging PHI started at 1811 – 15 minutes = at 1756.

241. He advised that delivery at any earlier time would have reduced the resuscitation time which in fact had been 3 minutes 36 seconds after birth. He advised that any delay in the Claimant's birth between 1756 and 1808 would have continued the increase in primary injury to the Claimant's brain neurones.

242. He deferred to a neurologist for apportionment of functional outcome.

243. Professor Mitchell gave limited verbal evidence in chief on the main issues. He explained that what had occurred in the Claimant's case was not the same as placental abruption. He said it was unusual to have significant hypoxia caused to a baby when the mother's blood pressure remained sustained. He considered that the M's blood loss compromised the Claimant's placental blood flow. He said that no one really knew how the placental blood flow stopped despite M's blood pressure remaining normal. He explained that the Claimant's brain injury must have been due to foetal circulatory collapse. The baby's heart had become overwhelmed and the baby's circulation had collapsed. There was no mechanical problem, no compromise of the cord and the placenta was operating properly. The hypothesis he put forwards was that there was a preferential loss of perfusion to the uterus and placenta caused by M's body. He postulated that there must have been a period of time of evolving hypoxia in the baby before it became overwhelmed and bradycardia commenced as a result of the PHI. He did not accept Mr. Tuffnell's opinion that there was a cliff edge occurrence and that nothing was happening to the FHR before the cliff edge.

244. Professor Mitchell gave the opinion that the build up before the bradycardia must have been affecting the baby's heart and the CTG would have reflected that. In his opinion there would have been unprovoked decelerations on the CTG before the

bradycardia emerged. He did so on the basis that the baby's heart rate could not have gone into bradycardia if the baby's circulation had not already been experiencing hypoxia which was escalating.

245. Professor Mitchell gave evidence that the foetal circulatory system responded to resuscitation after three minutes and 36 seconds because the FHR increased to over 100 at that time. Relying on the evidence of Dr. Pike and the severe disabilities suffered by the Claimant, Professor Mitchell considered that the likely duration of the hypoxia was "around 25 minutes". He considered that the PHI ended at 1811 hours and working back 25 minutes from then it would have started at 1746 hours. He advised that taking into account 10 minutes of compensation by the baby during which no damage was occurring the brain, damage caused by PHI would have started at 1756 hours.

246. He explained that primary injury to the brain neurones occurred during the PHI. However, after resuscitation secondary neuronal injury would have occurred which could have been mitigated by the cooling. The cooling does not mitigate the primary neuronal damage caused by the PHI. Therefore he advised that cooling makes it more difficult for experts to apportion functional outcome between the negligent PHI and the non-negligent PHI.

247. It was Professor Mitchell's opinion that any continuing PHI between 1803 and 1808 would have made a significant difference to the injury suffered. The shorter the period of primary injury the less the damage. He agreed with Dr. Pike that the longer the primary insult lasted the greater the injury the baby will have suffered. Therefore it was Professor Mitchell's view that if birth had occurred between 1803 and 1808 the Claimant would have suffered less primary brain injury.

248. In cross examination in relation to the "but for" scenario Professor Mitchell gave evidence that the CTG before bradycardia would have shown a rising foetal heart rate, loss of beat to beat variability and unprovoked decelerations. These would have been caused by the rising hypoxia. On the balance of probabilities he would have expected *significant abnormalities*. He of course deferred to the obstetricians about how those abnormalities would have been interpreted in practice. This evidence was given in the witness bow. It was not given in his report. He had not been asked to give it before trial.

249. He agreed with other experts that as a result of the research done on primates by *Myers R.E.: Two patterns of perinatal damage and their conditions of occurrence; American Journal of Obstetrics and Gynaecology 1972; 112:246-76,* it was generally accepted that PHI lasting for 25 minutes or more was usually fatal. The first 10 minutes did not usually lead to brain injury, but the 15 minutes thereafter did cause brain injury.

250. When looking at the detailed post birth notes he was not clear whether the stop watch timings had been started at the moment of birth or a little after that.

251. When asked in cross examination whether he agreed with Dr. Hawdon's estimate of the PHI being only 20 minutes, not 25, it was his opinion that all of the evidence showed that the PHI was longer than only 20 minutes.

252. Professor Mitchell explained the older view of categorising damage caused by PHI which was that after the 10 minutes of non damaging PHI there were three periods each lasting 5 minutes where damage occurred with reasonably predictable results:

252.1 The first 5 minutes produced mild damage.
252.2 The second 5 minutes produced moderate damage.
252.3 The third 5 minutes produced severe damage.

253. He deferred to the paediatric neurologist for apportionment of functional disability.

254. He was firm in his view that any saving of time or duration of PHI would avoid primary some injury. He accepted that it was not possible to apportion the functional outcome between damaging and non damaging PHI on the facts of this case. However he did not accept the general question asked by defence counsel in cross examination that once the Claimant had entered the damaging period it was impossible to say whether earlier delivery would have resulted in a better outcome. It was Professor Mitchell's firm opinion that the shorter the duration of PHI the lower the level of primary injury which would have been suffered by the baby.

255. Professor Mitchell provided an interesting insight into apportionment of functional disability. He stated that in clinical practice there was no need to carry out such apportionment, therefore experience of apportionment only really arose out of medico-legal practice with the precise timings used therein. He explained that he did not consider that the functional outcome had a linear relationship to the ratio of relative duration of negligent PHI to non-negligent PHI.

256. In my judgment if there is a non linear relationship this is a confounding factor for legal apportionment.

257. Professor Mitchell advised that if the PHI was of shorter duration then the period of resuscitation needed after birth likewise would be shorter. Therefore in effect there is a double benefit to a reduced period of PHI.

258. **Dr. Mike Pike** was the paediatric neurologist who reported for the Claimant in February 2022. In relation to causation he informed the Court that it was generally accepted that PHI of less than 10 minutes was likely to be survived by babies without brain injury. The longer the insult the greater the neurological injury. Insults lasting

15 or 20 minutes result in increasingly severe brain injury but survival. Insults of 25 minutes or more are likely to result in death.

259. However in relation to reliable allocation of damage by reference to duration of avoidable PHI insult he advised that any increased duration of PHI over the first 10 minutes will produce material but to use his words: "*non divisible"* increases in damage and disability.

260. Dr. Pike was not called and no evidence was called by the Defendant from a paediatric neurologist, so no further explanation was given in relation to apportionment of functional disability by reference to the duration of PHI being reduced if no negligence had occurred. That was the evidence provided to the Court.

261. **Dr. Connolly** reported for the Claimant in February 2022. He is a neuro radiologist. His conclusion was that the MRI scans showed damage to the Claimant's brain from PHI. He advised that the injury occurred around delivery and ended when the FHR rose above 100 beats per minute.

262. He concluded that had delivery been achieved before 1753 all of the brain damage would have been avoided and had delivery occurred before 1808 some brain injury would have been avoided.

263. The Defendant's neuro radiologist, who did not give live evidence but whose report was relied, on was **Dr. Marcus Likeman.** He reported in February 2022. He criticised the quality of the MRI and split up the areas damaged by name. He said there was damage to the Basal Ganglia, Thalami, Cerebral White Matter and Brain Stem. There was no damage to the Perirolandic Cortex.

264. He stated that it was generally accepted that a baby can withstand 10 minutes of PHI before damage commences and that 25 to 30 minutes of PHI would lead to death.

265. He advised that reduced oxygenation would lead to failure of the foetal heart muscle leading to the heart beating at a much lower rate which is bradycardia. Usually injury occurs during the bradycardia period.

266. He advised that the heart rate increased to above 100 bpm at 3 and a half minutes after birth so at around 1812.

267. He noted that bradycardia was seen on the CTG at 1754 and the PHI ended at 1812 so he estimated that the PHI lasted 18 minutes.

268. He then provided some assistance on which brain parts were likely to be damaged in each period of PHI time, however he qualified all of his advice with his complaint that the MRI was not sufficiently good for him to be able to assist much. It was his

evidence that the relationship between PHI and MRI identified brain damage is "*likely to be linear"*. In his conclusion he advised that the duration of the PHI was speculative due to the poor quality scan but it was likely to be between 15 and 20 minutes which correlated to the duration of the bradycardia.

269. **Dr. Jane Hawdon** was the neonatologist instructed by the Defendant. Her report was dated February 2022. Her summary of the chronology was very short. She thought M had been transferred to the LW at 1730. She advised that if the Claimant had been born by 1753 she would have avoided all injury and that any delay between 1753 and 1808 would have made a *material contribution to the injury.* She repeated the generally held view that a foetus could tolerate 10 minutes of PHI before injury occurred and that after 25 minutes survival would be unlikely.

270. She agreed that the functional outcome was affected by cooling but stated this was unlikely for babies with severe brain injury like the Claimant.

271. She advised that, on the balance of probabilities, taking into account the severity of the injury on imaging and the symptoms, her estimate of the duration of the PHI would be around 20 minutes. She stated it is likely to have persisted for 2 minutes after birth until the return of circulation (in fact the clinical notes show 3.5 minutes).

272. Dr. Hawdon back counted from 1810 (which was birth plus two minutes) and asserted that the PHI started at 1750. Allowing for 10 minutes of compensation by the foetus, during which the foetus was not being damaged, she calculated that the damage started at around 1800 hours.

273. She accepted that delivery after 1800 hours but before 1808 would have resulted in less severe injury and said that it may or may not be quantifiable depending on the length of the negligent delay.

274. In live evidence Dr. Hawdon refused to give any opinion on what the CTG trace would have been like before the bradycardia. She accepted that she could not pinpoint the start of the bradycardia with accuracy and repeatedly stressed her use of the word "around" for all of her timings.

275. In cross examination she told the Court that experts could back calculate the length of the PHI from four factors:

275.1 Firstly, the severity of the injury.
275.2 Secondly, the neuro radiology.
275.3 Thirdly, the rapidity of the recovery of normal heart rate.
275.4 Fourthly, the minimal other organ involvement.

276. Dr. Hawdon stated that brain cooling after PHI could not reduce the damage to the other organs of the body. It only affected the damage to the brain. The Claimant suffered little or no other organ damage. However she asserted that cooling made it less easy to determine the functional outcome by allocation between negligent and non-negligent PHI.

277. Dr. Hawdon was unable to say whether under 5 minutes of reduced PHI would have made a material difference. She considered that 5 minutes or more would have made a material difference. When challenged by Claimant's counsel over the logic of that evidence she refused to alter her position. The challenge was made on this basis: Dr. Hawdon asserted that if the Claimant had been born by 1803 a better outcome would have resulted. On her own evidence the damaging period of PHI started at 1800 therefore only three minutes of damage would have occurred by that stage. However she was not prepared to accept that if the birth had occurred 3 minutes earlier (by 1805) that would have made any material difference.

Assessment of the neonatology and radiology and neurology evidence

278. I consider that both neonatologists were helpful, experienced and impressive experts.

279. I preferred the evidence of Professor Mitchell because his approach was more measured, more detailed and more logical than the approach of Dr. Hawdon on some key issues. His explanation of the organic process was particularly detailed and logical and was unchallenged.

280. I found Professor Mitchell's explanation of the likely duration of the PHI more persuasive that Dr. Hawdon's. However there was much of Miss Hawdon's evidence which I accept as well. I consider that she was a little too rigid over the material contribution issue. It seems to me, and I so find, that any reduction in the period of PHI would have reduced the primary injury to the Claimant's brain neurones.

281. The radiology evidence was of assistance but not determinative in my judgment.

282. The paediatric neurology evidence was less full than I would have hoped to receive and because the expert was not called the Court could not assess the logic or foundations thereof. But this is civil litigation and the parties are entitled to choose the evidence to call and to challenge.

Factual causation

283. I make the following findings of fact in relation to factual causation based on all of the evidence put before me and on the balance of probabilities.

284. The Claimant was born at 1808 hours on the 4th of June 2018. The clinical records show that her FHR did not recover to over 100 bpm until three minutes and 36 seconds after her birth as measured on a stop watch. Therefore the PHI continued

until 1811 and 36 seconds after her birth if the stop watch was started precisely at birth.

285. Professor Mitchell doubted that the stopwatch was started immediately at birth. Assuming that it took perhaps just under half of one minute to start the stopwatch I find that the likely time for the end of the PHI was 1812 hours.

286. I find that the period of PHI suffered by the Claimant was around 23-24 minutes. I do so because I preferred the evidence of Professor Mitchell, which was that he estimated that the PHI had lasted for around 25 minutes. However I am not prepared to accept the full 25 minutes he estimated. The reason why I am not prepared to accept that is because all of the experts advised the Court that after 25 minutes of PHI, on the balance of probabilities, the Claimant would have died. Therefore it seems to me more likely that the PHI in this case, on balance, must have lasted less than 25 minutes.

287. The evidence of Dr. Hawdon that the PHI only lasted for 20 minutes is in my judgment less likely to be correct because that period is too short taking into account the other expert evidence as to the seriousness of the radiology injury and the functional outcome. I also accept Professor Mitchell's opinion that such a period would be too short taking into account the pattern and seriousness of the injury.

288. Therefore working back 23-24 minutes from 1812 I find that the PHI and the bradycardia commenced at or around 1748-1749.

289. The next factual issue on causation to be determined is what the CTG trace would have shown if started earlier whilst M was on the LW as I have found she should have been. I made provisional findings above on that issue. But does the expert neonatal, paediatric neurology and radiology evidence alter those provisional findings?

290. I rely partly on Professor Mitchell's evidence on this which matches the evidence of Miss Leonce to a reasonable extent and was also mirrored by Mr. Tuffnell's evidence in his report, albeit not his live evidence.

291. I consider that in the 10 minute period leading up to 1748-1749 the Claimant's heart was being deprived of oxygen as her mother's circulatory system was coping with her uterine bleed by closing off the blood supply to the uterus. This partial and increasing hypoxia would have affected the Claimant's FHR and that effect would have shown on the trace.

292. I find that the CTG trace between 1720 and 1748-1749 and the assessment results of maternal examination on the LW would have led the obstetricians on the LW to have had placental abruption or uterine rupture fully in mind for M as the minutes passed towards 1748-1749. Therefore the midwife attending M, who would most probably

have been Samantha Bond, would have been aware of and alive to the possibility of bradycardia and/or the need for an urgent call to the obstetricians for a decision on c-section.

293. It is not possible on the evidence put before me to make findings, on the balance of probabilities, on exactly what that CTG trace would have shown as time went on. It is possible on the evidence put before me, particularly that of Professor Mitchell and Miss Leonce, for me to find that the trace would have become abnormal and/or increasingly ominous.

294. On all of the evidence I find that the CTG may have been sufficiently ominous for a sufficient period of time for the midwife on the LW to have called the obstetricians for an assessment but not for the obstetricians to have decided to carry out a super-fast category one c-section at any time before the bradycardia emerged.

295. In any event, even if they had decided to do a c-section, the obstetric evidence, which was agreed, was that it would probably not have been a decision for a super-fast crash c-section, but instead a category one c-section and they agreed that it would have taken 30 minutes to complete that.

296. I find as a fact that when the CTG trace became bradycardic at 1748-1749 hours the midwife would most probably have called for obstetric assistance within one to two minutes, or a maximum of 3 minutes, so by 1749 at the earliest and by 1752 at the latest.

297. I find as a fact that Miss Nicks was standing outside M's room on the labour ward at 1750 and so on the but for scenario she would probably have walked into the room at the same time as she did in the event. I do not know where she was in the two minutes before 1750.

298. I find that it would have taken 17 minutes from the time that Miss Nicks walked into M's room to the time of delivery of the Claimant on the but for scenario as it did in real life on the 4th of June 2018.

Conclusions on factual causation

299. In my judgment, despite the findings of breach of duty made herein, I find that the claim fails on factual causation.

300. On the balance of probability and tragically, this baby would have been born brain damaged in any event. The brain damage was caused by PHI and would have been even if the Defendant's staff had not been negligent in their care for her mother on the ANW before the bradycardia started.

301. This terrible injury was caused by an extremely rare vascular malformation of the mother's uterus which led to a bleed but which did not lead to a drop in the maternal blood pressure or a substantial increase in the maternal heart rate. Instead it led to an unforeseeable reduction and then cessation of placental perfusion to the baby which created an emergency when bradycardia (reduction of the foetal heart rate) occurred alongside the PHI.

302. In real life the emergency occurred just as M was arriving on the LW at around 1749 hours (as I so find) and it was picked up very fast by Miss Nicks, the consultant on duty. She and her team then acted with hugely impressive professionalism and speed to deliver the baby within 17 minutes of the emergency. Few if any doctors could have done more.

The Law

303. When considering breach of duty in this case I have applied the principles in *Bolam v Frien Hospital* [1957] 1 WLR 582. Per McNair J who was addressing a jury:

> "Before I turn to that, I must tell you what in law we mean by "negligence." In the ordinary case which does not involve any special skill, negligence in law means a failure to do some act which a reasonable man in the circumstances would do, or the doing of some act which a reasonable man in the circumstances would not do; and if that failure or the doing of that act results in injury, then there is a cause of action. How do you test whether this act or failure is negligent? In an ordinary case it is generally said you judge it by the action of the man in the street. He is the ordinary man. In one case it has been said you judge it by the conduct of the man on the top of a Clapham omnibus. He is the ordinary man. But where you get a situation which involves the use of some special skill or competence, then the test as to whether there has been negligence or not is not the test of the man on the top of a Clapham omnibus, because he has not got this special skill. The test is the standard of the ordinary skilled man exercising and professing to have that special skill. A man need not possess the highest expert skill; it is well established law that it is sufficient if he exercises the ordinary skill of an ordinary competent man exercising that particular art."

And

> "A man need not possess the highest expert skill; it is well established law that it is sufficient if he exercises the ordinary skill of an ordinary competent man exercising that particular art … in the case of a medical man, negligence means failure to act in accordance with the standards of reasonably competent medical men at the time."

304. I also have taken into account the ruling of Lord Browne-Wilkinson in *Bolitho v City and Hackney HA* [1998] AC 232:

> "In the Bolam case itself, McNair J. [1957] 1 W.L.R. 583, 587 stated that the defendant had to have acted in accordance with the practice accepted as proper by a 'responsible body of medical men.' Later, at p. 588, he referred to 'a standard of practice recognised as proper by a competent reasonable body of opinion.' Again, in the passage which I have cited from Maynard's case [1984] 1 W.L.R. 634 , 639, Lord Scarman refers to a 'respectable' body of professional opinion. The use of these adjectives - responsible, reasonable and respectable - all show that the court has to be satisfied that the exponents of the body of opinion relied upon can demonstrate that such opinion has a logical basis. In particular in cases involving, as they so often do, the weighing of risks against benefits, the judge before accepting a body of opinion as being responsible, reasonable or respectable, will need to be satisfied that, in forming their views, the experts have directed their minds to the question of comparative risks and benefits and have reached a defensible conclusion on the matter."

305. When considering the actions of the clinicians and the level of seniority of the doctor and midwife involved I have taken into account the Court of Appeal decision in *FB v Princess Alexander Hospital NHS Trust* [2017] EWCA Civ 334, per Jackson LJ at para. 59:

> "In *Wilsher v Essex AHA* [1987] 1 QB 730 the Court of Appeal for the first time gave detailed consideration to the standard of care required of a junior doctor. (This issue did not arise in the subsequent appeal to the House of Lords). The majority of the court held that a hospital doctor should be judged by the standard of skill and care appropriate to the post which he or she was fulfilling, for example the post of junior houseman in a specialised unit. That involves leaving out of account the particular experience of the doctor or their length of service. This analysis works in the context of a hospital, where there is a clear hierarchy with consultants at the top, then registrars and below them various levels of junior doctors. Whether doctors are performing their normal role or 'acting up', they are judged by reference to the post which they are fulfilling at the material time. The health authority or health trust is liable if the doctor whom it puts into a particular position does not possess (and therefore does not exercise) the requisite degree of skill for the task in hand."

306. In relation to causation and the correct test in medical negligence claims, this was considered in *Bolitho v City and Hackney HA* [1998] AC 232 at page 239 by Lord Browne-Wilkinson:

> “Where, as in the present case, a breach of a duty of care is proved or admitted, the burden still lies on the plaintiff to prove that such breach caused the injury suffered: *Bonnington Castings Ltd. v. Wardlaw* [1956] A.C. 613; *Wilsher v. Essex Area Health Authority* [1988] A.C. 1074. In all cases the primary question is one of fact: did the wrongful act cause the injury? But in cases where the breach of duty consists of an omission to do an act which ought to be done (e.g. the failure by a doctor to attend) that factual inquiry is, by definition, in the realms of hypothesis. The question is what would have happened if an event which by definition did not occur had occurred. In a case of non-attendance by a doctor, there may be cases in which there is a doubt as to which doctor would have attended if the duty had been fulfilled. But in this case there was no doubt: if the duty had been carried out it would have either been Dr. Horn or Dr. Rodger, the only two doctors at St. Bartholomew’s who had responsibility for Patrick and were on duty. Therefore in the present case, the first relevant question is ‘What would Dr. Horn or Dr. Rodger have done if they had attended?”

307. When considering the findings of fact in relation to causation a difficulty for the Claimant in the present case was how to prove what would have happened if the Defendant’s doctors and midwives had started a CTG trace earlier (when I have found they should have). I have taken into account the ruling of Lord Justice Longmore in the Court of Appeal in the case of *Keefe v Isle of Man Steam Packet Co Ltd.* [2010] EWCA Civ 683:

> “19 If it is a defendant's duty to measure noise levels in places where his employees work and he does not do so, it hardly lies in his mouth to assert that the noise levels were not, in fact, excessive. In such circumstances the court should judge a Claimant's evidence benevolently and the defendant's evidence critically. If a defendant fails to call witnesses at his disposal who could have evidence relevant to an issue in the case, that defendant runs the risk of relevant adverse findings see *British Railways Board v Herrington* [1972] AC 877 , 930G. Similarly a defendant who has, in breach of duty, made it difficult or impossible for a Claimant to adduce relevant evidence must run the risk of adverse factual findings.”

308. The Defendant did not call Dr. Srivastiva so I needed to make findings and/or inferences about what happened in the absence of her evidence. The analysis of Lord Justice Brooke in the Court of Appeal *Wisniewski v Central Manchester Health Authority* [1998] PIQR p 324 (internal page 14) was of assistance:

> “From this line of authority I derive the following principles in the context of the present case:

(1) In certain circumstances a court may be entitled to draw adverse inferences from the absence or silence of a witness who might be expected to have material evidence to give on an issue in an action.

(2) If a court is willing to draw such inferences, they may go to strengthen the evidence adduced on that issue by the other party or to weaken the evidence, if any, adduced by the party who might reasonably have been expected to call the witness.

(3) There must, however, have been some evidence, however weak, adduced by the former on the matter in question before the court is entitled to draw the desired inference: in other words, there must be a case to answer on that issue.

(4) If the reason for the witness's absence or silence satisfies the court, then no such adverse inference may be drawn. If, on the other hand, there is some credible explanation given, even if it is not wholly satisfactory, the potentially detrimental effect of his/her absence or silence may be reduced or nullified."

Material contribution.

309. Causation has two elements in law. Factual causation and then legal causation.

310. The Claimant's primary case in relation to early CTG leading to an earlier decision for a c-section and birth by 1753 was not made out on her own obstetric evidence. Her secondary case, that bradycardia started at 1746 which would have resulted in birth 5-7 minutes earlier has not been made out on the evidence on my findings of fact.

311. The case law cited by counsel on material contribution included: *Bailey v Ministry of Defence* [2008] EWCA Civ 883, [2009] 1 WLR 1052; *Williams v Bermuda Hospitals Board (NHS Litigation Authority intervening)* [2016] A.C. 888 L.R. 47; *Popple v Birmingham Women's NHS Foundation Trust* [2012] EWCA Civ 1628.

312. However two matters prevented the need for an analysis by this Court of the law on material contribution in clinical negligence actions in relation to PHI caused between 1803 and 1808 for this Claimant.

313. Firstly, the Defendant admitted and accepted that if the Claimant proved over 5 minutes of saved PHI then a material contribution was admitted and the Claimant would be entitled to received 100% of her damages. So material contribution was in dispute only in relation to less than 5 minutes of avoidable PHI.

314. Secondly, I have found that factual causation was not proven so the legal issue does not arise.

Conclusions

315. The Defendant, through a midwife and a senior house officer who was the acting registrar at the time, breached its duty of care to the Claimant by failing to make proper clinical notes and failing for 2 hours to assess her mother's and her condition whilst she was left on the ante natal ward (ANW).

316. Those breaches were combined with a further breach caused by a delay of around 40-50 minutes in transferring the Claimant's mother to the labour ward (LW).

317. However the delayed transfer to the labour ward and the breaches I have found above did not make any difference to the tragic outcome on 4th June 2018. It would have been the same in any event due to the sequence of events which emerged on the day which were both extremely rare, sudden and unpredictable.

318. In the event Miss Helen Nicks and her staff on the labour ward at East Surrey Hospital saved the lives of both the Claimant and her mother due to their prompt and professional action in the face of a very rare, life threatening emergency.

319. I am grateful to senior counsel for their admirably clear and highly professional assistance in this difficult case.

END