OUTER HOUSE, COURT OF SESSION

[2022] CSOH 63

A76/15

OPINION OF LADY WISE

In the cause

SD, as legal representative of her son LD

Pursuer

against

GRAMPIAN HEALTH BOARD, known as NHS Grampian

Defenders

Pursuer: Khurana QC, Heaney; Balfour+Manson LLP
Defenders: Stephenson QC, McConnell; NHS Scotland Central Legal Office

7 September 2022

Introduction

[1] On 24 August 2008, the pursuer, SD, gave birth to her son LD at Aberdeen Maternity Hospital ("AMH"). LD suffered severe acute asphyxia as a result of compression of the umbilical cord shortly before birth and consequential quadriplegic dyskinetic cerebral palsy leaving him severely disabled. The pursuer, seeks damages for the loss, injury and damage suffered by her son which she avers were caused by negligence on the part of (i) certain midwives in the antenatal ward ("Westburn Ward") of AMH, (ii) certain unnamed doctors with oversight of the decision-making on Westburn Ward and (iii) Dr Sreebala Sripada, the

obstetric registrar who took a decision about not to perform an emergency caesarean section at 04:10 on 24 August but later delivered LD in theatre.

[2] The proof I heard was initially to encompass all issues of liability and quantification of damages. Accordingly, some evidence was led about LD's current condition from the pursuer including a video which gives some insight into his skills and needs. The pursuer and her now husband have three children who live in family with LD. It was apparent from the video evidence that LD receives an excellent standard of love and care from those around him, particularly the pursuer. It became clear that the four week period allocated to the proof would be insufficient to hear all matters and counsel agreed that it should be limited to issues of breach of duty and causation. I heard the evidence on those restricted issues over five weeks in two separate diets.

Medical terminology and abbreviations

[3] It may be useful to provide a general definition of, and abbreviations used for, some of the terms used frequently in this opinion. Most are specific to labour and childbirth.

Amniotomy/Artificial Rupture of Membranes ("ARM"):

The rupture of the membranes ("breaking the waters") containing the amniotic fluid in the uterus either by instrument or by the insertion of midwife or doctor's finger.

Bishop Score:

A group of measurements collated after performing a vaginal examination and scoring based on the station, dilation, effacement (length), position and consistency of the cervix.

Cardiotocography ("CTG"):

A technique used to monitor foetal heartbeat and uterine contractions during pregnancy and labour using a cardiotocograph machine. Interpretation of CTG tracing involves both qualitative and quantitative description of a number of factors, sometimes summarised in the mnemonic DR C BRAVADO where DR is defined risk, C is contractions (uterine activity), BRA is baseline foetal heart rate ("FHR"), V is baseline FHR variability, A presence of accelerations, D is decelerations and O is changes in FHR patterns over time.

Foetal Blood Sampling ("FBS"):

A procedure to take a small amount of blood from the foetus during pregnancy or labour. In labour this involves using a speculum type device to remove a sample of blood from the baby's head.

Hypertonic Uterus:

Where the uterus become overstimulated with abnormally frequent contractions, Tacysystole contractions of more than five in ten minutes are indicative of uterine hypertonus, which may result in foetal heart rate abnormalities.

Liquor:

The amniotic fluid surrounding the foetus within the membrane sac.

Meconium:

A thick green or black tar like substance lining the foetal intestine/bowel; the result of the foetus (usually post term) having a bowel movement.

Membrane Sweep:

A procedure, usually performed by a midwife inserting a gloved finger through the cervical canal and using a sweeping motion to separate the foetal membrane from

the cervix. The aim of the procedure is to help accelerate the onset of labour by releasing prostaglandins.

Maternal/Obstetric Early Warning Score Chart ("MEWS Chart")

A chart on which midwives record a patient's blood pressure, temperature, pulse and related observation results to assess maternal wellbeing and look for patterns of concern.

pH:

The measurement for detecting the level acid or alkaline in the blood. A value of ≥ 7.25 is indicative of acidosis where the blood is low in oxygen.

Primigravida

A woman who is pregnant for the first time

(Synthetic) Prostaglandin:

A drug that induces labour by stimulating contractions of the muscles of the uterus. Prostin is a brand name of such an artificial prostaglandin.

Syntocinon

A synthetic oxytocin administered to encourage more regular contractions

Materials relevant to CTG interpretation

[4] The following is a reproduction of the algorithm and associated flow chart appended to the applicable AMH Guidance and referred to in the evidence about CTG interpretation in this case:

Consideration should be given to maternal preference and priorities

Admission assessment

Are any of the following risk factors present?
(this list is not exhaustive)

Maternal problems
Previous caesarean section
Pre-eclampsia
Post-term pregnancy (>42 weeks)
Prolonged membrane rupture (>24 hours)
Induced labour
Diabetes
Antepartum haemorrhage
Other maternal medical disease

Fetal problems
Fetal growth restriction
Prematurity
Oligohydramnios
Abnormal Doppler artery velocimetry
Multiple pregnancies
Meconium-stained liquor
Breech presentation

No

Intermittent auscultation
For full minute after a contraction
But at least every: 15 minutes in the first stage
5 minutes in the second stage

Abnormal FHR on auscultation
Baseline ≤110 bpm or ≥160 bpm
Any decelerations

Yes

Offer and recommend continuous EFM

Intrapartum risk factors
Oxytocin augmentation
Epidural analgesia
Vaginal bleeding in labour
Maternal pyrexia
Fresh meconium-stained liquor

Yes

Continuous electronic fetal monitoring

Cardiotograph (CTG) Classification

NORMAL	A CTG where **all four** features fall into the reassuring category
SUSPICIOUS	A CTG whose features fall into **one** of the non-reassuring categories and the remainder of the features are reassuring
PATHOLOGICAL	A CTG whose features fall into **two or more** non-reassuring categories or **one or more** abnormal categories

Fetal heart-rate feature classification

	Baseline (bpm)	Variability (bpm)	Decelerations	Accelerations
Reassuring	110–160	≥5	None	Present
Non-reassuring	100–109 161–180	<5 for ≥40 but <90 minutes	Early deceleration Variable decelerations Single prolonged deceleration up to 3 minutes	*The absence of accelerations with an otherwise normal CTG is of uncertain significance*
Abnormal	<100 >180 Sinusoidal pattern for ≥10 minutes	<5 for ≥90 minutes	Atypical variable decelerations Late decelerations Single prolonged deceleration greater than 3 minutes	

CTG = cardiotograph
EFM = electronic fetal monitoring
FBS = fetal blood sample
FHR = fetal heart rate
FSE = fetal scalp electrode

This algorithm should, where necessary, be interpreted with reference to the full Guideline (*The Use of Electronic Fetal Monitoring*)

Ensure adequate quality recording of both FHR and contraction pattern

Ensure that mother is informed of concerns and included in management plan

Suspicious CTG

Inadequate quality CTG
- Poor contact from external transducer?
- FSE not working or detached?

→
- Check maternal pulse
- Check position of transducer/FSE
- Consider applying FSE

Uterine hypercontractility
- Is the mother receiving oxytocin?
- Has the mother recently received vaginal prostaglandins?

→
- Stop oxytocin infusion
- Consider tocolysis
- 0.25 mg subcutaneous terbutaline

Maternal tachycardia/pyrexia
- Maternal infection?
- Tocolytic infusion?
- Dehydrated?

→
- If temperature ≥37.8°C consider screening and treatment
- If pulse ≥140 bpm reduce tocolytic infusion
- Check blood pressure, give 500 ml crystalloid **if appropriate**

Other maternal factors
- What is the maternal position?
- Is the mother hypotensive?
- Has the mother just had a vaginal examination?
- Has the mother just used a bedpan?
- Has the mother been vomiting or had a vasovagal episode?
- Has the mother just had an epidural sited or topped up?

→
- Ensure that the mother is not lying supine
- Encourage mother to adopt left lateral position
- Check blood pressure, give 500 ml crystalloid **if appropriate**

If trace remains suspicious continue to observe for further suspicious FHR features and taking into consideration other clinical factors

Pathological CTG

Fetal blood sampling indicated

→
- Encourage mother to adopt left lateral position
- Check blood pressure, give 500 ml crystalloid **if appropriate**

Fetal blood sample result (pH)	Subsequent action
≥7.25	FBS should be repeated if the FHR abnormality persists
7.21–7.24	Repeat FBS within 30 minutes or consider delivery if rapid fall since last sample
≤7.20	Delivery indicated

All scalp pH estimations should be interpreted taking into account the previous pH measurement, the rate of progress in labour and the clinical features of the mother and baby

Fetal blood sampling inappropriate

→
- Encourage mother to adopt left lateral position
- Check blood pressure, give 500 ml crystalloid **if appropriate**

→ **Expedite delivery**

→
- Call anaesthetist and paediatrician
- Urgency of delivery should take into account the severity of the FHR abnormality and relevant maternal factors
- The accepted standard has been that ideally this should be accomplished within 30 minutes

Following delivery, paired umbilical cord samples should be taken and 1- and 5-minute Apgar scores calculated and all results recorded in the mother's notes

The following table and explanatory notes are contained in the **NICE 2007 Guidelines on Intrapartum care (No 7/7 of process)**

Table 6 Classification of FHR trace features

Feature	Baseline (bpm)	Variablity (bpm)	Decelerations	Accelerations
Reassuring	110-160	≥5	None	Present
Non-reassuring	100-109 161-180	<5 for 40-90 minutes	Typical variable decelerations with over 50% of contractions, occurring for over 90 minutes Single prolonged deceleration for up to 3 minutes	The absence of accelerations with otherwise normal trace is of uncertain significance
Abnormal	<100 >180 Sinusoidal pattern ≥10 minutes	<5 for 90 minutes	Either atypical variable decelerations with over 50% of contractions or late decelerations, both for over 30 minutes Single prolonged deceleration for more than 3 minutes	

Further information about classifying FHR traces is given below.

- If repeated accelerations are present with reduced variability, the FHR trace should be regarded as reassuring.
- True early uniform decelerations are rare and benign, and therefore they are not significant.
- Most decelerations in labour are variable.
- If a bradycardia occurs in the baby for more than 3 minutes, urgent medical aid should be sought and preparations should be made to urgently expedite the birth of the baby, classified as a category 1 birth. This could include moving the woman to theatre if the fetal heart has not recovered by 9 minutes. If the fetal heart recovers within 9 minutes the decision to delivery should be reconsidered in conjunction with the woman if reasonable. A tachycardia in the baby of 160-180 bmp, where accelerations are present and no other adverse features appear, should not be regarded as suspicious. However, an increase in the baseline heart rate, even within the normal range, with other non-reassuring or abnormal features should increase concern.

Chronological summary of events

[5] As the events under scrutiny took place 14 years ago, none of the witnesses to fact had any direct recollection of events. Each was taken through detailed medical records and those gave a fairly clear picture of how the pursuer's induction of labour had progressed. Where appropriate, the actions or decisions alleged to amount to specific breaches of duty are highlighted by bold type.

[6] The pursuer's ante-natal care was relatively routine. The notes record that at about the age of 12 she had an appendicostomy (a surgically created channel/tube between the abdomen and colon) inserted. She was also a carrier of the Group B Streptococcal bacteria, which is normally harmless but can pose a risk to a new-born. This is counteracted by administering antibiotics to a woman in labour as soon as the membranes have ruptured. Those involved in the pursuer's antenatal care were made aware of all of this. Her medical notes were clearly marked with stickers confirming the presence of Group B Streptococcus. Her ante-natal care included a membrane sweep at 38 weeks.

[7] On admission to AMH on 21 August 2008 the pursuer was 13 days beyond her estimated date of delivery (40+13). On vaginal examination at 16:00 hours the Bishop Score was 5 and the pursuer's cervix was not dilated. A decision was taken, in accordance with normal practice and local guidelines to administer prostaglandin in the form of Prostin. A first dose (3mg) of Prostin was administered vaginally at that time. Later that evening a decision was taken (by midwife Sheena Fairfull) not to administer a second dose of Prostin as the pursuer was contracting around four times in ten minutes. At 22:40 hours a plan was made to examine the pursuer in the morning with a view to giving further Prostin if required.

[8] On Friday 22 August 2008, midwife Nicola Braid (now Clevedon) attended on the pursuer and started a CTG at about 08:00. The CTG was stopped 40-45 minutes later and a vaginal examination performed. The Bishop Score was assessed at 6 and cervical dilation at 1cm**. A membrane sweep was undertaken but no further Prostin was given.** The pursuer was given Paracetamol at 10:15 and a note made that "contractions have intensified". Those contractions were noted to have subsided by 12:30 hours and the pursuer was asleep. At around 16:33 hours, midwife Jill Henderson attended the pursuer and restarted the CTG which ran until 17:34 hours. **No further Prostin was given.** A note at 19:55 was made that there were contractions on palpation of two in ten minutes but no other progress was made, **no specific medical review was sought and no further Prostin was given.**

[9] On Saturday 23 August 2008 at 00:30 hours midwife Elaine Dick examined the pursuer and noted strong uterine contractions with a frequency of three in ten minutes. The pursuer spoke of "trickling" since morning and midwife Dick noted being unsure whether or not liquor was present. She decided that the vaginal discharge on the pursuer's sanitary pad should be monitored. She conducted a vaginal examination and assessed the Bishop Score to be 7, deciding that the pursuer was still unsuitable for amniotomy. She made a note of "? Light meconium staining" and gave the pursuer a hospital sanitary pad. **She did not seek a specific medical review.**

[10] Midwife Henderson saw the pursuer at 11:15 and 12:30 that day. She noted that there was a dirty discharge on the sanitary pad, recording "? Meconium? Old blood". **She did not seek a specific medical review.** At 14:30 midwife Braid examined the pursuer and assessed the Bishop Score at 8. Cervical dilation was assessed as unchanged. A decision was taken to administer the second dose of Prostin, which was done after a vaginal

examination. There was note of contractions at that time. There continued to be a suspicion of meconium but the foetus appeared well. **Midwife Braid did not seek a specific medical review.**

[11] Midwife Braid administered paracetamol at 15:05 and at 15:44 she recommenced the CTG for about 45 minutes. **She did not arrange a specific medical review.** Then at 22:35 in the evening CTG was again commenced. The pursuer was seen by midwife Ellen Goodwin at 23:20 who noted early decelerations on the trace which responded well to a change of maternal position. A vaginal examination was performed by midwife Goodwin at 23:20 who assessed that the Bishop Score had fallen to 7, there being no progress in the dilatation of the pursuer's cervix. She called for a medical review and the pursuer was seen by Dr Sripada. She decided to transfer the pursuer to the labour ward.

[12] The pursuer was transferred to the labour ward at around 00:00 on 24 August. Continuous CTG was commenced and ran right through the pursuer's time in the labour ward until LD was delivered. Amniotomy was performed with difficulty and at about 02:10, grade 2 meconium was noted on the pursuer's sanitary pad with midwife Sarah Mitchell recording that Dr Sripada was aware of that. The CTG was reviewed at 03:15 and 03:45 and at the latter time midwife Mitchell assessed the trace as suspicious. She changed the pursuer's position and asked for a senior midwife to review the trace. At 03:50 senior midwife Gillian Argo noted that the CTG required review by medical staff once available.

[13] Dr Sripada reviewed the CTG trace at 04:10. She conducted a vaginal examination. She found that the pursuer's cervix was fully effaced, 3cm dilated and well applied to the presenting part. She noted her findings and gave consideration to obtaining an FBS and also to whether a caesarean section was indicated. **She decided (i) that the trace was not bad**

enough to require a caesarean section and (ii) to continue with monitoring and to review the CTG in 30 minutes.

[14] The foetal heart rate dropped suddenly from about 04:36. The midwives spotted a foetal bradycardia at 04:45 and Dr Sripada was called as soon as it was confirmed. She was present by 04:53. Immediate action was taken to prepare for delivery of the baby. LD was born at 05:13, as soon as reasonably practicable after the decision to deliver him.

Evidence led at proof

[15] The summary of the evidence that follows covers only the issues primarily in contention. Several other issues were canvassed in evidence which have required consideration. On each of these the evidence was effectively unchallenged and broadly consistent as between the various witnesses. First, there was evidence about a missing page of the MEWS chart relating the pursuer. There was no case that there had been an actionable failure to take or record the necessary observations and there were one or two entries in the medical notes indicating that observations had been taken and charted on occasions during the relevant period. It seemed likely that a page of the chart had come apart from the bundle and there was evidence that this occurred from time to time, something resolved more recently by electronic recording. There was no significant loss of records in this case and I do not consider that anything material turns on the evidence of the missing page of the MEWS chart. I conclude that there was no serious record keeping failure about which an adverse inference can or should be drawn. Secondly, all of the midwives attending to the pursuer at material times knew she had Group B Streptococcus and would require antibiotics as soon as her membranes ruptured. Each was asked about this and the skilled witnesses agreed it was a risk factor to be highlighted. There was

evidence that each page of the pursuer's notes was marked appropriately with stickers and antibiotics were duly administered when ARM was performed. There was no evidence to support a contention that any of the midwives were unaware of or had wrongly ignored this feature and I accept that it was taken into account in the decision making process.

[16] The third example is the use of Syntocinon in labour. There was ultimately no stand-alone criticism in relation to its administration and all independent witnesses agreed that its use on the labour ward was appropriate and that it had to be switched off when the decision to delivery by caesarean section was made. No case of fault remains in relation to its use either in principle or about the level administered.

[17] Fourthly, every witness was asked about whether there had been any internal review of events in 2008. None of the factual witnesses thought there had been, although Dr Sripada had reviewed the events and outcome with her mentor Dr Crichton as part of her own learning and development. Views on the outcome were expressed by the consultant in charge Dr Terry to the pursuer's GP and by another obstetric consultant in Aberdeen, Dr Danielian in manuscript in the notes. There was some evidence that the system of reviewing adverse outcomes in hospitals has developed considerably since 2008. In the absence of any specific systems case on the failure to conduct a particular type of review following LD's birth, I did not find the evidence about this of direct assistance.

[18] Finally and importantly, the nature and frequency of ward rounds in AMH was raised with every midwife and Dr Sripada. While some recalled this in more detail than others, the broad consensus which was effectively unchallenged and which I accept, was that there were three ward rounds in every 24 hours (morning, late afternoon and mid-evening) starting in the labour ward and then continuing in Westburn Ward. Senior medical personnel would be available at each ward round although clearly there would be

occasions when one or more of the doctors might be attending to an urgent situation and unable to attend. Each patient's details were summarised on a large whiteboard in the nurses' room and included details of any risk factors, how many days post term the patient was and whether she was a primigravida. Every patient was discussed on every ward round. The doctors would be told the woman's Bishop Score, the interventions attempted so far and any observations of concern. Unless the doctors saw an individual patient and changed the midwives' plan, they would tend not to write in the patient's notes. The independent witnesses considered this to be an appropriately thorough system. Having accepted the tenor of the evidence, I have found it unnecessary to record the minutiae given by the witnesses about the details of the system.

[19] Some evidence was heard under reservation following objection, but for the most part parties did not later insist in them. There was one objection taken that remained contentious at the conclusion of the evidence. It related to certain medical literature that was put to Professor Deirdre Murphy in her evidence in chief. It had not been put to the pursuer's expert witness Dr Elizabeth Sarah Cooper. I heard the evidence under reservation and accept it as relevant to the issue of reliability, but have taken into account that it was not put to Dr Cooper.

Pursuer's case

The Pursuer

[20] The pursuer gave evidence at some length, much of which related to issues not currently for determination. She recollected some parts of the experience of her induction of labour but understandably, after the passage of so many years, some memories had faded. She had no reason to dispute much of what was said in the notes. She remembered

particularly her late mother coming to see her at lunchtime on 22 August; they went for a walk up and down the ward, read magazines and did crosswords. She could not specifically remember whether she had been in pain.

[21] The pursuer recollected that at some point she had noticed a light shade of green on her underwear when in the bathroom. She had told her mother who thought it might be meconium and that could be a sign of the baby being in distress. Her recollection was that her mother had gone to speak to the midwife. The medical notes accorded with her recollection that the midwives had taken her sanitary pad and given her one belonging to the hospital. She did recall that late on 23 August she was in some pain with contractions being intense and tighter for longer. Once on the labour ward in the early hours of 24 August she had vomited and was in a lot of pain. She had some memory of being aware that LD's heartbeat was going lower during the contractions but her memory was "a bit blurry". She recalled someone coming in and checking the CTG after which lots of other people came running to her and she was taken to theatre.

[22] When she came round from the anaesthetic, LD's biological father (with whom LD has never lived in family) told her that LD was in a bad way with a 50/50 chance of surviving that night.

[23] Under cross-examination the pursuer agreed that she had been given an explanation and a leaflet she had read about what induction would involve when she went to her last antenatal appointment. She had some recollection of going in to see the consultant in overall charge of her care (Dr Terry) sometime after LD was born. When shown a letter from Dr Terry to her general practitioner (No 6/3 of process) stating that there seemed to be little indication from looking at the CTG trace that earlier delivery had been indicated, the pursuer agreed that by October 2008 her memory of the labour was already patchy.

However, she specifically remembered the midwife saying in relation to the discharge on her pad that it was nothing to worry about and that it was "not my waters". She recollected also that on Westburn Ward that all of the other beds in the six bedded room she had been placed in were full. When women were moved to the labour ward new patients would come and fill their beds.

[24] The pursuer did not remember doctors coming around during ward rounds but agreed that they could have come into the ward to discuss cases without her having contact with them. She had no recollection of being given an injection of diamorphine but remembered vomiting afterwards. She could not say whether she had seen a doctor other than Dr Sripada at any point.

Midwife Braid

[25] Mrs Nicola Braid or Clevedon ("MW Braid") qualified in the spring of 2008. She recollected the Westburn Ward and the six bedded room within it used for inductions. She had known of the increased risk of placental deterioration after term +14 and the slightly higher risk of stillbirth.

[26] The witness agreed that the hospital's labour ward guidelines will have been followed in Westburn Ward, that Prostin tended to be given vaginally six hours apart and she was aware of the NICE Guidelines for induction of labour. Although two doses of Prostin were normally given, if after the first dose a woman was contracting at the rate of four in ten minutes with moderate to strong tones then it would be withheld. On 22 August at 08:50 she had made a plan to monitor uterine activity and to reassess if contractions ceased. She agreed that she was probably being cautious at that time as the CTG had been showing contractions at the rate of only about one every 10-15 minutes. However, she must

have discussed the plan with the pursuer before deciding. She had given a membrane sweep to encourage contractions while discussing the plan to wait before giving more Prostin. It became apparent that MW Braid had been unaware until it was put to her in evidence that she was being criticised for failing to give a second dose of Prostin. She could only assume that she must have thought it was reasonable to withhold Prostin because of what the pursuer was telling her about contractions. She was a junior midwife and will have been cautious about giving more Prostin in case the woman became hypertonic. She thought that any departure from the guidance was a marginal one. When pressed MW Braid appeared to concede initially that she ought to have given Prostin; when that was asserted to her she stated "Yes that's fine".

[27] Discussions with medical staff on the thrice daily ward rounds were verbal and nothing would be written down if there were no concerns. When she had assessed and examined the pursuer on 23 August at 14.30 and administered the second dose of Prostin, no note had been made of the level of contractions, although some could be seen on the CTG trace. She accepted that the pursuer's condition was not markedly different from the day before when she had decided not to give Prostin because of the contractions.

[28] It was not clear from the Westburn notes whether meconium had ever been present. The patient had undergone several vaginal examinations which commonly lead to bleeding. In any event liquor has a profound smell and any midwife would know what it was. The pursuer's pads will have been monitored to rule out meconium and had the membranes ruptured she would have been transferred straight to labour ward. The midwife's task was to observe the pads and report any concern about the presence of meconium to medical staff. The witness agreed she would have read the note from 0030 on 23 August of "? Liquor on pad? Light meconium staining". The patient was only 1cm dilated and it would have

been hard to tell whether the membranes had ruptured. If she had felt forewaters she would know the membranes were generally intact but that would not exclude trickling from the hind waters.

[29] There was an adjournment during the evidence of MW Braid during which the pleadings were amended to introduce a case of failing to administer Prostin. Thereafter, she stated that she did not think what she did at 08.50 on 22 August was wrong. She accepted that having made a four hour plan to review the patient she probably ought to have done so but not that she would then have given her Prostin as the membrane sweep had been appropriate. The notes indicated that there were periods when the pursuer had been resting, permitted where the woman and baby seemed healthy. The pursuer had gone on to have contractions, so the membrane sweep had worked to some extent. The witness disagreed strongly that she ought to have refrained from giving Prostin the following day (23 August) and sought a medical review instead. She was clear that the notes indicated that the presence of meconium had never been confirmed while the pursuer was on Westburn ward.

[30] Under cross-examination the witness confirmed that in 2008 it was not uncommon for women to give birth more than two weeks after their due date. Admission for induction depended on the availability of staff and space but it could easily commence at T+12 or T+13. The process of induction itself could take several days and not uncommonly there were 62-72 hours from the initiation of induction to childbirth.

[31] The three principal interventions relevant to induced labour were prostaglandin, ARM and syntocinon. Additionally, sweeping of the membranes assists the process by naturally encouraging labour and had been found on occasions to have better results than Prostin. The general rule was that if a woman was contracting she should not be given more

Prostin as it was more likely she would go into labour naturally. ARM can speed up contractions and so augment labour. Prostin took time to be absorbed and release the prostaglandin. A midwife would always be vigilant as to the different effects Prostin can have on an individual woman and the risk of the foetus becoming distressed.

[32] A doctor would discuss any clinical findings relating to the patient with the midwife and then prescribe as necessary. The applicable guidelines (No 6/2 of process) clarified that the maximum dosage of Prostin was 6mg in two doses given six hourly. Administering Prostin limits the ability to administer syntocinon thereafter. The midwife required to balance the need for progress against the woman's ability to cope with the contractions, thus inductions could take days. Inducing labour using a synthetic drug like Prostin was more uncomfortable for the woman than normal labour.

[33] The midwives were allowed to assume that a sleeping woman should be left. The aim of induction was to promote labour to vaginal delivery safely rather than quickly. When MW Fairfull decided to withhold Prostin in the evening of 21 August any "chain" between the administration between the first and second dose of Prostin had been broken. The relevant guidelines did not assist when the second dose of Prostin was not, for good reason, administered six hours after the first.

[34] On the key decision at 08.50 on 22 August, the pursuer had been contracting and this had been a determining factor in deciding not to give Prostin. The signs at that time were reassuring and the foetus was healthy and well oxygenated. The contractions had subsequently intensified, paracetamol was required and the membrane sweep appeared to have worked so the plan made at 08.50 had been superseded. As a junior midwife MW Braid would have had to discuss any prescription with a doctor either by calling one or seeing one on the ward round. The note at 12.30 that the pursuer had "slept all morning …

not disturbed" could only mean that she had fallen asleep at some point between 10.15 and 12.30. On 23 August on examination just before 14.30, the results were noted before giving Prostin. Meconium could easily be seen on a vaginal examination and if seen she would have recorded it. Where its presence was suspected the hospital would give the woman one of their own pads which were less absorbent than commercially available pads and so easier to detect any meconium. Pulling apart a pad and smelling the contents remained the best way to determine whether the membranes had ruptured. The general rule was that if there was no meconium on the pad you could assume that the membranes had not ruptured. MW Braid did not consider she had breached her duty of care to the pursuer.

Midwife Henderson

[35] Jill Henderson, a 50 year old donor carer had been a registered midwife in 2008 but had not worked in that capacity since August 2009. On 22 August at 16:30 she had made a note that the pursuer was aware of regular contractions which were more frequent but less painful. She would have asked whether the patient felt any tightening in her tummy and commenced an hour long CTG to assess foetal wellbeing and monitor any uterine activity. It was normal, the baby seemed very active and MW Henderson made a plan to palpate to check the uterine activity and conduct a vaginal examination to assess whether more Prostin should be given. While there was a note at 19:55 about the uterine activity present on palpation the witness accepted there was no note of a vaginal examination being performed, but did not accept that meant she had not carried out that plan. Even if she had not, that could only have been because she was dealing with numerous patients and other things may have got in the way. Any decision she made not to administer Prostin at this time would

have been discussed with medical staff at the next ward round. She seemed to agree that if deciding not to give Prostin was a deviation from the normal guidelines then a medical review of some sort should have been sought. The doctors would have still discussed the pursuer with the midwives on every ward round and the absence of a doctor's note in the records did not mean that she had been missed out of a ward round discussion.

[36] The witness could not say whether the patient had simply been forgotten about on 22 August in the absence of any entries about observations or vaginal examination given it was almost 14 years ago. Many women would be coming in and out of Westburn Ward, some with high blood pressure or low foetal movements. Others would be up walking and so the midwife would move to the next bed. It was accepted, though, that there was a general need to progress labour.

[37] MW Henderson saw the pursuer again on 23 August and had made the note "? meconium? old blood" at 12:30. She explained that this meant it was obviously not clear fluid and so was probably either meconium or just a bloody discharge from the cervix. She had not decided that it was meconium, just that it could be and so she asked the patient to keep another pad. She had gone off shift at 15:00 and would have handed the plan over to the next midwife. When pressed, the witness seemed to accept that against a background of the note "? light meconium staining" some 12 hours before her own note, the two possible queries of meconium would be sufficient to indicate foetal distress such that a medical review should have been sought with possibly a move to the labour ward. Given the pursuer's account of "trickling since morning", it could all point to her membranes having ruptured.

[38] Under cross-examination the witness confirmed that induction to birth taking over 62 hours was probably not unusual. Although clinically significant matters would be

recorded in the patient's notes there were also additional contacts and casual conversations with all patients whenever passing. Westburn was a busy ward with competing calls on the midwives' time. It was usually impossible to execute a plan to review a patient at a specific time because something would go wrong with a new admission or someone would have a delivery on the ward or blood samples had to be taken.

[39] A midwife in Westburn was not able to transfer someone to labour ward without consent from that ward because it was so busy and on labour ward the patient to midwife ratio was 1:1 with continuous CTG monitoring, so transfer required an available bed and staff. The labour ward sister or senior charge midwife on labour ward was in charge of who could be transferred.

[40] The witness confirmed that she would always palpate the patient's abdomen before starting a CTG and although that was not recorded in the notes on 22 August it was likely that she did so. When she discontinued the CTG at 17:30 on 22 August the possibility of administering further Prostin was still in contemplation. However as the contractions were about two in ten minutes and thought to be increasing it had been better to let contractions develop naturally than risk over stimulating the uterus and the contractions did then pick up naturally. MW Henderson was clear that had liquor been present she would have recorded it. She had noted the colour on the pad and it was clear that it was typical of mucous coming away from the cervix, hence the reference to "dirty blood". Had she smelt meconium she would have immediately raised this at a higher level and restarted the CTG. All of these matters will have been discussed on midwife handover and on the ward rounds with the doctors.

Midwife Dick

[41] Elaine Catherine Dick ("MW Dick") qualified as a nurse in October 1990 and subsequently converted to midwifery. She saw the pursuer at 00:30 on 23 August, would have read the notes and known the background. She had recorded the pursuer as contracting at the rate of three in ten minutes. She palpated the abdomen and found the contractions to be strong. She queried whether the staining on the pad was "light meconium" and noted that the patient said she had been trickling since the morning. A CTG was commenced and the observations recorded in the MEWS chart. MW Dick was clear that she would have visually examined the pad and her notes indicated it was difficult to assess what was on it. The possibilities would include liquor, a mucous discharge or meconium. Her normal practice was to inform a patient of her thoughts, including that she could see something on the pad and was not sure what it was. Further checks would always be done. She was aware of the risk of foetal distress if meconium was passed and so would have commenced continuous CTG and sought a medical review had its presence been confirmed.

[42] On 23 August at 01:00 she took the decision to continue the CTG. She felt there was reduced variability in the foetal heartrate, possibly because the baby was sleeping and wanted to monitor to see if there were more accelerations. She secured consent for vaginal examination and saw that the patient was 1-2cm dilated. The overall Bishop score increased to 7 as the baby's head had dropped a little. She withheld Prostin because there were three strong contractions in ten minutes. The patient was asked to report any loss on a fresh pad and analgesia was given. The witness disagreed that she ought to have sought a medical review at that stage. There was no confirmed meconium on the pad and the trace was reassuring. She was clear that had she sought medical advice she would have been told to

keep checking. It was not possible to say where she had been an hour later but the overall plan was to monitor the pad. She agreed that as there were no entries from 00:15 until 07:00 the pad was probably not checked during that particular period. As the patient's observations were within the normal range there were no concerns and no reason to seek a review.

[43] Under cross-examination the witness confirmed that in 2008 she had primarily been employed in another ward and was probably just helping out in Westburn that night. One of the doctors would have required to prescribe the dihydrocodeine that she administered at 01:10. On checking the pad, protocol at the time was that the patient would be asked to page a midwife if she saw anything fresh on her pad. Any midwife who was around would check if alerted by the patient.

Midwife Fairfull

[44] Sheena Fairfull ("MW Fairfull") qualified as a nurse in 1984 and as a midwife in 2004. She had decided not to give the pursuer a second dose of Prostin on 21 August as she was contracting too much. On 23 August at 07:00 hours MW Fairfull had made a note that SD was asleep and her pad was to be checked when she awoke. She would have recognised MW Dick's handwriting from the 01:00 entry and assumed that the pad had not been checked thereafter because SD was asleep. She agreed that by 23 August the pregnancy was a prolonged one and she was aware of the various risks including that the placenta would stop working so well and the possibility of stillbirth. That said, in 2008 when the ward was busy they were seeing women at T+15 and T+16 as a norm. If meconium was identified there was always an opportunity either to discuss it on the next ward round or to call for a doctor. The note that MW Fairfull had made about the sanitary pad was to remind the shift

that came after her that day to check it. She had not been sure at all that she had seen meconium, just that the next shift should keep an eye on things.

[45] Under cross-examination the witness agreed that she had no particular difficulty with MW Dick's plan to monitor any loss by checking the pad. Personally, she might have spoken to a doctor and suggested a swab although only if someone thought that the waters had broken.

Midwife Argo

[46] Gillian Argo ("MW Argo") qualified as a midwife in 1987 and worked in that capacity in Aberdeen until 2017. She was the senior midwife who reviewed the CTG trace at 03:50 on 24 August and asked for a review by medical staff. She confirmed that the labour ward had only six midwives working in it overnight between 23 and 24 August and would have been very busy. After she gave evidence it was confirmed that the pursuer's case of fault in relation to midwifery care on the labour ward was to be dropped.

Margaret Richardson

[47] Margaret Richardson gave evidence as an independent skilled witness in the pursuer's case. Her CV (No 6/66 of process) narrates her career as a midwife in the early 1980s, which developed into clinical governance and risk work, mostly in London. Since April 2013 she has undertaken a variety of posts as an independent contractor/consultant and been an independent clinical expert witness, predominantly on the claimant (pursuer) side. She prepared and produced a report (No 6/44 of process) in April 2017. On 6 June 2019 she produced a subsequent review and comments (No 6/45 of process). In November 2021 she met (remotely) with Professor Julia Sanders (incorrectly

spelt Saunders in Ms Richardson's reports) and they produced a joint report for the assistance of the court (No 6/72 of process).

[48] Ms Richardson's view was that the Prostin should not have been withheld by MW Braid on 22 August as the result was to delay the induction. Even if it could be said that a decision about giving Prostin could be delayed, had the midwife followed matters up with a review 4 hours later as planned the labour might have progressed. There were no contra indications to giving a second dose as one contraction in 10/15 minutes was not sufficient to effect cervical changes. A vaginal examination should have been performed at 11:50 that morning in accordance with MW Dick's own plan. Seventeen hours had passed with no change and the contractions were infrequent, so she should have gone ahead and administered Prostin or a doctor should have been called. Although there was a note at 10:15 on 22 August that contractions had intensified the whole clinical picture had to be taken into account and by 13:00 that day when it was more than 21 hours since the first Prostin had been given it should certainly have been administered. The witness commented that with hindsight the second dose of Prostin would not have changed anything but if the decision was not to give the second dose of Prostin there should have been a medical review.

[49] The two independent midwives had agreed that when the pursuer had reported "trickling since morning" there was a possibility that the membranes had ruptured spontaneously but equally it could mean an increase in normal discharge due to induction and vaginal examinations. Ms Richardson considered that it was unlikely that the membranes were intact at the time of the ARM because of the history of trickling and the lack of liquor seen when it was performed. An ordinarily competent midwife would have contacted the delivery suite after the patient had reported the trickling and she had a

suspicion of meconium, given that all the midwives knew that antibiotics had to be administered on the membranes rupturing. She and Professor Sanders were in agreement that when there is a suspicion of the presence of meconium the midwife should carefully inspect the pad and the loss, provide a clean pad and recheck within an hour, possibly to commence a CTG and notify a doctor if the suspicion of the presence of meconium persisted. Accordingly, MW Henderson should have sought a medical review given the suspicion of the presence of meconium between 12:30 and 14:30 on 23 August.

[50] Further, when MW Braid saw the pursuer again at 14:20 on 23 August she should have again sought a medical review or a transfer to the delivery suite. The witness stated "there was meconium – well there was the query and so a query about ruptured membranes". On the primary issues of disagreement between her and Professor Sanders her view had not changed since hearing the evidence of the midwives.

[51] Under cross-examination and on being taken to the joint bundle of medical records (page 383 of No 116) Ms Richardson agreed that it seemed the second dose of Prostin given on 23 August had been prescribed by a doctor, as had earlier prescriptions for paracetamol and dihydrocodeine. On her clinical expertise, she thought that she had last delivered a baby in 2007 although had delivered hundreds before that. She had probably delivered about ten babies in total since 1996 given her work as a manager thereafter. She had given evidence once before, in Wales in 2017. When she prepared her first report she had not seen any statement from the pursuer or the midwives and had no idea how the maternity unit at AMH was organised. She had no information about the ward rounds there although she thought those were fairly standard across the UK. When she had criticised the absence of medical review between 19:00 on 21 August and 07:00 on 23 August she was aware that there would have been ward rounds.

[52] The witness accepted that she had characterised the first alleged breach of duty (of MW Braid) as failing to inform a doctor when a decision was made not to give Prostin on 22 August. She had described the second alleged breach of duty as a "lost opportunity" not to seek a doctor's review 24 hours after Prostin had been given, though accepted now that it had been 17 hours after the administration of Prostin when MW Braid saw the pursuer. She accepted that the note at 16:30 on 22 August recorded regular contractions, more frequent but less painful and her report ought to have recorded that instead of suggesting that the contractions were only 1 in 10/15. However, she remained of the view that there should have been a vaginal examination and the second dose of Prostin should have been given. If the midwife was in doubt at 16:30 she should have sought a review from someone more senior. If the midwife believed the contractions were strong and regular and likely to change the cervix then even if she was not going to give the second dose of Prostin she should have followed up within 4 hours. The witness accepted that some of her answers for the joint midwifery meeting could be read as her having reached the view that it was not a breach of duty not to administer more Prostin. She considered that the breach in duty was in believing that the labour was going to progress and so doing nothing.

[53] Ms Richardson agreed that the records indicated that LD was in good health at all times on the Westburn Ward. The length of the period taken for induction was not a concern of itself. She accepted that before taking any decision the associated risks of giving Prostin have to be balanced, together with any pressure on the labour ward.

[54] The recommended maximum of two doses of Prostin meant that clinical judgement had to be used when deciding whether to give a second dose. Her recollection was that in 2008 it was standard practice to give the second dose six hours after the first unless the woman was about to go into established labour and you were concerned about the risk of

hypertonus. The AMH guidelines had to be supplemented by the midwife's knowledge and experience.

[55] A midwife might reasonably wait for a ward round rather than calling the doctor for a specific medical review but it was unusual to have no doctor's notes in the records at all. While she would still find it puzzling that the induction was not progressed with a second dose of Prostin, if the evidence showed that the doctors and midwives had agreed the plan at ward rounds then she would accept that joint clinical decision making must have occurred.

[56] Ms Richardson's initial opinion (at paragraph 3.31) stated only that she would "question the wisdom" of MW Braid withholding Prostin on 22 August and she had not characterised the failure to administer the second dose of Prostin as a breach of duty. In her response report (No 6/45 of process) prepared after considering Professor Sanders' report, she had again articulated MW Braid's alleged breach of duty as not informing a doctor when the decision was made not to administer a further dose of Prostin. She stated "I accept that is what I said in the report, but my thinking may have been different – sorry". Further, in the joint midwifery report, in answer to question 9, the witness had stated that she would not have been critical of the decision not to administer Prostin if labour had subsequently become established within a few hours. Ms Richardson stated that she had been giving MW Braid the benefit of the doubt but accepted that opinions on breach of duty could not be determined by subsequent events.

[57] Any criticism of not seeking advice from doctors would fall away if the issue of Prostin had been discussed at each ward round. However, the witness continued to support each case on record that every midwife involved failed to perform a vaginal examination, give the second dose of Prostin and commence CTG monitoring or in the alternative seek a

medical review. She agreed that her report did not mention anything about failures to perform examinations or commence a CTG as she was focussing on the giving of Prostin and the induction of labour. She accepted that to some extent she had not followed the formula she had stated in her own report in addressing each breach of duty.

[58] The further criticism of MW Dick was her alleged failure to recognise the significance of meconium and risk of a membrane rupture in a woman with Group B Streptococcus. It might not have been practicable to seek a medical review at 01:00 on 23 August but the patient should not have been left on the antenatal ward. Ms Richardson disagreed that on examination at that time the pursuer was not favourable for ARM and disputed this was speculation. She then said it was "possible" that an ARM could have been done but even if not the patient should have been transferred to the labour ward.

[59] On the alleged failure of MW Henderson to arrange a medical review between 12:30 and 14:30 on 23 August the witness would expect that following a ward round discussion the patient would have been transferred to the labour ward. Her labour had not progressed and there was a concern about the possible presence of meconium. The specific breach then alleged against MW Braid at 14:30 on 23 August was pled as not informing the doctor of a deviation from the guidelines. The witness agreed that her report said nothing (at 3.8.1) about the meconium concern, and that the deviation from normal practice identified in her report was the second dose of Prostin being given so long after the first but said that what she had intended to focus on was the possible presence of meconium. If meconium had been ruled out that would be fine but there was nothing in the records to confirm either way. The last allegation was the failure by MW Braid to review the pursuer by 20:30 on 23 August and arrange a medical review. The witness accepted that at paragraph 3.9 of her report she did not state in terms that a medical review should have been sought. She

accepted that had there been an examination at 20:30 the results would be broadly similar to those which were found later at 23:30 but maintained that there should have been a discussion with the doctors. Again she accepted that if there were ward rounds the doctors would be aware of the patient's situation and her criticism of inaction at 20:30 would fly off. She considered herself realistic about what could be done in a busy antenatal ward.

[60] In re-examination Ms Richardson confirmed that her position was that a failure to give Prostin and to seek a medical review had been regarded by her as part of the same failing. When it was suggested to her that if ward rounds took place those would not impact on her view of breach of duty the witness appeared to agree, but accepted it would be reasonable for a midwife to wait until a ward round to start if it was happening soon and speak to the doctor then.

Dr Sripada

[61] Dr Sreebala Sripada, a consultant gynaecologist since 2012, (her CV is No 7/26 of process) gave evidence in relation to her actings in August 2008 when she was a specialist registrar (junior tier) in obstetrics and gynaecology. Dr Sripada had no detailed recollection of the pursuer's situation without reference to the notes which she had read prior to giving evidence.

[62] When Dr Sripada met the pursuer at 23:40 on 23 August she signed off the midwives' plan for ARM on the labour ward. She would have been aware of the special features of the case including the pursuer's medical history insofar as relevant. She would have realised that the pursuer needed continuous monitoring as she was T+15, the CTG showed some early decelerations and she had received two doses of Prostin.

[63] The witness was aware of the guidance on Prostin dosage although the key factor was that the *minimum* duration between doses was 6 hours. It was not uncommon to have a gap of something like 46 hours between doses. The policy at the time had been starting to induce women at T+12 but a woman might have to wait until term plus T+13 before being admitted. The postdates risk factors increased the risk of cord compression with a baby less able to withstand hypoxia due to cord compression because of poorer placental function. This was why there was constant monitoring, to reassure everyone that this was not occurring and most post term foetuses will be fine. The pursuer's foetal monitoring had shown some early decelerations and so Dr Sripada wanted her transferred to the labour ward for continuous monitoring. As the decelerations coincided with the contractions there was no significant cause for concern. The midwives used stickers to classify CTG at that time as "normal" "suspicious" or "pathological". Before the transfer to the labour ward the CTG showed some early decelerations with one variable one that did not coincide with the peak of the contractions.

[64] The witness agreed that variable decelerations could mean there was a cord compression although this was something that often occurred fleetingly. She disagreed that a CTG should have been categorised as suspicious at 23:40 on 23 August. The midwife's note of "liquor volume nil" at amniotomy meant either that the ARM had not been successful (it was noted to be difficult) or just that the liquor was not immediately visible.

[65] Dr Sripada had attended to look at the trace at 01:10 on 24 August and had made an abbreviated note which read (when extended):

> CTG baseline 155
> Good variability
> Occasional early decelerations
> Cervical dilation 1-2 cm
> Plan for review in 30 minutes

The trace at that time was between normal and suspicious and she disagreed that it showed variable decelerations. The uterine activity of two contractions in ten minutes at that time was not enough to progress labour and would need augmentation (by syntocinon). When she reviewed the CTG again at 01:35 it had improved and she recommended syntocinon. It was difficult to talk about variability of the foetal heartrate over a 20 minute period as you need a 30 minute spread but the variability had improved and continued to improve thereafter. While at 02:10 the midwife had noted grade 2 meconium and informed Dr Sripada, this was normal in postdates labour. Although it could signify foetal distress the trace was reassuring. Dr Sripada disagreed that she ought to have been concerned about the foetus at that stage.

[66] By 01:40 the pursuer was contracting at the rate of 1 in 7 minutes and the foetal heartrate variability had reduced but was still meeting the variability expectation of 5bpm from the baseline. During a baby's sleep phase the variability reduces. Dr Sripada disagreed that there were decelerations around this time. There was some up and down movement which was not clinically significant or long enough in duration to be concerning or even be categorised as a deceleration. Her recollection of the definition of a clinically significant deceleration was a drop of more than 40bpm from the baseline for more than two minutes. Looking at the trace from about 02:30-02:50 (No 6/92 of process, page 32) she disagreed that this showed decelerations, they were momentary fleeting dips of 20-30 seconds at most and some loss of contact. Between 02:50 and 03:00 there was a loss of contact after the patient had vomited. Thereafter there was a 20 second dip and a quick recovery, not a deceleration of clinical significance. Between 03:20 and 03:50 (No 6/92 pages 33 and 34) there were a number of drops seen and the trace could be described as between

normal and suspicious. The first two decelerations were early, not variable, lasting only 20 seconds and coinciding with the peak of the contractions. There were no decelerations in the second half of the trace on that page.

[67] Dr Sripada disagreed that there were decelerations shortly before 04:00. There was a loss of contact at about 04:06 and then a mark that looked more like a deceleration although it was hard to decide as the patient was not in a favourable position. Thereafter she could see only one dip accompanied by a note on the CTG that the patient had been put on to her left side. Taking the whole trace up to 04:10 she would describe the trace as switching between normal and suspicious but the baseline was always normal. The baseline variability was approaching five although could be described as borderline. The decelerations had been early but after 04:00 they did become incoordinate with the contractions and more frequent. It was the borderline variability and the possible deceleration that took the trace to suspicious. Her recollection was that in 2008 to fall into the suspicious category there had to be 90 minutes of reduced variability. The expression atypical variability was not used or in existence at that time just "normal" "poor" and "variable".

[68] The note she made at around 04:10 confirmed that the baseline variability was acceptable given that the patient had been given morphine, that there were early decelerations but that the foetus was quick to recover. The contractions were 4/5 in 10 minutes. On vaginal examination she found the cervix 3cm dilated and fully effaced but with a slightly eccentric shape which she had drawn. Her abbreviated plan stated (when extended);-

> Continue as pH not possible
> Review CTG in half an hour:
> CTG – not bad enough for caesarean section

[69] Dr Sripada was sufficiently concerned to want FBS to test the baby's pH. She was not alarmed such that she would be making a call that the trace was pathological, but wanted to review the trace in 30 minutes and perform a clinical review herself at that time. The reduction in variability had to be seen against the background of the patient having had morphine. It simply was not bad enough to call it a pathological trace and she disputed that she should have gone straight to caesarean section at that point. She disagreed that if she wanted but was unable to perform FBS she should have gone straight to a caesarean section. She had specifically recorded that the CTG was not bad enough for that. Having balanced all the factors her clinical judgement had been to review after half an hour. All of her thoughts had been rounded off in the conclusion that it was not bad enough for a caesarean section. Had she categorised the trace as pathological she would have decided upon a caesarean section at 04:10.

[70] The timing of a caesarean section would have depended on theatre availability. The patient had an appendicostomy so additional personnel would normally have been required. Attempts would have been made to do it in half an hour but that would not have been guaranteed. Ultimately LD had been born within 16 minutes of the decision to go to theatre but that was because he had suffered foetal tachycardia. It was only when it became so urgent that the need for a surgical registrar could be overridden. She was not sure whether she had been aware of the NICE 2007 Guidelines on intrapartum care (No 7/7 of process) and in particular Table 6 at page 45 (para [4] above) in 2008 as there was a long phase when NICE Guidelines would be introduced. Her practice was to go with the hospital guidance and her notes certainly did not use the categorisation of typical and atypical decelerations. She remained of the view that the CTG at 04:10 was at worst suspicious, in

keeping with the view of the charge midwife who probably had twice the experience she had in looking at CTGs. She would disagree with anyone who stated that the trace was pathological.

[71] Dr Sripada thought it was possible that she could have done a pH half an hour or so after 04:10 despite the eccentric shape of the cervix. She could not rule it out and all those thoughts were reflected in her note. A consultant would have been called if the trace had been pathological. She agreed that a primigravida who was only 3cm dilated would take some hours to deliver and so she was not really expecting the pursuer to undergo a vaginal delivery. She disagreed that the background circumstances were suggestive of foetal distress.

[72] When the sudden drop in the foetal heartrate to 57bpm occurred and Dr Sripada was alerted she took the immediate decision to go to theatre as this was a category 1 emergency. Her later note of 05:50 was written in retrospect as she had been so busy. The foetal bradycardia had started at 04:42 and by the time Dr Sripada saw it she was making decisions while looking at it. She had become aware of the ultimate outcome for LD in 2008

[73] Under cross-examination Dr Sripada confirmed that her discussion with Dr Crichton, a consultant obstetrician and her mentor, was immediately after the delivery and for Dr Sripada's own learning insight. She recalled feeling a bit reassured as Dr Crichton felt that the interventions were reasonable and that she had seen far worse CTG traces. Dr Sripada confirmed the ward rounds system and recalled that any patient deemed high risk would be seen by a doctor.

[74] The witness disagreed that the progress of the pursuer's labour up until 04:10 on 24 August had been slow. The latent phase, prior to the patient being 3cm dilated had not been particularly slow. By 00:40 on 24 August the pursuer was only 1-2cms dilated and not

in established labour. At 04:10 labour had been established as the cervix was 3cms dilated and within 40 minutes of that was fully dilated, an extremely short period and unexpected for a first baby. The total 62 hour period was not uncommon in AMH in 2008 for a primigravida showing no signs of labour at all when she came into a hospital. It was a question of prioritising patients.

[75] The alternative to continuing with a prolonged induction was to discuss other options, in particular a caesarean section, but there were risks of an abdominal route to delivery both to the mother and the baby. In this case there was an additional surgical risk because the appendicostomy site was very close to where the foetus lay. Concerns included injuries to the bowel, bladder or urethra and risks of infection and thrombosis. The risks involved in ending induction and performing a caesarean section can be higher than continuing with the labour, although the risks of deteriorating placental function and of stillbirth exist also have to be considered.

[76] There was nothing to suggest that meconium had been found prior to 01:55 on 24 August. Grade 2 meconium (darker in colour) was noted shortly thereafter when the pursuer mobilised. Dr Sripada had delivered healthy babies after seeing grade 3 meconium. Thick and fresh meconium was recorded at 03:15 and then a small amount of meconium liquor on the pad at 03:40. No meconium was seen by Dr Sripada when she examined the patient vaginally at 04:10 or she would have noted it.

[77] If the baseline variability was less than 5bpn it would have been clearly visible on the boxes reproduced by the CTG. Using the NICE Guidelines, the trace did not come anywhere close to there being non-reassuring features right up to 04:10. There were no variable decelerations with over 50% of the contractions for a period of over 90 minutes.

There was one atypical deceleration at 04:05 and 8 or 9 contractions in that 30 minute period and so there was nothing particularly abnormal.

[78] The witness agreed that if she had continued to try but fail to perform FBS she would ultimately have decided on a caesarean section. The caesarean section she performed later was marked as a category 1 because the foetal bradycardia meant there was a real risk to the life of the baby. A category 2 is less urgent, where there is no imminent danger to the life of the baby or mother and depending on theatre availability might have to wait for much longer. Had she thought that the CTG was pathological at 04:10 she would have stopped the syntocinon and discussed a caesarean section, still aiming for 30 minutes to delivery but with the caveat of wanting a surgical registrar present.

[79] The cord around the baby's neck in this case had an unknown cause and was an unavoidable situation. It happened in a certain proportion of cases including during vaginal delivery. The cord is always cut and clamped to stop the gasses. In this case the baby came out flat but the blood cord gas results indicated that the foetus was not compromised. The arterial result indicated that an acute incident (cord occlusion) had occurred involving a sudden change within minutes from normal to abnormal.

[80] In re-examination Dr Sripada accepted that the AMH chart contained some of the same definitions as the NICE Guidelines including reference to atypical variable decelerations and late decelerations. Her view was that when looking at a CTG a brief period of improved variability "broke the chain" of reduced variability. A statement was put to her that she had given in 2015, which she considered was consistent with her evidence that this was not a pathological trace albeit there were suspicious features.

Dr Cooper

[81] Dr Elizabeth Sarah Cooper, a consultant in obstetrics and foetal medicine at Edinburgh Royal Infirmary is an experienced consultant of over 20 years and works primarily in emergency obstetrics. She is also a trainer in various aspects of obstetric practice and has published widely in her field. She prepared an expert report (No 6/46 of process), dated 3 March 2020. Dr Cooper explained that she had erroneously used the 2017 NICE guidance in relation to the classification of the relevant CTG readings and had realised that subsequently. She had looked at the matter again as against the 2007 NICE guidance and her opinion had not changed. Having been "blindsided" by her mistake she decided that, in addition to satisfying herself she would anonymise the CTG trace and showed it on that basis to two colleagues at work who, she said, agreed with her interpretation.

[82] On the decision not to give Prostin on 22 August 2008. Dr Cooper considered this illogical, given that the contractions were only 1 in 10/15 minutes. A membrane sweep would not induce the labour when the first dose of Prostin had not precipitated it. While the risks of stillbirth were small they increased fairly steeply after 42 weeks and that would have to be borne in mind. Had a medical review been sought at 8.50 on 22 August a doctor's advice would have been to give the second dose of Prostin. Any risk of hyper stimulation would have been evident already. The consequence of not giving the second dose of Prostin meant that labour was effectively not being introduced at that point and the patient was just resting. Had the pursuer's situation been discussed at a ward round on 22 August Dr Cooper would have expected a doctor to give another dose of Prostin themselves or at least prescribe more Prostin. A competent obstetrician would have at least suggested another dose of Prostin.

[83] If told that the patient's contractions had intensified a prudent registrar would still review matters after a couple of hours to reassess the situation. If matters had not changed the advice would have been to administer more Prostin. On the events in the morning of 23 August, Dr Cooper was of the view that the contractions were not strong enough to withhold Prostin. The pursuer should have been examined and Prostin administered if it was not possible to do ARM. Further, a medical review should have been sought when the possible meconium staining was observed. The staining would indicate that the membranes had ruptured and that meconium was present in the liquor. Although meconium stained liquor is present in approximately 15% of post-dates pregnancies it can be a sign of foetal distress. Had a medical review been sought it is likely that the patient would have been transferred to the labour ward for continuous monitoring and augmentation. This would allow labour to proceed and the necessary antibiotics to be administered. Even if the forewaters were intact at that time there could still have been meconium from a hind water leak and so there should have been a concern about the membranes having ruptured. It would not have been unreasonable to perform an amniotomy with a Bishop Score of 7. An obstetrician would have given advice to that effect.

[84] Turning to the CTG, Dr Cooper defined a deceleration as a drop in the foetal heart rate by 15bpm for at least 15 seconds. Early decelerations, where the nadir of the deceleration is in time with the peak of the contractions, are caused by compression of the baby's head fleetingly during the contraction and are not concerning. Late decelerations, occurring after the peak of the contraction and characterised by their nadir being after the contraction has faded away are a sign of hypoxia. Typical variable decelerations are the most common but where there is a drop of less than 60bpm from the baseline and a return to it within 60 seconds they are of less concern. "Shouldering" is a small acceleration before

the deceleration where the compression of the cord is minimal and the heart rate soon returns to normal. Typical variable decelerations are not associated with hypoxia but if they lose shouldering such that they become deeper and slower to recover then ultimately they will be characterised as atypical. It is difficult to be dogmatic about categorisation. If the baseline variability is normal then the loss of shouldering for a period may be tolerated.

[85] The CTG trace illustrated these points. At 13:10 on 23 August (No 6/92 of process, page 19) one could see examples of typical variable decelerations, where the baby's stress receptors responded by his blood pressure going up and the heart rate going down. They were of a different shape to atypical variable decelerations where the shouldering is lost, they are much deeper, last longer and the recovery is slower. Dr Cooper acknowledged that the distinction between typical and the atypical decelerations was tricky and stated that the NICE 2007 Guidelines had caused a lot of confusion.

[86] The interruption of reduced non-reassuring variability by a period of normal variability would break the cycle; if there was reduced variability for 40 minutes but then normal variability for 40 minutes the trace would not fall within the non-reassuring category. However, it was always a holistic process and not assessed solely on the basis of the readings. An obstetrician would look at the background and it was very much a matter of professional judgement based on pattern recognition. Where the baseline variability was definitely more than 5bpn at all times that would be very reassuring. After 90 minutes of no real variability from the baseline the trace would then have to be reassuring for quite a while before you would reset matters. The determination of risk was the first part of the "Dr C BRAVADO" mnemonic. If using the AMH algorithm, a single early deceleration seems to be regarded as non-reassuring but there was no guidance on how long decelerations would go on for before being categorised that way. If that was the guideline Dr Sripada was using

it was difficult to say whether one would regard an early deceleration and variable decelerations as two separate non-reassuring features or one. Dr Cooper had never seen classification written precisely in that way. The algorithm did not specify how many atypical variable decelerations were necessary for the abnormal classification, it just referred to them in the plural.

[87] When she realised she had used the 2017 NICE Guidelines in error Dr Cooper had applied the guidance contained in the 2007 NICE Guidelines and in particular table 6. She agreed that most decelerations in labour are variable and that the NICE 2007 Guideline (table 5) classification of traces as normal, suspicious or pathological was in almost identical terms to that being used in AMH at the material time.

[88] The CTG was recorded in the medical notes as suspicious at around 01:00 on 24 August and was reviewed by Dr Sripada then and at 01:45 when it the CTG was reassuring. It became suspicious again by 03:45 and the critical period was after 03:50 hours. In Dr Cooper's view the CTG was pathological by 04:10 because the decelerations of the type seen on the trace were not early decelerations being too deep and not a mirror image of the contractions. Looking at the whole period, a registrar should have been thinking how long she would let the situation continue given the background of no liquor. It was okay to continue to monitor the situation for an hour or two after 01:10 because the variability was normal. At 03:14 there was a variable deceleration which did not really have shoulders and its nadir went down to 90bpm. It could not be called a typical deceleration and took place in the context of reduced baseline variability.

[89] From 03:20-03:50 the contractions were 4/5 in ten minutes and the baseline started at 155 but reduced to 150bpm. The decelerations with the contractions were variable and none were typical and overall the baseline variability was less than five bpm which was the

most striking feature. There were 6 contractions in the 10 minutes to 04:07, the foetal heart rate was 145bpm and became more tachycardic approaching 04:10. The variability was less than 5bpm and the decelerations with most contractions were atypical; the one at 04:07 was quite slow to recover. Overall the three concerning factors were (i) the number of variable atypical decelerations, (ii) the reduced baseline variability and (iii) the lack of accelerations. An ordinarily competent registrar acting with ordinary skill and care at 04:10 would take the whole picture into account including the fact that this was a primigravida, the risk of placental insufficiency against a backdrop of no liquor and thick fresh meconium having been found at 02:10. The CTG was pathological and the registrar knew she could not perform FBS as the cervix was not dilated enough. Accordingly by 04:10 she was obliged to deliver the baby due to the risk of hypoxia and to do that within half an hour. The CTG was pathological using the NICE Guidelines and the AMH Guidelines would have rendered it pathological before that point. If an obstetrician suspects a pH of less than 7.2 the only logical conclusion if FBS is not possible is that the baby has to be delivered.

[90] Dr Cooper noted an entry in the medical notes (page 316 of the joint bundle of medical records, No 116 of process) by a Dr Danielian, then a senior consultant obstetrician at AMH, recording a discussion he had with the pursuer and her mother. It stated that the CTG was not reassuring and that the situation "maybe merited FBS about ½ hour before delivery - whether this would have made a difference to outcome is not certain". The witness had no criticism of the delivery process following the acute event.

[91] In Dr Cooper's opinion, had it not been for the failures to give Prostin and to refer matters to the medical staff for decision-making and/or to respond appropriately to the finding of possible meconium staining LD would have been delivered well in advance of 04:50 on 24 August. The failure on the part of Dr Sripada was at 04:10 when she ought to

have proceeded to perform a caesarean section. Had she done so LD would have been delivered before 04:50. The witness agreed with Professor Murphy's view that what happened was a precipitous labour, but thought that the events under scrutiny had been aggravated by the diminished reserve available to the foetus with a gritty calcified placenta and the prolonged induction.

[92] Under cross-examination Dr Cooper accepted Professor Murphy's conclusion (No 7/3 of process at 9.3) that what happened to LD was that as his head descended into the birth canal the umbilical cord occluded and stopped the blood supply. It was a severe acute event close to birth and not one in existence much before delivery, involving a sudden progression from 3cm to 10cm dilated. The cord gas results post-delivery were consistent with that conclusion.

[93] The witness had no information about the ward rounds at AMH or the particular pressures on the labour ward in question. She was aware of the importance of keeping up the flow of patients between an antenatal induction unit and the labour ward and of overwhelming the labour ward. Sometimes women already in labour had to take priority but that had to be balanced against an immediate need for someone to be transferred. She accepted that when the pursuer needed to go to the labour ward she was taken there straightaway.

[94] CTG monitoring was used as an adjunct to labour management with a view to reducing instances of perinatal cerebral palsy. The nomenclature used had definitely changed over the years and the concept of variable decelerations had developed. As 80-90% of decelerations were variable, these would commonly be seen on CTGs and multiple typical decelerations would not be sinister unless they changed appearance. The sight of one atypical deceleration would not result in a conclusion that the trace was pathological. Under

the NICE 2017 Guidelines 30 minutes of atypical decelerations would result in a conclusion that the trace was pathological, which in this context means abnormal and does not raise any connotation of death. The NICE 2017 Guidelines are less stringent thank the 2007 Guidelines in terms of defining a trace as pathological. Dr Cooper accepted that an obstetrician would be expected to use the hospital guidelines. She had not been made aware of the agreement between parties in this case about the guidelines in place for labour ward staff at AMH in 2008.

[95] Dr Cooper agreed that two variable decelerations would not amount to a non-reassuring CTG *per se*. She had never seen a definition of a variable deceleration as one of at least 50bpm from the baseline. She agreed with the text in the AMH Guidance that the more adverse features that were present on a CTG the more worrying the pattern. She accepted, hesitatingly, that the morphine the pursuer had early in the morning on 24 August would have entered the foetal bloodstream and so had a sedative effect that had to be taken into account. FBS would have proved whether the reduced variability on the trace was due to morphine or not. While it was indisputable that different obstetricians would interpret the same CTG trace differently at different times, that was likely to be because full clinical information was not given.

[96] The witness was asked about her draft supplementary report, (No 6/79 of process), which suggested that in the circumstances in which Dr Sripada found herself, she had a choice of seeking a review from a senior registrar or consultant or proceeding to caesarean section. The witness explained Dr Sripada's grade having been confirmed she considered that she ought to have known what to do without asking a consultant. Dr Sripada had not asked for any senior review but had she done so it would likely have been a brief phone call with advice to go ahead with a caesarean section. On being shown the relevant passage

from the AMH Guidelines Dr Cooper acknowledged that these narrated that authorisation had to be by the senior registrar or consultant on duty. However, a telephone call would be enough, something also required in her own unit.

[97] On the flowchart used in AMH, Dr Cooper accepted that where a trace was classified as pathological and FBS was inappropriate, the guidance included encouraging the mother to adopt the left lateral position. That was simply to see as a further check whether if moving position took pressure of the cord. In the pursuer's case this had been attempted several times during the labour and had not worked. So while it was appropriate in principle, you would be able to see fairly quickly if that had been the reason for the abnormality. Here the suspicions about the trace were longstanding and the flowchart was giving advice in an acute situation.

[98] Dr Cooper accepted that at 04:10 and using the AMH classification of caesarean sections as (i) emergency, (ii) urgent, (iii) scheduled and (iv) elective there was no immediate threat to the life of the pursuer or the foetus. However if the obstetrician is considering FBS there is a reasonable chance that the pH is low and so a caesarean section in 30 minutes time was indicated. For a slightly less urgent situation 75 minutes was appropriate. The grading system for caesarean sections was slightly unsatisfactory but if the baby might be acidotic then the rule was to try to deliver within 30 minutes.

[99] The witness confirmed that the two key areas of disagreement between her and Professor Murphy were first, whether or not there was baseline variability of about 5bpm between 03:30 and 04:00 and secondly, whether the decelerations could be regarded as early or variable at that time. In Dr Cooper's view the declarations were not a mirror image of the contractions. She accepted that a disagreement on whether baseline variability was 5bpm just under 5bpm was something that consultant obstetricians using their best efforts could

have and that the view contrary to hers was a judgement that a reasonable and competent obstetrician could reach. If the baseline variability was 5bpm, that alone would be enough to prevent the CTG being classified as pathological at the relevant time.

[100] Between 04:00 and 04:30 there continued to be variable decelerations albeit not as steep in amplitude as previously. You could not reclassify the trace in as short a period as ten minutes so an improvement after 04:10 was irrelevant. The trace was in Dr Cooper's view still pathological using the NICE 2007 Guidelines and so delivery was indicated. If the trace was suspicious rather than pathological at 04:10 there was still an argument for proceeding to caesarean section but perhaps with a little less urgency. The marked and dramatic change in the CTG readings from 04:40 took it, if suspicious, to pathological then pre-terminal in about eight minutes.

[101] It was not reasonable of Dr Sripada to think at 04:10 that she could perform FBS in half an hour even if her conclusion about the CTG was accepted. It was not clear what she thought would happen other than that she must have hoped that the trace would return to normal. Dr Cooper acknowledged that she always knew there had been a poor outcome in this case but had tried to put herself in the shoes of the reasonable registrar. While Dr Terry's letter to the pursuer's GP was a contemporary review written shortly after the events, she had seen paperwork indicative of a different opinion by Dr Danielian, although both views could be reasonable.

[102] Dr Cooper accepted that there had never been a finding of a presence of meconium on the Westburn Ward. Examination with a gloved finger was not always enough to ascertain or discount its presence. A doctor should have been asked to review the patient when there was a suspicion of meconium. That was practice both in 2008 and currently. In all aspects of induction, risks accompanied decisions to delay and the clinician had to

balance the risks of intervening with the risks of delaying. Although by 2008 induction of labour was managed by midwives, because the AMH Guidelines had not been strictly adhered to, a medical review should have been sought.

[103] In re-examination it was asserted to Dr Cooper that if there were two reasonable options for Dr Sripada at 04:10 namely (i) perform a caesarean section or (ii) wait half an hour, then the legal test of failing to act as an ordinarily competent obstetrician acting with ordinary skill and care would not be met. Dr Cooper responded that there had only been one reasonable option available at 04:10 and that was to perform a caesarean section.

Defenders' case

Professor Sanders

[104] Professor Julia Sanders, a professor of clinical nursing and midwifery, holds a joint post between Cardiff University and the local Health Board and has enjoyed a long career worked in a combination of academia and clinical practice. She prepared a report for the defenders in these proceedings (No 7/17 of process) to which is her CV is appended. She was involved in the development of the NICE Guidelines on intrapartum care between 2001 and 2007. Her clinical practice takes place within the largest maternity unit in Wales. Her evidence focused on the points of disagreement in the joint midwifery report (No 6/72 of process).

[105] Professor Sanders confirmed that the process of induction is frequently more prolonged than suggested in any guidelines, particularly the first stage. The amount of care required is dependent on how a patient copes with Prostin, whether she is contracting and whether there is any concern about the foetus. For many women induction takes longer due to "Prostin pains" - uterine contractions caused by the prostaglandin, with pain and

discomfort but very little change to the cervix. The second dose of Prostin can be administered after a minimum of six hours, but it needs to be used with caution because it cannot be removed if given in a gel or tablet form. If a woman is contracting a midwife might well wait and sweep the membranes rather than administering a second dose. The risk of hyperstimulation should not be underestimated. As midwives would be aware that women may have another 12-18 hours once transferred to labour ward, allowing rest periods during the early stages of induction is good practice.

[106] The witness had reproduced information from Public Health Scotland (No 7/17 of process, page 13) which explains that a typical induction can take up to 2-3 days before going into established labour. Decisions during post term induction decisions tend to be taken by midwives, though in AMH in 2008 only the doctors prescribed the Prostin. A vaginal examination six hours after the first dose to see whether a second dose was appropriate would be normal. A Prostin information leaflet (number 7/19 of process) stating that if a woman had no contractions after six hours then the second tablet could be used was "ultra cautious". It was always a judgement whether to give a second dose. The pursuer had been contracting frequently at 22:40 on 21 August and so it was appropriate not to give more Prostin. Overnight the contractions did settle and she got some sleep, then on the morning of 22 August the contractions at that point were 3 in 10 minutes which is not particularly frequent but they were regular. MW Braid's decision to perform a membrane sweep and not administer more Prostin was "cautious and quite sensible". It was clear she was trying to stimulate the onset of labour without additional medication.

[107] There had been no need to seek a medical review before making the decision not to give the second dose of Prostin on 22 August. On the basis of the contractions, the conclusion of any discussions with the medical staff would likely be that as the pursuer may

well be about to go into labour there was no difficulty waiting. It was wrong to suggest that an obstetrician would have come in and insisted on a second dose. The midwives are responsible for decision-making about the first two doses and a rest day of 24 hours thereafter was permissible. Professor Sanders disagreed that that no ordinarily competent midwife would have failed to give more Prostin on 22 August. There were other midwives and medical staff around who would have intervened and told MW Braid to administer the second dose of Prostin had her actings been inappropriate.

[108] The witness acknowledged that the plan at 17:30 on 22 August was for vaginal examination and assessment. It is not clear what happened although a CTG had taken place between 16:30 and 17:30. By 20:30 the pursuer was having contractions every five minutes, so the decision may have been to hold off as things seemed to be moving. Vaginal examination is very intrusive and the pursuer had six in total on the antenatal ward. The idea that one should take place every 3-4 hours just to see what is happening was unacceptable. There did seem to be a bit of gap between 17:30 and 20:00 when the uterine activity was assessed through palpation, but nothing turned on that. The pattern overall portrayed a very typical picture of induction with an indication that labour would progress without more Prostin. Again a specific medical review was not required as the plan was clearly to wait and see if the contractions became more frequent and perform ARM when possible. Medical staff could decide during the ward rounds if the midwives were doing something wrong.

[109] On MW Dick's note querying "? light meconium staining" and MW Henderson's query of "? meconium ? old blood", these made sense as light meconium would look like a smear of something dark or yellowy if in liquor. Prior to the note of trickling there were no reports of any discharge and many women see cervical mucus on their pad. Sometimes it is

clear but often it is mucoid, slimy and often bloodstained. It can continue through the early stages of labour and often again at the end. Such queries required further investigation to ascertain whether it was just discharge or whether the membranes had ruptured. Midwives will carefully inspect the woman's pad in the sluice and make an assessment. MW Dick had made a full assessment and proceeded with great care to put her finger in the cervix to exclude the presence of meconium. Professor Sanders' interpretation was that the midwife was as confident as she could be that there was no meconium draining.

[110] The independent midwives had agreed (No 6/72 of process, question and answer 22 at page 17) that it was for a midwife to keep checking a woman's pad if there was a suspicion of meconium and that only if there continued to be a suspicion thereafter should a doctor be notified. If the suspicion was not confirmed then unless there was something new there would be no need to seek a medical review. It did not appear there had been any meconium draining because that would have been continuous. The 12 hour interval between the first suspicion of meconium and MW Henderson's query reduced considerably the chance that what had been seen at midnight was meconium. The important thing was to check the baby, which had been done by commencing a CTG. There was a low threshold for reporting meconium; had there remained a clear suspicion the doctor should have been called and the pursuer taken to the delivery suite but that was not how matters progressed.

[111] It was noteworthy also that when further Prostin was given after the examination at 14:30 on 23 August there was no suggestion that anything resembling meconium was seen. A vaginal assessment was performed and meconium would have been evident on a glove had it been present. The subsequent entries for 23 August make no note of any suspicion of meconium at all, despite there being three consecutive examinations.

[112] Professor Sanders was unsure why a criticism about the administration of Prostin on 23 August had been made. The midwives would be constantly aware of what was happening and of wanting to progress matters. There would have been a ward round later that day and no need to call for any medical review as the presence of meconium was never confirmed. While the total of 57 hours that the pursuer had spent on Westburn Ward was not ideal, it was not exceptional, within the parameters of what the Public Health Scotland leaflet stated and in keeping with accepted practice. The introduction of the new cases during the proof had not altered her view.

[113] The witness had reviewed all of the CTG records and expressed the view that between 03:00 and 04:00 on 24 August the trace had gone from normal to borderline suspicious but no worse than that. The baseline variability remained at just about 5bpm throughout, dropping a little when morphine had been administered but then recovering. By 04:00 the trace had become suspicious and the fact that the midwife had already sought a medical review at 03:50 indicated an appropriately cautious approach. The CTG remained suspicious after Dr Sripada's review up until about 04:35.

[114] Under cross-examination Professor Sanders acknowledged that the vast majority of her expert reports were prepared for defenders. She agreed in general terms about the risks in post-term pregnancies, which rise steeply after 42 weeks albeit from a low baseline. Some mothers do refuse induction and go to 43 weeks and beyond.

[115] She described a membrane sweep as an adjunct to induction that can reduce the need for further prostaglandin. Side effects of prostaglandins are not common because they do tend to be used with caution. Although hypertonus can be treated it is not always successful and only reduces unwanted uterine activity. Contraindications against giving a second dose of Prostin would include, for example, an abnormal CTG. When deciding whether to give a

second dose of Prostin the prerequisite was a CTG and discussion with the patient; palpation of the abdomen was not absolutely essential but would often take place. If the patient was contracting strongly there was no need to palpate. She would not say that any midwife who did not palpate the abdomen before making the decision was negligent because there were some women, such as the obese, where it simply could not be done. A midwife would be aware that a woman who had given birth before would be more accurate about reporting labour but would equally be aware of the risk that a woman was already in labour when deciding whether to administer a second dose.

[116] Professor Sanders would not have expected midwives to wake up the pursuer to give Prostin at any time; sleeping and the presence of strong contractions were both scenarios where a midwife might reasonably withhold the second dose. Those reasons explained the absence of a vaginal examination throughout 22 August. A woman being induced at T+13 should be treated the same way as someone being taken in at T+11 days.

[117] The witness agreed that the presence of forewaters felt on examination did not exclude membrane rupture because there could be a hindwater leak. She disagreed, however, that MW Dick ought to have re-checked the clean pad within an hour of her examination of the pursuer. She had spent at least 45 minutes with the patient and had checked for the presence of meconium on examination. There was no further vaginal loss and she will have been confident that there was no meconium. Question and answer 22 in the joint report related to a labouring woman's pad and on 23 August the pursuer was not that category.

[118] The witness agreed that the AMH Guidelines on CTG interpretation were rather outdated, though didn't know when there had been a transition to the 2007 guidance there. Most decelerations were variable and caused by fleeting cord compression, typically lasting

for less than 60 seconds and dropping less than 60bpm from the baseline, a definition from "Foetal Monitoring in Practice". She used that definition because NICE does not define variable decelerations or atypical decelerations. She agreed that applying only the RCOG 2001 guidance and very strictly, the CTG in this case had become pathological by 04:10. When considering the actions of the midwives the witness tried to be pragmatic as real life experience did not represent perfect practice.

[119] In re-examination the witness said she regarded the AMH Guidance as a guideline but you would need background knowledge before it would inform practice. The algorithm and flowchart would not change her assessment of the CTG. The issue was that the 2001 guidance did not include anything about frequency such that arguably even one atypical variable deceleration would categorise the trace as pathological. One of the main changes in 2007 was to remove that. Very few, if any, clinicians would adopt such a purist application of the 2001 RCOG guidance because occasional atypical variable decelerations can occur in an otherwise healthy situation. It would be absurd for someone to state that two atypical variable decelerations were sufficient to categorise a trace as pathological. The overall categorisation would be broader and take into account the reassuring features.

Professor Murphy

[120] Professor Deirdre Murphy, a professor in obstetrics at Trinity College, Dublin also undertakes clinical work at a Dublin hospital which delivers about 8,500-9,000 babies per annum. She prepared a report (No 7/3 of process, dated 14 February 2021) with a CV appended. She has worked in both England and Scotland and was a consultant obstetrician at Ninewells in Dundee from 2002-2006. She has worked extensively with the RCOG in the UK and conducted research on the origins of cerebral palsy and on induction of labour and

assisted with draft guidance for midwives and obstetricians. She has particular research interest in brain injury caused by poor oxygenation or trauma to the foetus prior to or during labour, undertaking studies on babies who have died to ascertain the causes and timing of injury. She has published extensively in her area.

[121] In Professor Murphy's experience a hospital induction of labour can take 2-3 days to achieve. While the majority of inductions will be completed before T+14 a proportion will go beyond that. If induction is carried out too early it might fail if the cervix is unfavourable and/or the baby can have transient respiratory complications.

[122] On the administration of Prostin, the difficulty was that if you give an agent to a woman who is already contracting there is a risk of hyperstimulation which can have negative effects on the blood supply to the foetus. Artificial prostaglandin lasts in the bloodstream for 4-6 hours, but can initiate uterine activity which will last long after that. Spontaneous labour is a more natural phenomenon and better tolerated by both mother and foetus. If a midwife assessed that a woman was beginning to approach spontaneous labour then the correct approach was one of "expectancy", to wait and see whether that occurred. If a woman reported contractions of three in every ten minutes to a midwife it could be patient mismanagement to administer more Prostin.

[123] The witness did not consider that the decision to withhold the second dose of Prostin on 22 August could be criticised as there were uterine contractions present at the material time that might indicate the spontaneous establishment of labour. On the noting of vaginal discharge thought to be either meconium or old blood Professor Murphy confirmed that on vaginal examination a midwife can state fairly categorically that what has been passed is not meconium by putting one or two gloved fingers to feel the forewaters. This was a clinically sound method of discounting the presence of meconium.

[124] Professor Murphy had conducted a full review of the CTGs using the 2001 RCOG algorithm reproduced in the AMH guidance. She thought that the algorithm and foetal monitoring parts had been carried forward to the NICE 2007 Guidelines. There was an element of subjectivity in interpretation of CTGs although the objective criteria included the baseline heartrate, the variability from the baseline, acceleration and decelerations and their timings. If one looked at a CTG trace over a period one observer may classify it as borderline and another may say it is normal depending on their focus. Obstetricians were trained to try to interpret the trace objectively but it was not straightforward. Anyone asked to interpret a 30 minute section of a CTG blindly ie without any extraneous information, may give a slightly different interpretation if asked to conduct the same exercise two years later. Separate observers may well interpret differently. If three or four experts interpret a CTG trace and there are differences, the correct interpretation will be one that the majority reach. Importantly, if the interpreter knew the adverse outcome in a particular situation they will inevitably classify it as more abnormal than when they are ignorant of it. This was supported by publications including "*Knowledge of Adverse Neonatal Outcome Alters Clinicians Interpretation of the Intrapartum Cardiotocograph*" (*D Ayres-de-Campos and others*, No 7/11 of process).

[125] In chapter 5 of her report Professor Murphy had concluded that the trace in the pursuer's case was normal overall other than towards the end when it was at most suspicious. During the critical period the CTG was reassuring. Categorising a trace as "suspicious" may be something that is transient and caused by the way in which the patient is lying but nonetheless warrants observation and repeat to satisfy oneself that the foetus is well oxygenated. Having looked at and reviewed the trace in this case several times Professor Murphy stood by her conclusion.

[126] The critical CTG trace illustrated that from about 03:30 until 04:20 on 24 August the pursuer's contractions were about 4/5 in 10 minutes but not strictly regular in pattern and the space between the contractions differed. At about 03:20 the readings were at the lower end of normal but the context was that the pursuer had received opioid analgesia which reduces foetal movement. There were occasional early decelerations which is the normal physiological response of labour and indicates transient cord compression. So long as the early decelerations are not too deep and the reading reverts to normal before the contraction ends there is no concern. Taking the period 03:30-04:00 Professor Murphy concluded that the CTG was normal or at most suspicious. The baseline heartrate was normal, the variability from the baseline was borderline at around 5bpm but acceptable as the pursuer had received morphine. There were some fleeting early decelerations of no great concern. Even the most pessimistic interpreter would regard the trace as at most suspicious. The appropriate action was that taken, to monitor the situation and seek a second opinion if concerned.

[127] At around 04:00 the trace showed a number of decelerations, two of which were definitely early and one of which was either early or variable but could be described as variable. However the patient was "left semi recumbent" at 04:05 and thereafter the variability improved to more than 5bpm. The one variable deceleration at 04:05 occurred in conjunction with a contraction and recovered before its' end. As the heartbeat went down to 80bpm for more than 15 seconds, it was a "deep early" or variable deceleration but not a late deceleration which would have been slower to recover. An obstetrician would have to look at a 20-30 minute period. If someone reported a late deceleration at 04:05 a reasonable obstetrician would respond by asking about the overall pattern. If it was normal to suspicious overall then the advice would be that it warranted further close monitoring. The

note on the CTG trace that the patient was semi recumbent was really important; if a woman is exhausted and in pain she will slump into a flatter position causing a reduction in blood flow to the uterus and consequent reduction in foetal heartrate. A note was made on the pursuer's trace that she had moved to her left side, optimal for improving blood flow, and the readings immediately recovered. Thereafter there were occasional early decelerations but again these always recovered quickly and the trace showed an improvement in the baseline variability. From 04:20 the baseline was normal at 150bpm and the variability had returned to normal at 5bpm. The few early decelerations seen did not take the reading outside normal limits although the very cautious might categorise it as suspicious.

[128] Had Professor Murphy been the registrar looking at the trace at 04:10 she would have looked backwards to half an hour before and seen that over the period the baseline bpm was unchanged, that the variability was within normal limits with any dip due to the morphine and then returning back to normal. She would have advised the midwives to monitor the situation closely. It was important to consider the labour overall. The context was a long induction process in which latterly there had been meconium present. The cervix was irregular but now 3cm dilated and an experienced obstetrician would need to look forward. She would need to consider whether the patient was going to progress and whether the foetus was showing any signs of stress such that it might become distressed. It was reasonable to question oneself on the options which would include either continuing monitoring for later review, returning sometime later to review or alternatively taking further steps there and then. One option would always be FBS or if the risk of deterioration was too great a caesarean section. An intelligent well-trained obstetrician would process all of that information. Some do it intuitively and might not express their concerns, but Professor Murphy preferred Dr Sripada's approach of recording her thoughts and the

matters she had considered so that everyone would be clear about the options. Her note indicated that she had decided that FBS was not possible and so she had to discount it although she could always revisit it in an hour's time if the woman became 5cm dilated. Professor Murphy agreed that a caesarean section was not indicated but good practice would be to alert the midwife to that possibility going forward. In short, Dr Sripada had done exactly what Professor Murphy would do in this situation. She underwent the correct thought processes and made a decision. It was clear from the notes that she was busy and in and out of theatre, so the midwife would know to contact her or get a second opinion if 35 minutes passed and she did not reappear.

[129] Professor Murphy agreed that the induction process had been managed appropriately both on Westburn Ward and on the labour ward. The ward rounds system described was exactly as Professor Murphy had experienced it in Dundee and in England. While there was less documentation to support the occasions on which the doctors had reviewed the patient through discussions with the midwife the overall management reflected normal practice. "Slow and steady" was preferable to going too fast with induction of labour. While a woman contracting 2 in 10 minutes is likely to be in the more latent stage of labour it was still relevant to a decision to defer the administration of Prostin. It was reasonable to let a patient sleep rather than unthinkingly progress the induction. The actions of the midwives involved were all entirely appropriate and well within their responsibility and remit, so there was no obligation to seek a specific medical review outside ward rounds. That included where the presence of meconium had been queried because there had been careful examinations, ongoing monitoring and no confirmation that the membranes had ruptured. Slow progression was not the same as identifying any breach of duty of care.

[130] The critical difference between Professor Murphy and Dr Cooper was that Professor Murphy would describe the CTG trace just prior to 04:00 on 24 August as suspicious at most. Notwithstanding the other risk factors, it could not be said that a caesarean section was the only option at 04:10. The probable cause of the damage to LD was cord occlusion shortly before birth caused by the rapid dilation of the cervix. Professor Murphy's view was set out in her section on aetiology in chapter 9 of her report with which others had agreed. There were three mains reasons for the adverse outcome. First, the pursuer's cervix was naturally irregular and firm and had responded unpredictably. She had been contracting reasonably strongly over the long induction but the cervix was not dilating. Then she went from 3cm to 10cm dilated in under an hour, something which could not have been anticipated. Secondly, the abnormally precipitous progress once she was fully dilated contributed significantly. If matters progress so quickly, the cord is around the neck and there is a dramatic descent, those caring for the patient have no warning and are unable to resolve the situation. Thirdly, complete cord occlusion meant the baby could survive only up to about ten minutes. The sudden unheralded change took place after about 04:35, before which the CTG had been perfectly normal and at 04:30 there was a healthy baby. Such rapid progress in labour was incredibly uncommon in a primigravida particularly after a protracted induction. The events described were simply not predictable and not caused by any acts or omissions of the obstetrician involved.

[131] Under cross-examination Professor Murphy confirmed that on all prior occasions that she had given evidence in Scotland she had been instructed on behalf of defenders. Her approach was first to establish the standard of care and also any aetiology not available to the doctors at the time. Then she tried to deduce from the records, which are uncontaminated by retrospect, why the clinician under attack reached their decisions.

Finally she applied the legal test to determine whether or not the clinician's thinking fell within the standard. She had reached her opinion before reading Dr Sripada's account.

[132] Professor Murphy knew that the RCOG algorithm was and is used throughout the UK. The midwives at AMH had a laminated version of it with relative stickers and everyone was using it in 2008. She would have expected Dr Sripada to use the NICE 2007 Guidelines, although those had now been superseded. The category of atypical variable decelerations used in the 2007 Guidelines was very contentious and had not been used subsequently. Professor Murphy would expect Dr Sripada to have heard the term "atypical deceleration" but not to use it. The NICE Guidelines did not explain how to classify decelerations as abnormal and AMH guidance was better.

[133] A CTG trace is a dynamic process over time. A variable deceleration will fall more than 40bpm from the baseline but where early will fall less than that. The American classification was much more specific and was produced as Appendix 1 to her report. A deceleration without there being a contraction would be an unprovoked deceleration, whereas decelerations around the time of a contraction had to be characterised as fleeting, early or late. Any deceleration from the baseline lasting more than two minutes would be categorised as prolonged. Any drop from between 15 and 40bpm would be flagged but the specific categorisation of variable decelerations would typically involve a decrease of 40bpm.

[134] The witness accepted that the 2001 guidance referred to atypical decelerations but reiterated that was not a term used in practice. Dr Sripada had interpreted the CTG and noted the various criteria but not formally classified the trace. That was usually provided by the midwife on the sticker as normal, suspicious or pathological and with reference to early, late and variable decelerations. Dr Sripada had been giving a second opinion on a midwife's

classification and had helpfully described the elements of her findings, not just a categorisation.

[135] A doctor advising MW Braid at 08:50 on 22 August would have approved the plan for vaginal examination and a membrane sweep, although the doctor might perform the sweep or administer prostaglandin. While a doctor was more likely to give prostaglandin a membrane sweep was a reasonable alternative and Professor Murphy would have agreed to it. It was an accepted part of clinical practice, mentioned in the AMH Guidance as being 40% successful and is sometimes done when a woman is in labour if progress is slow. Although the NICE guidance did not discuss a membrane sweep in terms as an alternative to Prostin, it was always an option to avoid further pharmaceutical induction. While giving the patient more Prostin on the morning of 22 August would have been the more common approach it was not the only reasonable one and what happened was within normal clinical practice. It was too strong to say that it was a breach of duty not to give Prostin when the contractions were only about 1 in 10 minutes. It certainly would not cause any harm and the timeframe had not been urgent.

[136] The witness agreed that there were occasions when the midwives' plans were not followed through completely, such as the absence of a review at 01:00 on 22 August after the pursuer had woken up. This was simply the result of a humanitarian approach to the patient by letting her rest. An obstetrician would accept a midwife's description of the patient's contractions and every obstetrician would know that Prostin should not be given to a woman who is contracting. The decisions of 22 August were all within normal practice. Any failure to actually perform a vaginal examination later that day was a fault only to the extent that there was no note stating why it was not done. There were some unrecorded gaps in the pursuer's notes and the induction process was protracted, however this was

common in busy units. Delays in this case looked as if they were for logistical reasons and were not breaches in duty of clinical practice, otherwise there would be daily breaches in everyone's clinical practice, including her own.

The witness agreed that the risks of stillbirth rise steeply after 42 weeks' gestation but the prolonged pregnancy was not the cause of LD's adverse outcome.

[137] One had to distinguish between fleeting cord compression and poor profusion with reduced blood flow from the placenta, the latter being of significant concern. An unlodged text "*Electronic Foetal Heart Rate Monitoring - A Practical Guide*" by Wood and Dobbie published in 1989 was put to test reliability. It stated that early decelerations were thought to be associated with head compression. Professor Murphy accepted that but noted the expression "thought to be"; there were no human studies to validate it. Her own approach was to hypothesise possibilities but not state a cause for the decelerations because one could not be sure. She was referred to another unlodged text, by Edwin Chandraharan who she described as a proponent of discussing physiological causes of decelerations. He had set-up a breakaway group and was not involved in mainstream practice having been discredited and removed from the RCOG. In any event, the suggestions that late decelerations were caused by placental insufficiency and variable decelerations were caused by cord compression were not mutually exclusive. She could not accept that all variable decelerations were caused by umbilical cord compression and preferred the views of the internationally accepted experts Donald Gillies and Diego Ayres-de-Campos. What she could accept was the part of the text that categorised late decelerations as abnormal and carrying a concern about worsening foetal status.

[138] The 2001 algorithm simply requires the clinician to follow a path to decide whether action was required; it was the flowchart that provided further detail on classification.

Professor Murphy had been chair of the relevant RCOG committee when the 2001 guidance was prepared. She considered Table 6 in the NICE 2007 clinical guidance to be consistent with the algorithm other than the reference to typical and atypical variable decelerations. In any event, her approach had been to interpret the trace herself and then look at the notes to see how the midwives and Dr Sripada had interpreted it.

[139] It was clear from her contemporaneous note that Dr Sripada had not considered there was a prolonged reduction in variability as that would have merited a caesarean section in itself. A plan for review was sensible because if the CTG had returned to normal there would be no need to give future consideration to FBS. Dr Sripada had not decided that FBS was necessary, just that she had considered whether it was feasible. One could infer that she was thinking ahead as to what she might be able to do if she came back in half an hour and things have not improved.

[140] Professor Murphy agreed with Dr Cooper that the CTG had to be interpreted in the context of the whole known facts but disagreed that the situation had been high risk. In her view the trace was suspicious at most and she would disagree with any other interpretation. She had complete respect for Dr Cooper's ability and expertise but she simply did not agree that at 04:10 the trace showed atypical variable decelerations. She regarded the disagreement as being one where two different but both valid views were held by two different obstetrician. If a colleague in her department reached the same view as Dr Cooper she would respect that without having to agree with it. Dr Cooper's view that the trace was pathological was not the only reasonable view. Professor Murphy could not agree that no obstetrician of ordinary competence acting with reasonable skill and care would fail to decide on a caesarean section at 04:10 on 24 August.

[141] The reason a caesarean section (absent FBS) was not the only reasonable option was because (i) Dr Cooper's interpretation of the CTG was challengeable and (ii) there was another reasonable option, namely to review the situation in half an hour. Had the pursuer been Professor's Murphy's patient she would have given her another 30 minutes because although the trace was suspicious that was not a sufficient reason to expose her to caesarean section with the consequent risk of having those for further pregnancies. It was not that FBS would be possible in 30 minutes, it was a question of waiting to see whether the CTG had normalised. On the facts known to at 04:10 the risk to the baby of waiting 30 minutes to reassess was very low. Had Professor Murphy shown the trace to her own colleagues, she anticipated that some would have interpreted the trace as suspicious and some as pathological, although Dr Cooper was the only obstetrician in this case who said it was pathological.

[142] Professor Murphy accepted that at paragraph 4.10 of her report she had made a statement to the effect that ruptured membranes can be excluded when the midwife can feel the forewaters. She ought to have stated that feeling the forewaters rendered the rupture of membranes very unlikely. It could not be excluded completely because a hind water rupture typically presented with trickling. That said, she remained of the view that the midwives had excluded the rupture of membranes as best as they could in a clinical setting. She disagreed that an ordinarily competent doctor would have transferred the pursuer to the labour ward earlier. It might have been reasonable to do so but was not the only course. Her cervix was unfavourable and she had received only one dose of Prostin by the morning of 23 August. When she was seen at 14:30 that day it was reasonable to administer further Prostin although it would have been equally reasonable to transfer her to continue her induction on the labour ward. It was not a breach of duty not to sit down for 20 minutes

with a patient and assess the contractions in a situation where there had been CTG monitoring and uterine activity of only one contraction every 20 minutes could been seen.

[143] The witness accepted that when exactly the cervix gave way in this case was to some extent speculative, but the documentation illustrated that a sudden change occurred at 04:43 and that is when she thought it had happened. In re-examination she considered the probability of her being correct in that view was over 90%.

Analysis and decision

Credibility and Reliability

[144] I found the pursuer to be an honest witness and an impressive individual. Due to the passage of time her recollection of events was vague. Insofar as relevant I have accepted her evidence about the checking of her pads on Westburn Ward. All of the midwives or former midwives who gave evidence seemed to me to be doing their best to assist the court although again their lack of recollection meant they could add little to the notes they had made in 2008. An issue arose as to the extent to which I could rely on what seemed to be tantamount to an admission of fault by MW Henderson and an initial though more equivocal acceptance by MW Braid. I do not consider such apparent concessions by these witnesses to be significant in my assessment of fault in a case of this type. They were being pressed by the questioner to accept that they could not explain why certain steps were not taken 14 years ago. MW Henderson in particular seemed keen not to disagree with the question. Neither she nor MW Braid had advance warning that they were to be challenged as having breached their duty of care to the pursuer. I accept the submission made on behalf of the defender that the evidence of the midwives' actings should be assessed objectively with no reliance being placed on those apparent concessions, particularly when

they had no recollection of events. This approach was taken in *Hughes* v *Turning Point Scotland* 2019 SLT 651 (paragraph 74) and I consider it equally appropriate in this case.

[145] Similarly, I have not placed any particular reliance on the denial of fault by Dr Sripada. I acknowledge that she is a highly qualified professional. She came across as a credible witness doing her best to assist the court but the assessment of whether she breached her duty of care is for me alone. No issue of credibility arises in relation to any of the four independent skilled witnesses. There were particular challenges to the reliability of the experts; those are addressed in my analysis of their evidence below.

Breach of Duty

[146] Parties were agreed that Lord Hodge's analysis of the authorities in *Honisz* v *Lothian Health Board* 2008 SC 235 continues to provide appropriate guidance. There, the long established test in *Hunter* v *Hanley* 1955 SC 200 was again reaffirmed. Lord Hodge also summarised the correct approach the court should take where experts led by the defenders give evidence to the effect that they would have adopted the same practice as those against whom negligence is alleged are proved to have adopted. In essence, while not being unduly deferential, it is not the function of the court to prefer one school of thought over the other unless it concludes that the practice perpetuated by responsible medical practitioners does not stand up to rational analysis (*Maynard* v *West Midlands Regional Health Authority* [1984] 1 WLR 634, *Bolitho* v *City and Hackney Health Authority* [1998] AC 232). As Lord Browne-Wilkinson put it in *Bolitho*,

> " It is only where a judge can be satisfied that the body of expert opinion cannot logically be supported at all that such opinion will not provide the benchmark by reference to which the defendant's conduct falls to be assessed".

Both Professor Sanders and Professor Murphy are extremely well qualified and eminent in their respective fields. Each gave evidence that they would have acted as the midwives and/or Dr Sripada did on the available information. I am faced with opposing clinical views and so must decide whether I am able to prefer one over the other and if not, whether the opinions of the defenders' skilled witnesses stand up to rational analysis.

(a) The midwifery care

[147] I have recorded the material aspects of the evidence in relation to the various alleged breaches of duty on the part of the midwives. I have been assisted by the evidence, particularly of Professor Sanders, in relation to various aspects the process of induction and what constitutes normal practice. The overarching contention by the pursuer in this case is that the induction of the pursuer's labour and subsequent delivery of LD was delayed unreasonably. Before turning to each of the more specific allegations, I will address the competing arguments made as to the reliability of the expert midwifery evidence.

[148] The pursuer's contention was that Ms Richardson, having only given evidence once before, was not a "seasoned expert witness" unlike Professor Sanders. As the case developed her opinions developed and that was a responsible approach to being a skilled witness. She had vast experience in the management of situations of this kind and gave her evidence fairly. For the defenders it was argued that Ms Richardson had no significant relevant clinical experience and was inconsistent in her criticisms of midwifery staff. Her interpretation of the CTG was said to be radically out of step with the interpretation given by all other experts. The extent to which she changed her view substantially during the course of the litigation without satisfactory explanation was founded upon. Her reasoning was in parts defective, particularly where she appeared to use hindsight in criticising

MW Braid. While I acknowledge that both midwifery experts are experienced and well qualified professionals, I have preferred the evidence of Professor Sanders and concluded that I cannot confidently rely on Ms Richardson's opinion. The fact that Professor Sanders is a more experienced skilled witness in no way detracted from the quality of her evidence. Ms Richardson had observed the factual midwifery evidence and Professor Sanders had not. However, nothing had emerged in evidence that was markedly different to the medical records and it was not suggested to Professor Sanders that any new material ought to have led her to change her opinion. Professor Sanders has more recent and substantial clinical experience and was better placed to provide an independent view of midwifery practice, including the induction of labour, in 2008. More importantly, she understood the need to assess the decision-making as it occurred and not to use hindsight. She appeared impartial and was willing to make concessions where appropriate. There were occasions in Ms Richardson's evidence where she appeared a little muddled and so I had less confidence in the opinions she was expressing. This was most marked when she expressed views on matters that had not been highlighted in her written report and/or where her oral evidence contradicted her written report

(i) Alleged failure to give more Prostin

[149] The first specific allegation is that it was a breach of duty to fail to administer a second dose of Prostin on 22 August and during the morning of 23 August. The pursuer's case was presented as if it was effectively mandatory to administer the second dose unless the woman was contracting strongly. The evidence did not support such a contention. The guidance being followed by the midwives in Aberdeen in 2008 stated that a maximum dosage of 6mg (2 x 3mg) could be given and was silent on the element of discretion available

to withhold the second dose. There were varying views on whether even a low frequency of contractions resulted in a second dose being contraindicated. The manufacturer's guidance indicated that Prostin should not be given to contracting women whereas the AMH guidance indicated that only that hyperstimulation was a reason to withhold Prostin. All of the evidence supported a conclusion that it was slightly unusual of MW Braid to have performed a membrane sweep instead of administering a second dose of Prostin on the morning of 22 August. It was a particularly cautious approach. However, for a number of reasons I conclude that it was not a sufficient departure from normal practice to constitute a breach of duty.

[150] First, the absence of any challenge on behalf of the pursuer to the decision taken on 21 August not to administer a second dose of Prostin six hours after the first dose illustrates that it cannot be said to be mandatory to give a second dose six hours after the first. Of course the evidence was that the pursuer was contracting quite strongly (4 in 10 minutes) at that time. However, the agreement that it was then appropriate to withhold Prostin was consistent with the evidence given by Professor Sanders and Professor Murphy that there was a significant element of discretion on the part of the midwives in relation to the progress of induction generally. Secondly, and conversely, there was evidence and argument about the decision taken to give Prostin on 23 August at 14:30, also by MW Braid. Against the background of a general contention that the midwives failed to progress the pursuer's induction sufficiently, it is difficult to see how the decision to give more Prostin on 23 August could be criticised. When MW Braid decided not to administer more Prostin on 22 August but perform a membrane sweep, the six hour interval between the usual administration of the first and second doses had long since passed and the chain or connection between those two doses had accordingly been broken. It was not wrong to try

different ways of encouraging labour, which would include the "expectant" approach of waiting. By the afternoon of 23 August, however, a new consideration was that the pursuer had now been in hospital for some 48 hours and was still very much in the latent stage of "pre-labour". It was both reasonable and appropriate of MW Braid then to take the decision to try to progress matters by administering Prostin. Thirdly, and most importantly, Ms Richardson had not initially identified withholding the second dose of Prostin as a breach of duty. She had queried it and was a little critical in her report but did not characterise it as a breach of duty. It is difficult to see how a view on that could develop as was suggested on behalf of the pursuer. I accept the evidence of Professor Sanders that MW Braid's decision was cautious but within the parameters of normal practice, albeit that she (and others) might well have decided differently.

[151] It follows that the related criticisms of the lack of administration of more Prostin at any later point on 22 or in the morning of 23 August do not amount to breaches of duty. The evidence was that there was ample opportunity for senior medical staff to intervene and insist that more Prostin was given when they discussed each patient on the ward rounds and indisputably this was a busy ward with an even busier labour ward to which the pursuer would ultimately be transferred. Both Professor Sanders and Professor Murphy commented that there were times at which the pursuer's induction was not progressed as quickly as it might have been in an ideal situation, but that any such criticism was insufficient to lead to a finding of breach of duty.

(ii) Alleged failures on 23 August 2008 to progress induction including the alleged failure to address the suspicion of meconium and to transfer the pursuer to the labour ward

[152] The main argument presented under this heading was that, as the pursuer has given a history of "trickling" since the morning and there was a twice recorded suspicion of meconium, the appropriate management was to augment labour with close monitoring. This would involve further checks for meconium, a medical review and/or seeking transfer to the labour ward. Central to this dispute was whether there was a sufficient suspicion that the pursuer's membranes had ruptured such that the midwives involved ought to have done more than they did. Ms Richardson and Professor Sanders had agreed (No 6/72 of process, question and answer 22) what normal practice would be in such a situation. It included checking the woman's pad and giving her a fresh one to check in an hour, although the question asked was directed to a labouring woman. There was a significant amount of evidence in relation to the timings involved but standing the general evidence of how busy the midwives were, I accept that would be adopting a standard of perfection to insist that checking take place exactly one hour after the initial check before a breach of duty could be avoided. In any event, the real difficulty with the pursuer's approach was that it presupposed that the suspicion about meconium continued. In contrast, the evidence illustrated that there were several examinations of the pursuer where no meconium was noted and where at least the forewaters were felt to be intact. Although the possibility of a hindwater leak could not be excluded completely, taking the period as a whole, I conclude that the initial suspicion of meconium was never confirmed and that there were indications militating in favour of a conclusion that it was not the source of any discharge on the pursuer's pads. That is consistent with the pursuer's recollection of what she was told. The evidence supports a conclusion that normal practice was followed in relation to this matter.

[153] The context of the criticisms about how the midwives dealt with any suspicion of meconium was the need to progress the pursuer's induction against the background of risk factors that were known to all, including that she was well post term, a Group B Streptococcus carrier and had been on Westburn Ward for two days by the afternoon of 23 August. However, the undisputed evidence was that relevant published information was to the effect that the pre-labour stage of induction could itself take two to three days which was precisely what occurred in the pursuer's case. It was contended that there should have been a high index of suspicion in relation to the pursuer where there was a question mark about meconium, but that seems to me to be overstating matters. There were several 45 minute periods of CTG monitoring when the pursuer was being assessed on the Westburn Ward. There was never any significant concern about the wellbeing of the foetus or the mother. I accept Professor Sanders' opinion and conclude that at no point during this period was there an imperative to transfer the pursuer to the labour ward.

[154] In summary, I accept the evidence of Professor Sanders (and Professor Murphy) that the progress of induction on 22 and 23 August was relatively standard, albeit slow. There was no requirement to administer Prostin after more than six hours had passed, with good reason, after the first dose. Further, there was no failure to identify and report to medical staff the presence of meconium because the presence of meconium was never established. Transfer to the labour ward would only have been necessary in the event that the presence of meconium had been confirmed such that the known risks would have had to be mitigated by the administration of antibiotics and continuous CTG monitoring.

(iii) Failure to seek medical review

[155] The pursuer also alleges breach of duty on the part of the midwives who attended on the pursuer during 22 and 23 August for failing to seek a specific medical review. For example, MW Dick was criticised for not seeking a medical review when she was considering the withholding of Prostin and for not seeking a specific medical review in light of the possible sighting of meconium. MW Henderson was said to have failed by not arranging a medical review because the induction was not progressing sufficiently. As the proof evolved, the defenders' position that there were ward rounds three times a day at which each patient was discussed became part of the defence that no specific additional medical review of the issues listed above was necessary. I have accepted (paragraph [18] above) the unchallenged evidence about the ward rounds given by the midwives and accepted by Dr Sripada. There were comments that it was slightly unusual that there were no individual notes made by doctors in the pursuer's medical notes until the point at which the decision was being made to transfer her to the labour ward. However, prescriptions were written on two separate occasions for Prostin and for analgesia, including dihydrocodeine, and so there was some support in the records for doctors being involved to approve the decision-making at different stages. Having considered all of the evidence about this it seems to me that the issue in this section is this: on any of the issues raised was there a duty on the part of the midwife to seek a separate specific medical review in additional to the regular ward round discussions and if so, did that midwife fail to do so, amounting to a breach of duty on her part?

[156] I have concluded that there were no such breaches in duty in failing to seek a medical review. I have been assisted in reaching that conclusion by the evidence of Professor Sanders and to some extent Professor Murphy. All four skilled witnesses agreed

that by 2008 induction of labour was very much a midwifery led process. There were certain matters that required medical action including prescribing, reviewing CTG traces that were concerning and there was oversight of the progress of the induction. However, I have concluded that at no time during the period from the prescription of the first dose of Prostin on 21 August to the decision to transfer the pursuer to the labour ward was there an identifiable situation in which a midwife acting with ordinary skill and care would have required to call for a doctor. The decisions taken not to administer more Prostin were within the professional judgement of the midwives. The ward rounds gave ample opportunity for the actions of MW Braid and others to be questioned and overruled had they been noticeably outside normal practice. Similarly, the medical notes illustrated that the midwives knew what to do when there was any suspicion of meconium and there is no evidential basis for a finding that they were unaware of the known risks of that or of post-dates induction of labour generally. Again a specific medical review separate from the ward rounds would only have been required had the suspicion of meconium continued. Overall, I do not consider that any breach of duty in failing to seek specific medical reviews has been established.

(b) The obstetric case

[157] The second primary case, the obstetric case, is that against Dr Sripada. The previous allegations of fault in relation to the use of syntocinon having been dropped, the dispute narrowed to the question of whether there was any reasonable option open to Dr Sripada at 04:10 on 24 August other than deciding to deliver the baby by caesarean section. The central issue was her interpretation of the CTG and whether she ought to have classified it as pathological. Dr Cooper also considered that various other factors ought to have been taken

into account in the decision-making and I will comment on that. However, the primary focus in this section is the dispute between Dr Cooper and Professor Murphy in relation to the interpretation and classification of the trace. Both Dr Cooper and Professor Murphy are experienced obstetricians who were well equipped to express a view on obstetric practice and decision-making. While Professor Murphy has broader geographical experience and a substantial academic as well as clinical practice and was a particularly impressive witness Dr Cooper's expertise in the kind of obstetric practice being examined in the present case cannot be doubted. However, their approaches to interpretation and classification of the CTG differed. Dr Cooper erroneously used the wrong NICE guidance in her initial report, was embarrassed about that and had corrected it by the time of her evidence. I accept that was merely an oversight. However, she then proceeded to use the NICE 2007 guidance for interpretation and classification in her evidence without appreciating that parties in the case had agreed (first joint minute of agreement No 119 of process, paragraph 3) that the guidelines in place for labour ward staff in AMH in August 2008 were the hospital guidelines. These were based on the RCOG 2001 guidance and contained the algorithm and flowchart. Dr Sripada was unsure as to whether the NICE 2007 guidance had been incorporated by AMH by 2008 but was very clear that she would use the guidelines in place for hospital staff. I accept that consideration of Dr Sripada's interpretation must be assessed against the guidelines that she said she was using and which were in place in the hospital in which she was working. However, while I had initial reservations about Dr Cooper's reliability given her primary reliance on the NICE 2007 Guidelines, Professor Murphy was clear that the differences were not substantial and that her opinion held regardless of which Guidelines were used. There was agreement also that an unthinking adherence to the Guidelines was not required, interpretation was a matter of professional judgement and the

classification used in the NICE 2007 guidance had turned out to be problematic and superseded by subsequent guidance. The nomenclature used had changed over the years and interpretation of CTGs is in many ways subjective. The objective criteria to be assessed remain the same but approaches will differ.

[158] Dr Cooper did provide her own interpretation and analysis of the CTG trace and regarded it as pathological at the material time regardless of which guidelines were used. In fact she indicated that in her view the AMH Guidelines would have classified it as pathological earlier than the 2007 NICE Guidelines. She identified three concerning factors which were the number of variable atypical decelerations, the reduced baseline variability and the lack of accelerations. She considered that the CTG showed a number of atypical decelerations during the period 03:20-03:50 after which the midwife had properly called for a review. In her view the reduced variability of the foetal heartrate (hovering around 5bpm but in her view dipping below it) was a significant concern and the variable decelerations had continued for more than 90 minutes. Professor Murphy on the other hand concluded that the CTG was normal or at most suspicious at the material time. There were a number of decelerations which were definitely early. There was a variable deceleration at 04:05 but it occurred in conjunction with contractions and recovered before the end of the contractions. While it was a deep deceleration it was variable at worse and not a late deceleration which would have recovered later. The variability remained at about 5bpm throughout the period of concern. Both experts agreed that it was the pattern of the CTG that was important and would inform decision-making at 04:10. Neither Dr Cooper nor Professor Murphy altered their opinion on the overall pattern of the CTG under cross-examination.

[159] I have concluded that this is not a situation where I can determine that the opinion of either of the independent obstetricians is erroneous or even one in which I can prefer the

view of one over the other on the critical issue. Both experts agreed that reasonable obstetricians could easily differ on the interpretation of such a trace and I consider there is force in Professor Murphy's reasoned view that such interpretation can be affected by knowledge of the adverse outcome. Dr Cooper indicated that she had shown the trace to colleagues who had agreed with her view but she accepted that those colleagues would probably know that she was looking at a case without a good outcome. Professor Murphy had the confidence not to seek any second opinion on her interpretation but accepted that had she shown it to colleagues, she might expect there to be different views on interpretation.

[160] No one involved in the pursuer's care had become concerned at the time that the CTG was pathological. The midwife concerned had classified it as suspicious when she sought a review from Dr Sripada, who did not reclassify it and simply recorded her findings. Dr Cooper's view relied on the variability of the foetal heart rate from the baseline being less than 5bpm and she seemed a little reluctant to acknowledge the impact of diamorphine on the foetus and so on that reading. Professor Murphy pointed out the importance of the impact of diamorphine on the foetus and the significance of the single deeper deceleration having occurred when the pursuer was semi recumbent, something that was then rectified. However, she acknowledged that, had she shown the trace to colleagues at least some of them would probably have classified it as pathological. This all supports a conclusion that there are two different but equally supportable interpretations of the critical CTG trace. Accordingly, it was reasonable to classify the trace as suspicious but not pathological. Of course, the CTG could not be considered in isolation at 04:10. Dr Cooper's opinion was that other factors were relevant including that the pursuer was a primigravida, the fact that her membranes had ruptured and that there had been thick fresh meconium

seen in the labour ward. While the defenders contended that this represented a significant change of position between Dr Cooper's report and her evidence, I am prepared to accept that it was more of an elaboration. Both expert witnesses accepted that Dr Sripada would require to take all of the relevant information about the patient into account in deciding what to do next.

[161] There was considerable focus on the note made by Dr Sripada at the critical time and the fact that she had considered both FBS and the possibility of caesarean section at 04:10. In Dr Cooper's view the inability to perform FBS at 04:10 when Dr Sripada would have liked one was sufficient reason to realise that only a caesarean section would get the baby delivered safely. It was most unlikely that the pursuer would deliver the baby within a reasonable time otherwise as she was only 3cm dilated. Professor Murphy on the other hand considered that Dr Sripada's note was appropriately detailed and illustrative of her thinking. She was starting to think ahead and contemplate whether a caesarean section was going to be required. Her inability to secure a blood sample at 04:10 did not preclude the taking of a sample an hour later if dilation progressed as hoped. In fact the CTG had improved shortly after 04:10 and Professor Murphy considered that that was exactly what a reasonable obstetrician would have thought may well happen when deciding not to perform a caesarean section at 04:10. I accept that there is a reasoned and logical basis for Professor Murphy's view, that if the ultimate outcome of the situation is put to one side, the decision-making process of Dr Sripada at 04:10 is not inexplicable or unreasonable.

[162] It was also contended on behalf of the pursuer that Professor Murphy had failed to comply with her duties as an expert witness using the *Kennedy* v *Cordia* test (*Kennedy v Cordia (Services)* 2016 SC (UKSC) 59. In particular, she had failed to look at how Dr Sripada viewed the CTG trace and her views on breach of duty ought to be disregarded. I reject that

criticism. Professor Murphy noted that Dr Cooper was the only obstetrician who had classified the trace as pathological. She then narrated and agreed with Dr Sripada's conclusion, which had been to accept the midwife's classification of suspicious, but to conclude that it was not bad enough to indicate immediate caesarean section.

[163] There was some evidence that those obstetricians who had reviewed the events (albeit informally) some weeks after LD's birth did not disagree with Dr Sripada's view. Dr Terry in particular had written to the pursuer's GP indicating that a caesarean section had not been indicated earlier. While there was some evidence that a Dr Danielian suggested that the GTG had become abnormal and that FBS was perhaps indicated about half an hour before delivery, at its highest this tends to support that views can reasonably differ on Dr Sripada's decision making. In any event, it is not clear that Dr Danielian was actually criticising the decision made at 04:10, given the reference to delivery. Dr Cooper was notably willing to accept that views could reasonably differ on whether there was an option to wait and see at 04:10, until it was made plain to her in re-examination that the pursuer could not succeed if there was a reasonable alternative to proceeding to caesarean section at 04:10.

[164] I conclude that, once other factors are taken into account, including the prolonged labour, the suspicious trace and the inability to perform FBS, a different reasonable obstetrician at 04:10 could have come to the contrary view to Dr Sripada, namely that caesarean section might be prudent. That does not render Dr Sripada's alternative and equally legitimate conclusion unreasonable or amount to a breach of duty. I conclude that the pursuer has not established breach of duty on the part of Dr Sripada.

(c) The alternative case in relation to medical decision-making during ward rounds

[165] In submissions senior counsel for the pursuer presented an alternative case that, if the evidence of ward rounds conducted in a room in the Westburn Ward was accepted then the pursuer's position was that the medical decision-making on those ward rounds was negligent. Dr Cooper had given evidence that, had MW Braid sought a medical review about her decision not to administer Prostin on 22 August, an obstetrician would have either instructed her to give more Prostin or administer it themselves. Similarly, Dr Cooper had given evidence that, had a medical view been sought in relation to the possible sightings of meconium on 23 August, an obstetrician would have instructed an earlier transfer to the labour ward. Again the overriding criticism was the prolonged nature of the induction. In relation to the various points during 22 and 23 August when it was said the induction should have been progressed quicker, the pursuer contended that if it was sufficient to seek the advice of doctors on ward rounds, then that advice fell short of the standard of reasonable care because the doctors must have (i) acquiesced in the failures to give the second dose of Prostin (prior to 14:30 on 23 August) and (ii) approved a decision not to transfer the pursuer to the labour ward notwithstanding the possible sightings of meconium.

[166] Senior Counsel for the defenders, Mr Stephenson, pointed out that there were no pleadings for such cases of fault against the unnamed doctors on the ward rounds. There were averments in articles 24 and 25 of condescendence about what a doctor would have done in terms of seeing to it that Prostin was administered without any suggestion that a doctor had been consulted and had failed to do that. In articles 26, 27, 28 and 29 of condescendence there was no reference to what any doctor acting with ordinary skill and care had failed to do. Accordingly there was no record for any alleged breach of duty by the

doctors involved in the pursuer's care prior to the very specific allegation of breach of duty on the part of Dr Sripada at 04:10 on 24 August and so no basis for any alternative case.

[167] While normally pleading points of this sort would be raised far earlier in a case of this type, I have already narrated that there was amendment of the pleadings during the proof diet itself. In my view, the absence of any specific cases of fault against the doctors involved in the ward rounds can be explained partly by the late introduction by the defenders of averments about ward rounds. That said, those averments were themselves a response to new cases made on behalf of the pursuer during the proof, in particular that the midwives had a positive duty to go ahead and administer the second dose of Prostin rather than the previous case which had simply been that they should have sought a medical review. The evidence relevant to what an obstetrician acting with ordinary skill and care would have done either on a specific medical review or on a ward round was led without objection and I consider it would be artificial to refuse to take account of it at this stage. As indicated, I have accepted the body of evidence in relation to the regular ward rounds. There is no evidence to support a contention that the practice explained in evidence was departed from such that the pursuer was not discussed on each of the ward rounds that took place while she was on Westburn Ward; every witness was clear that every patient was discussed with the doctors. Nor is there any evidence that the medical staff on the relevant ward rounds were unhappy with any of the decisions being made by the midwives or that they suggested any alternative intervention. I have to some extent relied on the absence of any contrary direction been given to the relevant midwives during ward rounds in rejecting that any of them were in breach of duty. The converse claim, that the doctors gave negligent advice or instructions to the midwives on ward rounds, could only be inferential. I have concluded that there is an insufficient basis in the evidence to take the absence of any record

of direction from the unnamed doctors concerned to the stage of a positive finding that each or all of them were in breach of duty in these respects. Further, evidence that certain action would (on balance) have been taken in the exercise of ordinary skill and care does not preclude that there was another reasonable course. So the evidence of what a reasonable obstetrician would have done or advised during ward rounds is not sufficient to make a case that there was no other reasonable course that could have been advised. The pursuer's case was not presented as a challenge to the decision-making on ward rounds. All of the allegations in relation to the pursuer's time on Westburn Ward were presented as cases of fault against the midwives. In so far as one of the cases of fault was their alleged failure to seek a medical review on certain occasions, the evidence about what a doctor would have advised on medical review seemed more directed to causation. The pursuer required to prove what the outcome of such a medical review would have been, to show that it would have had consequences relevant to outcome. For these reasons, I reject the alternative case against the unnamed doctors on ward rounds advanced by the pursuer. In reaching that conclusion I have relied on Professor Murphy's evidence that she would not have interfered with what she regarded as reasonable midwifery decisions taken during the pursuer's time on Westburn Ward.

Scope of Duty and Causation

[168] For the reasons given above, I have rejected the pursuer's case of breaches of duty on the part of any of the midwives. However it is appropriate that I set out my views on causation had I reached a different conclusion. The pursuer contends that but for the midwives' breaches of duty LD would have been born before 04:40 on 24 August and so

would have been born uninjured. The defenders argue that the pursuer has failed to prove that LD would have been born uninjured but that even if she has, a scope of duty issue has been overlooked, as distinct from the traditional "but for" causation approach. Reference was made to the decision of the UK Supreme Court in *Meadows* v *Khan* [2021] 3 WLR 147, a decision of seven justices of that court. That was a wrongful birth claim involving a patient (Ms Meadows) who had attended a GP for advice on avoiding giving birth to a child with haemophilia. Blood tests having failed to identify whether she was a carrier of the relevant gene she attended another GP, Dr Khan, who failed to refer her for genetic testing. Some years later Ms Meadows gave birth to a haemophiliac son who also had severe autism. It was accepted that had she known she carried the haemophilia gene the claimant would have undergone testing of the foetus and terminated the pregnancy on discovering that her unborn child carried that gene. The issue on which the UKSC was asked to adjudicate was whether the scope of Dr Khan's duty was limited to advising how to avoid giving birth to a child with haemophilia or whether the additional costs associated with the child's autism could also be recovered.

[169] On the scope of duty question, the court stated the following (at paragraph 63):

> "… it is necessary in every case to consider the nature of the service which the medical practitioner is providing in order to determine what are the risk or risks which the law imposes a duty on the medical practitioner to exercise reasonable care to avoid. That is the scope of the duty question."

[170] The defenders contend that the cause of LD's injury was the unforeseen and dramatic pace of labour after 04:10 such that the pursuer's cervix was fully dilated half an hour later. This led to LD's head descending in the pelvis very quickly and the umbilical cord being completely occluded. It was not seriously in dispute that until that point LD was not injured. By analogy with the situation in *Meadows* v *Khan*, the defenders query why any

midwife who saw a patient on 22 and 23 August in an induction ward for the purposes of managing that induction would be responsible for injuries that LD suffered the following day in the labour ward caused by something that could not have been predicted even minutes before 04:42. The issue is whether the alleged breaches of duty on the part of the midwives on Westburn Ward can result in liability for all injuries suffered by LD prior to birth regardless of the cause.

[171] In *Meadows* the UK Supreme Court set out six sequential questions as follows (paragraph 29):

(1) Is the harm (loss, injury and damage) which is the subject matter of the claim actionable in negligence?
(2) What are the risks of harm to the claimant against which the law imposes on the defendant a duty to take care?
(3) Did the defendant breach his or her duty by his or act or omission?
(4) Is the loss for which the claimant seeks damages the consequence of the defendant's act or omission?
(5) Is there a sufficient nexus between a particular element of the harm for which the claimant seeks damages and the subject matter of the defendant's duty of care as analysed at question (2) above?
(6) Is a particular element of the harm for which the claimant seeks damages irrecoverable because it is too remote, or because there is a different effective cause (including *novus actus interveniens*) in relation to it or because the claimant has mitigated his or her loss or has failed to avoid loss which he or she could reasonably have been expected to avoid?

Mr Stephenson contended that if those questions are asked in the present case, it is clear both that there is no sufficient nexus between the harm for which the pursuer seeks damages and the subject matter of the defenders' duty of care and that there is a completely different cause of the damage unrelated to any breach of duty by the Westburn Ward midwives. As those midwives had no continuing involvement with the pursuer in the labour ward their obligations ceased on the pursuer's transfer there. It was not part of the service they provided to secure the delivery of the baby and they cannot be regarded as having assumed

responsibility for that. The care provided with a view to delivery of LD was by different midwives and by Dr Sripada. Under reference to *Meadows* at paragraph 65, it was submitted that where, as here, a midwife had undertaken a particular restricted role, the risk of an outcome unrelated to that role will not as a general rule be within the scope of their duty of care.

[172] Mr Khurana pointed to answer 22 in the pleadings where there is an admission that had LD been born by 04:50 he would (probably) not have suffered any brain damage under explanation that brain damage does not begin until ten minutes of the cord occlusion. He submitted that the case had been run on the basis that in light of that admission Dr Cooper did not have to give evidence about the nature of the relationship between earlier breaches of duty and the outcome. In any event, it was put to all witnesses that there was a link between cord compression or occlusion and prolonged pregnancy because placental insufficiency gets worse as time goes on, reduced liquor is a feature of prolonged pregnancy and that taken with the passage of time all increases the risk of cord compression. The foetus has less ability to withstand cord compression as time goes on with consequent risk of stillbirth. Accordingly, the breaches of duty on the part of the midwives took place against the background of the known risks of such a prolonged pregnancy. The case of *Meadows v Khan* was simply not in point because of that unchallenged evidence about the link between prolonged pregnancy, cord compression and stillbirth. By allowing the induction to be delayed the midwives (and Dr Sripada) exposed the pursuer and LD to the specific harm that prompt induction would have avoided. In light of such a direct link between the breaches of duty and the damage to LD the scope of duty argument simply did not arise. It was an innovative but novel argument that one could distinguish the induction of labour from labour itself. It could not be said that the scope of the defenders' duties did not extend

to looking after the health of the unborn child. The duty was to take reasonable care to avoid the risk of injury or stillbirth. The undisputed fact that the unborn baby was healthy at all times in Westburn Ward did not address the case that against the known risks of delay the midwives had failed to take appropriate intervention. The whole field of obstetrics was based on risk management and at least from the evening of 23 August it was reasonable to have a concern for the baby. The harm was caused by the various delays and so naturally flowed from the breaches in duty. The whole rationale of induction was to avoid the risks of a very late delivery such as that occurring in this case.

[173] Mr Khurana also criticised Professor Murphy and alleged that she had failed to separate breach of duty from harm. She had given evidence that she started with the outcome and determined that it was unforeseeable so defended the decision-making. Accordingly she misunderstood the legal approach in *Bolitho* v *City & Hackney Health Authority (supra)* (at 241-242). It seems to me, however, that Professor Murphy's approach is entirely consistent with that suggested in *Meadows v Khan* and I reject that criticism.

[174] I have concluded that, on the basis of the unchallenged evidence about how the harm to LD occurred, that harm is too remote from his time on Westburn Ward for there to be the necessary sufficient nexus between any breaches of duty on the part of the midwives and the adverse outcome. I accept up to a point the proposition that induction of labour and subsequent delivery are in a general sense linked to the extent that they cannot be seen as two completely separate services. There was a general duty on the midwives in Westburn Ward to take account of risk factors and not prolong the induction beyond an acceptable time frame without good reason. The real difficulty for the pursuer in my view is that on the evidence in this case the only consequence of any breach of duty on the part of the midwives was a delay in having the pursuer transferred to the labour ward, but there was no evidence

about how and why that would have altered the outcome. There was no evidence about what could reasonably have been expected to happen had the pursuer been given more Prostin earlier or transferred earlier to the labour ward. To the contrary, the undisputed evidence illustrated that giving Prostin does not smoothly and inevitably lead to the onset of labour. There was no evidence about how long the pursuer would have been on the labour ward without further intervention, assuming the continuous CTG monitoring gave no cause for alarm. No immediate or identifiable harm was caused to LD by any of the delays. Further, absent any evidence that LD became distressed at any time prior to 04:42, any failure to act on the suspicion of meconium appears not to have had any direct consequences. The evidence about the risks of prolonged pregnancy was very general and not directed at a case that LD should have been delivered earlier than half an hour or so after 04:10 on 24 August. I am not persuaded that, had any of the midwifery failures been established, the necessary direct connection between any of those and the harm to LD was established.

[175] In contrast, no scope of duty issue arises for the obstetric case. The defenders admit on record a very direct relationship between the alleged breach of duty of Dr Sripada and the ultimate outcome in that they accept in essence that had the decision been taken to deliver the baby at 04:10 LD would have been be unharmed. I did not understand the defenders to be admitting that if LD had been delivered (at any point and by whatever means) on 22 or 23 August he would have been so unharmed. The defenders' causation argument in relation to Dr Sripada's actings was that because the mechanism of injury was indisputably the sudden descent of the head causing cord occlusion and as Professor Murphy had stated with 90% probability that the event happened just before 04:43, Dr Sripada's decision did not cause the harm to LD. However, the context of

the defenders' admission is that, given that there was concern about the CTG and the overall clinical situation at 04:10, delivery by caesarean section could have occurred in half an hour. It was Dr Sripada's decision to give the trace another half an hour that resulted in there being no attempt to deliver LD by the time the bradycardia caused by cord occlusion occurred. The link between Dr Sripada's decision to delay and the harm caused is a direct one and causation on a traditional "but for" basis flows naturally from that. Had I found that the only course available at 04: 10 was to deliver the baby by urgent caesarean section, I would have found causation established in relation to Dr Sripada's actings.

Disposal

[176] In light of the decision I have reached that no breaches of duty occurred in this case, I will pronounce decree of absolvitor. As requested by counsel I will also have a hearing fixed to determine all questions of expenses.