

26 January 2023

Baby I

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Thursday, 26 January 2023

(10.30 am)

(In the absence of the jury)

Housekeeping

MR JUSTICE GOSS: Mr Johnson, Mr Myers, as far as next week is concerned, as you well know, the jury is not required on Monday or Tuesday, but I gather that court will be sitting on Tuesday.

MR MYERS: My Lord, yes. There's a matter which can conveniently be dealt with then, a matter of law. The necessary papers will be with your Lordship and with the prosecution today, so there's time to consider that.

It's a section 8 application relating to disclosure issues and, with the court's leave, that could be conveniently dealt with on Tuesday.

MR JUSTICE GOSS: Yes. So as far as the defendant is concerned, obviously not brought here on Monday?

MR MYERS: We'll take instructions as to Tuesday, if we may, my Lord, because it's a matter of law and sometimes in those situations, on balance, Ms Letby has felt better served by recuperating where she is rather than coming to court, but I would be grateful if we could confirm the position today with regards to Tuesday.

MR JUSTICE GOSS: All right. I'm just informing whoever -- I think you, madam, at the end. There is no question of requirement for transport on Monday. Tuesday, possibly, but to be confirmed this week. Will it be confirmed --

MR MYERS: We'll try and confirm it today.

MR JUSTICE GOSS: Today or tomorrow, to be confirmed, but definitely not Monday. Thank you very much. Right.

(In the presence of the jury)

MR JUSTICE GOSS: Mr Driver.

Witness statement of [NURSE C] (read)

MR DRIVER: May it please your Lordship, members of the jury, may we begin, please, by reading a statement and looking whilst we do so at some underlying original material referred to by [Nurse C] in a statement she made on 6 February 2019. That is at page 31, top left corner, of the reading bundle provided to the court a day or two ago.

MR JUSTICE GOSS: Thank you.

MR DRIVER: [Nurse C] states:

"I have been asked about my involvement with and recollections of a baby called [Baby I] who died at the Countess of Chester Hospital on 23 October 2015.

"Prior to providing this statement, I have had the opportunity to review [Baby I]'s notes.

"The first date I have been asked about was 23 August 2015. I know from records I was [Baby I]'s designated nurse during the day shift on that date, but to be honest, it's not a shift I

recall at all. I would have started at 07.30 and taken over care for [Baby I] some time between 07.45 and 08.00 hours."

She then refers to her nursing notes and with Mr Murphy's assistance, it's page J13807, the bottom -- yes, thank you, Mr Murphy, you're ahead of me.

So the upper paragraph of the notes on screen at present, members of the jury. This will be in your additional file, but it's not on the sequence itself.

And everything I refer to in the next hour or so is in the additional file on the iPads.

MR JUSTICE GOSS: So you've got the reference there if you want it.

(Pause)

Has anyone else got a problem? Just a white screen, is it?

MR DRIVER: Mr Murphy, thank you.

(Pause)

MR JUSTICE GOSS: For those who have screens that have got material displayed on them, if you go into the additional -- you should find it in the additional documents on the top right-hand side, J13807. There are very few documents in that little section if you want to follow it there or just -- it's on the main screen as well.

MR DRIVER: Do you all have active iPads?

(Pause)

MR JUSTICE GOSS: Thank you.

MR DRIVER: So I was reading [Nurse C]'s statement and she was just about to refer to her notes in relation to her care for [Baby I] on the morning of 23 August 2015.

She says -- and you can see it in front of you:

"From my notes written at 09.37 [we'll come to that discrepancy in a moment] I can see she had some blood in her nappy and I asked someone to review her and we were keeping an eye on that, but I don't remember the shift."

So if we look at the screen we'll see the upper paragraph records that [Baby I] was settled in an incubator, she continued

on CPAP, no signs of respiratory distress. There was good capillary -- I'm not sure what CBG is, I'll come back to that. She was warm and well perfused, she was tolerating two-hourly feeds of expressed breast milk via the nasogastric tube, abdomen was distended, although that was reported as normal for this baby. Soft, ie the abdomen, veins apparent all over the trunk, her bowels were opening, she was passing urine well, her skin was intact, and mum called at the start of the shift and will be in for the next cares.

Then this line which was added later:

"Mum changed nappy at 12.30 and noted small amount of fresh blood in stool, also mucousy. Consultant informed as on ward. [Baby I] otherwise well with only slightly lower temperature."

So pausing there, [Nurse C] noted, as she stated in her statement that I have just read, that she asked someone to review [Baby I]. The nursing note tells us that was a consultant. If Mr Murphy would be good enough to put up another page, which is also in the additional notes, that is to say page 13758, we'll see the corresponding note from [Dr B].

Consultant review from [Dr B] at 11.15 am on 23 August, which is said to be day 16. It sets out [Baby I]'s age at birth and her adjusted gestational age:

"Problems: premature, respiratory distress syndrome, hence CPAP."

And they were establishing feeds.

So there, under the familiar symbols that we now have seen many times, her ventilation, the regime set out, the feeding regime set out, the medication.

If we continue down the page, Mr Murphy.

On examination the baby was settled, she handled well, the chest was clear, the abdomen was soft, the bowel sounds were positive. The plan was to wean her off CPAP as tolerated. There was a cranial ultrasound that had been received and showed that the ventricles were slightly dilated "in good views", which I take to be a reference to where there was a good image of the ventricles available from the ultrasound:

"No blood clot. Guarded chat to parents when we speak to them."

Which is under the topic of the results of the ultrasound test.

If we go down to the next page, PTO. Still talking about the ultrasound:

"In some view ventricles look big [perhaps]."

The doctor thought mostly the views were -- the choroid plexus, that's part of the brain, was there in the view, and there was significant ventriculomegaly, increased size of ventricles and the blood clot:

"Advised to repeat the ultrasound next week and monitor the head circumference [I think that is] twice weekly and please do that when she was not on CPAP."

If we go down to the next part of [Dr B]'s examination. So 12.40, [Dr B] spoke to [Baby I]'s mum and explained the ultrasound finding and the fact that it would be repeated next week -- and here is the point recorded in the nursing notes that directed us here in the first place -- and that [Baby I] had had a small amount of blood and mucus in her nappy, a yellow seedy stool.

Otherwise the temperature was between 36.5 and 36.6.

She was otherwise well and their plan of action was set out:

"CRP and blood count tests. A low threshold for screening."

That's the plan for the future. The abdominal X-ray should be performed to consider whether NEC was present and samples from the stool should be sent away for examination, and all of this was explained to [Baby I]'s mum.

So if we go back, please, Mr Murphy, to [Nurse C]'s note, thank you very much. We can see how she recorded that event:

"Mum changed nappy at 12.30 and noted small amount of fresh blood in stool, also mucousy. The consultant, [we now know that's [Dr B]] was informed. [Baby I] otherwise well with only a slightly low temperature. Stool was sent for reducing substances, FBC and CPR sent. CRP [at that point] 4. WCC raised, but lower than previous result. SPR [probably the senior paediatric registrar] was made aware. Observe for now. Abdo remains distended, soft, veiny, unchanged from previously. Further stool at 16.30 hours free from obvious blood and mucous, yellow and slightly orange in colour. Passing urine well. Warm and well perfused. Observations stable."

If we just go to the other side of this page and the upper part of the same page, 13807, we see [Nurse C]'s note, said to be a continuation, timed at 09.35:

"[Baby I] had a settled day. She was off CPAP for 2.75 hours. Then clustered desats so returned on to CPAP."

That's the oxygen levels and the readings: She was warm and well perfused now, following two times low than normal temperatures earlier. She was tolerating feeds.

A couple of possets this afternoon. Bowels open, passing urine. Bowels opened earlier as new have seen had fresh blood in it and mucus. That was reviewed by [Dr B]. Blood and stool samples were sent for testing. The same data was set out that we've seen earlier:

"Abdo was distended and veiny but soft and unchanged from the morning. The plan was to observe her for now with a low threshold for intervention [as we saw on the notes], if required. The ultrasound results were discussed with mum by [Dr B]. Her skin was intact and the DuoDERM was removed from her face and [I guess that should be 'trunk']. Intact skin underneath. Mum was there for most of the day, attending to [Baby I]'s cares, and her father visited in the evening and he was also updated."

So that's the nursing note that [Nurse C] used to remind herself of the detail before making the statement that I'm reading to you because she couldn't actually remember the shift. But she tells us that she noted that [Baby I] was settled and on CPAP but was having, periodically, 2 to 3 off it, off the CPAP:

"We were putting it back on when she had clustered desaturations. That's not unusual. My notes say she didn't have any increasing oxygen requirements and was warm and well perfused throughout. They are things I would worry about in a baby that had a large abdomen like [Baby I] had. She had good capillary blood gas..."

That would be the CBG, the initials I couldn't remember a few minutes ago:

"... which measures the pH and the amount of carbon dioxide in the blood and indicates how well the CPAP is working. I noted that she was tolerating two-hourly feeds of expressed breast milk via her nasogastric tube and her abdomen was distended, which was reported as normal for her. Her abdomen was soft and veins were apparent all over her trunk.

"Some babies will have a distended abdomen, which can be due to the CPAP, and this is called CPAP belly, but you wouldn't expect to see the veins. If a baby has a distended tummy then you check to see if it's soft, is it painful to be touched, is the baby

pooing, do they have bowel sounds, and do they have these veins? The veins can be a sign of a problem.

"My next note is timed at 17.19 hours."

I think that is also on the same page. It is.

That's the one we looked at in the bottom corner where she reported that her mum had changed her nappy. So we have already looked at this:

"I noted that mum changed [Baby I]'s nappy at 12.30 and found a small amount of fresh blood in her stool. It was mucousy and I informed the consultant, [Dr B], who was on the ward. I have read her note so I know it was her. She wrote that she looked at it and ordered an abdominal X-ray and that [Baby I] would be a low threshold for a screen. I didn't see [Dr B] examining [Baby I] and I can't remember whether she did or not."

Going back to [Nurse C]'s notes as repeated in her statement:

"I recorded that she had a low (inaudible: coughing) normal temperature of 36.6. Her stool was sent for reducing substances, for an FBC [full blood count] and CRP, which I recorded in error as CPR. CRP is the infection protein that we monitor. The CRP came back with a score of 4 and we were happy with anything less than 10. Her white cell count was raised but lower than previous results and the paediatric registrar was made aware. The plan was to observe for now. Her abdomen remained distended, soft and veiny and unchanged from previously. She had a further stool that was yellow and slightly orange in colour at 16.30 hours and that was free from obvious blood and mucus. She was passing urine well and was warm and well perfused and I observed she was stable. My opinion of [Baby I] at that point was that I had no immediate concerns. We were going to watch her abdomen and watch her bloods.

"At 18.27 hours I wrote my evaluation, which is a summary of the day. I recorded that she had been off CPAP for 2.7 hours and she had had a settled day. She then had clustered desats, so went back on to CPAP. The desats were an indication she needed to go back on the CPAP.

"She was warm then and well perfused following two low normal temperatures of 36.6. She had tolerated her feeds during the day with a couple of small possets. I mentioned the blood in her stool and [Dr B]'s involvement. The plan was to observe her for the time being, with a low threshold for intervention if required. That just meant that we would inform the doctors at an early stage of any issues. I finished by stating that mum had

been there most of the day attending to cares and dad visited that evening. I handed over to Jo Williams that night.

"The next date I have been asked about was 5 September 2015."

We'll go to the corresponding note of that in a moment:

"I was on a night shift that night and was the designated nurse for part of the night. Again, I have had the chance to review [Baby I]'s notes from that date and my recollections are purely from those notes as I have no personal recollection of that shift. I have checked and I was on with Yvonne Griffiths, [Nurse E], Lucy Letby and Val Thomas. We had two intensive care babies, two high dependency unit babies and three special care babies, so we were quite high acuity for the people who we had on at the time.

"From looking at the notes and shift records, I can't understand the allocation of babies that night and so I wonder if I was in charge of that shift. The shift records I have access to are only in black and white. If they were in colour and I was shown in blue then that would mean I was in charge, but I can't tell from the records I have. I have seen a colour copy of the roster provided by a police officer, which confirms that I was allocated to be shift leader that shift."

Mr Murphy, if we could please put from the additional notes page J13858. We see [Nurse C]'s initials and reading her statement, she states:

"I took [Baby I] over from Val Thomas at 20.30 hours because she was obviously deteriorating, but I then handed over again at 00.30 hours to Yvonne Griffiths and I can't remember why I have done that.

"I'm wondering if I took her on because at the time there was no one else to have her and then handed her over as soon as I was able to do so, so I could concentrate on being in charge of the unit. The fact that Val had her first would indicate she was quite well at that stage. The notes that I did make stated she was deteriorating..."

And we can see that on the screen, members of the jury:

"... and likely to need ventilator support. I described her as very quiet and desaturating frequently, especially at handover on handling. Her capillary refill time was 2 seconds, which is okay. She was pale and she was slightly mottled. Her abdomen was full, fairly firm to touch at that time, and she was desaturating when palpated.

"Bowel sounds were heard and I noted she had opened her bowels and been passing urine well on the day shift. She was given oxygen and a paediatric registrar, Dr Ventress, was called to review her."

If we could pause there and go to Dr Ventress' notes of that review again in the additional file. J13775, please.

Dr Ventress made this note, it would seem, at 22.30 hours, where she sets out the fact that septic screen bloods were taken and antibiotics given. She sets out the blood test results and then records:

"Twenty minutes after feed (22.20) had profound desat down to 50% sats. Oxygen provide to 100% and Optiflow at a rate of up to 7 litres a minute and improved to 80%. Stomach was aspirated after which her sats normalised and oxygen weaned down rapidly back to 30%."

Go to the next page, Mr Murphy, where the note continues:

"On examination the baby was quiet. She cried when disturbed but not an [unusual] strong cry. The baby looks pale, slightly mottled, and her capillary refill time was less than 2 seconds. There was minimal increased work of breathing. Good bilateral air entry. Chest clear. Heart..."

I've forgotten what HS stands for.

MR JUSTICE GOSS: Heart sounds.

MR DRIVER: I thought that. I leave it to others to attach meaning to the numbers:

"Abdomen mildly distended but soft. Veiny in appearance. Normal tone."

The impression was that she was a septic baby, so the plan was to give her a fluid bolus, keep her on Optiflow, to repeat the gas in 2 hours' time, or sooner if there were concerns, a lumbar puncture test was required, and a question as to whether she would be given a blood transfusion in the morning, and there would be a need for both chest and abdominal X-rays.

If we go down again, Dr Ventress saw [Baby I] and she made a note, a further note written retrospectively at 01.00 hours with Dr Ventress recording:

"At approximately 23.15 [Baby I] had another profound desat to 50%. Facial oxygen 100% applied with pressure via mask at which her heart rate increased but her sats remained low, so

ventilation was given with double-handed jaw thrust, which improved saturation levels gradually.

"Decision made to intubate [Baby I]. While equipment was being gathered, [Baby I] improved so the oxygen provided was reduced to 60% with regular resps [I think that says] on the mask with CPAP. She was given high levels of oxygen and have decided to electively intubate with intubation drugs. First attempt was unsuccessful but second attempt, using a size 3 tube, passed easily and there was thereafter good bilateral air entry with the tube at 8 centimetres. Her heart rate and saturation levels improved. Capnograph test was positive. The tube was secured and ventilation settings were determined and then reduced because it would seem the baby was fighting vent and settled better on this."

Dr Ventress revised the plan:

"Chest X-ray, second morphine bolus, followed by an infusion. Further (inaudible: coughing) tests (inaudible: coughing) 30 minutes. Postpone planned lumbar puncture for now until the baby is more stable. The baby should remain nil by mouth and receive fluids intravenously."

And [Dr B] was asked to come and review the baby and due to acute desaturation -- and Dr Ventress planned to update the parents.

So pausing there, I go back to [Nurse C]'s statement where she said that Dr Ventress was called to review:

"She assessed her [that is to say [Baby I]] and was happy with her abdomen and described it as soft when examined. She was happy for [Baby I] to continue to feed at that time. Intravenous cefotaxime was started as per policy in case she had an infection. [Baby I]'s temperature had been cool earlier and had only warmed up slightly. She had been handled for a peripheral intravenous catheter insertion and screen. She had her incubator temperature increased and blankets were added. Losing temperature can be a sign of infection, especially in a baby who desaturates like she was doing, especially on handling.

"Therefore sepsis was a concern. I noted that mum and dad were present at the time of her deterioration and were up to date with her cares and plans. [Baby I] had further episodes of desaturation to between 50 and 70%, needing oxygen and positive end expiratory pressure, which is pressure given with a mask which helps to keep the airways open, making it easy for the baby to breathe. Optiflow was increased to 7 litres a minute and she required an inspired oxygen fraction up to 100% for short periods. Her desaturations were worse following feeds. It is

something to note because having filled their tummies up, are we squishing their lungs, which can make it harder to breathe or there could be something wrong with the bowel and more problems could be caused by putting feeds in. There are lots of different reasons for desats after feeds but it is worth noting."

The notes state that:

"A nasogastric tube was aspirated with minimal results and she had a further desaturation to 55% at 23.15 hours and found it difficult to recover so the decision was taken to intubate her and that decision was taken by the registrar. She was also given a fluid bolus of 0.9% saline for perfusion. We give that for signs of circulatory compromise but I can't say what that is from looking at the notes but maybe poor perfusion or high heart rate. It can be low blood pressure but the notes state her blood pressure had remained stable throughout.

"She was intubated with a [3-millimetre] tube and put on an end tidal carbon dioxide monitor device to indicate whether carbon dioxide is present in the ET tube. This shows that the tube is in the lungs. She had equal air entry on both sides but was quieter on the left side, so the airway tube was pulled back and better air entry was heard. It was pulled back slightly more following a chest X-ray.

"We pulled it back initially because if you put it down too far, it is likely to go into the right lung rather than the left. Because of the way the trachea splits down into each lung it makes it easier to go into the right first. Measurement-wise, there are all sorts of formulas for older children and adults for how far you put the tube down, but if a baby is under 1 you are talking very small distances.

"Pulling a tube back or pushing it down only a centimetre makes a massive difference in a baby that size, so when intubating, the registrar will make an estimate. They can see when a tube goes through the vocal cords and know when it is down into the lungs, but whilst they do that they have the baby's head extended back so when released the head will move down and the tube will move slightly. That's partly why we use the end tidal device to check if it's in the lungs and then the X-ray will tell us where in the lungs it is.

"You can see the tube and where it is sat in relation to markers such as rib level, vertebrae level, and you can sometimes see the end, which tells you it's in the right place. Once you're happy with the position you don't secure it with tape, like in an older child, you use a plastic device that sits on the tube that's tied to a hat, so that means you can undo a little clamp and push or pull the tube as you need to."

Turning to the cares given to [Baby I]:

"She had two morphine boluses, one pre-intubation and one post as she was very active, to help calm her down. I then noted that she was settled after that and syncing with the ventilator, which meant she wasn't fighting it.

"She remained cool and her capillary refill was 2 to 3 seconds, which had got a bit worse. I noted that her peripheries were pale and mottled and a further fluid bolus was given.

"The mottled appearance is a sign of a baby who is compromised. You see it in all sorts of things like a baby who is struggling to breathe where the body is getting the oxygen to the important parts. Babies who are cold can appear mottled and some babies who are septic can also look mottled. It is a sign of circulation problems.

"She was given metronidazole, which is another antibiotic, so she was then on two different antibiotics, which focus on different things. Cefotaxime is for babies over 72 hours old who are showing signs of sepsis. The metronidazole is for babies with abdominal problems such as NEC, which is something we see quite a lot on the unit.

"The notes show that the parents were updated and had to come in to stay on the unit overnight. The reducing substances result was flagged to the senior paediatric registrar who was then going to follow up that with further tests that may have been ordered and who would then advise us regarding any action needed. I have been unable to find the reducing substances result and can only presume it is not on the system.

"They do come through electronically but it can take a while. If there is something we need to be aware of then they will pass the result verbally, for example if a baby has low platelets. I cannot remember how they came through in this instance.

"We would tell the result to the registrar whether they were good or bad. A reducing substance test is a stool sample test used to diagnose lactose intolerance and some rare metabolic abnormalities. The notes also reflect that mum had also said that she thought that [Baby I]'s urine output had been less than usual that afternoon.

"I then handed over care for [Baby I] to Yvonne Griffiths at 00.30 hours. As I said earlier, I can't recall why I handed [Baby I] over to Yvonne.

"I have also been asked whether I recall a conversation with [Baby I]'s mum on an occasion when she had come back into the unit after [Baby I] had died. She came back to the unit to drop money off that they had raised. I do remember that conversation. It was about the fact that I had looked after [Baby I] the night before she had died and she had been very unsettled and had been throughout the day.

"She was in an incubator and all undressed and babies hate that, generally speaking, so I had dressed her. That must have been after mum had gone home. I hoped it would settle her down because they get cosy and it did work a little bit. When mum came in after [Baby I] died, we spoke and she asked me about why I had dressed her and I explained that I wanted to see if it would settle her. I don't recall any other part of the conversation and I don't remember saying to her that [Baby I] didn't die of prematurity. I only remember the babygro part of the conversation."

And that's the extent of the relevant parts of [Nurse C]'s statement.

Witness statement of DR SALLY OGDEN (read)

MR DRIVER: Next, my Lord, and overleaf at page 38 of the reading bundle, is a statement from Dr Sally Ogden.

Before we get to the body of her statement -- and if we return, please, Mr Murphy, to the carousel, tile number 5 -- we will see, though it's not within the statement, Dr Sally Ogden made some clinical notes about [Baby I] upon her arrival within Chester.

If we click on, please, Mr Murphy. We're going back here to 18 August. Scroll down. We can see it's a note of the reception in Liverpool Women's, the active problems, condition at birth, and then a familiar set of entries: ventilation, cardiovascular, feeding regime, screening, cultures, ultrasound, jaundice resolved, blood results, long line in situ, medication, Dr Ogden's examination of [Baby I]:

"Pink and well perfused, abdomen soft and not distended."

Then the plan for [Baby I] at that point in time was to continue on CPAP and wean her off as able, to increase her feeds and to repeat the cranial ultrasound.

So that was Dr Ogden's examination of [Baby I] upon her return. Then her statement, dated 22 May 2019, moves forward in time to 23 August 2015. If Mr Murphy could please put up the

corresponding clinical notes, which are in the additional file and can be found at page J13760 and 13761.

Dr Sally Ogden's note begins at the bottom. Now I will read from the statement if I may:

"My notes begin with me stating I had been asked to review her abdomen. That happened fairly frequently on the neonatal unit. At any time there was any concern about abdominal distension, we would always have to look at the baby to see if there were any signs of infection, so that will have been why I reviewed [Baby I].

"I stated that there had been some concerns about her abdomen being distended. The nasogastric tube had been repositioned after an X-ray and now the abdomen felt softer and no longer distended. They had got some air and some mucus out of the tummy and now it was soft with palpable bowel loops, which are quite common in preterms babies, where you can feel the loops of the bowel within the abdomen because the abdominal walls are quite thin, but it wasn't tense or distended and there was no discomfort on palpation."

If you go down the page, Mr Murphy, if you don't mind. Thank you:

"I documented that an X-ray had been done, which I reviewed. The nasogastric tube was in too far into the stomach, which is why I had repositioned. The bowel loops looked normal and I signed that at 23.00 hours."

As we can see. Down the page, please:

"My next entry..."

That doesn't appear to be Dr Ogden's note. It's at 23.00 hours, her statement tells us. It says:

"My next entry read: 'Nasogastric tube repositioned since X-ray.' I don't remember who raised the concern about [Baby I]'s abdomen but it most likely would have been one of the nurses who were looking after her. Looking back, it looked like the senior house officer had reviewed her first, and that was Emily Thomas, so it could have been her who raised it to me."

If we look back at the top of page 13760, we'll see an entry from Dr Emily Thomas. Thank you. I'll return to Dr Ogden's statement while we have that on screen:

"So it looked like Emily was asked to review her earlier by nursing staff as she had a distended abdomen and some blood in

her stool earlier that day. She had no aspirates coming out of the NG tube, was full and quite tense, and Emily had requested the X-ray, which I subsequently reviewed.

"It is quite common for the nursing staff to raise concerns with one of us and if it was an SHO who had seen the baby then, as a registrar, you would go and see the baby afterwards. It seems with [Baby I] that since we had re-passed the NG tube her abdomen was a lot softer and there were no concerning features on examination of the X-ray.

"NG tubes can be positioned wrongly but they don't tend to cause loads of difficulty, but sometimes if they are not in the right place it just means you can't get air out of the tummy. The point of the NG tube as well as for feeding is also to get air from the stomach, so if it's not sitting in the right place and then you're not getting air out, that could contribute to her abdomen being distended.

"Because the nursing staff put them in reasonably blindly through the nose to an estimated length, it is not unusual for it to be a bit far or a bit short. Having passed a tube, you then take an aspirate from it and if it's acidic then it proves that it is in the stomach. But because a lot of these babies have X-rays for other reasons, you always see where it is on the X-ray. They probably get X-rays once a week where you could see the position of the tube, but you wouldn't normally routinely X-ray every NG tube.

"An NG tube can deflate the stomach, especially on CPAP, but only if it is not clamped. I can't say if it was or wasn't in this case. It can drain on free drainage and will do increasingly when aspirated. There are many times that the NG tube can be clamped, unclamped, on free drainage, aspirated. It is all part of the continuing assessment of what is needed at the time.

"In [Baby I]'s case it wasn't that the tube was in the wrong place, it was just that it wasn't deflating the air properly, so it will have been in the stomach. It was just potentially in too far and was curling on itself or not in far enough.

"Her abdomen did get better once the NG was re-passed, but it might have got better anyway if it was just a transient problem due to CPAP. It is difficult to say retrospectively when there is only what is documented in the notes, but the more important aspect at the time was the abdomen was then soft, so unlikely to be a significant cause rather than the specifics of the NG tube.

"When Emily wrote there were no aspirates, I think she clearly meant there were no abnormal aspirates. We get worried about NEC

and babies who get a lot of bile back up the tube or green aspirates or blood up the tube or large quantities of aspirates. For example, if you're feeding a baby 2ml of food but are aspirating 10ml, then it is clear it is not going anywhere. But Emily doesn't say any of that so I presume her record was a reassuring sign that whatever the nurses were feeding into the stomach was being digested rather than just sitting there.

"If you get no aspirates, you wouldn't use that as a sign that the NG tube is in the wrong place, so you would tend to X-ray.

"It appeared that the small procedure of repositioning [Baby I]'s NG tube resolved the issue of her distended abdomen. What we tend to find with babies with NEC is that their abdomens stay distended, so even if we hadn't repositioned the NG tube, the fact that her tummy got better in such a short space of time was reassuring that there wasn't more significant pathology going on. I would have been more concerned if the X-ray had shown abnormal bowel loops rather than specifically anything to do with the NG tube.

"That was the last of my involvement with [Baby I] that night. In summary, the NG tube being repositioned and the distended stomach was something that happened quite frequently and not something I was overly concerned about. There was nothing about this episode that struck me as anything other than routine neonatal management."

I want to now hand over to Mr Astbury, if I may.

MR JUSTICE GOSS: Certainly.

MR ASTBURY: My Lord, there's an additional reading bundle, if I could pass it up, please.

MR JUSTICE GOSS: Thank you very much.

(Handed)

Witness statement of MS YVONNE GRIFFITHS (read)

MR ASTBURY: I'm going to begin by reading a statement from Yvonne Griffiths, please, which appears at the front of that most recent bundle.

MR JUSTICE GOSS: Thank you.

MR ASTBURY: Her statement is dated 2 December 2019 and reads as follows:

"I have been asked by DC Birch of Cheshire Police about my recollection and knowledge of [Baby I]'s care on 5 September 2015. Prior to providing this statement I have had the opportunity to review [Baby I]'s notes for that date.

"After reading the notes, I do remember the evening but not the full ins and outs. I remember her parents coming in and providing comfortable armchairs for them to spend time at the bedside.

"I was on a night shift on 5 September and took over the care of [Baby I] from 00.30 hours on 6 September from [Nurse C]. I then handed her over to the day staff the following morning.

"As a senior nurse we tend to take ITU babies or high dependency babies when they are allocated, so on that evening I had a high dependency baby on Optiflow when I first came in in nursery 1. [Nurse C] was in charge and was in charge of coordinating the night and any admissions that come through, or if a baby deteriorated then she was responsible for reallocating staff according to need.

"The other staff on duty were [Nurse E], Lucy Letby and Val Thomas, who was a nursery nurse. Val would have been responsible for any transition care babies that night if we had any, but I'm not sure if we did. The amount of staff on duty was quite a good ratio to the number of babies we had.

"Looking at [Baby I]'s notes for the day I can see [Nurse C] took over at 20.00 hours. I remember coming on duty and [Baby I] had been desaturating during the day a little bit, which is what premature babies do. After all, she was only 28 days old.

"It was deemed unsuitable for a nursery nurse to take over her care for the night. I think she then became more apnoeic and desaturated quite a bit so she did then need ITU care. As [Nurse C] was the shift leader, she then allocated [Baby I] to be under my care as I had a high dependency baby so was in a position to take over. We work within a team and I'm sure I supported [Nurse C] whilst [Baby I] was intubated before I took over. I remember that we contacted her parents at home. We knew the parents really well and they asked if they could come in because they were very proactive parents. That wasn't a problem at all and I remember them coming in and [Dr B] coming in.

"Alison Ventress was the registrar on duty and she's very experienced as well. Everything went to plan with the intubation, however during the night there were episodes of further desaturation which required us to increase the ventilator pressures slightly.

"My notes from the night were written retrospectively at 06.19 hours on the 6th. They confirm I took over care at 00.30 hours. She, [Baby I], had been in one of the outer nurseries but when she came to me, she came into nursery 1.

"[Baby I] was on ventilator support and SIMV [that's the reference to mechanical ventilation] 16/5 and 40 breaths per minute. This is simultaneous support which allows the baby to do some of the breathing whilst having mechanical support, so it doesn't take over completely. Because she was a small baby we didn't want to use a lot of high pressures initially because it can cause problems like pneumothoraces because they have only tiny lungs. We start with a lower pressure and then assess with blood gases to see if we need to go up.

"A chest X-ray was then performed and the ET tube was pulled back by half a centimetre. My next note was about a desaturation episode at 03.23 hours when her blood gases dropped to 30% oxygen, which we picked up on the monitor that measures oxygen levels. Dr Ventress was already at the bedside and we did inflation breaths using Neopuff. When a baby desats you do a whole check, making sure the probe is on in the first place, then listening to the chest sounds to see if the tube was still in situ, because they wriggle about and sometimes the tube can be dislodged, so we always do those basics and then if everything is checked out okay, we may think they might need a higher pressure. We will disconnect from the ventilator and then pop the bagging mask on and give higher inflation breaths at our control rather than by the ventilator. That can be done by a doctor or a QIS nurse, who's a nurse who's gone through her advanced training like me.

"With regard to that particular desaturation where we bagged [Baby I], I can't recall who was there present and who assisted or who did what.

"Following on from that desat, after the Neopuff good air entry was heard and increased pressure required. She had recovered sufficiently to be put back on the ventilator. Ventilation was increased to 20/5. The 20 is the higher pressure, the lower figure is the CPAP. The CPAP just keeps your lungs just open a little bit to make breathing easier and the higher pressure is how much you want to inflate the lungs.

"She was on 60 breaths per minute, which is normal. She remained very pale and had a similar episode at 0.10 hours. The paleness could have been indicative of NEC, an infection, as she had been started on metronidazole. She also had a blood transfusion overnight via a peripheral cannula and was given 20ml of blood per kilogram of body weight. That was in relation to her

paleness and we would have done bloods and possibly her haemoglobin was low.

"The note then states that fluids were infusing via another cannula at 150ml per kilogram. These were her maintenance fluids, including morphine. In order to infuse blood products a separate cannula is required. My notes go on to say that pre-ductal oxygen was recorded due to her desaturations. This is to do with the valves in the heart and we have to check pre- and post-ductal stats. We are always looking to see what the cause of the desaturation is.

"Her temperature was noted to be low, which could have been environmental due to procedures being carried out or early signs of sepsis. Her desaturations, her coolness and the paleness all pointed towards infection and NEC on that night.

"When she was later transferred to Liverpool, we were informed her endotracheal tube was blocked, which was very unusual to happen in an eight-hour window.

"My last note was about mum ringing the unit and asking if they could stay over. We encouraged them to come in and they came in. We offered them the parent accommodation but they wanted to be with her, so we set them up with chairs next to her bed.

"[Dr B] updated them as to what had happened and I noted they were very loving and appropriate at the bedside. I can't think of anything else that may assist the investigation."

My Lord, we can return to the original bundle, please, page 41.

MR JUSTICE GOSS: Thank you.

Witness statement of MS NICOLA SIMMONS (read)

MR ASTBURY: It's a statement from Nicola Simmons, dated 16 March 2020. She says as follows:

"I have been asked to make comment about a particular baby that I cared for, namely [Baby I], at the Liverpool Women's Hospital in 2015.

"In 2015, as band 5 nurse, I was working at Liverpool Women's Hospital neonatal unit when at some time during the late afternoon of 6 September 2015, according to medical notes, I did receive or admit [Baby I] from the transport team to the neonatal unit at the Liverpool Women's Hospital.

"We received [Baby I] from the level 2 Countess of Chester Hospital as they would not have been able to ventilate her. We

are a level 3 unit and we have a higher level of intensive care support.

"My role in 2015 as a neonatal nurse would have been to work with the medical team, admitting babies and setting up ventilation, medication, supporting parents and general nursing of babies. I cannot remember who I was working with on this day. I make this statement purely based on [Baby I]'s medical notes that I have reviewed and were typed by me.

"My medical notes relating to [Baby I] timed at 18.50 on 6 September 2015 show that I admitted her from the transport team. They show that [Baby I] was, on arrival, 31 weeks, incubated, ventilated and in receipt of two peripheral cannulas. She was also nil by mouth.

"[Baby I] was then transferred to a Liverpool Women's Hospital incubator and a ventilator was set up for [Baby I]. As the receiving nurse, I and the medical staff would have been given a handover of [Baby I]'s condition from the transport team.

"The notes say not long after the transfer from the transport team and at the Liverpool Women's Hospital, with [Baby I] having been set up on our own ventilator and whilst we were setting up a new intravenous line for [Baby I] to receive total parenteral nutrition, [Baby I] had a profound bradycardia upon positioning.

"This in itself is not uncommon for a small sick baby upon repositioning. For a tiny baby like [Baby I] just moving her from one incubator to another, as we had to, may have triggered a desaturation and a bradycardia. The movement upset could have been created by as little as moving her arm so we can get access for a line insertion.

"From the notes, [Baby I] had large creamy secretions in her ET tube, possibly as a direct result of being moved. These secretions can block the airway. I would have listened to [Baby I]'s breathing to discover that she had secretions blocking her airway. These desaturations and bradycardias can be a natural reaction to being moved. However, they do indicate to me and the medical team that there is something very wrong with that baby.

"This reaction is how the babies tell us that something is not right. The fact that [Baby I] had a bradycardia along with a desaturation tells me that there was an issue with her airway and she was not able to breathe, she is not able to circulate herself. I would have reacted by giving [Baby I] suction in order for her to breathe.

"The notes say that [Baby I] was a little irritable and had abdomen problems. The abdomen problem could have caused [Baby I]

pain and discomfort. I cannot recall this bradycardia episode at all let alone who I was working with.

"Interpreting [Baby I]'s notes, [Baby I] recovered from this episode. According to the notes I changed [Baby I]'s morphine. It's standard practice that if a baby arrives with certain infusions running, like morphine or adrenaline drugs, we will replace those drugs with our own Women's Hospital comparable drugs via a doctor's prescription.

"[Baby I]'s antibiotics were also changed. [Baby I] was also on 10% dextrose, again which was changed to Liverpool Women's Hospital. Later on in the day, [Baby I] had settled and we have supported her parents."

My Lord, moving on to 30 September --

MR JUSTICE GOSS: If we're moving on to another date, we'll have the break then.

MR ASTBURY: Yes, that's very much the build-up to the 30 September (inaudible: coughing) statement this morning.

MR JUSTICE GOSS: That's a good time, it's a natural break in the history, and it'll actually be completely the middle of the morning session. A ten-minute break then and then we'll move on to 30 September, thank you.

(11.42 am)

(A short break)

(11.52 am)

MR ASTBURY: -- (inaudible: no audio feed from court) the one witness, live, we will have this morning before the adjournment is Bernadette Butterworth. It doesn't emphasise the point that she has screens, so we will need a short break to put the screens in place. So apologies we've missed that off the list.

MR JUSTICE GOSS: Right.

MR ASTBURY: I think we're about 20 minutes away as a best guess.

MR JUSTICE GOSS: We'll do it then.

(In the presence of the jury)

Witness statement of MS LISA WALKER (read)

MR ASTBURY: My Lord, the next statement is from Lisa Walker. It's page 44 of my Lord's original bundle.

She signed this statement on 6 November 2019 and says as follows:

"I have been asked about my involvement with and recollections of a baby called [Baby I], who died at the Countess of Chester Hospital on 23 October 2015.

"Prior to providing this statement, I have had the opportunity to review medical records to assist me. Specifically, I have been asked about 30 September 2015.

"I was not included in the staff numbers on the neonatal unit that day, but I was on duty and in the unit from 08.00 hours to 15.30 hours on a parent education day.

"Parentcraft finishes at 18.30 hours now, but back in 2015 it would finish at 15.30. I was not involved in any clinical care of babies that day and have no recollection of [Baby I]. I am aware that my name appears alongside [Baby I]'s mum's name in the nursing therapy notes for [Baby I] on the infant massage progress form dated 30 September, so on that day I would have been just doing a skin patch test on [Baby I] to see if there was any reaction to the oil I was using. I have recorded that I tested grapeseed oil on her right ear. I can say that we don't do skin patch tests on sick babies so the fact that I did one on [Baby I] tells me she must have been well even though I can't actually remember that day.

"On [Baby I]'s feeding chart for 30 September I wrote:

""Skin patch test R ear 1300 grapeseed oil."."

"I have been told that [Baby I] suffered two collapses later in the day, around 16.30 hours and 19.30 hours, but the feeding chart gives a specific time of the skin patch test at 13.00 hours and I was off duty at 15.30 hours, so sadly I would not have been in at the times of her collapse and can offer nothing in addition to the above."

My Lord, the next statement I'm going to read is at page 48 of the bundle. It's [Nurse A], a witness who I'm sure the jury will recall, we've heard from before.

Witness statement of [NURSE A] (read)

MR ASTBURY: This is dated 6 November 2018 and she says:

"On 10 September 2018, DC Birch from Cheshire Police interviewed me and asked me about the night of 30 September and my recollections and involvement with [Baby I] on that date. I was informed that [Baby I] suffered a collapse at handover time.

"Of course, I remember [Baby I] well in general terms because she was on the unit for quite some time and had a number of collapses. I knew her because, as a team leader, you need to have an overview of all the babies but I don't remember being heavily involved in her care.

"She kept going out to other hospitals and she kept coming back to us where it seemed like the other hospitals hadn't done much and it was very frustrating to us.

"I have been told that I am shown on the rota for 30 September as being on nights. Night shifts run from 7.30 I have been told that I was working that night with Ailsa Simpson, Bernie Butterworth, Kate Brammall and Val Taylor. Ailsa and I are band 6 nurses so one of us would have been the shift leader that night, but I am unable to recall which one of us it was as we didn't keep a record of who did what on a particular shift. With regards to the shift leader we try to keep that role as supernumerary. We would try to allocate a lower dependency stable baby to the shift leader so that if something did happen they would be free to assist.

"I have had the opportunity of reading the nursing notes from 30 September day shift made by her designated nurse, Lucy Letby, and the night shift notes made by her designated nurse, Bernie Butterworth. These records are good and comprehensive but did not help jogging my memory about that date.

"I can't recall what the handover procedure was at the time, whether it was a five-minute huddle by the nurse station or whether we all went to the resource room. The notes did remind me about [Baby I] in more general terms and her distended abdomen, which was a feature of her, but nothing about that night.

"I have no recollection of the events that night and therefore don't recall the collapse at handover. I do not recall being involved in any resuscitation and don't appear in the notes as being involved. If I did get involved, it would only have been peripherally.

"If I was shift leader I would probably have gone in and made sure there were enough people assisting. I can't say who else was involved other than the people I have read about in the notes, who are Lucy, Bernie and Dave Harkness. I am unable to

say anything about who did what or where people were during the collapse.

"I also remember, at the time we were talking about, we had massive staffing issues where people were coming in and doing extra shifts. It was mainly Lucy that did a lot as she was one of only three band 5 nurses that had done the neonatal course at that time, Bernie Butterworth being the other and Shelley Tomlins. Lucy was young, living in halls in the doctors' residential, saving to buy a house, she was single, able to swap, willing and wanting to do extras, whereas Bernie was married, had a much more established life and didn't need the money, but not that she wasn't flexible too. I can't think of anything else that might assist the investigation with regards to [Baby I]."

MR JUSTICE GOSS: She could have given that evidence orally, realistically, couldn't she? She doesn't add anything to 30 September because she has no recollection of it.

MR ASTBURY: No, my Lord, but we're trying to keep everything in date order.

MR JUSTICE GOSS: Well, I know. Just the bit at the end about the defendant's personal circumstances, that's what I was thinking of.

MR ASTBURY: Yes. It happens to be where it fell --

MR JUSTICE GOSS: Anyway, it's in evidence now.

MR ASTBURY: With that chronological issue in mind, we have two doctors to call in respect of events on 30 September. The first doctor, I'm afraid, is not available until tomorrow, so we are going to be taking that doctor a little bit out of order, so I apologise for that now, but I am going to read the statement of [Dr A] who saw [Baby I] immediately after the collapse at 4.30.

MR JUSTICE GOSS: Thank you. This is page?

Witness statement of [DR A] (read)

MR ASTBURY: This is the new bundle, page 56.

My Lord, a statement dated 3 April 2019, and [Dr A] says as follows:

"I have been asked by DC Birch from Cheshire Police about my recollections of and involvement with a baby called [Baby I], who died on 23 October 2015 at the Countess of Chester Hospital.

"I have been asked in particular about 30 September 2015. Prior to providing this statement I have had the opportunity to review [Baby I]'s clinical notes.

"As far as any recollection of [Baby I], I can say that I remember that she was there at the start of my placement in Chester and I remember the name, but that's about it. Anything that appears in the following statement is exclusively from my notes and not from personal recollection.

"My notes on 30 September 2015 start at 16.30 hours. It actually looks like I've started to write 17.00 but I've crossed that out and wrote 16.30."

I wonder if we can go, please, to tile 97, Mr Murphy, and the notes behind.

We can see in the top left-hand corner that amendment that the doctor has just mentioned in his statement. And from his notes the statement continues as follows:

"My note on that date states that I was asked to see [Baby I] due to her vomiting and desaturating. I was crash called to the neonatal intensive care unit following a large vomit. I don't know who crash called me because it comes through the switchboard and they just tell you where to go.

"She was being bagged on a resuscitator and oral and nasal suction was given. Her saturations were 30% and her heart rate 50. On my arrival, I recorded that she was in a heated cot and had been weaned in the last 24 hours. The baby had been cool that day and her temperature had been monitored on a heated cot at 38 degrees with the incubator set at 20 degrees.

"The fact that I have managed to write it in that order would suggest that I have dealt with the problem first and was doing my writing afterwards. I have set the scene at the top and then, on my arrival, given my impression of what was going on at that point. I probably started to write at 17.00 but this is an event from 16.30 so I have changed it.

"The large vomit had already happened and her oxygen saturations have reduced down as far as 30% and that is really low. Her heart rate has followed that as well. With a low saturation, a low heart rate follows. When I arrived she was pink and her heart rate was 130. Saturations were 99% in air, so she didn't need any extra oxygen, and she had normal saturations with a normal heart rate. Her respiratory rate was 28 and she would have been about 34 weeks, so a respiratory rate of 28 was normal.

"When I was looking at her, she was breathing well, there was no effort for breathing and she wasn't working hard. Her chest signs was clear, her abdomen was a little bit distended, and she had active bowel signs all over.

"The fontanelle, the soft spot at the top, was normal. Her tone was normal, her movements were normal. A cannula was placed in the back of her left hand."

If we can scroll down a little bit, please, Mr Murphy. There will be a plan at the bottom of the notes, thank you.

"My notes then reflect what my plan was for her. I have ordered some blood tests, a full blood count and a CRP as markers of infection, and a blood culture for presumed infection. I arranged a chest and an abdominal X-ray to look for why she had a vomit and a big desaturation.

"I have also said, and this is in quotation marks, 'Let's not feed her and let's give her all of her fluids as IV fluids through that cannula.' She was on 165ml per kilogram per day, which I presume would be what she was on by(?) milk prior to this. So it's the same volume, it's just a different fluid via a different route.

"Then we've started some intravenous antibiotics. There are some ticks next to them on my notes and that means I have ordered them. My notes then say 'venous gas' and she had a lactate of 5.4, which was raised. She had a base excess of minus 6.7, which is also raised, and this has come at the time she had her collapse, so they are not surprising results, but they are very difficult to quantify given that she had recently been unwell. Lactate is a marker of how your cells are doing their metabolism. Without oxygen, you switch to an anaerobic metabolism and it's a marker of that. It's often raised in sepsis and it's often raised if you've had an event recently. The base excess would normally be between plus 2 and minus 2. The lactate I wouldn't normally expect to be over 2, so 5.4 is quite high, but again there was a reason for it in that she had just needed some resuscitation. Whether that preceded the collapse or whether it's because of the collapse, it's impossible to tell on that gas."

If we scroll down a little further, please.

[Dr A] says:

"My next entry was at 20.00 hours on the same date, the 30th. The chest X-ray showed perihilar shadowing. That's where all of the airways or the blood vessels that join the lungs into the

main breathing apparatus and to the main blood vessels have some increased markings.

"This could be consistent with infection and the fact that I have mentioned it means that it wasn't normal, but without seeing the X-ray I can't comment any more. There was no evidence, or I have not written of any evidence, of any collapse or signs of bits of lung that were obscured by infection.

"I then wrote with regards to the abdominal film that there were dilated loops of bowel in the lower quadrant but there was no air in the biliary tree and no obvious falciform ligament."

MR JUSTICE GOSS: What does all that mean? Can someone else help us later in relation to that if it's of significance?

MR ASTBURY: Yes.

MR JUSTICE GOSS: I don't think we've encountered falciform ligament before.

MR ASTBURY: No, or biliary tree. We'll ask one of the doctors to help us, thank you:

"So that was looking at the air in the loops of bowel because it's gone in the top end and it'll work its way out at the bottom end. This showed there was no air in the biliary tree. The gall bladder is connected to your bowel over in the upper right-hand quadrant. If you've got free air, you'll often see that tracking back up and that will be a worrying sign of NEC, necrotising enterocolitis, but I couldn't see that there.

"She did have temperature instability and she'd had an apnoea where she stopped breathing, so my presumption was that this was the very early stages of NEC, so that was why I ordered the tests that were ordered and why I started her on antibiotics. My notes show a triangle next to where I wrote 'NEC', which is medical shorthand for showing that is my diagnosis."

We can see that in the bottom of the left page:

"I then wrote, 'Presumed NEC Bell score of 1A.' There is a scoring system for necrotising enterocolitis and, based on the X-ray and the other things that are there, I have looked it up and I have typed it as a 1A, which is a very, very low score.

"If it had been NEC that had been ongoing for a while, you'd have a score that was higher, so 2 or 3. So in terms of the 1A, that's only suspected NEC. She wasn't displaying any signs of NEC, but there was enough there to make me want to treat it to prevent it getting any worse. Even if there is a very, very low

suspicion of NEC, you still take the safe option and treat it as if it was. I wouldn't want to have missed it and then found ourselves with a higher score and a baby that was worsening. So the cefotaxime, which was the antibiotic started at the end of that review earlier on, was now supplemented by metronidazole, which is another antibiotic. They both cover different spheres of bugs, so it was a two-pronged approach.

"There is a sticker on the notes..."

If we can go to tile 98, please:

"... which relates to the X-ray review. My comments on that are the same as in my notes, but the sticker is a sure mark that I have seen it. After that sticker, my last note was that mother had been updated. I then signed off the notes."

Take that down, thank you:

"I am trying to picture the baby or parents [continues [Dr A]] and I can't recall the appearance of any of them, so the fact that I've written 'mother updated' at the bottom of my notes, that may well have been my only discussion with that family. At that point I will have finished for the daytime and handed over to Dave Harkness, who was on for the night, and he makes the next entries on [Baby I]'s notes.

"I have also looked through [Baby I]'s other notes and know that she was there for quite a while, as you would expect for a 27-week gestation baby. I remember her name because even though I didn't look after her day-to-day, I would have heard her name at handover when she got mentioned, but there's still nothing that stands out about her to me.

"An explanation for her large vomit on 30 September could be because her bowel could have been inflamed, possibly a sign of early necrotising enterocolitis. The Bell score of 1A would have been increased by having blood in the vomit or bile in the vomit or blood passing from the tail end. She had a large vomit and a desaturation and in a baby who has had temperature instability that day, that could be a sign of NEC. So based on the vomit, temperature instability, presumed apnoea because of the desaturation and the low heart rate, they were all my warning flags that this could be NEC, so you start the investigations and start treatment.

"Having looked through the rest of her notes, I am unable to comment on whether there was anything unusual about the desaturation of a baby of that gestation without being there to see it happen because it happened before I arrived. As the doctor, you come along after things have happened and deal with

what's in front of you. You come up with a care plan and implement that. There will have been some information passed at the time of arriving there, but if a baby has sats in the 30s with a heart rate in the 50s, it is more important to get on with treating the baby there and then, and then afterwards tell me what happened before.

"I will presume that there was some extra information given at that point about the temperature instability and about the large vomit, which has then made me put my pieces together to think this could be necrotising enterocolitis. I can't remember who would have given me that additional information.

"As far as discussing [Baby I] with other members of staff, there will obviously been a discussion with Dave Harkness for the night shift because we've started some investigations. She will have been on the list of babies to keep a closer eye on that night. I can't think of anything else that might assist with the investigation at this time."

But my Lord, for the sake of completeness, please, if we can go to tile 204, there is in fact another entry from [Dr A].

I'm going to rely on the analyst's summary given his handwriting and the note reads:

"Previous care noted. 9 o'clock the next morning."

Presumably the doctor on the day shift the following day again:

"Previous care noted. See medical notes for full details. Imp 1. Presumed NEC. Plan..."

Sorry, that should be "impression 1, presumed NEC":

"Plan. (1) Nil by mouth. (2) CRP at 18.00 hours. (3) 3 days of antibiotics. Review to consider restarting feeds. Parents concerned that sibling has lactose intolerance [query] related to episode of abdo distension."

Then:

"Observations: alert, active, pink, well perfused, heart rate 150. Saturation of oxygen 97% (air). Femorals ++. Respiratory rate 30 to 40. Equal air entry bilaterally."

Then:

"Resp distress. Vesicular sounds all zones. Abdomen soft, markedly less distended. Active bowel sounds all quadrants. LKKS..."

Which I'm told is liver, kidney, kidney, spleen -- I will be corrected, I'm sure, if I'm wrong -- and a circle indicating they were palpable:

"Reducible umbilical hernia. Anterior fontanelle. Sort(?) tone N..."

Which is "no" presumably -- sorry "normal". Then the next word is not legible:

"... movements normal."

So that concludes [Dr A]'s contribution for events on and around 30 September.

My Lord, the next witness is Bernadette Butterworth.

MR JUSTICE GOSS: Who is going to give evidence?

MR ASTBURY: Will give evidence but behind screens.

MR JUSTICE GOSS: Right, 2 minutes or thereabouts, please.

(Pause)

MISS BERNADETTE BUTTERWORTH (sworn)

Examination-in-chief by MR ASTBURY

MR ASTBURY: Could we start with your full name, please?

BUTTERWORTH: My name is Bernadette Butterworth.

ASTBURY: And your occupation, please?

BUTTERWORTH: Neonatal nurse.

ASTBURY: Thank you. Were you employed in that capacity at the Countess of Chester Hospital in September of 2015?

BUTTERWORTH: Yes.

ASTBURY: Were you a band 5 at that time?

BUTTERWORTH: Yes, a band 5.

ASTBURY: And we've heard something of it, but had you also taken the additional QIS qualification --

BUTTERWORTH: Yes.

ASTBURY: -- to enable you to care for sick babies?

BUTTERWORTH: Yes, who need more support.

ASTBURY: Thank you. You know you've come here today to help us with a night shift that you worked beginning at 7.30 on 30 September 2015.

BUTTERWORTH: Yes.

ASTBURY: We don't have a record -- we do of some of the shifts, but we don't have one -- but I think you have looked at the notes to refresh your memory?

BUTTERWORTH: Yes.

ASTBURY: And you have been able to confirm that also on duty with you were [Nurse A] and Kate Brammall that night?

BUTTERWORTH: Yes.

ASTBURY: Is your recollection of that shift entirely based on the notes that you've been able to see or do you have some recollection yourself?

BUTTERWORTH: I do have some recollection, but mostly from the notes.

ASTBURY: Okay. We've heard that ordinarily there would be a handover, a shift handover, when your shift would have started?

BUTTERWORTH: Yes.

ASTBURY: Do you recall that?

BUTTERWORTH: I don't remember exactly the handover. We used to have a whole handover and then go to the bedside and have an individual handover of the babies. So yes, I do remember the individual.

ASTBURY: And do you recall who you were taking over from the day shift that day?

BUTTERWORTH: Lucy Letby.

ASTBURY: Okay. Do you recall the handover between yourself and Lucy Letby?

BUTTERWORTH: Yes, not word for word.

ASTBURY: Okay. Were you made aware that [Baby I] had been unwell during the course of the day shift?

BUTTERWORTH: I would have been, yes.

ASTBURY: And were you made aware that she'd been moved into nursery 1 as a result of those difficulties?

BUTTERWORTH: Yes.

ASTBURY: And that was where you were her, I think, designated nurse?

BUTTERWORTH: Yes.

ASTBURY: And that's where you were to care for her that particular shift?

BUTTERWORTH: Yes.

ASTBURY: All right. Did anything unusual happen during the course of the handover?

BUTTERWORTH: During the handover, [Baby I] had another do where she dropped her heart rate and desaturated and we needed to intervene.

ASTBURY: So she had another do?

BUTTERWORTH: Yes.

ASTBURY: Okay. And that involved -- just tell us, please, what that involved.

BUTTERWORTH: Her saturations dropped and she --

ASTBURY: That's the oxygen level in the blood?

BUTTERWORTH: Her oxygen level and she came bradycardic, so her heart rate dropped.

ASTBURY: Right.

BUTTERWORTH: I don't think she was breathing at that point. At some point her chest -- there was no chest movement so we started intervening with the Neopuff.

ASTBURY: How did you become aware of [Baby I]'s do?

BUTTERWORTH: Because the alarm monitor would have alarmed, the monitor would have alarmed and we would have --

ASTBURY: And do you remember what you were both doing or what you were doing at the time the alarms went off?

BUTTERWORTH: We probably would have been just handing over.

ASTBURY: So literally in the process of discussing what had gone on and what --

BUTTERWORTH: Yes.

ASTBURY: -- you needed to be aware of? Okay, all right. So the alarm's alerted you to a number of problems with [Baby I]?

BUTTERWORTH: Yes.

ASTBURY: You're going to tell us what happened next. What did you both do, if anything?

BUTTERWORTH: Um... We'd got the Neopuff, I had started Neopuffing -- I think it was me who started Neopuffing. I noticed [Baby I]'s tummy was becoming larger, chest wasn't moving, so I asked Lucy to aspirate the NG tube.

ASTBURY: Let's pause there. So when you went for the Neopuff, just to be clear, was [Baby I] on any respiratory support at all at that point?

BUTTERWORTH: No.

ASTBURY: So she wasn't receiving any --

BUTTERWORTH: No.

ASTBURY: -- assistance when first the alarms went off?

BUTTERWORTH: No.

ASTBURY: When did you notice her tummy?

BUTTERWORTH: Probably just as I was looking because obviously you're looking for colour. If the alarms are going, you're looking to see whether her colour's gone and I think her tummy was distended previously anyway. And as we were Neopuffing her tummy seemed to be getting bigger and appeared hard.

ASTBURY: My fault, I didn't want to interrupt you, but you've -- I think one or two people might be struggling to hear.

My fault, not yours. Please don't apologise.

The tummy was swollen. I think you mentioned she'd had that problem already?

BUTTERWORTH: Distended, yes.

MR JUSTICE GOSS: She said the stomach was getting larger and distending as you were Neopuffing.

MR ASTBURY: Did you also mention what the condition was before the Neopuffing started?

BUTTERWORTH: What do you mean, sorry?

ASTBURY: I think you said -- I asked you when you first noticed it.

BUTTERWORTH: Oh yes, I think her tummy was slightly distended anyway, but as we were Neopuffing, because obviously you're putting the pressure in and, like, air, it seemed to be getting bigger.

ASTBURY: Okay. Do you recall how long you'd been at the side of the cot when all this started?

BUTTERWORTH: I can't say for definite to be quite honest.

ASTBURY: Okay. Half an hour, an hour?

BUTTERWORTH: Oh, it wouldn't have been that long. It was handover, so --

ASTBURY: All right.

BUTTERWORTH: It could have been 5 minutes. I couldn't really give an exact amount of time on it.

ASTBURY: All right. So what was the problem with the tummy as you saw it? What was the problem with the tummy becoming distended?

BUTTERWORTH: If it was getting bigger and we were, like, Neopuffing.

So you're putting force in, air into her tummy, that type thing. The tummy, I think, would be pushing up the diaphragm. We weren't getting chest movement, so I asked Lucy to aspirate the NG tube to get some of the air out of her tummy, which she did. We got quite a bit of air out and a little bit of milk.

ASTBURY: Let's pause there: do you actually remember asking her to do that?

BUTTERWORTH: Yes, and it was in my notes also.

ASTBURY: Just describe to us then, please, the aspiration in a bit more detail.

BUTTERWORTH: You just draw back, so there would have been air coming back because I think I'd put "++ of air". So you are just taking air off the tummy, so the tummy would then reduce slightly, and there was a little bit of milk also.

ASTBURY: Okay. Were you able to measure the air?

BUTTERWORTH: I don't think we did at that point, no. I've put "++", so there must have been a fair amount, but I couldn't say whether it was 10ml or 20ml.

ASTBURY: Okay. When you say a fair amount, in comparison to what?

BUTTERWORTH: Um... I haven't really got a comparison. I'm just thinking of what I put in my notes. It says "++".

ASTBURY: So "++" is what you might normally expect to find?

BUTTERWORTH: Yes. You might just get a bit of air. If you were aspirating the tube to do a feed, you might just get a little bit of air off before you get some milk, to check the tube is in the right place, so it could have been 2, could have been 3. I'm not too sure, to be quite honest.

ASTBURY: But the "++" meant something different?

BUTTERWORTH: Would have been like a little bit of air, yes, a lot of air.

ASTBURY: A lot of air, okay.

BUTTERWORTH: I couldn't give a measurement on that.

ASTBURY: Did you measure the milk?

BUTTERWORTH: I think I have wrote down 2ml in my note, approximately.

ASTBURY: Does the milk have any particular appearance?

BUTTERWORTH: If I haven't put it in my notes, it would have just been milk.

ASTBURY: What happened as a result of your intervention?

BUTTERWORTH: I think she settled down, her chest movements then became -- and I think she came back to normal then.

Heart rate and respiratory rate all came back to number and her saturations, I think we -- I don't know whether the doctors had already been bleeped or whether we bleeped the doctors.

ASTBURY: You're just dropping your voice a little bit.

BUTTERWORTH: Sorry.

ASTBURY: I think you said you weren't sure whether the doctors were there or you bleeped the doctors?

BUTTERWORTH: No, I don't know whether we bleeped the doctors or the doctors had been bleeped.

ASTBURY: All right. Do we take it from that doctors arrived?

BUTTERWORTH: Yes.

ASTBURY: Do you remember who?

BUTTERWORTH: I know the doctor on for nights was Dave Harkness, but I don't know whether it was him. I can't remember for definite.

ASTBURY: All right. Do you recall whether the improvement, the recovery, came before or after you'd aspirated the air from [Baby I]'s tummy?

BUTTERWORTH: After.

ASTBURY: Following [Baby I]'s recovery, did she stay in nursery 1?

BUTTERWORTH: She did.

ASTBURY: And did you continue to care for her (overspeaking) shift?

BUTTERWORTH: I did.

ASTBURY: I'm going to look at your notes next, please, then from the remainder of that shift. You will see a screen to your right. We're going to pop them up, I hope, in a minute. I'm going to ask Mr Murphy to put up tile 94, please.

If we go behind it. The first block, please, top left. You'll be very familiar with these. We're becoming more and more familiar

with them. Looking at that, we can see it's created at -- is that 22.35?

BUTTERWORTH: Yes.

ASTBURY: That night. So written in retrospect?

BUTTERWORTH: Yes.

ASTBURY: We can see your initials. I think, correct me if I'm wrong, please, the second time records when you complete the note, it's when you hit the return button or something similar to that. Then we can see the content of what you wrote between 10.35 and 10.56 that evening.

BUTTERWORTH: Okay.

ASTBURY: Can you take us through that, please?

BUTTERWORTH: Do you want me to read it?

ASTBURY: Yes, please.

BUTTERWORTH: "For care commenced at 20.00 hours. All safety checks completed and satisfactory. During handover [Baby I]'s abdo had become more distended and hard, she had become apnoeic and bradycardic and sats had dropped. IPPV given and, despite a good seal with Neopuff, there was still no chest movement. Aspirated NGT air +++."

ASTBURY: Pausing there, in fact you put 3 pluses there, is that significant?

BUTTERWORTH: It's a fair amount.

ASTBURY: Okay. And then I think you've put:

"2ml of milk obtained"?

BUTTERWORTH: Yes.

ASTBURY: "Eventually got chest movement and sats (overspeaking)"

--

BUTTERWORTH: "... and sats and heart rate normalised. Colour remained pale. Doctors called. Cefotaxime and loading dose of metronidazole prescribed and given. Metronidazole given over reduced time, 10 to 15 minutes. Dr Harkness informed and Datix to be completed. Parents have been fully updated by myself and doctors. Repeat CBG satisfactory. Glucose raised at 10.9. For

repeat in 6 hours. Not for transfusion at this point due to grade 1 NEC. Reviewed by Dr Harkness."

ASTBURY: So no transfusion because at that stage, as we've heard earlier this morning, there was a suspicion of NEC, necrotising enterocolitis?

BUTTERWORTH: Yes.

ASTBURY: Thank you. Just pausing there, there's mention about a Datix form being completed.

BUTTERWORTH: Yes.

ASTBURY: I think there'd been a problem, is that right, when the (overspeaking) --

BUTTERWORTH: The metronidazole should have gone over 30 minutes and for some reason it went only over 10 to 15 minutes.

There's usually two members of staff to check the drug that we put up and the machine that we do it, so there's two people checking that the amount we're putting in, the time it's supposed to go over is correct. And I think I did that with Katie Brammall, I think.

And when I had gone to check on everything and on the pump, I noted that it had gone through in a short period of time, hence why I informed Dr Harkness. There was no harm done or anything.

And a Datix, it's like if anything untoward (overspeaking) --

ASTBURY: Right. I'm going to interrupt you, if I may. We've heard a little bit about what a Datix form is and we'll come to it in fact in a moment, but in effect it's a report to the authorities, isn't it, where something goes wrong (overspeaking) on the basis that people can learn from it in the future?

BUTTERWORTH: Yes.

ASTBURY: All right. But you put it down in your notes straightaway in any event?

BUTTERWORTH: Definitely -- well, when I have time I wrote my notes, yes.

ASTBURY: Thank you. You comment there on the repeat -- is that capillary --

BUTTERWORTH: "Capillary blood (overspeaking)."

ASTBURY: "... (overspeaking) glucose slightly raised."

That would have been from a heel prick, would it?

BUTTERWORTH: It would have been, yes.

ASTBURY: All right. If we can go, please, to tile 100, Mr Murphy. We don't need to go behind it. We can see there on our presentation the administration of the cefotaxime and the metronidazole on the next tile by yourself and Nurse Brammall --

BUTTERWORTH: Yes.

ASTBURY: -- as you told us a moment ago. That times it at 8.33 pm. If we scroll along, please, we should see the times when it's entered on the -- 103 and 104, please.

We can see those two are entered on the computer at 20.40 hours.

BUTTERWORTH: So by the time we would have set it up and put it on the pump and then come back to the computer to sign for it, I presume.

ASTBURY: Next in the timeline, please, I would like to go to tile 131. You mentioned the capillary blood gas that you took. Can we have a look at the blood gas record, please? If we can just -- that's it, thank you.

Can you read that okay? It's slightly enlarged.

BUTTERWORTH: Yes.

ASTBURY: I'm going to ask for it to be a little bit bigger if possible. Thank you.

We can see it's the second line down --

BUTTERWORTH: Yes.

ASTBURY: -- I think, 21.23.

BUTTERWORTH: Yes.

ASTBURY: Is that the blood gas that you'd have been referring to in your note?

BUTTERWORTH: I presume so, yes, it's got the glucose.

ASTBURY: We can see 10.9 in the glucose column which is what you put in your notes.

Just while we're here, the next entry is in the early hours of 1 October, so the same shift?

BUTTERWORTH: Yes.

ASTBURY: Again by the look of it, 3.34 --

BUTTERWORTH: Yes.

ASTBURY: -- so we don't have to go back to it.

Could I ask you, please, about the third entry down?

Is that your handwriting?

BUTTERWORTH: I would like to say so, yes.

ASTBURY: Okay. Do you remember making that entry?

BUTTERWORTH: I don't know, unless -- the only other reason is if a blood gas had been done and had not been documented on the chart and -- we get like a little slip of paper and if I've seen that I might have put it on on my shift, whoever had done it before.

ASTBURY: So when the blood test is taken, we've heard from another witness, you get a printout from the machine; is that right?

BUTTERWORTH: Yes.

ASTBURY: And that has the relevant values printed out on it?

BUTTERWORTH: Yes.

ASTBURY: All right. Can you make out, I'm struggling, the time?

BUTTERWORTH: 14.15.

ASTBURY: You think that's 14.15?

BUTTERWORTH: I think. Or 17.15.

ASTBURY: Okay.

BUTTERWORTH: Actually, 17.15.

ASTBURY: All right.

MR JUSTICE GOSS: Could I just ask, do you write your sevens in the --

BUTTERWORTH: With a little -- yeah, with a little line in the middle.

MR JUSTICE GOSS: -- the European way rather than the normal way?

BUTTERWORTH: Yes.

MR JUSTICE GOSS: So you put the line across the --

BUTTERWORTH: I do, yes.

MR ASTBURY: With that in place, does that help you with that being your handwriting or not?

BUTTERWORTH: I would say it is mine because I put here "Initialled PP for LL".

ASTBURY: What did you mean by that?

BUTTERWORTH: I've put it -- Lucy Letby, it would have been from Lucy Letby's shift.

ASTBURY: Of course, she was on days and you didn't even come in until 7.30.

BUTTERWORTH: No.

ASTBURY: All right. And are you able to help with -- you said you thought it was maybe you'd found the slip. Can you remember how you came by that information?

BUTTERWORTH: If the slip is on your workbench -- so you have like a little -- where you keep all your charts and things.

It would have been clipped up up there so I would have come across -- if it had not been put on here I would usually -- because otherwise that information is missing from here.

ASTBURY: Okay.

BUTTERWORTH: It would usually just get thrown away otherwise.

ASTBURY: Were you asked to do it or did you (overspeaking) --

BUTTERWORTH: No, I would just (overspeaking) I think I would have just seen it. I can't remember being asked to do it.

If I'd come across it and it was before mine and it hadn't been documented I would have just put it in.

ASTBURY: All right. The fact it's come in on the line after 21.23, does that suggest (overspeaking) --

BUTTERWORTH: I have then put a little arrow. I've obviously put mine in, I think --

ASTBURY: Okay.

BUTTERWORTH: -- and then realised that was there, I think.

ASTBURY: Also written across the line, is that "saline bolus given"?

BUTTERWORTH: Bolus, yes.

ASTBURY: What does that refer to? Is that an entry from you or something else that you've found?

BUTTERWORTH: I don't know what that -- a saline bolus -- so it's like a salty liquid that we would give, a bolus of 0.9% saline for a bolus. But in all honesty I don't know whether I have done that for this, for my -- when I've done mine or whether it was previously done.

ASTBURY: Okay.

MR JUSTICE GOSS: But it's your handwriting?

BUTTERWORTH: It is my handwriting.

MR ASTBURY: All right. But you can't remember why it's there?

BUTTERWORTH: I can't, no, sorry (overspeaking) it's 7 years ago.

ASTBURY: We understand.

If we can go, then, please, to tile 148 next, Mr Murphy. Go behind it. That I think, correct me if I'm wrong, please, is a more detailed readout of the blood test that you'd have taken?

BUTTERWORTH: Yes.

ASTBURY: And certainly the page in front suggested it represented low haemoglobin, would you agree with --

BUTTERWORTH: The Hb is low, yes.

ASTBURY: Hence your note saying that the blood transfusion was to be delayed --

BUTTERWORTH: Yes.

ASTBURY: -- because of that?

All right. Back to tile 162, please. This is the neonatal fluid balance chart?

BUTTERWORTH: Yes.

ASTBURY: If we could look just to the initials at the bottom of that page, please.

BUTTERWORTH: Yes.

ASTBURY: It only starts at 20.00 hours.

BUTTERWORTH: Right, okay, yes.

ASTBURY: Can you just explain to us why there's -- it might be obvious -- no entries before then?

BUTTERWORTH: Because if she'd just gone on to fluids -- I don't know what time she started her fluids.

ASTBURY: Okay. We can see, if we look about a third of the way down the form, there's a time at 19.30; is that your handwriting?

BUTTERWORTH: I think it is.

ASTBURY: That suggests there's been a bolus at 19.30.

BUTTERWORTH: I couldn't say that for definite it was my handwriting.

ASTBURY: Okay. But that shows us when those -- that intravenous --

BUTTERWORTH: Bolus.

ASTBURY: -- nutritional bolus began. And then we have a cumulative figure across the second line; is that right?

BUTTERWORTH: Yes. It's got -- here it says:

"18.20, cannula tissued."

So that would have been for Lucy's shift.

ASTBURY: Then a bolus given at 19.30?

BUTTERWORTH: Yes. So I would have just been coming on, so I wouldn't have given that bolus, I don't think. I would have just been coming on then.

ASTBURY: So that, as you recall, would have been given right at the end of the day shift?

BUTTERWORTH: Yes, if it's got 19.30 there.

ASTBURY: That wasn't given by you?

BUTTERWORTH: I don't think so. I can't remember doing a bolus at 19.30. I would have just come on.

ASTBURY: (Overspeaking) yes. And these are readings that we are becoming more familiar with. Across the top we can see the nutrition recorded on the hour, each hour?

BUTTERWORTH: Yes.

ASTBURY: It takes us up until midnight. If we can go to the next tile, please, 163. These documents are in the jury's bundle as well, my Lord, for event 1.

Scroll down again, please, and see if we can identify your initials at the bottom.

BUTTERWORTH: Yes.

ASTBURY: I'm just trying to see what time they started, Mr Murphy. Can we do that in your usual helpful way.

So that's 20.00 hours?

BUTTERWORTH: Yes.

ASTBURY: Again, you have now taken over, you become responsible for these charts?

BUTTERWORTH: Yes.

ASTBURY: And I think, save for one, they're all your entries on that form?

BUTTERWORTH: Yes.

ASTBURY: I'm not going to go through it but it's there and it's there in hard copy if anyone wants to go back to it.

Tile 186, please. We can see more doses of antibiotics at 4.31 in the morning. If we carry on, please, to tile 191, just look

behind it. We can see this chart picks up where the last one finished. The last one finished at 5 am, this carries on at 6 am, so that, if we scroll down, would still be you with the initials, the very first one?

BUTTERWORTH: For -- the first one is mine and then Ailsa's done a set of obs.

ASTBURY: And likewise the next tile has the fluid chart that carries on from midnight. So that one starts at 01.00 hours, one finishes at midnight, one finishes at 5 am?

BUTTERWORTH: Yes.

ASTBURY: At the bottom, can you recognise your initials for most of those entries (overspeaking) by whom?

BUTTERWORTH: It looks like Ailsa Simpson.

ASTBURY: Thank you. If we can go back, then, to tile 199. Back to the Datix report that you told us you completed as a result of the administration of the antibiotics when you first came on duty, about 8.30.

Then if we can look at your notes, please, for the -- your summary of the remaining shift after you made the first entry at 10.50 or thereabouts. Tile 200, I think, is probably the best. If we go into it. The lower half of the left-hand side, please.

Can you read that okay?

BUTTERWORTH: Would you like me to read it?

ASTBURY: Check you can read it first. This was made at 8.44 in the morning. We can see the end of the entry you made finished at 22.52?

BUTTERWORTH: Yes.

ASTBURY: And that tells us, correct me if I'm wrong, [Baby I] continued to self-ventilate in air?

BUTTERWORTH: Yes.

ASTBURY: Initially her sats were dipping briefly to 89 or 90%?

BUTTERWORTH: Yes.

ASTBURY: And she was having desats and bradys on handling?

BUTTERWORTH: Yes.

ASTBURY: But you say this:

"Over the course of the shift has handled much better without desats and bradys."

BUTTERWORTH: Yes.

ASTBURY: "Sats have been more stable, mid to high 90s."

You record the respiratory rate and the temperature.

You then comment that the temperature was adjusted at one point; is that right?

BUTTERWORTH: So the inc temp was adjusted, so the incubator that [Baby I] was in has a temperature setting, so if the temperature is high or -- if the baby's temperature is high or low, you can adjust the setting on the incubator to increase or decrease the incubator temperature.

ASTBURY: Looking at that, would you have increased it or lowered it in --

BUTTERWORTH: For 36.1, I would have increased it for 37.5 I would have decreased it.

ASTBURY: Okay. Her temperature is obviously recorded on the form that we looked at a --

BUTTERWORTH: Yes.

ASTBURY: -- a moment or two ago. You comment:

"Initially very pale but she improved. Abdomen [is that] remained distended and firm but less distended at the beginning of the shift."

BUTTERWORTH: Yes.

ASTBURY: "Remains a veiny colour. Has also improved on abdo [as read]."

What does that mean, please?

BUTTERWORTH: "Remains a veiny colour, has also improved."

So you could see the baby's little veins in the tummy and the colour of the tummy has improved on abdo.

ASTBURY: "Minimal clear aspirates", is that?

BUTTERWORTH: Yes.

ASTBURY: So just explain that to us, the significance or otherwise.

BUTTERWORTH: We check the aspirates. Although [Baby I] was nil by mouth, I would have still been checking her aspirates and just checking them every now and then from the NG tube.

ASTBURY: Okay. Does your (overspeaking) problematic?

BUTTERWORTH: No, clear aspirates is what -- it's probably just like little stomach juices.

ASTBURY: You have then put her urine output?

BUTTERWORTH: 8.5ml per kilo per hour was the last urine output.

ASTBURY: Is that a positive or a negative sign?

BUTTERWORTH: It's a little bit up, but it was fine. It's obviously been handed over.

ASTBURY: "Bowels opened at the beginning of shift. Antibiotics given as documented. Continues to have the 10% dextrose running via PVC..."

BUTTERWORTH: Yes, peripheral venous cannula.

ASTBURY: Thank you:

"... site. Pressure satisfactory. Can be positional at times."

Having looked at those notes and we'll come to -- let's finish the note and I'll ask you the question.

"Positional at times", is that the line?

BUTTERWORTH: Depending on where the cannula is placed, if the baby's hands move it can occlude the cannula, so the pressures on the machine can go up and it can alarm. So if you --

ASTBURY: Occlude means blocked?

BUTTERWORTH: Yes. It'll stop working, so the fluid will stop going through, but it alarms quite quickly, so you either know to reposition it -- the alarm is like a safety --

ASTBURY: Okay.

BUTTERWORTH: -- device so you can just go and check it.

ASTBURY: "She remained nil by mouth, was unsettled at times and appeared to be straining."

Can you just explain that to us, please?

BUTTERWORTH: "Unsettled at times", she's obviously been a little uncomfortable.

"Appears to be straining", so whether she's trying to do a poo.

ASTBURY: And "rooting for feeds"?

BUTTERWORTH: Query she was showing signs what that she wanted feeds because she had been fully fed to the point of going nil by mouth in the daytime.

ASTBURY: Your shift started with a profound desaturation, very unwell. What's your impression of the remainder of the shift and [Baby I]'s --

BUTTERWORTH: Throughout the shift she had like improved desats and bradys, they'd come down, even with handling. Initially it sounds like on handling, at the beginning, she would be desatting and bradying, but that seemed to have settled down and by the end of the shift she was really improved. And the fact that she was rooting for feeds was a good sign also.

ASTBURY: Hungry?

BUTTERWORTH: Hungry.

ASTBURY: Okay. There's another entry a little bit further down, please. Can you scroll down, Mr Murphy? Thank you.

It's now 8.53, so you're well into overtime. Repeat capillary blood gases have been satisfactory?

BUTTERWORTH: Yes.

ASTBURY: Is that another positive sign --

BUTTERWORTH: That's a good sign, yes. The glass(?) gases, I think, had always been okay.

ASTBURY: And I think you put a family communication there, created, I think, when your previous note was done at 8.44:

"Parents roomed on Christopher Ward. Aware of plan of care. Mum has been this morning and (inaudible) been updated."

BUTTERWORTH: Yes.

MR ASTBURY: Okay. Thank you. I have no more questions.

If you --

BUTTERWORTH: Thank you.

MR MYERS: My Lord, at risk of going further into overtime, I'll only be a couple of minutes. I wonder if that's all right with your Lordship and everybody.

MR JUSTICE GOSS: Yes, let's do that, then the witness can go.

Cross-examination by MR MYERS

MR MYERS: Miss Butterworth, as you've gathered, I haven't got many questions, I just want to clarify a couple of things, please. I'm going to ask Mr Murphy to put on the screens the notes at T94, which are the notes that you have seen, Miss Butterworth, the ones you were looking at. Just check we can all see those.

If we just enlarge them so we can all read them and Miss Butterworth can read them. Thank you.

We've read through the notes and you've read through the notes, and they reflect a summary of what took place, looking at the top of this, when you came to write them up at 22.35, don't they?

BUTTERWORTH: Yes.

MYERS: I just want to go through, if you'd help me with this, just the order in which the initial events actually took place. Because if you see there, it says during handover [Baby I]'s abdomen had become more distended and hard, she had become apnoeic and bradycardic and sats had dropped, and you go on to describe using the Neopuff --

BUTTERWORTH: Yes.

MYERS: -- and aspirating. But you've explained to us in your evidence, when you gave it as you recalled it, that events went in the following order.

BUTTERWORTH: Yes.

MYERS: I'm going to check this with you. You were dealing with [Baby I] during handover with Lucy Letby, weren't you?

BUTTERWORTH: Yes.

MYERS: And it became apparent that there was another drop in saturations and she was becoming bradycardic; is that the first thing?

BUTTERWORTH: So when we handed over, we were having handover, she would have become -- the desats and bradycardic, that would have happened. We then would have gone in to give the Neopuff, although I've put it the other way round.

MYERS: Yes.

BUTTERWORTH: We would have started the Neopuff and obviously we're putting, like, air into her tummy. Sometimes the tummy can increase with -- if you're Neopuffing and become hard and sometimes that can push up the diaphragm if the tummy is that full of air.

MYERS: That's helpful. That's what I wanted to ask if I may say. That's the order in which it took place?

BUTTERWORTH: Yes, it would have. Whether she desatted first or bradycardic, those two things would have happened first.

MYERS: But as for the abdomen becoming more distended, was that something you could actually see happening as the Neopuffing was taking place?

BUTTERWORTH: Yes, I think I could.

MYERS: And that's why you then asked Lucy Letby to get the air out by aspirating?

BUTTERWORTH: By aspirating.

MYERS: And you recall that some air and some milk came out at that point?

BUTTERWORTH: Yes.

MYERS: We can see that, and you've told us that doctors were called by somebody; is that right?

BUTTERWORTH: Yes.

MYERS: But from your recollection, was [Baby I] made stable relatively rapidly?

BUTTERWORTH: Once we'd aspirated, going from my notes, once we'd aspirated her tube, her NG tube, and her -- the sats and bradycardia, her chest movement began again and her desats and bradys ceased and she did improve.

MYERS: Thank you. The only other thing I want to ask about -- if we go down in the notes to see the entry you made the following day at 08.44. Just looking at the centre of that section, you've got a line where you say -- you've gone through the temperature being adjusted and it says:

"Was initially very pale in colour. Has improved."

BUTTERWORTH: Yes.

MYERS: And then this:

"Abdo remains distended and firm but less distended than at the beginning."

BUTTERWORTH: Yes.

MYERS: So although she had settled, she did still have an abdomen that was distended to some extent?

BUTTERWORTH: She did.

MYERS: You also, continuing with the detail, make a note:

"Remains veiny colour, has also improved on abdo."

BUTTERWORTH: "Remains veiny. Colour: has also improved on abdo".

MYERS: "Remains veiny." That's my fault.

BUTTERWORTH: There should be a comma in there, so it's partly my fault also.

MYERS: When you say "veiny", would this be some hours after the incident that you're describing?

BUTTERWORTH: Yes, it would have been over the course, so it would have been -- if I've wrote these at 8.45, it would have been later on.

MYERS: So even at this time you could still see, I think you described, little veins on her tummy?

BUTTERWORTH: Yes. I don't know how little they were.

MYERS: Right. But although her abdomen was still distended and the veins you could see --

BUTTERWORTH: Still see, yeah.

MYERS: She appeared to be stable?

BUTTERWORTH: Yes, she had improved.

MR MYERS: Thank you very much.

I'm grateful for the time to deal with that, my Lord.

MR ASTBURY: I have nothing further, my Lord.

MR JUSTICE GOSS: And I have no questions.

Thank you very much, Miss Butterworth. That completes your evidence. I don't believe you'll be required again.

BUTTERWORTH: Thank you.

MR JUSTICE GOSS: But just in case, would you please not talk to anyone about --

BUTTERWORTH: Oh yes, definitely.

MR JUSTICE GOSS: -- this case until it's all over.

BUTTERWORTH: Okay.

MR JUSTICE GOSS: But as things presently stand, you won't be required.

BUTTERWORTH: Thank you.

MR JUSTICE GOSS: Thank you very much indeed for coming and giving your evidence. Just stay where you are.

I'll say quarter past, members of the jury because a bit of court re-arrangement has to be done, so a slightly longer lunch. 2.15. Thank you very much.

(1.07 pm)

(The short adjournment)

(2.15 pm)

MR JUSTICE GOSS: Mr Astbury.

Witness statement of DR DAVID HARKNESS (read)

MR ASTBURY: My Lord, one more statement to read for now, please, that of Dr David Harkness. It appears at page 46 in my Lord's original bundle.

The statement, ladies and gentlemen, is dated 5 November 2019, in which David Harkness says:

"On 29 September 2015, a weekly review with consultant of the week, Dr Newby, was completed. [Baby I] at this point was doing well. She was given fortified vitamins in her milk, she was gaining weight nicely and taking bottle feeds.

"[Baby I] had been pale but we were happy with her. There were no concerns in her blood tests. It was planned for the following week for routine immunisations and she was coming up to 2 months old. [Baby I] was in a hospital cot, which maintains body temperature. [Baby I] was doing okay.

"On 30 September 2015, the consultant made a plan on the information provided. In general, if a child is well and there are no concerns, they will not visit the child personally, which is the norm.

"At 11.40 hours on 30 September, [Baby I]'s temperature had come down slightly to 36.2. We like to keep babies at 36.5. Other than being pale, which fits with anaemia, her abdomen was slightly larger than typical for a baby. However, the senior house officer examined her the day before and it was the same, so there was nothing to worry about as she had opened her bowels. The plan was to watch and see how she got on.

"At 16.30 hours on the 30th, [Baby I] vomited, her oxygen levels dropped, and she stopped breathing. She required some assistance with her breathing by bagging, which in essence is giving breathing via a mask to help breathe for her for a few minutes. [Baby I]'s oxygen levels and heart rate dropped quite a lot, which typically happens when there is a pause in breathing.

"Once resolved, the decision was for [Baby I] to have a septic screen, which means putting her on antibiotics, followed by an X-ray of her chest and abdomen. They stopped her milk as when there are breathing problems we tend to give babies a rest and give them fluids instead. [Baby I]'s blood gas was quite high, which goes along with an infection or necrotising enterocolitis, NEC. Her chest X-ray showed her abdomen was quite large and her bowel loops were prominent. Initially, this indicates NEC, so they started [Baby I] with an extra antibiotic which helps to fight the bugs that can cause NEC. [Baby I] was still breathing for herself.

"I saw [Baby I] at 22.00 hours on 30 September. I went to see her for a routine review because of the events in the day. She was breathing well for herself, the blood tests did not show any indication of obvious signs of infection. She was still receiving antibiotics and she still looked pale. [Baby I] did not like being touched or being handled to change her nappy, which again suggested an infection.

"Her abdomen was still distended and you could see visible loops, which means they are full of air. The wall of a baby's abdomen is quite thin and you can make out the impression of the bowel underneath. This would look rather lumpy and looks like ridges from the tubes underneath the skin. It is wavy in appearance. I could hear her bowels, which was a good sign, as with severe NEC this can stop your bowels from moving. A repeat of the blood gas lactate had gone down to 1.1, which is good, and there was nothing concerning. The plan was to carry on with what we were doing and try not to handle her too much and to think about giving her a blood transfusion when she was better. A blood transfusion can cause problems with NEC as it can make the blood quite thick, so we tend to hold off until patients are well.

"The next day, [Baby I] was seen by [Dr A] again. She was stable, nil by mouth, and further blood tests were requested for later that day and [Baby I] was to continue with antibiotics."

If we can go to the relevant tile, my Lord, so everyone knows where it is. It's tile 153. We left off, my Lord, with the sticker from the X-ray review from [Dr A]. If we scroll down we can then see Dr Harkness's note timed at 10 o'clock, from which this statement has been compiled. If we scroll down again, we can see the next entry at 09.00 hours, which is [Dr A] again the following day:

"The next day, [Baby I] was seen by [Dr A]. She was stable, nil by mouth, and further blood tests were asked for later that day and [Baby I] was to continue with antibiotics. My contact with [Baby I] at 22.00 hours was just a review. Not everyone will do this on a shift, but as I was on a night shift I tend to if a patient has been unwell during the day or there are any concerns. If they became worse overnight I would have already read up on them and I would know what had happened earlier in the day."

That concludes his statement, my Lord.

MR JUSTICE GOSS: Thank you.

MR ASTBURY: My Lord, that concludes, save for Dr Beebe, who we expect tomorrow, the evidence in respect of 30 September and the days up to it.

MR JUSTICE GOSS: Right. This is a doctor who's not available today but would be the last witness in relation to the 30 September event. We are not going to stop now, we're going to move on to the next date and then come back to the doctor tomorrow. I'm sure you can manage that.

Yes, Mr Johnson.

MR JOHNSON: Just before I recall Claire Hocknell, could I distribute some more documents.

(Handed)

Some of these look slightly different to others because they were printed in two runs on a machine on which the toner had been changed, I think, so the colours are a bit brighter on some than others, but it's the same document.

MR JUSTICE GOSS: Good, thank you.

MR JOHNSON: Before you put them into divider 12, can I give you an explanation. If you just -- so everyone has one first. There are two ways of doing this and it's simply a matter of personal preference. The first way is to put them in as they are behind what you have already got behind divider 12. The second way is to follow the pagination and to interleave them. If you choose the second way, and I'm not making any recommendations either way, we've put a 2 at the top right-hand corner of each of these sheets so that you know, just by looking at it, that this relates to the second incident concerning [Baby I]. All right?

So if you're putting them straight in as one, we've put a divider on so there's an easy way of working that out. If you choose the interleaving method then the number 2 will help you distinguish between which one is which.

MR JUSTICE GOSS: You can always change -- if you do it one way, that's a matter for you. I'm going to have it as a separate bundle because it's a separate event, but if I find in fact I want to do it differently, I'll just change it later on. Helpfully, it's got the number 2 marked so you can differentiate between the two. There we are. Entirely up to you.

MR JOHNSON: Could I recall Claire Hocknell, please?

MS CLAIRE HOCKNELL (recalled)

Examination-in-chief by MR JOHNSON

MR JOHNSON: Welcome back, Mrs Hocknell. Could we move on to the second event concerning [Baby I]. This is a digital document which runs to 220 separate tiles, as we can see in the top centre of the screen.

We bear in mind, of course, that the events we've just been considering all happened on 30 September and we're moving on, really, so far as the incident is concerned, by 2 weeks to 13 October. But looking at the document, tile 1, you have recorded that the medical records indicate that following [Baby I]'s collapse on 30 September, she continued to be cared for at the neonatal unit at the Countess of Chester?

HOCKNELL: Yes.

JOHNSON: Thank you. I should have asked you to identify yourself first of all, which I think I forgot to do. Could you just remind us?

HOCKNELL: Claire Hocknell.

JOHNSON: Thank you.

MR JUSTICE GOSS: Well, you welcomed her back by her surname.

MR JOHNSON: I did, absolutely, but I forgot to ask her to confirm that I wasn't incorrect. Thank you.

Just to remind ourselves of where we're up to with Lucy Letby's shift, have you got jury bundle 2 there, please? If we go to page 3 and those rather faint numbers next to the blue line that goes under the calendar, 30 September is the incident that we've just been considering, isn't it?

HOCKNELL: Yes.

JOHNSON: If we turn the page, we can see that the following day, 1 October, was a day off for Lucy Letby.

HOCKNELL: Yes.

JOHNSON: She then worked three long days, Friday the 2nd through to Sunday, 4 October.

HOCKNELL: Yes.

JOHNSON: Is that right? Monday 5th was a day off so far as she was concerned?

HOCKNELL: Yes.

JOHNSON: And we see on the sequence on -- if we keep that open but look at the sequence on the screen, please, and move to tiles 2, 3 and 4, we can see that in the early hours of that Monday morning at 1.16, she searched for [Mother of Baby I] on Facebook. At 1.17, for [Father of Babies E & F], and at 1.18 and [Mother of Baby H].

HOCKNELL: Yes.

JOHNSON: Do we then see, just going back to the work rota, that on Tuesday, 6 October Lucy Letby worked what's called a late day --

HOCKNELL: Yes.

JOHNSON: -- or a late? Wednesday was off. Thursday, the 8th, she was doing a training day?

HOCKNELL: Yes.

JOHNSON: Friday through to and including Sunday, the 9th to 11 October, she was off?

HOCKNELL: Yes.

JOHNSON: And she then worked a block of three night shifts, the 12th, 13th and 14 October?

HOCKNELL: Yes.

JOHNSON: And thus if we go back to the digital sequence, do we see at tile 5 you have recorded that the medical records show that -- sorry, the medical records that follow are a detailed account from midnight at the beginning of the day, 12 October?

HOCKNELL: Yes.

JOHNSON: Thank you. At tile 6, do we have an update on the nursing notes made by Ashleigh Hudson?

HOCKNELL: Yes.

JOHNSON: At tile 7, do we have a further update at 00.55, made by Ashleigh Hudson?

HOCKNELL: Yes.

JOHNSON: Tile 8 is an entry on the neonatal feeding chart?

HOCKNELL: Yes.

JOHNSON: If we just go to that because it's rather different to what we've seen up to now. We can see that [Baby I]'s feeds had increased significantly up to 54 or 55 millilitres.

HOCKNELL: Yes.

JOHNSON: I think previously it had been in the --

HOCKNELL: 35.

JOHNSON: Yes, thank you. We can see that the route is recorded there, six bottles that day --

HOCKNELL: Yes.

JOHNSON: -- as it happens on 12 October? If we return to the carousel, please, we see that between those feeds, there is literally nothing in the records at all, so there's a feed at 1.30, then the next feed 4 hours later at 5.30?

HOCKNELL: Yes.

JOHNSON: Tile 10. Just to get a measure of how [Baby I] was progressing, if we can move to that, please, and to what you have transcribed from the note:

"No change to above entry. No concerns to report."

HOCKNELL: That's correct.

JOHNSON: So [Baby I]'s feeds up by a significant percentage and no concerns, no vital signs being measured between feeds or anything like that?

HOCKNELL: No.

JOHNSON: Back to tile 11, please, and 12. Cefotaxime and sodium chloride --

HOCKNELL: Yes.

JOHNSON: -- at 7 am? Tile 13 is the handover to Vicky Blamire?

HOCKNELL: Yes.

JOHNSON: Tile 14, the observation charts. [Baby I]'s observations taken at 09.30?

HOCKNELL: Yes.

JOHNSON: At the same time she was fed, tile 15?

HOCKNELL: Yes.

JOHNSON: Tiles 16 and 17, some vitamins and Sytron?

HOCKNELL: Yes.

JOHNSON: Tile 18, clinical notes completed by Dr Harkness?

HOCKNELL: Yes.

JOHNSON: We'll be hearing from him in due course or from a statement he made.

Tile 19, observations at 13.00 hours together with a feeding chart 30 minutes later at tile 20?

HOCKNELL: Yes.

JOHNSON: Tile 21, cefotaxime at 16.20?

HOCKNELL: That's correct.

JOHNSON: And then tile 22, a nursing record at 16.30 that Monday afternoon. If we could just go to that, please. It pretty much shows what we've seen. Could you talk us through that, please?

HOCKNELL: "Written in retrospect for the care given. All safety equipment present and correct. Continues to feed four-hourly, taking all bottles. Passed urine, bowels only open a small amount on my shift. Tummy soft to touch. Remains on a hot cot, currently set at 36, temperature within range. Vitamins given as prescribed. Antibiotics given late as needed a new cannula. Cannula now situated in right arm. Routine bloods taken during this time. No new concerns."

JOHNSON: Thank you. The next tile, which is number 23, is 4 minutes later at 16.34. Is that a blood test?

HOCKNELL: Yes.

JOHNSON: Tile 24, is that observations of heart rate, et cetera?

HOCKNELL: Yes.

JOHNSON: If we have a look at that, we haven't looked -- although the jury have this in hard copy, I think that's the 11th into the 12th; is that right?

HOCKNELL: The 12th starts towards the... I think it's the fifth one from the right.

JOHNSON: Yes, at 9 that morning.

HOCKNELL: Yes.

JOHNSON: So we can see that there's nothing been recorded for the heart rate at all; is that right?

HOCKNELL: That's right, yes.

JOHNSON: It says "temperature check only", written in from the bottom to the top, halfway down the chart?

HOCKNELL: Yes.

JOHNSON: And then we see the temperature being recorded at the bottom?

HOCKNELL: Yes.

JOHNSON: Right at the bottom in manuscript we also see the temperature of the hot cot; is that right?

HOCKNELL: Yes.

JOHNSON: The probe position is ticked?

HOCKNELL: Yes.

JOHNSON: Finally, the initials of the nurse recording the information?

HOCKNELL: Yes.

JOHNSON: Thank you. If we go back now to tile 25. Another feed at 17.30 for [Baby I] of 55ml via the bottle?

HOCKNELL: Yes.

JOHNSON: Tile 26, an update on the computer recording the fact of the feed?

HOCKNELL: Yes.

JOHNSON: At tile 27 -- we'll open this one up if we can, please.

Tell us what's recorded at 18.04, please?

HOCKNELL: "Looks pale this evening. Tummy looks full but soft to touch."

JOHNSON: Back to 28, please. I think there's then a nursing note about a routine blood test.

HOCKNELL: Yes.

JOHNSON: If we just go to that as well, please:

"Hb [is that haemoglobin?] only 7."

HOCKNELL: Yes.

JOHNSON: "Retics 4. Paeds aware."

HOCKNELL: Yes.

JOHNSON: Back to 29, please. Is there then a personal message, really, from Lucy Letby to Minna Lappalainen?

HOCKNELL: Yes.

JOHNSON: Can you help us with that at 18.56?

HOCKNELL: "Just spoken to mum. My auntie had a fall earlier. Sounds like she's broken her shoulder. In a sling and going to fracture clinic tom. Very badly cut and bruised."

JOHNSON: The next tile is number 30. That concerns the nursing shift handover, so we're now into the night shift of the 12th into 13 October; is that right?

HOCKNELL: Yes.

JOHNSON: On this shift will we see that Lucy Letby was the designated nurse?

HOCKNELL: No.

JOHNSON: Who was the designated nurse?

HOCKNELL: Ashleigh Hudson was the designated nurse.

JOHNSON: Thank you. We see that the paediatrician of the week was [Dr B]?

HOCKNELL: Yes.

JOHNSON: On-call consultant, Elizabeth Newby. Registrar and SHO, Matthew Neame and Ekaterina Clegg.

HOCKNELL: Yes.

JOHNSON: Shift leader, Caroline Oakley. As you've told us, Ashleigh Hudson was the designated nurse. But Lucy Letby is one of the other nurses together with Laura Eagles, with a nursery nurse, Janet Cox?

HOCKNELL: Yes.

JOHNSON: Thank you. Beneath that, or on the next tile, I should say, have we got the population location graphic?

HOCKNELL: Yes.

JOHNSON: So let's start with [Baby I], please. Is she in nursery 2?

HOCKNELL: Yes.

JOHNSON: Together with two other children, JF and [Baby G]?

HOCKNELL: Yes.

JOHNSON: Their designated nurse, each of them, is Ashleigh Hudson?

HOCKNELL: That's correct, yes.

JOHNSON: Going to the top left, in nursery 4 is there a child, JJ, whose nurse was Janet Cox?

HOCKNELL: Yes.

JOHNSON: Nursery 3, two children, NC and EM?

HOCKNELL: Yes.

JOHNSON: For whom Janet Cox was also designated?

HOCKNELL: That's correct.

JOHNSON: Then in nursery number 1, do we see that Lucy Letby had a child, AM?

HOCKNELL: Yes.

JOHNSON: And Laura Eagles had two children, MC and AK?

HOCKNELL: Yes.

JOHNSON: Was there another child, OL, whose location cannot be confirmed from the records?

HOCKNELL: That's correct, yes.

JOHNSON: But OL's designated nurse was Caroline Oakley?

HOCKNELL: Yes.

JOHNSON: And Caroline Oakley was the shift leader?

HOCKNELL: Yes.

JOHNSON: Thank you. Moving on then, please. Can you start by telling us about the nursing note made at tile 32, please?

HOCKNELL: "Written for care taken over at 19.45 hours. Emergency equipment, alarm limits and feeds checked. SVIA on handover. On a hot cot set at 36C. Temperature 36.5C. Demanding and tolerates four-hourly feeds. Feeding well. Alert when awake. Pale pink in colour but well perfused."

JOHNSON: Thank you. So that's at 19.45, albeit written retrospectively the following morning at 05.04.

HOCKNELL: Yes.

JOHNSON: Are there then a series of three messages incoming from Minna Lappalainen? Could you take us through those between 21.05 and 21.07?

HOCKNELL: "On the east gate row near and Albert shop!"

"Yes, but it will hee."

I think that's then replaced with:

"Heal and get better."

JOHNSON: Yes. Then did Lucy Letby respond to that message at tile 36 at 21.23?

HOCKNELL: "Yes, she'll be okay. It's just shaken her a bit. I think she might go and stay with mum and dad tom so she's not on her own."

JOHNSON: Then tile 37, is that the observations chart?

HOCKNELL: Yes.

JOHNSON: And is tile 38 the feeding chart where [Baby I] again took 55ml of breast milk?

HOCKNELL: Yes, at 9.30 pm.

JOHNSON: And if we click on the chart, please, because there's another feature of it, we can also see that she passed urine and her bowels opened ++?

HOCKNELL: Yes.

JOHNSON: Thank you. Tile 39 next, please. I would like to look at that, if we may. Could you read us what Ashleigh Hudson there recorded?

HOCKNELL: "Dad resident on the unit at start of shift. Attended to cares and feed. [Baby I]'s brother also present. Asked to view resus DVD. Laptop set up. Dad and brother present on the unit until 22.45 hours. During this time dad asked on multiple occasions about [Baby I]'s temperature. I again explained that her reliance on the hot cot was likely due to her prematurity and size and as she grows she will adapt to regulate her own temperature. He also asked about [Baby I]'s recent bloods. I informed him of the result. He appeared happy with the information given. Due to dad leaving so late with [Baby I]'s brother, I discussed with nurse in charge Caroline Oakley whether this was appropriate on a school night. Ward manager to be informed."

JOHNSON: Thank you. That's 22.45. Tiles 40, 41, 42 and 43, do they all concern prescriptions for and the administration of cefotaxime and sodium chloride?

HOCKNELL: Yes.

JOHNSON: And that was at about 23.30?

HOCKNELL: Yes.

JOHNSON: Just before 23.30. We then move on 2 hours, is that right, to the next event that's recorded for [Baby I]?

HOCKNELL: Yes, 01.30 am.

JOHNSON: If we click on that, please. Is that the furthest right column?

HOCKNELL: Yes.

JOHNSON: The very final column. We see four-hourly feeds at the top; is that right?

HOCKNELL: Yes, I believe that's what it --

JOHNSON: Observations, I beg your pardon. Again, no monitoring of the heart rate or respirations?

HOCKNELL: No.

JOHNSON: And the temperature is being monitored and lies between the yellow bands?

HOCKNELL: Yes.

JOHNSON: As before, the hot cot temperature is recorded and the fact that the probe, the position of the probe, was checked; is that right?

HOCKNELL: I think so, yes.

JOHNSON: So that's at 01.30. And signed off by Ashleigh Hudson at the bottom?

HOCKNELL: Yes.

JOHNSON: Next is tile 47, please.

HOCKNELL: 45, I think.

JOHNSON: 45, I beg your pardon. My eyes are going down the page.

That's the feeding chart to show that when her temperature had been taken, [Baby I] had also been fed by bottle?

HOCKNELL: Yes.

JOHNSON: So despite the fact it was 1.30 in the morning, [Baby I] wide awake, taking a 55ml feed from a bottle?

HOCKNELL: Taking a bottle feed, yes.

JOHNSON: Then at 03.20, an event concerning [Baby I], a note which we see at tile 47; is that right?

HOCKNELL: Yes.

JOHNSON: This note is not written by the designated nurse, is it?

HOCKNELL: No.

JOHNSON: Who wrote it?

HOCKNELL: Lucy Letby.

JOHNSON: Can we look at it, please?

HOCKNELL: "[Baby I] noted to be pale in cot by myself at 03.20. Senior Nurse Hudson present. Apnoea alarm in situ and had not sounded. On examination [Baby I] centrally white. Minimal shallow breaths followed by gasping observed. Ventilation breaths given via Neopuff and further help summoned."

JOHNSON: Thank you. On the next tile do we get Ashleigh Hudson's note written?

HOCKNELL: Yes.

JOHNSON: Just before we click on it, just before we do that, albeit the note written by Lucy Letby retrospectively -- we can see, I didn't point this out, but on the previous tile we can see that Lucy Letby's note was written at 07.59 and she times the incident at 03.20; is that right?

HOCKNELL: Yes.

JOHNSON: We can see Ashleigh Hudson times the incident at 03.22, so 2 minutes after Lucy Letby does?

HOCKNELL: Yes.

JOHNSON: And wrote the note before Lucy Letby at 05.04?

HOCKNELL: Yes.

JOHNSON: Let's deal with that, please.

HOCKNELL: "When in the nursery, neonatal nurse Lucy Letby noticed that [Baby I] looked quite pale. When turning the light on for closer examination, we found [Baby I] to be very pale in colour and not moving. Apnoea alarm in situ had not sounded. Breathing was shallow and respiration rate appeared low. Philips monitoring commenced and Senior Neonatal Nurse Laura Eagles and paediatric SHO Ekaterina Clegg shouted to assist. 30% Neopuff O2 commenced whilst Philips monitor establishing a trace. Philips monitor saturations 53%. Heart rate in 50s. Confirmed via stethoscope."

JOHNSON: Thank you. If we go to tile 49, do we see Dr Clegg's -- sorry, Dr Matthew Neame's note?

HOCKNELL: Yes.

JOHNSON: He's a registrar. We'll click on that to give us more specific times, please. It might be better just to go to your typed version if we could. Does that show that Dr Neame recorded that he'd been bleeped at 02.23 and asked to come immediately to see [Baby I]?

HOCKNELL: Yes.

JOHNSON: And that she was receiving chest compressions?

HOCKNELL: Yes.

JOHNSON: We'll deal with that in more detail later. If we return to the events, please. Continuing with Ashleigh Hudson's note, if we could go to your transposition of it, please.

HOCKNELL: "Chest compressions commenced at 03.25. No heart rate heard. Paeds registrar Matthew Neame contacted via bleep. On arrival Dr Neame took over the airway from L Letby and I gave breaths via Neopuff."

JOHNSON: Then do we have a further note from Lucy Letby?

HOCKNELL: Yes.

JOHNSON: So this is all part of the same note that we looked at before, but just inserted at the correct point in the chronology; is that right?

HOCKNELL: That's correct, yes.

JOHNSON: We will, of course, go to the original in due course, but does that record -- did she record:

"Full resuscitation commenced as documented in medical notes"?

HOCKNELL: Yes.

JOHNSON: Thank you. Can we continue to tile 52, please. Are these further notes of Dr Neame?

HOCKNELL: Yes.

JOHNSON: Does he describe in those notes the measures he had to follow to resuscitate [Baby I]?

HOCKNELL: Yes.

JOHNSON: Thank you. Tile 53 next, please. Taking up the account in Ashleigh Hudson's notes, did she in effect describe the same period of time as had been described in Dr Neame's notes?

HOCKNELL: Yes.

JOHNSON: Moving to tile 54, which is Lucy Letby's account of events, we'll deal with those, please. If you could read what she has written there.

HOCKNELL: "[Baby I] ventilated. Size 3 ET tube. 8 centimetres at lips. Clear bilateral air entry. Settings: SIMV 22/5, inspiratory time 0.4, rate 40 breaths per minute. Requiring 30-40% oxygen to maintain saturations. Minimal respiratory effort made by [Baby I] at present. 100mcg/kilogram morphine bolus given as [Baby I] active."

JOHNSON: Thank you. Do we then have at 55 a prescription for adrenaline?

HOCKNELL: Yes.

JOHNSON: At 56, 03.31, the nursing note of Ashleigh Hudson, timing the administration of that first dose of adrenaline at 03.31?

HOCKNELL: Yes, that's correct.

JOHNSON: Together with a saline bolus?

HOCKNELL: Yes.

JOHNSON: At 57 do we have bleep data showing that Dr Newby, the consultant, was called in from home?

HOCKNELL: Yes.

JOHNSON: At 58, do we have a second prescription of adrenaline?

HOCKNELL: Yes.

JOHNSON: At 59, timed at 03.36, the administration of that second dose of adrenaline?

HOCKNELL: Yes.

JOHNSON: At 60, timed at 03.36, Dr Newby's notes?

HOCKNELL: Yes.

JOHNSON: If we just go to your transposition of her handwriting, the translation of her handwriting. The way you read it, does it read:

"Called urgently to neonatal unit. No concerns over cause [but it may be 'course'] of day. Tolerating feeds. Found blue/apnoeic in cot. CPR commenced. On my arrival, ETT tube in place. Position checked. Bilateral air entry, positive capnograph. Chest compressions ongoing."

Then she times the adrenaline. You have written in:

"See entries below in chronological order."

Does that reflect the fact that her note goes on for some time, covering a period of time?

HOCKNELL: Yes.

JOHNSON: And that you have inserted those subsequent entries at the appropriate point of the chronology?

HOCKNELL: Yes.

JOHNSON: Thank you. Going to 61 then, please, and returning to Ashleigh Hudson's nursing note. I don't think we need to go to it, but does this concern contact from the hospital to [Baby I]'s parents?

HOCKNELL: Yes.

JOHNSON: And a request for Ashleigh Hudson actually requesting [Baby I]'s mum to come to the unit as soon as possible?

HOCKNELL: Yes.

JOHNSON: 62 is a prescription for sodium bicarbonate?

HOCKNELL: Yes.

JOHNSON: 63 is Ashleigh Hudson's note concerning the administration of that substance?

HOCKNELL: Yes.

JOHNSON: We then have Dr Newby's record of the same event?

HOCKNELL: Yes.

JOHNSON: Just written in a chemical formula rather than the words sodium bicarbonate?

HOCKNELL: Yes.

JOHNSON: 65 is a record of a dextrose -- of dextrose being administered to [Baby I]?

HOCKNELL: Yes.

JOHNSON: 66 is Dr Newby's record of that same event?

HOCKNELL: Yes.

JOHNSON: 67, a prescription for adrenaline --

HOCKNELL: Yes.

JOHNSON: -- at 3.45? And then 68 the administration of that adrenaline, so the third dose of adrenaline administered to [Baby I]?

HOCKNELL: Yes.

JOHNSON: At 69 have you put in Dr Newby's notes concerning this third administration of adrenaline?

HOCKNELL: Yes.

JOHNSON: If we just look at it, please, just to get an idea of the gravity of what was going on. She's written:

"Adrenaline 0.2ml (1 in 10,000). 3.45 am: signs of life."

HOCKNELL: Yes.

JOHNSON: And of course the alarm had been raised, at the earliest estimate, from Lucy Letby's notes, at 03.20, at the latest the bleep to Dr Neame at 03.23, so we're a minimum of 22 minutes on now from the collapse; is that right?

HOCKNELL: Yes.

JOHNSON: At tile 70 do we see a continuation -- sorry, yes, some further notes but this time from Dr Neame, the registrar --

HOCKNELL: Yes.

JOHNSON: -- concerning CPR and other treatment?

HOCKNELL: Yes.

JOHNSON: At tile 71 do we have Lucy Letby's notes?

HOCKNELL: Yes.

JOHNSON: Is this timed at 03.45?

HOCKNELL: Yes.

JOHNSON: And is this because the care of [Baby I] was transferred from Ashleigh Hudson to Lucy Letby at this time?

HOCKNELL: That's correct, yes.

JOHNSON: So just to -- I'm not asking the jury to go back and look at it, but Ashleigh Hudson up to that point had had all three children in nursery 2, Lucy Letby had had a single child in nursery 1; is that right?

HOCKNELL: That's correct, yes.

JOHNSON: I don't think we need to click on that tile, but does it say underneath:

"Care taken from 03.45"?

HOCKNELL: Yes.

JOHNSON: At tile 72, another Lucy Letby note made at 07.59, so at the end of the shift, at the same time as the previous note. Can we just click on that, please. Tell us what she wrote.

HOCKNELL: "Septic screen carried out. CRP 2. Cefotaxime discontinued and metronidazole, ciprofloxacin and teicoplanin given as prescribed. IV fluids: 150ml/kg/day of 10% glucose."

JOHNSON: Thank you. At tile 73 is there a further note from Ashleigh Hudson, which is timed as being at 4 o'clock, and she entered into the system at 05.04 in the morning?

HOCKNELL: Yes.

JOHNSON: Does that concern an attempt to get emergency blood for [Baby I]?

HOCKNELL: Yes.

JOHNSON: And also records the fact that care was transferred from Ashleigh Hudson to Lucy Letby?

HOCKNELL: Yes.

JOHNSON: We'll deal with that in more detail in due course. But moving on, at tile 74, at 4 am, did Lucy Letby make a note of a heel prick test, presumably a small blood sample being taken

from [Baby I] and the fact that containment and morphine were used to manage her pain?

HOCKNELL: Yes.

JOHNSON: At 75, is there a blood gas record filled in by Lucy Letby?

HOCKNELL: Yes.

JOHNSON: At 76, is there a record of blood being collected for cross-matching?

HOCKNELL: Yes.

JOHNSON: That's at 04.15. At 77, was a blood transfusion started?

HOCKNELL: Yes.

JOHNSON: And that was carried out by Lucy Letby together with Caroline Oakley?

HOCKNELL: That's correct, yes.

JOHNSON: There is a note relating to that event in the next nursing note, which is all part of the same retrospective note that we've seen already, completed at 07.59.

I think we may need a break, please.

MR JUSTICE GOSS: Yes. Is there a convenient point coming up in the next minute or two?

MR JOHNSON: Yes, I'll deal with this.

MR JUSTICE GOSS: We'll just do that and then have the break.

MR JOHNSON: Okay. 78. Is that a note made by Lucy Letby concerning the blood transfusion?

HOCKNELL: It does, yes.

JOHNSON: If we click on it, please. Does it say:

"Emergency blood transfusion commenced at 04.20"?

It gives the pack number and records the fact that there were three peripheral lines in situ:

"The original line in the right arm was swollen with areas of discolouration following administration of the resus drugs, but the doctors were happy to use it until the blood transfusion was complete."

HOCKNELL: That's correct.

MR JOHNSON: Thank you. My Lord, that may be --

MR JUSTICE GOSS: That's a good point, yes.

We'll have our ten-minute break then, please, members of the jury.

(In the absence of the jury)

MR JOHNSON: It's very hot in here again.

MR JUSTICE GOSS: Well, it's feast or famine. I think actually the forecast for the foreseeable future is relatively mild weather outside. I say relatively mild, I think sort of average January temperatures rather than colder.

(3.02 pm)

(A short break)

(3.12 pm)

(In the presence of the jury)

MR JOHNSON: Mrs Hocknell, we'd got to tile 79, please. Do we have there a record of [Baby I]'s fluid requirements?

HOCKNELL: Yes.

JOHNSON: Moving on to tile 80, is there then a report from Dr Wright, the radiologist?

HOCKNELL: Yes.

JOHNSON: If we could just click on that, please. We'll be returning to this. Amongst the things that Dr Wright recorded, we can see:

"Marked gaseous distension of abdominal bowel loops."

HOCKNELL: Yes.

JOHNSON: Thank you. Back to 81, please. Was there then a collection of venous blood from the veins of [Baby I] for microbiology?

HOCKNELL: Yes.

JOHNSON: I think you've put in there, if we just click on it, the fact that after 5 days no bacterial growth was detected in that sample.

HOCKNELL: That's correct.

JOHNSON: And 82. At the same time some other blood that was analysed for various trace elements and the like?

HOCKNELL: Yes.

JOHNSON: At tile 83, was there then a record of a prescription for morphine sulphate, which was being given as an infusion?

HOCKNELL: Yes.

JOHNSON: Tile 84, the observation chart --

HOCKNELL: Yes.

JOHNSON: -- on which a record was made by Lucy Letby?

HOCKNELL: That's correct.

JOHNSON: Tile 85, the prescription for the morphine sulphate that was started 8 minutes earlier?

HOCKNELL: Yes.

JOHNSON: Tile 86, the computer update for that same prescription?

HOCKNELL: Yes.

JOHNSON: Tile 87, a dextrose infusion started --

HOCKNELL: Yes.

JOHNSON: -- at 04.45? At the same time observations taken?

HOCKNELL: Yes.

JOHNSON: At the same time again, the time at which Dr Neame made his notes, which have been inserted earlier in the chronology?

HOCKNELL: Yes.

JOHNSON: Tile 90 is the fluid requirements of [Baby I]; is that right?

HOCKNELL: That's correct.

JOHNSON: Tile 91, her observations?

HOCKNELL: Yes.

JOHNSON: Tile 92, the intensive care chart, which we've seen in so many other cases?

HOCKNELL: Yes.

JOHNSON: Tile 93, the time at which Ashleigh Hudson made her notes?

HOCKNELL: Yes.

JOHNSON: The text of which you have inserted at the appropriate stage?

HOCKNELL: That's correct, yes.

JOHNSON: Tile 94, the observation chart annotated by Lucy Letby?

HOCKNELL: Yes.

JOHNSON: Tile 95, Dr Neame's notes concerning an examination of [Baby I] at that time?

HOCKNELL: I think it's his review of the X-ray.

JOHNSON: Sorry, I beg your pardon, yes. You're quite right. But also concerning a plan of sending bloods off for various analyses --

HOCKNELL: Yes.

JOHNSON: -- and other details, which he will deal with in due course? All right.

At that stage was the nasogastric tube repositioned by and noted by Dr Neame but done by Lucy Letby?

HOCKNELL: Yes, at 05.26.

JOHNSON: At tile 97, vital signs at 5.30 am?

HOCKNELL: Yes.

JOHNSON: Tiles 98 through to 100, prescriptions for teicoplanin, sodium chloride, metronidazole?

HOCKNELL: Yes.

JOHNSON: Tile 101, a blood gas record?

HOCKNELL: Yes.

JOHNSON: All these signed for or by Lucy Letby?

HOCKNELL: Yes.

JOHNSON: A further heel prick at tile 102?

HOCKNELL: Yes.

JOHNSON: Further observations at 103?

HOCKNELL: Yes.

JOHNSON: And the fluid intensive care chart, 104, all at 6 am?

HOCKNELL: Yes.

JOHNSON: Also at 6 am, the environmental checks at tile 105?

HOCKNELL: Yes.

JOHNSON: 106 through to 108, a trio of updates on the computer for the teicoplanin, sodium chloride and metronidazole that had been given or that had been prescribed about half an hour or so earlier?

HOCKNELL: Yes.

JOHNSON: Thank you. At 109 is there a Datix report, which is timed at 06.36?

HOCKNELL: Yes.

JOHNSON: Was that completed by Caroline Oakley?

HOCKNELL: Yes.

JOHNSON: Caroline Oakley, of course, was the shift leader. Did it concern efforts that had been made to access emergency blood for [Baby I]?

HOCKNELL: Yes.

JOHNSON: And that an emergency override had had to be used for the system to access the blood, essentially?

HOCKNELL: Yes.

JOHNSON: So a problem with the system.

At tile 110, was there an update on the computer made by Ashleigh Hudson concerning communications she had had with [Baby I]'s family?

HOCKNELL: Yes.

JOHNSON: At tiles 111, 112 and 113, do we have the standard hourly records made of data, which include [Baby I]'s vital signs?

HOCKNELL: Yes.

JOHNSON: At 114 through to 117, are there prescriptions for ciprofloxacin and morphine sulphate, and those were updated on the computer?

HOCKNELL: Yes.

JOHNSON: At tile 118, is it the handover between the day shift and the night shift?

HOCKNELL: The night shift and the day shift, yes.

JOHNSON: Sorry, yes, the night shift and the day shift. The designated nurse went from being Lucy Letby to Belinda Simcock?

HOCKNELL: That's correct, yes.

JOHNSON: Thank you. Ms Simcock made a note of that fact in the nursing record at tile 119. Lucy Letby updated her notes at tile 120. If we just look at what Lucy Letby wrote, please.

This is a note made at 07.59 that morning. Would you take us through -- I think this is the end of a note, the earlier parts of which you put in at the relevant stages of the chronology?

HOCKNELL: Yes, that's correct.

JOHNSON: This is -- not the sign-off exactly, but the conclusion of the note. It reads how, please?

HOCKNELL: "Currently appears settled on 20 micrograms per kilogram per hour via peripheral line. No signs of infiltration/tracking. 10% glucose and morphine infusing via line. Cares not attended to at present. Blood pressure maintained. Appears pale/mottled in appearance. Stiff in posture. Nil by mouth. Nil obtained from NG tube. Abdomen appears full but soft."

JOHNSON: Thank you. The next three tiles, 121 to 123, are they what I keep calling the standard three?

HOCKNELL: Yes.

JOHNSON: All recorded by Belinda Simcock at 8 am?

HOCKNELL: Yes.

JOHNSON: At the same time did Belinda Simcock note up a blood gas record?

HOCKNELL: Yes.

JOHNSON: Then at 08.10 did Lucy Letby make a record on the family communications section in the nursing notes?

HOCKNELL: Yes.

JOHNSON: Can you tell us what she wrote, please?

HOCKNELL: "Parents were contacted by Senior Nurse Hudson. Currently present and fully updated on events and plan of care by myself and medical team. Initially arrived with siblings as struggled to find childcare. They were taken home by another relative about an hour after arrival."

JOHNSON: Thank you. Were there then several updates made on the medication administration section of the computer system concerning the adrenaline given as part of the resuscitation and some sodium bicarbonate and were those under the names of Caroline Oakley and Lucy Letby?

HOCKNELL: Yes.

JOHNSON: Did the blood transfusion conclude at tile 130 at 08.20?

HOCKNELL: Yes.

JOHNSON: So there were several tiles there that we saw, but each administration of adrenaline warrants an individual tile because it has an individual entry on the system; is that right?

HOCKNELL: Yes.

JOHNSON: So it's the three administrations of adrenaline which are replicated three times at that stage because of the record keeping process?

HOCKNELL: Yes.

JOHNSON: We then move back to text or WhatsApp or Facebook communications between Lucy Letby and various other people, starting with a message sent by Lucy Letby to Ashleigh Hudson, who of course had been the designated nurse for [Baby I] at the beginning of shift.

HOCKNELL: Yes.

JOHNSON: Was that at 08.28?

HOCKNELL: Yes:

"I've got your swipe and badge! Caroline found it and gave it to me."

JOHNSON: Thank you. Before the reply came, [Baby I]'s vital signs were recorded by Belinda Simcock at tile 132, but can you take us straight on to the reply at 133, please?

HOCKNELL: The reply is:

"Oh bugger, I lent it to Caroline earlier. You're in tonight, aren't you? I could nip to yours and pick it up before your shift."

JOHNSON: And then about a minute later?

HOCKNELL: Lucy Letby replies:

"Yep, or are you free now? I'm just walking back."

JOHNSON: Did Ashleigh Hudson respond?

HOCKNELL: "I'm already in my pyjamas in bed but I could come now if that's easier for you?"

Lucy Letby replies:

"You are speedy! Ha ha. Yes, come outside now in your PJs. Don't worry, get it tonight. Hope you are okay."

Ashleigh Hudson replies:

"Ha ha. I don't mess around when it comes to bedtime. Thanks, pal. I'll be okay. I'm just so glad that it was a better outcome this time around. I hope you are okay, Lucy!"

JOHNSON: She replied:

"Yes, thank goodness. Sleep well, catch you later."

Then do we have an update made on the nursing notes by Belinda Simcock?

HOCKNELL: Yes.

JOHNSON: Could you take us through that note, please?

HOCKNELL: "Infant pale pink in colour and warm to touch. Remains intubated with size 3 ETT measuring 8 centimetres at lips. Remains on SIMV 22/5. Rate initially 40 increased following 08.00 hours cap gas to 50 as per Dr Neame. IT 0.4. Inspired oxygen 34 to 40. Air entry right = left. Breath sounds squeaky on auscultation. Symmetrical chest movement. NGT in situ on free drainage. Remains nil by mouth. Remains on 150ml/kg/day. PIVC in left hand clamped. Sit (sic) puffy and oedematous at handover [query] from resus drugs. PIVC in left foot. 10% glucose at 10.5ml/hour.

"Morphine 20 micrograms/kg/hour equals 0.9ml/hour. Nil redness or swelling at site observed. PIVC in right foot clamped. Nil redness or swelling at site observed. Parents in attendance."

JOHNSON: In that transcription of the notes that you've produced, where it has F followed by what appears to be a series of commas and then another F and commas, what does that indicate?

HOCKNELL: I'm not sure. I think it's a direct copy of the notes, so I left it as it is.

MR JUSTICE GOSS: It is a direct copy, I was looking at the note.

MR JOHNSON: Yes, thank you.

At 9 am, did Belinda Simcock fill in the standard three sources or records of data?

HOCKNELL: Yes.

JOHNSON: At 143, was there an examination of [Baby I] by Dr Hunt?

HOCKNELL: Yes.

JOHNSON: That was some time that morning, it tends to be about 9 o'clock, the grand round, as we heard in evidence.

At 144, were [Baby I]'s vital signs recorded at 10 am by Belinda Simcock?

HOCKNELL: Yes.

JOHNSON: 145, at the same time a capillary gas was repeated?

HOCKNELL: Yes.

JOHNSON: 146, one of the standard charts was filled in, also at 10 am --

HOCKNELL: Yes.

JOHNSON: -- together with another one of the standard three?

At 148 there is a separate record of a blood gas result.

HOCKNELL: Yes.

JOHNSON: 149, blood collected for cross-match?

HOCKNELL: Yes.

JOHNSON: Still at 10 o'clock. At 150 through to 152, at 11 am that Tuesday, 13 October, do we have the standard three?

HOCKNELL: Yes.

JOHNSON: At 153 and 154 do we have further blood tests and results?

HOCKNELL: Yes.

JOHNSON: 155, a nursing note update made at 11.44 by Belinda Simcock?

HOCKNELL: Yes.

JOHNSON: Referring to the sending of the blood sample for cross-match, the fact that [Baby I] had passed urine, her bowels had opened, her abdomen was full and firm to touch, and there were bowel sounds to be heard?

HOCKNELL: Yes.

JOHNSON: At midday, tile 156 through to 158, do we have the standard three recorded by Belinda Simcock?

HOCKNELL: Yes.

JOHNSON: 159, another blood gas record?

HOCKNELL: Yes.

JOHNSON: 160, 12.02, a pharmacist's note from Dr Harwood concerning the antibiotic choice for [Baby I]?

HOCKNELL: That's correct.

JOHNSON: That's followed at 161 through to 163 by three prescriptions?

HOCKNELL: Yes.

JOHNSON: At 164, 165 and 166 we have the standard three at 1 pm?

HOCKNELL: Yes.

JOHNSON: Followed by the same data at 2 pm between 167 and 169?

HOCKNELL: That's correct.

JOHNSON: At 170, at 2 pm, is there a further nursing note concerning [Baby I]'s heart rate and blood pressure?

HOCKNELL: Yes.

JOHNSON: At tile 171, the time being 14.40, was dobutamine started for [Baby I]?

HOCKNELL: Yes.

JOHNSON: That was recorded in Belinda Simcock's nursing note at the same time, 14.40, at tile 172?

HOCKNELL: That's correct.

JOHNSON: Tiles 173 to 175, we have the standard three records of data recorded at 3 pm?

HOCKNELL: That's correct.

JOHNSON: And again at 176 to 178 at 4 pm?

HOCKNELL: Yes.

JOHNSON: At 179 we have some notes made by Dr Harkness?

HOCKNELL: That's correct.

JOHNSON: That's also at 4 pm, followed by a nursing note made by Belinda Simcock concerning treatment which had been given or approved by Dr Harkness?

HOCKNELL: Yes.

JOHNSON: That included the insertion of a long line?

HOCKNELL: Yes.

JOHNSON: Thank you. At 181 a further X-ray of [Baby I]?

HOCKNELL: Yes.

JOHNSON: It addresses several issues: the position of the NG tube; is that right?

HOCKNELL: Yes.

JOHNSON: The position of the long line?

HOCKNELL: Yes.

JOHNSON: The degree of distension of [Baby I]'s bowel with gas?

HOCKNELL: Yes.

JOHNSON: And comparing that to what had previously been seen?

HOCKNELL: Yes.

JOHNSON: At 182, is there a note from Dr Harkness timed at 4 o'clock concerning the X-ray of the long line?

HOCKNELL: Yes.

JOHNSON: At 183, did Belinda Simcock make a nursing note relating to the repeat abdominal X-ray taken at 16.30 --

HOCKNELL: Yes.

JOHNSON: -- concerning the fact that there were communications with Alder Hey, no doubt discussing what should be done to help [Baby I]?

HOCKNELL: Yes.

JOHNSON: At 184 and 185, are there two prescriptions at 16.45?

HOCKNELL: Yes.

JOHNSON: Then at 186, did Belinda Simcock make a further nursing note recording the fact that [Baby I] had had a repeat capillary blood gas at 5 pm?

HOCKNELL: Yes.

JOHNSON: And that the pressure on the ventilator had been increased by the registrar?

HOCKNELL: Yes.

JOHNSON: Also at 5 pm, between times 187 and 189, do we have the standard three?

HOCKNELL: Yes.

JOHNSON: Followed, as before on many occasions during the course of this sequence, by a blood gas record at the same time?

HOCKNELL: Yes.

JOHNSON: Then we see a series of WhatsApp messages between [Nurse A] and Lucy Letby. Could you take us through those, please?

HOCKNELL: At 17.27 [Nurse A] sends a message to Lucy Letby:

"How's you, hun? Were you on last night? Yvonne asked me to swap to tomorrow night which would have been good to work with you but I had plans."

Lucy Letby replies:

"Hey. Yes on for 3. [Baby I] was found gasping in cot. Full resus and vented. I don't know why. Wasn't nice. Wish you were working tomorrow as it's me, Jo and [Nurse B]."

Further messages sent:

"AM hard work too 1-1."

And the name of a third party redacted.

[Nurse A] replies:

"Damn. I've been 1 in, 1 off, 1 in too which would have messed time with G up too. Wish it wasn't those 2."

JOHNSON: One in, one off, one in, is that one shift on, one shift off, one shift on?

HOCKNELL: I think so.

JOHNSON: So the response from Lucy Letby?

HOCKNELL: "Oh yeah, that would be a bit rubbish. No, not looking forward to it. Laura, Caroline O and Jo tonight. Caroline B in charge today. So be interesting to see who she gives me. AM had CO2 of 22 last night!"

JOHNSON: AM is one of the children; is that right?

HOCKNELL: Yes.

JOHNSON: Obviously, I'm not asking the jury to do this, but AM was Lucy Letby's designated child at the beginning of that night shift.

HOCKNELL: Yes.

JOHNSON: We see -- I hadn't read ahead.

HOCKNELL: [Nurse A] replies:

"Who did you have last night? Or won't it work to keep those babies? That's a bit high. Are they talking to Alder Hey Children's Hospital."

Then Lucy Letby replies:

"Had AM but took [Baby I] from Ashleigh when she went off as Laura had 2 CPAP and Caroline in charge. Yes, talking to them but nothing seems to be being done because she's fine when awake."

[Nurse A] replies:

"So you should have AM or [Baby I] then hopefully. Let me know how it's going."

Lucy Letby replies:

"Will do. How's things with you?"

JOHNSON: I'm sure it's very clear, but when it says at the conclusion of some of those messages "redacted: name of third party", that's a reference back to the initials AM?

HOCKNELL: Yes.

JOHNSON: So that was the child in room number 1. All right.

At 200 through to 202 do we have the standard three at 6 pm?

HOCKNELL: Yes.

JOHNSON: At 203 do we then have an incoming message to Lucy Letby sent by [Nurse A]?

HOCKNELL: Yes:

"I'm okay. Had to come he with D and V on Friday night. P came to see me Sunday which went well."

JOHNSON: Meanwhile, back at the hospital at 204, did Belinda Simcock make an update to the nursing notes concerning a dextrose infusion being given via the long line to [Baby I]?

HOCKNELL: Yes. This is the time when she entered the notes on to the system.

JOHNSON: Yes, thank you. At 205 to 207, we have a collection of three prescriptions --

HOCKNELL: Yes.

JOHNSON: -- at 18.28? Then at tile 208, was there a further message, but this time from Ashleigh Hudson, sent to Lucy Letby?

HOCKNELL: Yes:

"Hope you slept okay. Just let me know when you want me to meet you."

JOHNSON: Earlier they'd been talking about the pass, hadn't they?

HOCKNELL: Yes.

JOHNSON: So Ashleigh Hudson had left her pass behind at the end of the shift?

HOCKNELL: Yes. Lucy Letby replies:

"Or dear. Better now? Ah, is that when you had your gin?"

This is a reply to [Nurse A], sorry.

Then her reply to Ashleigh Hudson is:

"I'll give you a shout when leaving and I'll meet you outside."

JOHNSON: Yes. Ashleigh Hudson said, "Okey dokey".

19.00, tile 212, Belinda Simcock made a note of a repeat capillary gas and informing Registrar Soni of what had happened or what the results were.

HOCKNELL: Yes.

JOHNSON: At 213 to 215, we have the standard three at 7 pm; is that right?

HOCKNELL: Yes.

JOHNSON: Followed at 216 by a blood gas, also at 7 pm?

HOCKNELL: Yes.

JOHNSON: And then to conclude this particular sequence, are there three messages all involving Lucy Letby but on the other side, both [Nurse A] or Ashleigh Hudson?

HOCKNELL: Yes.

JOHNSON: Can you take us through those, please?

HOCKNELL: [Nurse A]'s reply:

"Lol. [No], that was Sunday when I was feeling better. It was largely tonic. I don't like it strong. Was awful having to go home and leave 4 of them."

Lucy Letby replies to Ashleigh Hudson:

"Just about to leave. Meet you outside."

Lucy Letby replies to [Nurse A]:

"I meant Sunday with the gin lol. Well better off at home with that!"

JOHNSON: Then Lucy Letby, of course, was on her way in to start a night shift; is that right?

HOCKNELL: Yes.

JOHNSON: The night shift that follows involved a further event for [Baby I].

HOCKNELL: Yes.

JOHNSON: And you've just, in effect, signed off this particular sequence by reference to the fact that everything that follows that point in time can be found in the subsequent sequence of events?

HOCKNELL: That's correct, yes.

MR JOHNSON: Thank you very much.

MR MYERS: There are no questions, thank you, my Lord.

MR JOHNSON: Does your Lordship have any questions?

MR JUSTICE GOSS: I don't, thank you very much.

(The witness withdrew)

MR JOHNSON: My Lord, I think we're returning to live evidence tomorrow, relating to the previous incident, to finish that off.

MR JUSTICE GOSS: Yes.

MR JOHNSON: Then we are moving to the evidence for what the jury has just run through.

MR JUSTICE GOSS: Are we not having the neonatal review?

MR JOHNSON: Ah yes, of course, sorry. I think the heat's getting to me.

Kate Tyndall, please.

MR JUSTICE GOSS: There's been a request to lower the temperature in here, but...

MRS KATE TYNDALL (recalled)

Examination-in-chief by MR JOHNSON

MR JOHNSON: Welcome back. Just for the sake of the record, would you identify yourself, please?

TYNDALL: I'm Kate Tyndall.

JOHNSON: Thank you. Have you overseen or participated in the production of the neonatal review schedule relating to the incident concerning [Baby I] on 13 October?

TYNDALL: Yes.

JOHNSON: Thank you. As we can see from the front sheet, the conventions which apply to --

MR JUSTICE GOSS: Just wait a minute until everyone's got there.

MR JOHNSON: I'm sorry.

(Pause).

MR JUSTICE GOSS: This is the second batch, do you remember, with the yellow Post-its, which you received yesterday?

It's the second one. It runs to...

MR JOHNSON: Seven pages.

MR JUSTICE GOSS: Yes, seven pages.

MR JOHNSON: Thank you.

So Mrs Tyndall, from the front sheet do we see that the conventions which are well-established now apply equally to this document as they have to the previous ones?

TYNDALL: Yes.

JOHNSON: Thank you. Turning over to page 2 of 7, do we see the layout of the population and their respective designated nurses at the beginning of the relevant shift?

TYNDALL: Yes.

JOHNSON: And that replicates the one we've just looked at in the sequence of events?

TYNDALL: Correct.

JOHNSON: Thank you. Moving on to page 3, as before, do we see that this document includes all the entries which are attributable to Lucy Letby?

TYNDALL: Yes.

JOHNSON: They appear in blue font as before?

TYNDALL: Yes.

JOHNSON: On the first page they exclusively -- well, I was going to say they exclusively relate to AM, but they don't as a matter

of fact. There's also another child, AK, in respect of whom Lucy Letby had some involvement, at lines 32 and 33?

TYNDALL: Yes, and there's MC at line 29 as well.

JOHNSON: There is, thank you very much.

So far as [Baby I] was concerned, though, do we see that there are only two entries at lines 46 and 47?

TYNDALL: Yes.

JOHNSON: And they concern the fact that her observations were taken at 01.30 hours and she was fed at that time?

TYNDALL: Yes.

JOHNSON: Turning over to page 4, do we then see that in the first two lines, lines 67 and 68, the child AM was given medication by Lucy Letby, which was co-signed for by Laura Eagles?

TYNDALL: Yes.

JOHNSON: [Baby I]'s collapse is marked by that thick black line at row 69?

TYNDALL: Correct.

JOHNSON: Thereafter, we see that most of the entries relating to [Baby I], save for those which are related to doctors, concern Lucy Letby?

TYNDALL: Yes, either written by her or action she's taken part in.

JOHNSON: Thank you very much. Otherwise, at lines 96 and 97, we can see that Lucy Letby was still involved with the child AM, who was in room number 1?

TYNDALL: Yes.

JOHNSON: At lines 110 to 113 she appears to have co-signed for medication concerning or administered to [Baby G] --

TYNDALL: Yes.

JOHNSON: -- who was one of the other children in nursery 2 with [Baby I]?

TYNDALL: Yes.

JOHNSON: Thank you. Page 5 of 7.

TYNDALL: I think [Baby I] had been moved by that point.

JOHNSON: Sorry, you're quite right, she'd been moved to nursery 1. I don't think we've had that in evidence yet, I don't think anyway. Possibly it was in the nursing notes, I can't remember, sorry.

Anyway, just dealing with page 5, though, please, do we see there are a lot of entries concerning [Baby I] here, which mirror what we've already seen in the sequence of events?

TYNDALL: Yes.

JOHNSON: Again, other than a nursing note, which was completed by Ashleigh Hudson, and other than the odd record made by a doctor, all the [Baby I] records are or concern Lucy Letby?

TYNDALL: Yes, because [Baby I]'s now being cared for by Lucy.

JOHNSON: By her, exactly. But she also is making entries in the notes of AM, for example at lines 133 to 134, 154 to 155 and so on --

TYNDALL: Yes.

JOHNSON: -- although other people are as well.

Just to deal with AM as an example, at line 168, a blood gas record is noted up by Bernadette Butterworth?

TYNDALL: Yes, but we're not -- we don't know whether that is -- I think it's in the key that it might be thought of to be in -- signed in error.

JOHNSON: Right, okay.

TYNDALL: Sorry, it's on the key at the front:

"Believed to be signed in area as a member of staff who's on the day shift."

JOHNSON: Okay. Let's make this absolutely clear then: just looking at line 168, it's an entry on 13 October at 6.39?

TYNDALL: Yes.

JOHNSON: As we've already said, it's a blood gas record.

Bernie Butterworth's name appears, there's an asterisk next to her name.

TYNDALL: Yes.

JOHNSON: We know from the staff list that Bernie Butterworth wasn't working that shift.

TYNDALL: Yes, she's working on the day shift --

JOHNSON: And so --

TYNDALL: -- and starts at half 7.

JOHNSON: So there's a mistake there somewhere?

TYNDALL: We believe so, yes.

JOHNSON: All right. It's just as well to know.

Then the final page, please, which is page -- well, it's the penultimate page, page 6 of 7. Do we see, so far as that is concerned, there are five lines, four of which concern [Baby I] and are, largely speaking, updates on the computer, together with the nursing note, all of which information also appears in the sequence of events?

TYNDALL: Yes.

JOHNSON: Thank you. And truly the final page is the population location. As you've already helpfully pointed out, that includes a note of the fact that [Baby I] moved from nursery 2 to nursery 1 and you have also put into -- against the nurse's name the times for which specific nurses were responsible for [Baby I]?

TYNDALL: Yes.

JOHNSON: Just dealing with that, as a matter of fact we know from the evidence we've already had in the sequence that Ashleigh Hudson had [Baby I] from the beginning of the shift at 20.00 hours. Is that 02.00 hours an inversion of the numbers?

TYNDALL: More than likely.

JOHNSON: It's all right, I hadn't spotted it before. So it should say 20 rather than 02?

TYNDALL: Yes.

JOHNSON: So if people just correct that so there's no confusion later on. That is now correct --

TYNDALL: Yes.

MR JOHNSON: -- is that right?

TYNDALL: Yes.

MR MYERS: There are no questions, thank you.

MR JOHNSON: Does your Lordship have any questions?

MR JUSTICE GOSS: No. The nursing note behind tile 71, written in retrospect by Lucy Letby at 7.59, records that at 03.45, which is confirmed on page 7, that's when the move took place.

MR JOHNSON: Yes.

MR JUSTICE GOSS: Into nursery 1.

MR JOHNSON: Yes.

(The witness withdrew)

MR JUSTICE GOSS: Thank you very much.

That's as far as we can go today?

MR JOHNSON: It is.

MR JUSTICE GOSS: Thank you very much. 10.30 tomorrow then, please, ladies and gentlemen --

(3.54 pm)

(No audio feed from court due to change of camera view)

(3.56 pm)

MR JUSTICE GOSS: -- it will appear on a list on Monday in any event and it will appear on a list on Tuesday for the hearing of your application.

MR MYERS: Thank you.

MR JUSTICE GOSS: Good. Thank you very much.

(3.57 pm)

(The hearing adjourned until 10.30 am on Friday, 27 January 2023)