

7 November 2022
Baby D

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Monday, 7 November 2022
(10.30 am)

(In the absence of the jury)

MR JUSTICE GOSS: We'll be rising no later than 4.15 this afternoon, just for the avoidance of any doubt or difficulty, because of the consequences of the rail strike that was called off, but it's still created problems.

MR DRIVER: Thank you. We anticipate that we'll finish the evidence comfortably before that point in time.

MR JUSTICE GOSS: Then it's not a problem then. Thank you very much.

(In the presence of the jury)

MR JUSTICE GOSS: Yes, Mr Driver.

MR DRIVER: My Lord, may I call Dr Andrew Brunton to give evidence, please.

MR JUSTICE GOSS: Yes. If any of you have any difficulties with your iPads, please just indicate that you have a difficulty, don't wait, all right? It will get sorted out. I think they've

all been fully charged and should be working all right. Thank you, Mr Murphy.

DR ANDREW BRUNTON (sworn)

Examination-in-chief by MR DRIVER

MR DRIVER: Could you state your full name, please?

BRUNTON: My name is Dr Andrew Brunton.

DRIVER: And your occupation?

BRUNTON: I'm a consultant neonatologist.

DRIVER: And where are you currently based?

BRUNTON: I work at the Royal Hospital for Children in Glasgow.

DRIVER: And as part of your training, over recent years were you in 2015 based in the Countess of Chester Hospital as a paediatric trainee?

BRUNTON: That's correct.

DRIVER: And as of June 2015, what stage had you reached in your training and experience?

BRUNTON: I was an ST4, or a specialist trainee year 4, in paediatrics.

DRIVER: And would ST4s sometimes be referred to as registrars?

BRUNTON: That's correct.

DRIVER: Dr Brunton, I'm going to ask you about your recollection of your involvement with the baby [Baby D] --

BRUNTON: Okay.

DRIVER: -- during the course of which I'm going to draw your attention to clinical records that you made and they'll appear on that screen to your right. You may want to move the water vessel, it might be obscuring your view.

We know that you made a statement to the police some time ago in relation to [Baby D] and could you confirm that, prior to doing so, you were given and took the opportunity of refreshing your memory from the contemporaneous clinical notes?

BRUNTON: That's correct.

DRIVER: We understand, is it right, that you were on duty at the Countess of Chester Hospital on Saturday, 20 June 2015?

BRUNTON: That's correct.

DRIVER: Is it right that you first met [Baby D] at about 9 pm on that Saturday night --

BRUNTON: That's correct.

DRIVER: -- when you had just started your night shift?

BRUNTON: That's correct.

DRIVER: Mr Murphy, I wonder whether you could put on screen, please, slide 34.

Dr Brunton, just to familiarise you with the presentation that's on screen now, it's a chronological presentation, you can see your name at a time, 21.45, and if we click behind it a third party has summarised, under the heading here "description", the contents of your clinical notes which we'll now click on to so you can see the original.

First, on that page is an entry from a colleague, Dr Rylance, but if we scroll down you will no doubt recognise your own handwriting; do you?

BRUNTON: Yes, I do.

DRIVER: Thank you. I've been informed a little of the protocols at the Countess of Chester Hospital, but could you confirm that you, having come on duty for the night shift on the Saturday, you would have received some introduction and information about the patients being handed over to your care?

BRUNTON: Yes, we would have had a handover. It normally took place in the paediatric ward, but a handover of both the paediatric and the neonatal patients. I can't remember the exact time of it but we would have had a formal handover.

DRIVER: Thank you. Having received the information from a colleague did you then, as this note suggests, at 21.45, on Saturday 20th, did you go and examine the baby and consider the data generated by the monitoring of [Baby D]?

BRUNTON: Yes. 21.45 might be an approximate time, but around that time, yes.

DRIVER: So you would undertake the observations and then note up as you went along or would you do it retrospectively at the end of your examination of the baby?

BRUNTON: I would normally write it at the end of examining the baby.

DRIVER: Thank you. And if you could then please take us through the notes that you made and help us understand them. So the handover was given by your colleague Dr Rylance?

BRUNTON: Yes, that's correct.

DRIVER: Your first note says "repeat gas". Does that inform the reader that this was a second reading of the baby's gas tests, as it were?

BRUNTON: I presume so, that's the first one that's been brought to my attention. But that may have been in the context of from the handover previously, but I can't be certain of that.

DRIVER: Could you take us through the entries there to the right of the colon?

BRUNTON: The right of the colon shows that the pH, the acid levels in the blood, were 7.24. PCO₂, the carbon dioxide level, was 7.49. The base excess was minus 4.6 and the lactate level was 2.7.

DRIVER: I'm grateful. Let's look at them one by one.

We can see alongside pH 7.24 what appears to be an arrow pointing upwards.

BRUNTON: Yes, I'm presuming, I can't remember what the previous gas result was, but the arrow pointing upwards would have indicated, normally in my clinical notes, that that was an improvement.

DRIVER: Thank you. What are the pH levels indicative of?

BRUNTON: The pH levels will measure the acidity level in the blood.

DRIVER: So the arrow pointing upwards from your noting indicates an improvement --

BRUNTON: An improvement, yes.

DRIVER: -- rather than an increased level?

BRUNTON: That's correct.

DRIVER: Thank you. And the next entry?

BRUNTON: So the carbon dioxide level was 7.49. There's an arrow pointing downwards besides that. Again, I can't remember the previous gas, but my presumption would be that that would be an improvement compared to the previous one.

DRIVER: Could you help me understand that? You seem to have arrows in opposite directions, both indicative of an improvement.

BRUNTON: An improvement clinically. So we've seen that the acid level is improving within the blood, even though the number is going up, that's a good thing, as it means that the acid level is reducing within the blood.

Likewise, the carbon dioxide level, which can sometimes drive the acidity within the blood, is coming down. So those two figures together indicate an improvement.

DRIVER: Thank you. Next entry?

BRUNTON: The base excess was minus 4.6. The base excess is a rough figure that we look at that is used to -- that's helpful in terms of trying to work out whether the gas, if it's abnormal in any way, is being driven by a respiratory perspective or what we call a metabolic perspective, but that number would be within acceptable limits.

DRIVER: So the 4.6 is, all things considered, within acceptable limits?

BRUNTON: Yes.

DRIVER: And the lactate of 2.7?

BRUNTON: Lactate of 2.7, again in the context of [Baby D]'s clinical status at that time, would be within acceptable limits.

DRIVER: So exercising your clinical judgment, taking into account those four readings collectively, what was the picture?

BRUNTON: Well, like I say, I would need to see the previous gas to see how that was but from that gas result there is a slight improvement. However, as you can see, I don't know if you want me to go on --

DRIVER: Yes, please.

BRUNTON: -- but in the next sentence what I've said is that the baby's currently on non-invasive respiratory support, which means CPAP, which is also defined as continuous positive airway pressure. And the end expiratory pressure, which is what that word PEEP is, is a measure of how much force we are having to give to keep the lungs open. And what we're also looking at after that there is where it says "in 48% O2". That is the amount of oxygen [Baby D] was requiring at that time. So that was a high level of oxygen.

DRIVER: Could you just help us understand why you have used the word "however" (overspeaking) --

BRUNTON: Because the gas shows an improvement but clinically correlating that gas against [Baby D] she had not clinically improved at that time.

DRIVER: As evidenced by her requirement for the continuing CPAP --

BRUNTON: Yes.

DRIVER: -- at those levels?

BRUNTON: Yes, and the subsequent observations underneath that where I've mentioned RR. RR is the respiratory rate, which was measured at between 70 and 90 breaths per minute. It was also noted that she had what we call subcostal recessions. Subcostal recessions are when the skin underneath the lungs is being pulled backwards and forwards because she is breathing quite hard.

DRIVER: So that is a visual sign or a visual indicator of --

BRUNTON: Respiratory distress, that she was needing extra support.

DRIVER: Going back to the data, the respiratory rate of 70 to 90, is that sub-optimal?

BRUNTON: That's sub-optimal, yes.

DRIVER: Too quick?

BRUNTON: Too high, yes.

DRIVER: Thank you. The next entry?

BRUNTON: I've said her oxygen saturation levels are between 97% and 99%. They are acceptable.

DRIVER: Thank you. Scroll down please. This goes on to another page but is this a continuation of your note from the same examination of the baby and her data?

BRUNTON: That's correct. It's a discussion with dad, but yes, it's about discussing [Baby D].

DRIVER: So you informed her father that although her blood tests have improved slightly, as you've just explained to us, you're having to give her a high level of respiratory support in order to maintain her oxygen saturation levels?

BRUNTON: That's correct.

DRIVER: That's a written version of the evidence you gave a few minutes ago effectively; is that right?

BRUNTON: Yes, that's correct.

DRIVER: Thank you. You explained to her father that the safest option -- well, you decode all of that for me, please?

BRUNTON: I have subsequently had a discussion with [Baby D]'s father and I've explained at this moment in time, given the high level of breathing support that we're having to give in order to maintain her oxygen saturation levels within normal parameters, the most safest thing to do for [Baby D] would be to what we call intubate her, so place her a breathing tube into her airway, and then put her on a ventilator with the hope of actually giving her some medicine and then taking her off of the ventilator relatively quickly.

DRIVER: Thank you. Could you help us with the abbreviation WOB?

BRUNTON: WOB means work of breathing.

DRIVER: Thank you. So you confirmed in the note that her father understood and confirmed the decision to intubate [Baby D] and then we keep reading. Mr Murphy, if you could help us, please. Thank you.

So now this is a note of the attempted intubation, is it?

BRUNTON: Mm-hm, yes.

DRIVER: Could you --

BRUNTON: So it looks like we tried to pass a size 3 endotracheal tube, but we were unable to pass that because [Baby D] was quite active at that time. We then moved to giving her some elective intubation drugs. So these are drugs to settle her, to allow us

to pass that -- perform that procedure successfully. So the drugs that we gave would have been as per the clinical guidelines for the drugs we used at the Countess of Chester Hospital at that time, which would have been morphine, atropine and suxamethonium.

Then it looks like Dr Thomas, who was the SHO, the ST1, had an attempt at intubation. She was unable to insert the endotracheal tube because she was unable to get a good visualisation of the cords. And I then subsequently took over and inserted the endotracheal tube at first attempt.

DRIVER: Thank you. Let's just go back up a bit, please, Mr Murphy, and we'll go over that ground one more time.

You attempted to insert a size 3 tube?

BRUNTON: Yes.

DRIVER: The baby was too active?

BRUNTON: Yes.

DRIVER: So you gave her drugs to make her less active --

BRUNTON: Yes.

DRIVER: -- to enable the procedure? And your junior colleague tried and failed to insert the tube but then you successfully inserted it?

BRUNTON: That's correct.

DRIVER: What would have been in effect the third attempt?

BRUNTON: Yes.

DRIVER: Then we have some information about the intubation. So it was inserted at 10 centimetres to the lips?

BRUNTON: Yes. And then it was subsequently pulled back because we would listen in, we would what we call auscultate or listen in to make sure that the air entry on both sides of the chest was good, so I've asked for it to be pulled back by a centimetre, and I've confirmed that the air entry is good. And the capnograph, which is what is called a colourimetric carbon dioxide detector, it will change from purple to yellow if inspired carbon dioxide is given out, and that's important because it means that the endotracheal tube is in the right place. And that's confirmed.

DRIVER: So she was exhaling carbon dioxide, which demonstrates it's working?

BRUNTON: Yes.

DRIVER: Thank you. Then secured at that position?

BRUNTON: Yes.

DRIVER: Was it -- what method would you have used to secure it?

BRUNTON: I can't remember. It would have been as per the trust's guidelines at that time.

DRIVER: The next entry, "good" -- is that --

BRUNTON: "Good A/E" means air entry, bilaterally, which means that we are getting air, or oxygen in this case initially, into both lungs when the tube has been secured at 9 centimetres.

DRIVER: Thank you. So the intubation process has been completed and is working successfully?

BRUNTON: That's correct.

DRIVER: Next entry?

BRUNTON: So this is the initial rates that we set the ventilator at. So CMV is the mode of ventilation, continuous mandatory ventilation is what CMV stands for, so that's the ventilator doing the work initially for the baby.

The 22 is what we call the PIP, the peak inspiratory pressure, and that's the highest amount of pressure that we will give on the ventilator. And the PEEP, similar to the reference previously, is the end expiratory pressure and that's the amount of pressure that's being given at the lowest point of the breath.

And the R, that stands for the rate that the ventilator is going to give these breaths at, and that's at 60 breaths per minute. And you can see "in 30% O2", so we were in 30% oxygen at that point.

DRIVER: Thank you. So you have recorded in this note how you decided to place [Baby D] on a ventilator?

BRUNTON: That's correct.

DRIVER: Although your plan, it seems, was to do so for a relatively short time; was that your intention?

BRUNTON: That was the intention but it would be dependent very much on [Baby D].

DRIVER: And so the equipment was put in place and she was attached to a ventilator and provided assistance at those rates?

BRUNTON: That's correct.

DRIVER: Could we please go to tile 35. We understand, Dr Brunton, that part of the protocol in these circumstances would be to obtain a chest X-ray for what purpose?

BRUNTON: Well, in this situation it would be to ensure that the endotracheal tube is in the correct position.

DRIVER: Thank you. So if we scroll down, please, we've already looked at this part of the note. Pausing there, we've finished with the page above now, so this is the statement of intention, "To obtain a chest X-ray"; is that right?

BRUNTON: That's correct.

DRIVER: You take us from CXR, please?

BRUNTON: CXR is chest X-ray. If the ET, endotracheal tube, is in a good position, then we would proceed to giving a medicine called surfactant. The next part of the plan was to hold off morphine at present. I didn't want to give morphine at that point because the hope would be that we would be able to take her off the ventilator pretty quickly. Morphine is what we call a respiratory depressant, it would reduce the amount of breaths that a baby would take, so we wouldn't give that unless we were going to be on the ventilator for a longer period of time.

We then planned to do a repeat blood gas in an hour to see if there was an improvement. As you can see, after that my plan was to speak to the parents regarding that.

DRIVER: The purpose of surfactant?

BRUNTON: Surfactant is a protein that is involved in the aid of gas exchange within the lung. What we sometimes find with babies, particularly babies born prematurely, but it can happen with babies who are born at term as well, they can be deficient of surfactant. There's no way of actually knowing this without looking at the clinical parameters of the baby and my concern at that time was that with a high oxygen concentration and still needing quite a bit of non-invasive respiratory support, potentially [Baby D] would benefit from getting some surfactant,

so we gave that medicine down the endotracheal tube subsequently.

DRIVER: The resultant image was reviewed by you --

BRUNTON: That's correct.

DRIVER: -- at -- now we're at 23.00 hours, 11 pm, still on the Saturday night. Your finding was?

BRUNTON: My finding was -- as you can see it says:

"ET tube position..."

Again referring to the endotracheal tube position and it was slightly high, so I pushed it in -- when I say high it was sitting within the airway but not at the level that we would like, so I pushed it in by approximately 0.75 centimetres. And then I've made some general comments around the X-ray itself, which showed no obvious signs of consolidation, so any obvious signs of infection within the chest X-ray. There was no obvious signs of a pneumothorax, which is an air leak from the lung cavity -- within the lung cavity, sorry.

And I have said that it is, "Likely RDS", which is what I referenced earlier, which is a condition called respiratory distress syndrome, "type picture".

DRIVER: So you undertook the bedside review of the X-ray image?

BRUNTON: That's correct.

DRIVER: Was it protocol that, subsequently, a radiologist colleague would make a further examination of the same image and provide feedback to you, the clinicians?

BRUNTON: Yes, they would do that. I think -- again, I can't remember the exact parameters of how -- the mechanism of how it worked, sorry, in the Countess of Chester. But again this was taken out of hours on a Saturday night, so this would be subsequently reported in the following few days.

DRIVER: At the same time as you have timed your review of the X-ray, that is to say 23.00 hours, we see alongside your name and I think in your handwriting?

BRUNTON: That's correct.

DRIVER: Tell us about this?

BRUNTON: So Curosurf is the brand name for surfactant and that is the medicine, the protein. It's given in a liquid form and it was given down the endotracheal, down into the lungs to actively take an effect on the lungs. The batch number is just the number of the medicine that we give. We like to record it.

DRIVER: An audit trail. Then 15 minutes later?

BRUNTON: So it looks like then I've spoken to [Baby D]'s mother and father. I've explained that [Baby D] is clinically stable at present, although is on a ventilator, and I have explained that I'm awaiting a repeat blood gas to review to see if we can reduce the level of support on the ventilator at that time that we are, I am presuming that is going to say, currently giving.

DRIVER: I think we need to go to the next tile, please, to see the continuation of that note. So behind -- thank you.

There is a continuation of the same note.

BRUNTON: Then I've explained that -- the fact that if there is prolonged ventilation required, or a deterioration or [Baby D] is not getting better, then we may have to think about transferring her at that point to either Arrowe Park Hospital, which is what APH stands for, or LWH is Liverpool Women's Hospital, and the parents understood that and had no further questions at that time.

DRIVER: Can we break that into two parts. Why would prolonged ventilation, if it were required, cause a transfer?

BRUNTON: Well, it doesn't necessarily definitely happen, that's why I said it may need to happen. But what we think about in these situations is: is this the most appropriate place for a baby who's requiring this level of support to be looked after? We know that Chester was at that time was what we call a level 2 neonatal unit, or a local neonatal unit. They would look after babies -- I can't remember the exact parameters now, but I think it was around 28 weeks' gestation and above or babies who were reasonably stable. If it was demonstrated that [Baby D] was more unwell and requiring more levels of support from an intensive care perspective she would need to be transferred to a higher -- another hospital that can provide a higher level of neonatal intensive care.

DRIVER: Thank you. Let's continue down the page. Again your handwriting?

BRUNTON: That's correct.

DRIVER: Timed now at 01.50 so we're into the early hours of Sunday, 21 June. It would appear that further blood gas data had been received; is that right?

BRUNTON: That's correct, yes.

DRIVER: Could you walk us through it?

BRUNTON: What we can see here is the repeat blood gas again -- although I have not got any arrows this time -- has shown a clinical improvement. Her pH has increased to 7.32, which is closer to normal range. And the inspired carbon dioxide level is now 5.44, which is decreased, and that would be close to again normal range. The base excess is within acceptable parameters of minus 4 to minus 5. Her glucose level, which is obviously a measure of her blood sugar, is 6.1, which is again normal. Her lactate was 2.6, which was stable.

DRIVER: So comparing these blood gas readings to the last, do any of them indicate a deterioration?

BRUNTON: No.

DRIVER: Do all of them indicate an improvement?

BRUNTON: The base excess, again, is within acceptable limits but all of the other ones indicate an improvement to me.

DRIVER: Thank you. Let's look to the right of this endorsement.

Explain that to us.

BRUNTON: So what I've mentioned here is that we've switched the mode of ventilation -- so again I mentioned previously continuous mandatory ventilation. What I've switched to now is synchronised intermittent mandatory ventilation, and this is essentially to allow [Baby D] to start to breathe by herself on the ventilator. So the ventilator will support her but she can take some breaths as well.

DRIVER: Can you recall why you made that decision at this point in time?

BRUNTON: Because we had seen a clinical improvement and also I was able to wean her ventilation. As you can see later on in the second sentence, and I will explain that if required, that the hope then would be that allowing her to do that would put her in a position to potentially be able to come off of the ventilator in reasonably short fashion.

DRIVER: Your next entry to the right of the page?

BRUNTON: That confirms what I said, that she was putting in multiple breaths by herself.

DRIVER: The next entry is a summary, is it?

BRUNTON: Yes. It essentially says she remains clinically stable on the ventilator and we were actually reducing the level of respiratory support at that time, so we had weaned the pressures -- the initial starting pressure that we had had been weaned down to a top pressure now of 16, so we were giving her less ventilation to keep her numbers within the optimal ranges. What we did notice however was that on the gas machine we can get a bilirubin level and the bilirubin level at that time was high at 92 and that required treatment and she was currently on the treatment there, as you can see, of triple phototherapy. That's how we treat jaundice levels.

Unfortunately, two of the lab samples that had been sent earlier in the evening had haemolysed, that would be not an unusual thing to happen --

DRIVER: What does that mean?

BRUNTON: Haemolysed is when we can't essentially get a result from the bilirubin sample that's been sent. I'm not an expert in the lab with regards to why that actually happens, but they essentially can't provide us with a magic number that we can put on the graph at that time.

And the DAT, the direction antigen test, which looks to see if there is any evidence of a cross-reaction between mum's blood and baby's blood that can cause the blood count to fall, was negative, there was no evidence to suggest that from that initial result. So my plan had been to do a blood gas -- I can't see the time because of the printing over it, but a repeat blood gas in due course, to do an urgent bilirubin sample, and you can see that I contacted the lab to say that that sample will be with them as soon as possible.

DRIVER: Thank you. I think that may have been the extent of your involvement with this baby on this night.

You were on duty again --

MR JUSTICE GOSS: Sorry, just before we leave that, for the jury's reference, if they want to make a note of it, that's slide 69 where they will find this continuation sheet because it's been put in the timeline much further on.

MR DRIVER: I'm very grateful. Let's go to it then.

MR JUSTICE GOSS: I've had to scroll through to find it.

MR DRIVER: Could we go to tile 69, please?

MR JUSTICE GOSS: And there you see it.

MR DRIVER: Thank you. And go back to the main carousel, please, Mr Murphy.

Then if we could, please, move forward in time to Sunday night and tile 174. Before we look at the detail, Dr Brunton, we understand that you worked a second night shift that weekend, this being Sunday the 21st, going into Monday the 22nd.

BRUNTON: That's correct.

DRIVER: The same protocols, no doubt, were observed, that you would have engaged in a handover with a colleague --

BRUNTON: That's correct, yes.

DRIVER: -- and received information about various patients, including [Baby D]?

BRUNTON: Yes.

DRIVER: Then we have, early into your night shift at 21.10, your observations of [Baby D] and the data being collected through the monitoring of her?

BRUNTON: That's correct, yes.

DRIVER: Let's repeat the process then please. Her blood results, blood gas results?

BRUNTON: Yes. No, I think these are serum urea and electrolyte levels. And they show the sodium level was low at 126, the potassium, which is the K, has an H beside it with a circle, that means it was haemolysed, we were unable to get a result from that blood test. The bicarbonate was 18. The urea was 5.6, and the creatine, which is the CREAT at the bottom, was 86. The BIL is the serum bilirubin level and that's 94 and the CRP was 6.

DRIVER: Right. So what did you conclude from those sets of data individually and/or collectively?

BRUNTON: So as you can see, I've highlighted the sodium level, so that is low. I haven't got my arrows on it this time, but that number is low and potentially may require some correction.

The creatine level at the bottom is high, but that would be something we would continue to monitor and we would cross-correlate that with the clinical symptoms of the baby. So underneath where I've documented "PU'd", that means "passed urine earlier", so I would look at the parameters for the baby.

But looking at these blood test result as a whole, there was some treatment potentially required but there wasn't anything that I needed to do dramatically here.

DRIVER: What is a relatively low sodium level indicative of?

BRUNTON: A relatively low sodium level can -- most of the time can actually be reflected -- in the first 24 or 36 hours, it can be a reflection of mum's sodium. What we also find is that babies, in the first 24 to 36 hours, have what we call a diuresis, so they are -- they have a little bit of extra fluid on board to start with and they will lose that fluid. And when they lose that fluid, either their sodium levels can sometimes go up but they can sometimes go down as well. So we look at the total amount of fluid that babies are on then and that's one of the things that I have documented underneath that.

DRIVER: The things that you have documented underneath, are they intended to note your general considerations of fluid levels in the baby?

BRUNTON: That's correct.

DRIVER: So the significance of the fact that [Baby D] had already passed urine earlier?

BRUNTON: Yes, that would be what we would expect and would be in keeping with her clinical condition and so that was definitely appropriate. And we've said -- I've said she's not clinically oedematous, so what we worry about sometimes is that when there are abnormalities in sodium levels that the fluid might be leaking out of the capillaries and into the skin and into the tissues, which would cause her to become more oedematous.

Oedematous is the medical word for swollen, in effect.

DRIVER: Thank you. Your next entry?

BRUNTON: I've looked at the total amount of fluids at that time that [Baby D] was on and at that moment in time she was on 75ml per kilogram per day. So we would multiply the 75 by her weight and then divide that by 24 hours to give the amount of fluid that she would be getting every hour. And that -- the type of fluid was 10% dextrose -- and the plus, that's what that 10% and

DEX means, and the "plus NBM" means she was nil by mouth, she wasn't getting any milk at this time.

DRIVER: Thank you. Now moving on to -- are these respiratory related notes?

BRUNTON: Yes. So I've started my clinical notes with an overall examination of her. She was saturating 100%. I haven't documented it, but she was on -- I haven't documented the amount of oxygen she was requiring for that but she was on her CPAP, so she was still on the continuous positive airway pressure --

DRIVER: Can we pause there? Sorry to interrupt. When we last left your notes she was on a ventilator.

BRUNTON: Yes.

DRIVER: As of this point in time, around 21.10 on a Sunday -- Dr Brunton, it's not your fault, somebody elsewhere is taking a note of my questions and your answers and we're going too quickly.

BRUNTON: Okay, sorry.

MR JUSTICE GOSS: And you're using some quite complicated words as well. That's not in any way critical, you have to, these are the medical terms for various things, but just bear in mind that laypeople are having to listen to this and absorb the information. So just speak a little more slowly if you could, please.

BRUNTON: Okay.

MR JUSTICE GOSS: Thank you very much.

MR DRIVER: When we left your notes from the previous day, [Baby D] had been intubated and put on a ventilator.

BRUNTON: Yes.

DRIVER: We're now 20-odd hours forward. Was she still on a ventilator at this point in time, do these notes --

BRUNTON: No, these notes don't suggest that. She'd been taken off earlier in the day.

DRIVER: Right. So not on a ventilator, however receiving some respiratory assistance?

BRUNTON: Yes.

DRIVER: In what form?

BRUNTON: CPAP, which was the non-invasive breathing support, so that was the air with a mask being pushed down into the lungs.

DRIVER: And the movement from ventilation, from the way you described on the Saturday to this, as it was on the Sunday night, in terms of your care for the baby and the levels of respiratory support, how were things evolving?

BRUNTON: They're clinically improving.

DRIVER: Next entry.

BRUNTON: So thereafter, I did a clinical examination of [Baby D].

I found that she had no signs of -- the WOB with the arrow besides it means increased work of breathing, so there was no signs of this. And there was also no signs of any respiratory distress, the things that I outlined previously.

Where the arrow is is an examination of her chest, and that's a well-known medical illustration that her chest was clear. The HS besides that is her heart sounds. Heart sounds, 1 plus 2, are normal. And the zero means that there were no added sounds, no abnormalities detected.

Then finally I have done a clinical examination of her abdomen and that has shown that her abdomen was soft and her bowel sounds, which is the BS underneath, were normal. And no organomegaly, any enlargement of the organs, was detected.

DRIVER: So retracing our steps there, going from left to right, the first diagram illustrates your examination of her lungs, effectively?

BRUNTON: Yes.

DRIVER: On your last set of entries, you'd done it in words rather than in illustration. But were things the same as they were previously?

BRUNTON: Yes.

DRIVER: The heart?

BRUNTON: There were again no abnormalities detected.

DRIVER: Thank you. Moving across the page. Abdomen?

BRUNTON: Again, no abnormalities detected clinically.

DRIVER: So the fact that the abdomen was soft, why was that worthy of noting in the clinical records?

BRUNTON: It's just a standard parameter that we measure when we're examining the abdomen.

DRIVER: BS?

BRUNTON: Is bowel sounds. Again, the bowel sounds, the N beside that means normal, so they were present, which is what we'd expect.

DRIVER: Forgive me if this is a very (inaudible) tell us something that is very obvious to you, but why would you listen for bowel sounds?

BRUNTON: Well, you would potentially listen for bowel sounds in case there was any signs of obstruction of the bowel, for example. Again, it would just be a standard clinical examination that we would do. So even though I wasn't concerned about it, I was carrying out a full detailed examination anyway.

DRIVER: And here the bowel sounds were normal -- is normal present?

BRUNTON: Yes, that's correct.

DRIVER: And there was no enlarged organs?

BRUNTON: Yes.

DRIVER: Next entries?

BRUNTON: We always in babies will check the femoral pulses, so the femoral pulses are two pulses at the top of the legs and this diagram here indicates that both femoral pulses on the left leg and on the right leg were present and normal.

DRIVER: So they are your observations on examination?

BRUNTON: Yes.

DRIVER: Then we move to you looking forward and the immediate plan for care and treatment of [Baby D].

BRUNTON: Yes.

DRIVER: Your plan was to commence enteral feeds?

BRUNTON: Yes, so we wanted to start giving her milk, in effect, because she was well enough to start taking some milk.

DRIVER: We've seen from an earlier entry that you'd recorded she was NBM, nil by mouth, but now things have moved forward and at this point in time you've changed the plan; is that right?

BRUNTON: That's correct, yes.

DRIVER: And why?

BRUNTON: Because she was clinically improving and we know that babies get better and -- not so much get better but they -- we should be trying to improve their clinical status by giving them milk, so that's what we've done.

DRIVER: And your final entry speaks for itself.

If we can just scroll down.

MR JUSTICE GOSS: I think it says:

"Initially 1 millilitre every hour and increase as tolerated."

BRUNTON: That's correct.

MR JUSTICE GOSS: In other words you start with a very little amount and then --

BRUNTON: Go up.

MR JUSTICE GOSS: And if all is going well --

BRUNTON: You can start to increase that, yes.

MR JUSTICE GOSS: And that's via a tube, obviously?

BRUNTON: Yes, that would have been a tube initially but hopefully, as the volumes built up, we would then move to start to allow her to suck some feeds.

MR JUSTICE GOSS: Thank you. Sorry, Mr Driver.

MR DRIVER: Not at all, my Lord.

Let's continue. So this is your final entry for the note that we've been examining over the last 10 minutes or so.

BRUNTON: Yes. It was to repeat a set of blood tests and a blood gas at midnight.

DRIVER: So that's your examination of [Baby D] on the Sunday night and now we're going to consider your notes at 01.40 on the Monday morning. So a few hours later, you were at her cot side again?

BRUNTON: Mm-hm.

DRIVER: The reason you were here on this occasion was because you had been called there; is that correct?

BRUNTON: That's correct, that's what I've documented.

DRIVER: So leaving the notes for a moment, Dr Brunton, I'm going to ask you what you actually recall, what your memory of these events is, and if you need your memory jogging then we'll go to the clinical notes taken at the time.

So do you recall being asked to return to [Baby D]'s bedside?

BRUNTON: Not really, no.

DRIVER: Do you know from the notes where you were when you received that request?

BRUNTON: No, I've not documented where I was, but if I've been called to review the baby I would have been in one of two or three places: the paediatric ward, labour ward or potentially on the post-natal ward.

DRIVER: We know, and we'll read in due course, that you attended to her upon request more than once. This is the first such event and it happened at around 01.40 on the Monday morning. Leaving the screen aside for a moment, do you recall attending upon her --

BRUNTON: Yes.

DRIVER: -- at about that time? And from memory, what do you recall about [Baby D] and her condition at that point in time?

BRUNTON: I don't remember specifically. It's all very hazy, given the passage of time that there has been, so I can't remember the fine details. But I was called to come and see her because there was a concern that her oxygen level had gone up and that she had developed a rash.

DRIVER: So that's, as best you can recall, what was communicated to you?

BRUNTON: Yes.

DRIVER: More importantly now, I'd like you to tell us what it is you found upon attending upon [Baby D].

BRUNTON: I can't remember the exact details in terms of recalling information, so my information would be exactly as the medical notes describe it.

DRIVER: Understood. Let's go to your note then. At 01.40, you were, it seems, called to urgently review [Baby D].

BRUNTON: That's correct.

DRIVER: "SOBU"?

BRUNTON: I think that's supposed to be a C, my apologies. It's SCBU, so "Baby on SCBU".

DRIVER: Being?

BRUNTON: Special Care Baby Unit, which is where [Baby D] was.

DRIVER: Thank you. So the clinical record written in your hand says that:

"The nurses noted that became extremely mottled+++"; yes?

BRUNTON: Yes.

DRIVER: "Also noted to have tracking lesions -- dark brown/black -- across the trunk."

From memory are you able to say whether both of those entries reflect facts reported to you by the nurses or facts observed by you?

BRUNTON: I can't remember. The way it reads is the nurses, but I can't remember that.

DRIVER: The next entry:

"On examination..."

Is that what O/E --

BRUNTON: Yes, that's correct, yes.

DRIVER: So does it follow that by now you're at the cot side --

BRUNTON: Yes.

DRIVER: -- examining the baby?

BRUNTON: Yes, that's correct.

DRIVER: And take us through your entries then, please.

BRUNTON: So she was still on her CPAP, which is the bit to the right, which was the non-invasive breathing support, but her oxygen requirement or the amount of oxygen she was being given from the CPAP machine had increased from air to 60%.

Her heart rate was --

DRIVER: Sorry, forgive me, just stop there. I want to go back over that line in more detail, my apologies. So the amount of oxygen she was being given by the machine had increased?

BRUNTON: Yes.

DRIVER: Was that based on a decision made by a doctor and/or a nurse?

BRUNTON: Again, I can't be certain. It wasn't made by me because I would have said to increase her oxygen levels. The nurses normally have parameters that they would follow to allow them to increase the oxygen manually if it's required.

DRIVER: So in any event by the time you're examining [Baby D], her oxygen levels had been increased?

BRUNTON: Yes.

DRIVER: What's that indicative of?

BRUNTON: Well, it's indicative of that she must have had low saturation levels that the nurses were concerned about to increase the amount of oxygen she needed.

DRIVER: Thank you. Your next entry?

BRUNTON: Her heart rate is 130 and to the side of that I've written that she has slight subcostal recession, so the muscles between the ribs were coming in and out, which they hadn't been doing previously, which can be a sign that her respiratory parameters are changing.

DRIVER: Thank you. Let's take those two entries in order. Her heart rate is now 130?

BRUNTON: That would be within acceptable parameters.

DRIVER: Thank you. You made a visual observation that she is working to breathe?

BRUNTON: Yes. However, I have then moved on to examine her clinically and again it's a similar picture to the one that you have shown previously, which is a diagram of the lungs, and listening to the lungs I couldn't hear anything of any worry or concern. Again, her heart sounds were again normal and no abnormalities were detected. Again, the abdominal examination, all of these are completely normal.

DRIVER: Thank you. Your next entry?

BRUNTON: I've documented that the skin at this point was brown and there were areas of discolouration within that, that were light brown -- "across the trunk", it says underneath. Sorry, I didn't see that.

DRIVER: So should we read that note as a single note:

"Skin [arrow] brown, areas of discolouration -- light brown across trunk"?

BRUNTON: That's correct.

DRIVER: That's a single note?

BRUNTON: Yes.

DRIVER: Do you recall this?

BRUNTON: No.

DRIVER: Does it follow therefore that you're not able to expand upon that description?

BRUNTON: No.

DRIVER: Thank you. Next?

BRUNTON: The plan was to do a blood gas at that time and then to give 10ml per kg of a fluid bolus and thereafter, or while this was happening, to discuss with Dr Newby, who was the on-call paediatric consultant. I have discussed it with her and the hyphen beside it, when it says "Will review on neonatal unit", she agreed that she would come in to review the baby.

DRIVER: So you were present within the hospital and called to this part of the unit?

BRUNTON: Yes.

DRIVER: Your senior colleague, Dr Newby, the consultant, was elsewhere but on call?

BRUNTON: Yes.

DRIVER: And so you've called the consultant?

BRUNTON: Yes.

DRIVER: Why?

BRUNTON: Because this was a completely unusual situation that I had never seen before.

DRIVER: What was?

BRUNTON: The changes in the skin. I couldn't explain it.

DRIVER: Dr Newby agreed to come and provide assistance and opinion?

BRUNTON: Yes.

DRIVER: Thank you. Could we go back to the carousel, please.

Could we please go to slide 215? Let's just check 214 and see what might be behind there. I think it's the same note. It is the same note, yes. Thank you.

Let's look then at 215:

"Pathology: sample collected."

Now it's at 01.51, so a few minutes after the clinical note that we've just examined, and let's see the original document, please. Could you help us with this, please, Dr Brunton?

BRUNTON: It shows a lactate level of 2.75.

DRIVER: The cursor is pointing to that. The relevant clinical details:

"Unwell baby, no lactate on gas."

Would they be your words or somebody else's?

BRUNTON: I've ordered it, so it would be my words, so I'm presuming that we couldn't get a lactate on the gas machine sample, so we've sent one to the lab or added it on to the previous samples that were sent, but I can't be certain of that.

DRIVER: If you're right, is that indicative of an absence of a reading or a reading of zero?

BRUNTON: It would be -- you would -- I've never seen a reading of zero of lactate ever.

DRIVER: So the testing process had failed?

BRUNTON: Well, I didn't have a result, so what's documented there is "no lactate on gas", it means that I didn't have a result from the gas machine, so I've found another way of getting a result.

DRIVER: And the result that you obtained?

BRUNTON: Is slightly on the high side.

DRIVER: Which is indicative of?

BRUNTON: It could be indicative of the sampling process itself, it could be indicative of [Baby D] becoming more unwell, it could be indicative of absolutely nothing at all because it is not unusual that babies can have lactate levels slightly outside the reference parameters.

DRIVER: Thank you. Mr Murphy, could we go back to the carousel, please, and could we go briefly to slide 217, but we need not click behind it.

Before we do that, let's look at the next entry, please. You gave evidence previously, Dr Brunton, to the effect that you would make a bedside examination of any relevant X-rays taken, but a radiologist colleague would subsequently review them?

BRUNTON: Yes.

DRIVER: And would you inform yourself of any opinions expressed by the radiologist?

BRUNTON: They would have been normally -- the results would be checked during the day. These wouldn't have been reported when I was on shift, they would have been reported, I would imagine, on the Monday; by that point I'd finished my shift.

DRIVER: Let's move on then.

The next entry here, Dr Brunton, is just entry and exit door swipe data that's been collected, which informs us that your pass, as it were, was used to enter through those doors at 01.55 hours.

So let's go back to the carousel. We have now Dr Newby's clinical notes. When Dr Newby attended at your request, did she go to the baby independent of you or was it a joint effort or don't you know?

BRUNTON: Standard practice would be that I would have attended unless there were any other emergencies anywhere else, but I can't remember for certain about that.

DRIVER: Let's look at Dr Newby's notes briefly to see whether we're assisted. They're your notes that we looked at a moment ago. There doesn't appear to be anything there that tells us either way, but Dr Newby will give evidence in due course so we'll leave Dr Newby's notes for Dr Newby.

Back to the carousel, please.

MR JUSTICE GOSS: Sorry. Are we looking at J2223?

MR DRIVER: Yes.

MR JUSTICE GOSS: I think if you go to the bottom, in the margin:

"22/6/14, 2 am. Asked to see."

And if you look at the very bottom, there's a squiggle, brackets, "Newby, cons".

MR DRIVER: Thank you. So they're Dr Newby's notes?

BRUNTON: Yes.

MR JUSTICE GOSS: Yes. So the notes, they're recorded -- so what's happened, as I understand it, is that at the completion of Dr Brunton's previous note, Dr Newby's just written on the note and there's the note.

BRUNTON: Yes. She subsequently came in from wherever she was to see the baby and then she documents after that.

MR JUSTICE GOSS: That's right. As you say, she will give evidence about that.

MR DRIVER: She will.

Is this right, Dr Brunton, do you recall whether you were with Dr Newby at this point in time or not?

BRUNTON: I don't remember, but interestingly my swipe pass was letting me into the neonatal unit at 01.55 and Dr Newby's entry is at 2 but I can't be certain about that.

MR JUSTICE GOSS: So you can't say one way or the other, you haven't any independent recollection?

BRUNTON: No, I don't.

MR JUSTICE GOSS: Right. Sorry to interrupt you again, Mr Driver.

MR DRIVER: Not at all, my Lord.

Go back to the carousel, please, Mr Murphy, and let us please go to tile 222. You'll see, Dr Brunton, it's timed at approximately 02.35 that morning, where we see firstly what appears to be a review undertaken by you of an X-ray.

BRUNTON: So I've documented the review, but what I've written in the notes is "Reviewed by Dr Newby, consultant".

DRIVER: So this was -- and we can see this is at 02.35, so Dr Newby's note of her attendance at [Baby D]'s bedside was at 2 am?

BRUNTON: Mm-hm.

DRIVER: And at 2.35, you've noted the fact that Dr Newby reviewed an X-ray?

BRUNTON: Yes.

DRIVER: And then is this your writing beneath?

BRUNTON: Yes, I've written that the UVC, the umbilical venous line, which was used to give the administration of fluids and medicines, was what we call low lying, so it was in a lower position than where had sat previously on X-ray. And I've then commented underneath that there was nothing else of note on the X-ray.

DRIVER: Thank you. The entries below the pro forma X-ray review, are they your entries?

BRUNTON: That's correct, yes.

DRIVER: So let's look at the left margin again to give ourselves a time for all of this, for these notes, please. At 02.35, do you recall the circumstances that caused you to be at her bedside at this point?

BRUNTON: I would have been coming back to review her regularly because she had been unwell previously.

DRIVER: Thank you. Take us through the set of data.

BRUNTON: These bloods show that the clotting factors were slightly suboptimal. Her prothrombin time was increased slightly and her APTT, which is activated partial thrombin time, was also increased slightly as well. We would have to take that result in clinical context, so you'd be looking, for example, to see -- clotting factors are important in whether or not a baby was having issues with bleeding, for example, so you would then have to look at the clinical context of that result to determine whether or not you would need to start any treatment.

DRIVER: And what was the clinical context for this baby at this point in time?

BRUNTON: Was the baby having any episodes of obvious overt bleeding? And the answer to that was no. It's not unusual that babies can have slightly abnormal clotting factors in the first 24 to 48 hours and they gradually improve as time progresses. We give babies vitamin K because we know that they can be deficient of vitamin K, for example, at birth.

DRIVER: Thank you. Can you continue to take us through these entries in your clinical notes?

BRUNTON: Yes. Her sodium level was 129, so that had improved compared to the previous result that we had seen before.

Her potassium level, we now have a result for that, and that was 4.1. Her bicarbonate level was 14, again within parameters that wouldn't require any treatment at the moment. And her urea level was 5.1, and her creatine level was 79, which had improved slightly as well.

I've not documented all of the LFTs in the top right corner just there. Her liver function tests were -- N means normal when I am documenting things. Her lactate, as you've already discussed, was slightly elevated at 2.75, and her CRP was 6.

DRIVER: Meaning?

BRUNTON: Meaning that the level 6 -- there's no really any other way of describing it. It's not a high level. We would normally -- as per current guidance, and I think guidance at the time, as well, CRPs of 10 and above would be something that we would be...

DRIVER: Remind the jury what a CRP reading is, please?

BRUNTON: CRP is C-reactive protein. It's a type of protein that can be a non-specific potential sign of infection.

DRIVER: Thank you.

BRUNTON: Then what I've documented after that is a repeat gas and I've written post bolus, so after the fluid bolus that I'd asked for previously had been given, and that showed again that the pH was now continuing -- I can't remember the exact number previously but was within acceptable parameters of 7.31. The CO₂, the carbon dioxide level, was 5.01, I think, which is again within acceptable parameters. And the base excess is slightly on the elevated side at minus 6.9 to minus 7, which is why I have circled it. The glucose level is within normal parameters at 6.6, and you can see that we have now got a lactate reading from the gas machine and that level is actually lower than the serum sample that was taken at 2.3.

DRIVER: Having considered all of that data, did you then express an assessment as to her evolving condition in the next line?

BRUNTON: I came back -- and I don't know if I carried out a clinical examination but she had much improved from a clinical perspective. The areas of discolouration, as I've documented there, had completely disappeared.

I don't know what I've said after that, but it says, "Note above gas".

DRIVER: You told us earlier as to the areas of discolouration that it was something that you hadn't encountered, hence you brought in Dr Newby.

BRUNTON: Yes, that's correct. And I have subsequently, what I've done here is underneath I've said, "Discussed with Dr Newby". I don't know whether I've discussed that with her on the telephone at home or whether I've discussed that in the hospital, but she's then given me a plan as outlined.

DRIVER: So that's your joint plan, as it were?

BRUNTON: Correct.

DRIVER: And the plan was?

BRUNTON: As I've discussed, not for correction of the coagulation, the results, the PT and the APTT. We'd to leave the UVC in its current position and continue to use it. And the plan had been as previously and that we would subsequently update the parents thereafter.

DRIVER: Thank you. The next entry we're going to is at 03.15, but before we look at the detail of your entry, do you recall this part of the events of the morning of Monday the 22nd?

BRUNTON: I do remember this a little bit more, yes.

DRIVER: All right. Let's go away from the notes for a moment then. Do you recall what caused you to attend upon [Baby D] at about 3.15 that morning?

BRUNTON: Yes. I remember being called -- I was on the paediatric ward and I remember being called at this time to say that [Baby D] had had a period where she was upset and crying and that the rash had reappeared and that her oxygen requirement had gone up again briefly at this time.

DRIVER: Pause there if you would. So that was information received by you through the phone?

BRUNTON: Yes.

DRIVER: From?

BRUNTON: I'm presuming a nurse, but I can't remember who telephoned me.

DRIVER: In consequence what did you decide to do?

BRUNTON: I made my way to go and see [Baby D].

DRIVER: Again, before we go to the notes, do you recall what you found upon arrival at her cot?

BRUNTON: I can't remember the specifics, but I do remember her being quite agitated and upset, which had been unusual for her because, again, I don't remember her being like that, it was not something that sticks in my mind that she was like that previously when I had examined her before.

DRIVER: Yes? Anything else?

BRUNTON: That she had a bit of a rash, but again I can't remember the rash previously, but she had a little bit of a rash present on her trunk, on her abdomen.

DRIVER: In relation to her rash, we know your original observations as recorded. Subsequently you noted that it had gone?

BRUNTON: Yes.

DRIVER: And now you recall that it had returned?

BRUNTON: Yes.

DRIVER: Are you able to make any comparison between the two times when you observed a rash?

BRUNTON: Not from my recollection. It would just be from the medical notes.

DRIVER: Anything else from memory before we go to the notes about anything to do with [Baby D] at this point in time?

BRUNTON: Just the agitation, the upset from her, which I felt at that time was due to the mask, the CPAP mask that she was wearing.

DRIVER: So let's look at your notes as of 03.15:

"Called urgently."

As you indicated.

BRUNTON: I've said "to paediatric ward", but just to clarify, I think I meant to the neonatal unit, I was in the paediatric ward.

DRIVER: From?

BRUNTON: More appropriate.

DRIVER: Does this paragraph detail information observed by you or facts shared with you?

BRUNTON: That's what I remember being told on the telephone.

I can't remember if I physically saw those numbers. By the time I've gone to examine her, however, given the length of distance between the units, which was minimal, she's already back in air.

DRIVER: Right. Can you expand upon that for the jury?

BRUNTON: What I've documented?

DRIVER: Yes, and your last evidence.

BRUNTON: So yes, so what's happened is that I've been called and been told that [Baby D] was crying and she had desaturated to a low level, so her saturation levels were 80% and she was requiring 100% oxygen at that time. I've then made my way to

the -- from the paediatric ward to the neonatal unit and what I have observed was that she had a bit of skin discolouration at that time, but I've documented -- I can't remember what it was like previously to compare it with, but I've written that it was not as obvious as previously seen. But I have then subsequently gone on to examine her -- all of this would have been in a relatively short time frame, I don't know the exact minute-to-minute timeline of events, but she appeared distressed on the CPAP. However, she actually appeared clinically well and all of her examination, apart from the skin discolouration of her abdomen, was normal and she had returned completely back to air.

DRIVER: I know I'm asking you to approximate, but about how long would have passed from you receiving the call to attend upon her and you making these observations and recording these notes?

BRUNTON: Two to 3 minutes. I don't think it could be any more than that. I don't know in terms of writing the physical notes themselves, but going from the paediatric ward to the neonatal unit was a very short distance.

DRIVER: Thank you. You have added two diagrams here. One of the lungs to the left?

BRUNTON: Yes.

DRIVER: In between the diagrams, there's notes as to the heart readings?

BRUNTON: That's correct, yes. So her lungs, again, examined normally, there was no evidence of any added sounds or any issues. Her heart sounds were again normal and on this situation I've only documented the skin discolouration on the abdomen, but I've noted that there was some skin discolouration present and I've documented it as "slight".

DRIVER: The information illustrated in that diagram, "Skin discolouration, slight", that diagram, is that from your observations or from facts imparted to you by others?

BRUNTON: That would have been from my observations because I was there at this point.

DRIVER: Right. Again, this is an invitation to state the obvious, what do the crosses --

BRUNTON: The crosses mean the areas where I noted the skin discolouration, which is what the arrow, sorry, should be pointing to.

DRIVER: So that is to the right of the umbilicus?

BRUNTON: At the right of the umbilicus, there seems to be a small amount of area in the left upper quadrant and one little cross just heading towards the left lower quadrant.

DRIVER: The uppermost to the right, where would that correspond to on the baby's trunk?

BRUNTON: Probably not far from the belly button, just around that area, but I can't be certain of that.

DRIVER: That's where the arrow is now; yes?

BRUNTON: No, the arrow's down at the right flank, so down kind of close to your kidneys or your pelvis, for example.

DRIVER: And if we take the cursor to the highest cross.

BRUNTON: The belly button would be at the middle of the abdomen.

So that's where that cross -- the highest cross there would be the left upper side, kind of where your gallbladder -- not your gallbladder, your spleen would be.

DRIVER: Perhaps not all of us know precisely where the spleen might be. Around the ribcage?

BRUNTON: Around the ribcage, slightly below.

MR JUSTICE GOSS: I think the belly button --

BRUNTON: The belly button is in the middle.

MR JUSTICE GOSS: -- (overspeaking) that's the bit where the belly button would be and then you can work out the rest.

BRUNTON: Yes, that would be correct.

MR DRIVER: So having been called urgently, what was her clinical presentation? Was this an emergency situation on your assessment or not?

BRUNTON: Well, by the time I arrived, there was a clear clinical change in her from being called to when I'd arrived in terms of there being a slight improvement with her. And my particular worry and concern, as you can see there, was that although she still had this rash she was actually quite distressed on the CPAP and there was not any clinical evidence to my mind at that time to keep her on the CPAP. So the plan had been to trial her off of CPAP at that time, as you can see, to see if that would help her in terms of allowing her to be less agitated.

DRIVER: And you drafted a plan?

BRUNTON: Yes, which was -- sorry.

DRIVER: Yes?

BRUNTON: Which was to take her off of the CPAP and also, because the skin discolouration had reappeared, was to try her with a little bit of extra fluid, so give her another bit of fluid to try and increase the perfusion of her skin, and then again to repeat a gas in 1 hour to see if that had improved the situation.

DRIVER: In your mind or on your professional assessment, what was the potential link between fluids and the skin discolouration?

BRUNTON: My worry was that she -- as we talked about previously, that she maybe didn't have enough fluids on board, so to speak, to provide enough circulation to the organs and the skin, so what I decided to do was to give her a little bit of extra fluid to try and top that up, to see if there would be a benefit or an improvement.

DRIVER: Had you previously encountered babies with a fluid deficiency?

BRUNTON: Yes.

DRIVER: Had you previously encountered skin discolouration of this ilk?

BRUNTON: No.

DRIVER: Scroll down to make sure there's no further entries.

No. Back to the carousel, please.

We'll just go along in time, pausing briefly at tile 238. We don't need to go behind it. This is just a swipe data entry, Dr Brunton, to inform us of your movement or at least the movement of your pass.

If we could click behind it briefly. At 03.22, you are, it would seem, or the evidence suggests, you're entering the maternity ward. Then back to the carousel, please. We'll see other similar entries at 245. And then 246. We'll look to see where you are at this point in time. Again, it was suggested that you were passing into the maternity ward through the doors there.

Now, please, Mr Murphy, could you take us to tile 253. Sorry, just go back to the carousel for a moment, please. We can see that you've made some notes for events at 03.55, albeit the notes were made retrospectively at 04.35. And we can see, if we look to the right on the next tile, that there's some bleep data to indicate a call was put out for you, to which you responded, we can see, if we went behind the next tile, to see you entering the neonatal unit.

Let's go behind tile 253, please. Thank you. And look at our exhibit J2226. Before we look at the detail, Dr Brunton, do you recall these events?

BRUNTON: I recall aspects of them, I don't recall all of them.

DRIVER: Do you recall being summoned to [Baby D]?

BRUNTON: Yes.

DRIVER: Do you recall what was said to you at that point?

BRUNTON: I recall just being asked to come urgently to see [Baby D].

I can't remember the exact wording.

DRIVER: Do you remember what you saw upon arrival?

BRUNTON: When I read -- and as I was walking there, the crash page, I remember going off in the corridor between the paediatric ward and the neonatal unit, so I ran as I was already on the way. And when I arrived, I remember there being Caroline Oakley, who was the nurse looking after [Baby D] that night, I think, and then Emily Thomas, who was the senior house officer, the junior doctor, were around [Baby D]'s bed space (overspeaking) --

DRIVER: Thank you. Pause there. Does it follow from what you've just told us that you received two signals, as it were?

BRUNTON: Yes, definitely, yes.

DRIVER: The first through?

BRUNTON: The first through just a normal -- I presume it was a normal page and then I answered the telephone -- I did a telephone call based on that page and then the second one, as I was leaving to go and see her, was a crash page, so an urgent, urgent attendance, so to speak.

DRIVER: As you recall, Nurse Caroline Oakley and Dr Emily Thomas were present at the cot side. From recollection what were they doing?

BRUNTON: I can't quite remember exactly who was doing what but I remember them both being around the cot space because [Baby D] was unwell at this time.

DRIVER: And in general terms, what sort of treatment were they providing to the baby?

BRUNTON: They were providing emergency treatment.

DRIVER: And did you join in?

BRUNTON: Yes, absolutely.

DRIVER: Before we look at the notes, are you able to give us an account, a summary, of what happened?

BRUNTON: Well, at that time when I arrived, she -- I don't believe she had a heart rate or -- I can't -- to be honest I can't remember, without reviewing my medical notes, exactly the timeline.

DRIVER: Let's review your medical notes. The timing of 04.35 is the timing of the making of the note --

BRUNTON: Yes, written in retrospect.

DRIVER: -- for events that your first entry informs us took place at or around 03.55?

BRUNTON: Yes.

DRIVER: So you were called to the neonatal ward and you have noted -- please take us through after the time 03.55?

BRUNTON: I was called to the neonatal ward. I had been told that [Baby D] had an apnoea, which is a pause in her breathing, and was struggling to saturate, so get her oxygen saturations levels within appropriate levels. As I've documented, I left the children's ward immediately and as I was attending the neonatal unit, the crash page went off. I've subsequently walked on to the unit and chest compressions, I don't know who by, were being commenced, and at that time on the monitor [Baby D]'s oxygen saturation levels were between 60% and 70% and she had a heart rate of between 60 and 70.

DRIVER: Pausing there, forgive me once again for inviting you to state the obvious, but what do those readings mean?

BRUNTON: They mean that she's not very well.

DRIVER: Thank you.

BRUNTON: As you can see, I have immediately taken over the airway, because when we're resuscitating babies, children, adults, the airway is the most important thing to try and improve situations like this. And I carried out a clinical assessment.

DRIVER: And were you the most senior clinician at the cot side at that point in time?

BRUNTON: At that point in time, yes.

DRIVER: And does protocol dictate that you take the lead?

BRUNTON: Yes.

DRIVER: And you did so?

BRUNTON: Yes.

DRIVER: Next entry?

BRUNTON: At that time I have assessed the heart rate was less than 60, there was no chest wall movement, so [Baby D] wasn't obviously breathing, and she had a lot of secretions. I can't remember whether those secretions were from the mouth or from the nose, but at that time I knew that she was very unwell, so I've asked for the nursing staff to call Dr Newby, who was the on-call consultant.

DRIVER: Thank you. We'll then go through the timeline minute by minute as recorded, but if I may digress for a moment.

Do you recall that there was something of an error or some confusion in terms of the communication through the telephone?

BRUNTON: Yes. As per my police statement, I was standing at [Baby D]'s airway trying to manage that, when a phone was placed to my ear. I might need my statement just...

DRIVER: Do your best for the moment. We'll help you if need be.

BRUNTON: But the phone was placed to my ear and within a few seconds I realised that the person that I was speaking to was not Dr Newby on the phone.

DRIVER: Right. So that conversation was stopped?

BRUNTON: Yes, within seconds.

DRIVER: And you returned to providing emergency treatment to the baby.

BRUNTON: Yes. The emergency treatment was ongoing, it never stopped.

DRIVER: Of course, my mistake. Is the process that one of the team record the events contemporaneously, minute by minute, event by event?

BRUNTON: That would be normally what would happen, a scribe in effect.

DRIVER: And that enables you or assists you to provide this detailed record after the events looking backwards?

BRUNTON: That's correct.

DRIVER: And we can see what happened in the minutes that followed. So at 03.58?

BRUNTON: I passed a breathing tube again down into [Baby D]'s airway, we got a capnograph positive, which again means that the breathing tube was in the correct place, and we got good chest wall movement, so the chest was starting to rise. Our chest compressions were continuing at this time.

DRIVER: Pause there, Dr Brunton. The good chest movements, was that indicative of the baby breathing for herself --

BRUNTON: No.

DRIVER: -- or a consequence of your intervention?

BRUNTON: It's a consequence of my intervention.

DRIVER: At 04.00 hours?

BRUNTON: We gave a dose of adrenaline and that was given via the umbilical venous catheter.

DRIVER: That was intended to do what or --

BRUNTON: Try and stimulate the heart rate.

DRIVER: 04.02?

BRUNTON: We gave a second dose of adrenaline, again via the umbilical venous catheter.

DRIVER: 04.04?

BRUNTON: We gave some fluid to try and increase the circulatory volume. That was 10ml per kilo of 0.9% sodium chloride, so a standard fluid bolus, and that was given via the umbilical venous catheter.

DRIVER: 04.05?

BRUNTON: Another dose of adrenaline was given at the same dose as previously via the umbilical venous catheter.

DRIVER: Mr Murphy, I think to see the continuation of this note we need to go behind tile 264. It's just the way it's been set out. If we go over to the next page, so we've just gone from time 04.05 to time 04.07.

BRUNTON: I have documented at this time that Dr Newby is now in attendance, a fourth dose of adrenaline is given via her umbilical venous catheter, and we gave a first dose of sodium bicarbonate via her umbilical venous catheter to try and correct any acidity levels that will have now built up in the blood.

DRIVER: That was what it was hoped the sodium bicarbonate might address --

BRUNTON: Yes.

DRIVER: -- if needed?

BRUNTON: Yes.

DRIVER: 04.10.

BRUNTON: We gave a fifth dose of adrenaline via the umbilical venous catheter.

DRIVER: 04.12?

BRUNTON: We gave another dose of sodium bicarbonate via the umbilical venous catheter.

DRIVER: 04.13?

BRUNTON: We gave another fluid bolus again to try and increase the circulating volume of fluid round [Baby D]'s body.

That was a standard dose given via umbilical venous catheter.

DRIVER: 04.15?

BRUNTON: Dr Newby then asked to increase the adrenaline dose, which we can do from 0.1 to 0.3 mics per kilo, done via the UVC, and another bolus of fluid was given via the umbilical venous catheter.

DRIVER: The fact that you were returning -- repeating, forgive me, adrenaline dose after adrenaline dose and now at this stage the quantity of the dose was increased, why?

Why was all that necessary?

BRUNTON: All of that was necessary because [Baby D] was in effect dying in front of us.

DRIVER: Then at 04.18?

BRUNTON: I've documented this, but Dr Newby discussed with the parents at approximately 28 minutes into the resuscitation and a decision was made to discontinue CPR.

DRIVER: And we know that from that note, tragically, [Baby D] passed away at 04.25 that morning.

BRUNTON: That's correct.

DRIVER: Having made repeated observations and examinations of [Baby D] during the course of this shift, it culminated in her death at 04.25. How would you summarise the evolution of her condition that day?

BRUNTON: From when I came in on my night shift there weren't any particular worries or concerns identified to me regarding [Baby D]. But by 1.40, until the time of her death, she had dramatic deteriorations over different points. It was completely unclear to me why that was occurring.

DRIVER: Why was it unclear?

BRUNTON: Because I've never seen a baby behave in that manner prior to this and I've never seen a baby behave in that manner after this.

MR DRIVER: That concludes my examination of Dr Brunton.

Would this be a convenient moment?

MR JUSTICE GOSS: Yes, certainly.

Could I just, whilst it's in my mind -- this sheet that's come up on the screen, where do we find it in the...

MR DRIVER: It's behind tile 264.

MR JUSTICE GOSS: Thank you very much.

We're going to have a break -- we always have a break during the middle of the morning session -- just for 10 minutes. So you're free to go, but please be back ready to continue in 10 minutes' time, which is about 12.08. Don't talk to anyone about your evidence, all right?

BRUNTON: Yes.

MR JUSTICE GOSS: Thank you very much. Ten minutes then, please, members of the jury.

(11.58 am)

(A short break)

(12.12 pm)

(In the presence of the jury)

Cross-examination by MR MYERS

MR MYERS: Dr Brunton, I'd just like to ask you, to start, to clarify something for me, please, and for all of us.

You described how, from about 1.40 to the time of death, there was a dramatic deterioration in [Baby D]'s condition at various points, at different points, is the word used and you said it was unclear to you why that was occurring.

Can I just ask you this: when you say it's unclear why she deteriorated like that from 01.40, do you mean it's unclear why she should have deteriorated at all or it's unclear why she deteriorated as she did, if you see what I mean?

BRUNTON: Can you rephrase, sorry?

MYERS: Yes. Well, it's not unusual for a neonate to deteriorate, is it, they can desaturate, they can deteriorate?

BRUNTON: Yes, that's correct.

MYERS: In fact, if we break down what happened with [Baby D] on the three particular events that you were called to, the first two were rectified relatively quickly, weren't they?

BRUNTON: Yes.

MYERS: Although you've identified the discolouration that you saw as something that really stood out?

BRUNTON: Yes.

MYERS: Right. Then it was the third occasion, coming some hours after the first, that there was the dramatic deterioration that led to her tragic death?

BRUNTON: Yes.

MYERS: So what I was asking was, when we look at all of that, are you saying it's unclear why there were any deteriorations at all, for example, or could you specify what it is about it that was unclear to you?

BRUNTON: It was to me, anyway. At the time, the thing that was most unclear to me was the pattern of events overall.

So the fact that she had had a relatively dramatic episode when I was initially called, but then responded very quickly, and then had a period of stability and then had another one that was less marked but responded very quickly again, and then a third one that happened that she did not respond to.

MYERS: Would it be so unusual to find two -- putting aside the question of discolouration for a moment, would it be so unusual to find two desaturations of the sort that there were that were stabilised relatively quickly on their own?

BRUNTON: Not necessarily.

MYERS: It's putting it together that raises your concern?

BRUNTON: Yes.

MYERS: I just want to deal with a little bit of clinical history of [Baby D], please, if you could help me, Dr Brunton. I say help me, help us.

You first began to deal with [Baby D] on the evening of 20 June, didn't you?

BRUNTON: That's correct.

MYERS: When that commenced, you would have had a handover beforehand; is that correct?

BRUNTON: Yes.

MYERS: Would you have been able to see her clinical notes?

BRUNTON: Yes.

MYERS: And would you, in all probability, have read through them at some point?

BRUNTON: I would have thought so, yes.

MYERS: I'd just like to have a look at the picture as it presented up to about the time you came on.

BRUNTON: Okay.

MYERS: So we can have this in mind and I am going to ask that we put slide 19, page 1, on the screens. It's J221.

Can we go to the page, thank you very much, Mr Murphy. What we're going to have here is Dr Rylance's notes, but this is the period from birth leading up to your involvement. I just want to draw out a couple of items. If we look underneath where it says "Apgars, 8 and 9", it says:

"Initial poor colour, 12 minutes of age, in dad's arms, lost colour, floppy. Five rescue breaths."

Would you have been aware of that background at the time you came on to deal with [Baby D]?

BRUNTON: I can't remember.

MYERS: Perhaps we can just read through this with you coming up to where your involvement comes in. The notes say:

"Otherwise obs okay, examined normally."

Then they read:

"Blepped again as midwife not happy with her colour and lack of response to vit K. Poor feeding. Brought to unit [that means to the NNU] for a screen. On arrival to NNU looked dusky, poor respiratory."

Then it gives the initial saturations at 48%, with the poor respiratory effort. Can you see that?

BRUNTON: Yes.

MYERS: Which is poor respiration, isn't it?

BRUNTON: Yes. Well, as per Dr Rylance's notes, yes.

MYERS: "Initial sats" -- does that mean 48% oxygen in the blood?

BRUNTON: I'm guessing, but they're Dr Rylance's notes.

MYERS: All right. We'll hear more of that.

In any event, do you agree, if one were to characterise it, there are apparently some respiratory issues and breathing problems more generally, it appears, very soon after the moment of birth, if we look at that?

BRUNTON: Yes.

MYERS: If we move to page 2 of this document, 2215, carry on just reading down here, this is at the point that [Baby D] has gone to the NNU that she's on CPAP. Can you see just two lines down?

BRUNTON: Yes.

MYERS: She was on CPAP at the time that you took the decision to ventilate her; is that right?

BRUNTON: That's correct, yes.

MYERS: If we just go down to the final note, and this is shortly before you come on at 20.20, Dr Rylance has written:

"Parents updated. Explained likely sepsis. Needing help with breathing. On CPAP at present. May need further support with ventilation. Receiving antibiotics to treat infection."

You see that?

BRUNTON: Yes.

MYERS: That's the position when you come on. And you've explained to us, Dr Brunton, that once you became responsible you took the decision that [Baby D] should be ventilated?

BRUNTON: Yes.

MYERS: If we can go to page 2216, which is slide 35, so this is the next one along.

Did you decide that it was necessary to ventilate [Baby D] because it was clear to you that she did need a high level of respiratory support?

BRUNTON: In combination with her clinical symptoms.

MYERS: And by clinical symptoms do you mean things like what her blood gas readings would have been at the time?

BRUNTON: Partially and also her work of breathing, which -- I would need to go back to see what I had documented in terms of my parameters that made me think that.

MYERS: Let's just go back. I don't want there to be -- sorry about jumping between the pages, but if we go back to the page before. I don't know if it is back on the carousel or if we need to go to slide 19, page 2, but we will find what you have documented there. There we are, thank you. Just at the bottom of that page, Dr Brunton.

BRUNTON: I was worried that she had an increased respiratory rate. Despite being on the CPAP, her oxygen requirement had increased from when Dr Rylance had documented previously and she had shown that she had the indrawing that I had described previously.

MYERS: And you also explained to us about your concerns of the blood gas readings that we can see?

BRUNTON: Yes.

MYERS: Let's carry on. We were at slide 35. I think you described there were three -- she was intubated on the third attempt; is that correct?

BRUNTON: Yes.

MYERS: Just to help us with this, is three attempts standard or a lot? What do you say about that?

BRUNTON: You need to put it slightly into context. The first attempt she didn't have any pre-medicines, so once the pre-medicines were administered she needed two further attempts after that. The second attempt there was no -- I can't remember any clinical difficulties with passing the ET tube.

MYERS: Just to help us -- you do this all the time, we don't -- is three quite common?

BRUNTON: Three would not be unusual.

MYERS: Right. We can see at the centre of the page, just a little bit further down from here, please, it says:

"Attempted intubation by Dr Thomas. Unable to insert as unable to visualise cords."

When it says "unable to visualise cords", what is that problem amounting to? What is it?

BRUNTON: The problem is that -- again, this would have been told to me by Dr Thomas. Now in the days of video laryngoscopy we can see what our trainees are doing, but at this moment in time Dr Thomas would have said to me, "I can't get a good view in order to find the area that we need to place the endotracheal tube in".

MYERS: Is that because the cords are obscured by other parts of the tissue around there or because they are swollen or is there some other reason you can think of that would make it difficult to see?

BRUNTON: It can just be that it's a thing that -- it's a procedure and a skill that trainees are learning and one of the most difficult aspects of it is getting the visualisation of that in place. That doesn't necessarily mean there was anything anatomically wrong.

MYERS: All right. You explained to us that she'd been put on ventilation and what happened next depended as to whether she was going to be on it for a long time or a short time, which depended rather on [Baby D].

BRUNTON: Yes.

MYERS: Can you help us, what is a short time on ventilation or a long time, how do we compare what happened with what you're talking about when you say what would follow depending on whether it was a short time?

BRUNTON: Well, again, it would have been -- this would have been very much a consultant-led decision in the morning, but we would always pre-warn parents if there were babies in a local neonatal unit that might need transition to a higher level of neonatal intensive care, that their baby might need moved.

In terms of your specific question about what's a long time and what's a short time, the short answer to that is it would probably be very much dependent on the consultant's discretion as to how long that might be.

The hope here in [Baby D]'s particular point was that a short time would be potentially extubating her in the morning, which is I think what happened. I can't remember the exact times that she was taken off the ventilator.

MYERS: It was between about 9 and 10 the following morning when she was extubated.

We have seen in the notes, I will just remind us all, that there had been a note about the question of whether she would need to go to Arrowe Park or Liverpool Women's Hospital depending on the length of ventilation.

So does that mean if it had gone on into the next day for any length of time it might have been considered necessary to transfer her?

BRUNTON: You would need to speak to the consultant because that would be a consultant-led decision and a discussion with the consultant neonatologist as standard practice.

MYERS: You're a consultant now though, aren't you?

BRUNTON: I am.

MYERS: So does that help us with just how long you'd expect someone to be on ventilation for before they get transferred to a higher level of intensive care?

BRUNTON: We would discuss it with the consultant on call at that time, so I don't know if that discussion ever even happened (inaudible).

MYERS: All right. The next morning we know that [Baby D] was taken off ventilation and she was put, round about 10.30 or thereabouts, on to CPAP. But do you agree this is, certainly up to this point, a baby who's having to have some degree of support with breathing?

BRUNTON: Absolutely, yes.

MYERS: And there are some issues with her ability to breathe with -- her ability to breathe?

BRUNTON: Yes. It was clinically improving, that's a certainty because she came off the ventilation, it was deescalating the respiratory support. But in answer to your specific question were there issues at that time, yes.

MYERS: Yes. If we just move to slide 158, which is clinical notes for later in that day now, going into the 21st.

If we can go behind that to the actual notes.

Again we have a similar position to the night before. Dr Rylance has been looking after or responsible for [Baby D] in the shift before your shift commences and we have a note here at 19.00. I'm not going to go through all of it, as you said the doctors involved are perhaps best placed to deal with that.

If we just go down, please, to the lower part of the page. It's J2221, slide 158:

"Stable on CPAP. Tried taking her off but respiratory effort became irregular and desaturated a few times so put back on."

Can you see that?

BRUNTON: Yes.

MYERS: So we hear practitioners such as yourself say, yes, she was doing all right on CPAP, she could survive on CPAP with that level of respiratory support. It doesn't follow, just because a baby is able to cope on CPAP, that she or he will be able to cope off CPAP, does it?

BRUNTON: At this moment in time it appears that that would be the case, but the natural evolution of babies is that you would hope that that position would continue.

MYERS: So if all is well with them?

BRUNTON: If they're improving.

MYERS: If they don't improve or their condition deteriorates for any reason it may be that they cannot come off CPAP or should not come off CPAP?

BRUNTON: It may be that they might not be ready to come off but that's why we would test babies on a regular basis to see if they could come off.

MYERS: You have to look at the whole clinical picture, don't you?

BRUNTON: Yes.

MYERS: But certainly by the time your shift commences on 21 June, we have in the notes that [Baby D] -- her respiratory effort became irregular and she was desaturating if taken off CPAP, don't we?

BRUNTON: Yes.

MYERS: We'll come to this when we go through the events that took place, but it was your decision, in between the second and the third of the events when [Baby D] deteriorated, it was your decision in fact to take her off CPAP at that point, wasn't it?

BRUNTON: That's correct.

MYERS: We'll come to that and your explanation for that when we get there, Dr Brunton. But up until that point, [Baby D] had been on CPAP throughout when your shift started up to then, hadn't she?

BRUNTON: That's correct.

MYERS: I want to ask you about blood gas next because we've been talking about the whole clinical picture and there's been references to blood gas. If I could ask you to help us with this. We are getting familiar with the picture that there are a number of different ways in which you or other practitioners can assess a baby's condition. There are a number of different sources of information, aren't there? We know some are visual, looking at the baby. Some are touch, like palpating the abdomen. You can listen, can't you?

BRUNTON: Yes.

MYERS: Would it be a reasonable simplification to say that blood gas helps you get important information about the chemical system inside the baby at a given point?

BRUNTON: It can be helpful. It can give you information with regards to the amount of acidity within the blood.

I don't know what you mean in terms of chemicals.

MYERS: All right. Well, the cardiorespiratory system, heart and lungs in a baby, and the various other systems there, all require the pH to remain in a fairly narrow range, don't they, to function correctly?

BRUNTON: Yes.

MYERS: And we've seen on the blood gas readings where pH features. That's a part of the blood gas reading, isn't it?

BRUNTON: Yes.

MYERS: Okay. I'm not going to try and go too far into the science of all this because I won't follow it, but just to help us understand why blood gas is important as a reading, there are chemicals, enzymes or molecules in the body that play a part in

controlling those systems, breathing and heartbeat, aren't there?

BRUNTON: Yes.

MYERS: And those chemicals and that system are sensitive to changes in the pH of the blood, aren't they?

BRUNTON: Yes, potentially.

MYERS: So looking at the blood gas is important because if we see, for instance, the acidity rising, that might indicate underlying problems in the baby or the patient?

BRUNTON: Potentially, but you need to take blood gases in cross-correlation with the baby's clinical status.

Remember, when you take blood gases from babies, if they're not from an actual arterial sample, then they can be -- they would need to be cross-correlated.

MYERS: But if the doctor treating was dissatisfied with the quality of the sample she or he can always ask for an arterial sample, can't they?

BRUNTON: Yes. You make it very sound simple. It's not a simple procedure to do. But potentially that might be something that might be considered.

MYERS: Yes. But when you are saying we have to look at the whole clinical picture -- when I ask you about CPAP, you say you need to look at the clinical picture. I ask you about blood gas, you say you need to look at the clinical picture. If you look at CPAP and blood gas, breathing and blood gas, you're beginning to get a clinical picture, aren't you?

BRUNTON: Yes.

MYERS: If we go, please, to slide 174, which is page 2222.

This is a summary in your notes at 21.10, so do we take it after you've completed your examination of [Baby D] at that point?

BRUNTON: Approximately, yes.

MYERS: Approximately, all right. After you'd gone through this with the prosecution, you summarised to say that the picture on the whole is that things appeared to be clinically improving. And this is at 21.10. You're nodding. You have to say yes or no.

BRUNTON: Sorry. I think what I said was I went through all of the blood test results in detail. I don't remember saying -- perhaps I did, but I don't quite remember saying that everything was clinically improving based on those blood test results.

MYERS: You went through everything and said things were clinically improving.

BRUNTON: Okay. So yes, if that's what I said.

MYERS: All right. "Nothing that you needed to do dramatically" actually was the expression you used, based on what you could see.

BRUNTON: Yes.

MYERS: All right. Before we move from this, one item which you identified for the jury, part of the picture, was the sodium reading. We see that is 126; is that correct?

BRUNTON: Yes.

MYERS: That is low, isn't it, for what you might expect if there are -- if the patient is healthy?

BRUNTON: Yes.

MYERS: And you've explained that is linked to issues relating to fluid?

BRUNTON: Yes.

MYERS: Because it's connected to the diuretic hormone, is that correct, in the baby?

BRUNTON: It can be, yes.

MYERS: It can be. I'm not going to suggest you can form a picture, a clinical picture, of a patient from one reading alone, Dr Brunton, I'm not going to do that.

But sodium at that level, however we look at it, is not an indicator that all is well, is it?

BRUNTON: It's an indicator that there might be some potential intervention required to normalise that level.

MYERS: So it's an indicator of a potential problem if no intervention takes place?

BRUNTON: Yes.

MYERS: I'd like to have a look at the blood gas as we move forwards at this point. So we've got the chart at page 2294, J2294. I'd ask if that can be put up. It's at slide 12 for people following on the carousel.

If we go, please -- we're looking at maybe the bottom half of the chart, please, Mr Murphy. Just about the bottom half. Thank you.

Do you agree if we look at the readings, say, from about 12.10 on 21 June, which is the third line down, to 18.44, which is the third line below that, we see the pH value rise, don't we?

BRUNTON: That's correct.

MYERS: What we see is it moves from more acidic to less acidic.

The acidity reduces, doesn't it?

BRUNTON: Yes.

MYERS: By the time it's at 7.34, that's getting into the range that you would hope to see in a healthy patient, isn't it?

BRUNTON: Yes.

MYERS: You've told us what the clinical picture was at 21.10 and we looked at that in your notes. We've not looked at this with you yet. So let's just take a look, if we could, at 23.52, which is about an hour and a half before the first deterioration.

Looking across, where it says V, for where it comes from, does that mean it's come from -- where does that mean it's come from?

BRUNTON: Again, I didn't document that, but I presume it's a venous sample.

MYERS: So 7.266 is getting -- that's acidic, isn't it? That's lower than it should be, lower than is optimal?

BRUNTON: It needs to again be taken in clinical context with the baby in terms of whether you're going to intervene based on that.

MYERS: Yes, but taking that as a starting point, we'll look at other matters in a moment, 7.266 is acidic, isn't it?

BRUNTON: Slightly acidic.

MYERS: Yes. We know [Baby D] at this point is breathing on CPAP; yes?

BRUNTON: That's what it says.

MYERS: And also you've already identified a potential issue, I'm not saying it is one, it depends on the whole picture, but a potential issue with the sodium reading; is that correct?

BRUNTON: Were the bloods from this time? If they were, I would need to cross-correlate the times.

MYERS: If you want to check, if we put up J2320, which is slide 191, Mr Murphy. Just asking about blood gas readings at 23.52, slide 191.

This is a reading collected at 23.58, can you see that?

BRUNTON: Yes.

MYERS: So this is almost the same time?

BRUNTON: Okay.

MYERS: And we can see sodium has actually dropped a little bit more here at 127, hasn't it?

BRUNTON: No, it's gone up.

MYERS: It's gone up a little bit from 126, sorry, but it's still below the standard it should be optimally, isn't it?

BRUNTON: Her reference range is 133 to 144 so it's outside the reference range.

MYERS: It is, but putting it into terms of better or worse, that is not an indicator of health, is it, taken on its own?

BRUNTON: We wouldn't take a sodium level of 127 on its own as an indicator of health. Again we would go back to saying we would look at the clinical picture.

MYERS: It is not a sign that is consistent with that system working correctly, necessarily, is it? I asked you about this earlier.

BRUNTON: Yes, that's correct.

MYERS: Right. So you'd asked me whether or not the sodium level was low at the time of the blood gas and it is low, isn't it?

BRUNTON: Yes, it's on the lower side.

MYERS: Let's go back to the blood gas table, please, which was at slide 12 and back to the bottom half of the table.

At 23.52, the pH is low. Base excess is a little low, isn't it, at minus 5.6?

BRUNTON: Yes.

MYERS: Which again is an indicator of potential problem. It doesn't prove there's a problem, it's an indicator of something that's potentially a problem?

BRUNTON: Yes.

MYERS: So if we move on now to about 15 minutes before the first deterioration, we can see the penultimate line, 01.14, the pH has gone down now to 7 point -- it's a little difficult to tell whether it's 217 or 257, but it's lower than it had been before, isn't it?

BRUNTON: Looks like it.

MYERS: So that indicates a deterioration of whatever magnitude so far as that is concerned, doesn't it?

BRUNTON: It also shows that the base excess has increased, which I believe subsequently then we started treatment for.

MYERS: But what I asked was, we can see a deterioration from the reading before, can't we?

BRUNTON: There is a reduction in the pH.

MYERS: Yes. And the fact that the base excess has increased to minus 8.9, again, comes outside the optimal range, doesn't it?

BRUNTON: Yes.

MYERS: That's a worsening of that reading, isn't it?

BRUNTON: Yes.

MYERS: So if we look at the picture at about 01.14 so far as [Baby D] is concerned, the clinical picture, if we're looking at the available signs you have there, it's not as good as it was at 21.10, is it?

BRUNTON: No, but what I would say is that the CO2 has remained completely stable, which is a good sign.

MYERS: Yes, it is. But you wouldn't look at this and say, yes, this is therefore the sign of a healthy baby, would you, on CPAP?

BRUNTON: Again, I would never look at a blood gas and decide whether or not a baby was healthy or not. I would look at it in a wider clinical context.

MYERS: But a number of aspects here are below what might be considered the optimal, aren't they?

BRUNTON: And I believe that treatment was started for these.

MYERS: Yes, but they're below what's optimal, aren't they?

BRUNTON: They're outside the reference ranges that you've described.

MYERS: Your first call to the neonatal unit, is it around about 1.40 in the morning?

BRUNTON: I believe so.

MYERS: You had been on the paediatric ward before that, hadn't you?

BRUNTON: I believe so; I can't quite remember my movements.

MYERS: If it helps, when you made the statement to the police back in April 2018, you'd said that you were on the paediatric ward when you were paged. I'm not expecting you to remember all the details of that, but that's where you were.

Do you recall, not in the notes, whether the blood gas readings we've been looking at had been brought to your attention before that point or not?

BRUNTON: No, I can't remember.

MYERS: All right. We can take the readings off the screen, Mr Murphy, now, thank you.

When you were called to the neonatal unit, you were called because the message was there had been a desaturation and a rash, that was what you were called for, that was the information you were given at that point. Is that accurate?

BRUNTON: I believe so if that's what I said in my police statement.

MYERS: In your statement, so it's clear, you said you don't know who paged you but the request was to see [Baby D], stating that she wasn't very well. It was when you were giving evidence you talked about the desaturation and the rash.

BRUNTON: Yes, it was the subsequent medical note after that.

MYERS: Let's go and look at the notes you made, slide 214, Mr Murphy. That's page -- I think it's 222.

By the time that you came to the neonatal unit, in terms of [Baby D]'s -- putting aside the colour, her general presentation, it appeared that she had recovered quite well from the desaturation, didn't it?

BRUNTON: On this episode?

MYERS: The first one, yes. We're talking about number 1.

BRUNTON: Can I scroll down to see my medical notes?

MYERS: Yes, of course.

BRUNTON: So you're saying that she had -- sorry, can you --

MYERS: By the time you got to the unit, particularly in terms of saturation, we'll come to colour in a moment, it appeared that she was on the way to recovering from whatever desaturation had taken place; do you agree with that?

BRUNTON: I can't agree with that. I don't know that.

MYERS: All right. Is that because you weren't there beforehand?

BRUNTON: Yes.

MYERS: So you can't measure it against it?

BRUNTON: Yes, I had no parameters which I did later on.

MYERS: Would it be right to say that what most struck you about her, so far as you could see when you saw her, was the discolouration?

BRUNTON: That's what I've documented, but I can't remember that, recollect that.

MYERS: And you've explained to us that the first three lines in your notes that deal with discolouration that read:

"Nurses noted that became extremely mottled +++."

And the description of tracking and dark brown, you think that is probably what the nurses told you?

BRUNTON: Yes, but I can't be certain.

MYERS: All right. What you do think, so far as your assessment was, is that it was as we see below the diagrams?

BRUNTON: Yes.

MYERS: Where it says:

"Skin [arrow] brown. Areas of discolouration light brown across trunk."

BRUNTON: Yes.

MYERS: That's what you recall -- working with the notes, that's what you recall seeing?

BRUNTON: I don't recall it but that's what's documented in the notes.

MYERS: All right, that's what it would be.

Over the period that followed this were you monitoring [Baby D] and seeing how she was recovering?

BRUNTON: I believe I went away and then came back to see her.

And as you can see from the notes, I was reviewing her regularly throughout the night.

MYERS: Yes. You were coming and going between the neonatal unit and the paediatric ward, weren't you?

BRUNTON: That's correct.

MYERS: Within the hour that followed, [Baby D] became stable and seemed to be -- recovered from the desaturation?

BRUNTON: That's what's documented.

MYERS: And the discolouration, as it happens, vanished?

BRUNTON: I think it had -- dramatically improved is how I (overspeaking) --

MYERS: Dramatically improved. Again in the statement to the police, just to help you, you said:

"At 02.35 I examined [Baby D] again. I have documented she was clinically much improved. The areas of discolouration had disappeared."

And you were satisfied with her blood gas at that time?

BRUNTON: Yes, I think so. I would need to see the gas to cross-correlate that.

MYERS: Yes. I don't want you to be at any disadvantage. Can we put up slide 12 and see what the next reading says.

I think it might be the final one.

BRUNTON: So it had improved.

MYERS: It's an improvement then, thank you.

I want to move to the second event. Can we put up, please, slide 236, which is page 2225. Can we go behind that to the actual notes? Thank you, Mr Murphy.

You say your recollection of this event is a little bit better than the first event?

BRUNTON: That's correct.

MYERS: So would you have gone to the neonatal unit from the paediatric ward as quickly as you could once the message came through?

BRUNTON: Yes.

MYERS: We've had a time in the notes of the collapse at 03.00.

You make these notes at 03.15?

BRUNTON: Yes.

MYERS: So you'll have got there as quickly as possible after you were called and then made these notes up once you dealt with the immediate issue?

BRUNTON: That would be correct.

MYERS: Thank you. You described to us that one of the things you were told is that [Baby D] had been crying, is that correct, crying and upset?

BRUNTON: Yes. That's what I've documented in the notes.

MYERS: Yes. Where it says, "Desaturated to 80%", does that mean that was the level she'd gone down to in terms of oxygen, 80%?

BRUNTON: I believe that's what her oxygen saturation readings were at that time.

MYERS: And again I don't make light of it, but in fact a desaturation to 80% in terms of the severity of desaturations is not in itself a severe situation, is it?

BRUNTON: No, not necessarily.

MYERS: No. So if we actually look at the situation you were dealing with, there'd been a report of [Baby D] becoming upset and crying and desaturating. That's what came to you; is that correct?

BRUNTON: Yes.

MYERS: You got there to find that the oxygen level had gone down, was it still at 80 when you got there?

BRUNTON: Well, I'd written when I've examined the baby -- I can't quite remember but I would imagine the timeline would be that I would examine the baby more or less immediately on arrival. By the time I've arrived I've documented that:

"[The baby] is now in air with no increased work of breathing."

MYERS: In terms of breathing and oxygen, stable at that point as far as you could tell?

BRUNTON: Yes.

MYERS: You noticed again some discolouration but not as prominent as last time?

BRUNTON: That's what I've documented but I can't recollect that.

MYERS: In terms of a baby crying and being upset or distressed, the word we can see on the screen, there could be, with babies, I don't make light of it, any number of causes for that, couldn't there?

BRUNTON: There could be, yes.

MYERS: Your view when you looked at the situation was that it might even be the CPAP, the intrusive nature of the CPAP that was upsetting her?

BRUNTON: That's correct.

MYERS: That was the view you formed at that point?

BRUNTON: Yes.

MYERS: Once you were there, apart from the discolouration, did she appear to be otherwise clinically well?

BRUNTON: I've written, "Clinically appears very well".

MYERS: Yes. Up until this point she had been on CPAP really throughout, hadn't she?

BRUNTON: Mm-hm.

MYERS: We've seen that earlier in the day there'd been an entry on the notes that she had deteriorated when taken off CPAP. We've seen that earlier in the day in Dr Rylance's notes.

BRUNTON: That was what's documented by Dr Rylance.

MYERS: Yes. When you took the decision that she should come off CPAP, did it cross your mind that it might possibly lead to a deterioration?

BRUNTON: Absolutely not, no. My thought process -- I can only explain -- my thought process behind what I was doing, was that we had, I think, four or five blood gases that had a CO2 level within normal limits in the time period between 7 pm when she'd been previously tried off and now. And what we worry about with babies, particularly term infants, is the possibility that if babies are agitated or upset, that might lead to potential side effects of being on potential -- more negative side effects when they're on CPAP if they don't truly require it at that time.

And it would be a natural process within a neonatal unit to repeatedly try a baby off of CPAP at different points and I think the last time [Baby D] was subsequently tried off was 7 hours previously.

MYERS: Nothing up to this point had indicated it would go well if she was taken off CPAP, had it?

BRUNTON: Again, we look at everything in a clinical context, so a carbon dioxide level of between 4 and 6 did not indicate that she needed ongoing respiratory support at that time.

MYERS: Were you aware of the blood gas readings from 23.50 and 01.14 at the time you took the decision to take her off CPAP or can you not remember?

BRUNTON: I can't remember that.

MYERS: Because she had already had two desaturations before you took the decision to take her off CPAP, hadn't she?

BRUNTON: Yes, but like I say, we were treating the underlying causes and I think by this time Dr Newby had already seen the baby and provided a plan from a senior consultant perspective. So we had worked our way through our differential diagnoses, as we do as, doctors with regards to what might be the potential causes. And one of the things I thought was that this was upsetting her and agitating her and could this allow her to settle.

MYERS: You have to agree, Dr Brunton, that certainly up to this point nothing had indicated she would do well without respiratory support, had it?

BRUNTON: Again, trialling a baby off does not necessarily mean that they can't go back on it, so if we had felt that she wasn't going to be able to cope with that then of course we would have put her back on.

MYERS: If a baby is upset by CPAP is it possible to put them on Optiflow, which is rather less intrusive?

BRUNTON: I'm not sure that Optiflow in a term neonate would be described as less intrusive. You'd need to look at the evidence behind that. We know that non-invasive breathing support for babies is -- they can be upset by it, we've seen that before, I've seen that in my clinical practice. But in answer to your specific question, I don't know, I don't know whether Optiflow would be less intrusive for her.

MYERS: The third event and the one which -- I don't really like to use the word "dramatic", but is the most dramatic, that was the word introduced in your evidence. You were back on the paediatric ward at the time you were called to the neonatal unit, weren't you?

BRUNTON: That's correct.

MYERS: And I'm not making a criticism of you when I ask that question, Dr Brunton. The reality of this is, on the evening, you are having to move between both wards.

That's the way that it worked, wasn't it?

BRUNTON: That was standard practice at the time.

MYERS: We'll just put up the notes in case you want to refer to them for anything I ask, which relate to this, which are at slide 257, please, Mr Murphy. There's only a couple of things I would like to ask you about at some point because we've over them in some detail, Dr Brunton. Can you just go down to where it says "heart rate below 60", which is just above the lower hole punch. Thank you, Mr Murphy.

Can you see there where the cursor is?

BRUNTON: Yes.

MYERS: And it's got "secretions +++". In your evidence you said you weren't too sure where it was the secretions came from, whether it was nose or mouth. Wherever it was that they came from, are you able to help us with -- when it says "+++", does that mean they were copious secretions?

BRUNTON: Yes, it's a fair word to use.

MYERS: We've seen that a number of drugs were administered to [Baby D] in attempts to resuscitate her and to provide her support; that's correct, isn't it?

BRUNTON: Yes.

MYERS: If we just scroll down the page to see where that commences, we can see it's on this page and it follows on the next page. The route of entry for those drugs was via the UVC, wasn't it?

BRUNTON: That's what's documented.

MYERS: Thank you for explaining all of that, Dr Brunton.

There's just one other matter I want to ask you about.

It's not directly related to this now, so it's slightly different, but it's something you dealt with in your evidence. You were asked a question about clotting problems or you gave an answer dealing with clotting problems in newborns, newborn children. I think you said, and I may not have heard it

correctly, but there can be clotting problems within the first 24 hours; is that correct?

BRUNTON: What can happen is that -- we know babies can be deficient of vitamin K and it's a standard practice across the United Kingdom that a baby would be administered vitamin K. Vitamin K is a vitamin that is very important in the clotting cascade.

MYERS: Right. When you talk about the babies having clotting problems in the first 24 hours, does that mean therefore they can bleed more than they otherwise would if it wasn't for those problems?

BRUNTON: Not necessarily. That's not something we would see on a -- we don't see bleeding babies on a regular basis because of that. And the clotting factor results would gradually -- my understanding, over the course of that week, would gradually set in naturally.

MR MYERS: All right. That's just something I wanted to ask you, it doesn't relate directly to [Baby D], but you gave evidence about it and I wanted to confirm that.

Thank you, Dr Brunton.

MR DRIVER: My Lord, I have no questions in re-examination.

Does your Lordship have any?

MR JUSTICE GOSS: No, I don't. Thank you, Dr Brunton.

That completes your evidence. Would you please not talk to anyone about this case, the evidence that you have given, any questions you've been asked, all right, until it's all over?

BRUNTON: Yes.

MR JUSTICE GOSS: Thank you very much.

MR DRIVER: Would that be a convenient moment, my Lord?

MR JUSTICE GOSS: Yes, it would be, certainly. We'll break off until 2.05 then, please, members of the jury.

(12.58 pm)

(The short adjournment)

(2.05 pm)

MR ASTBURY: My Lord, we propose to return to the chronology that we were anticipating in the witness list, so we're picking up where we left --

MR JUSTICE GOSS: Thank you.

MR ASTBURY: I will start by reading a statement before I call Dr Davies. It's a statement from a witness called Julie Robson.

MR JUSTICE GOSS: I have it, thank you. I have the latest list.

MR ASTBURY: If we reach Lisa Walker, the nurse, this afternoon, my Lord will recall that she requires screens, so we'll need a break.

MR JUSTICE GOSS: We'll have to have a break, good.

Thank you. Jury in, please.

(In the presence of the jury)

MR JUSTICE GOSS: I've received a note from one of you that doesn't concern the evidence in the case. Someone will speak to you, the juror concerned.

Witness statement of JULIE ROBSON (read)

MR ASTBURY: This afternoon we propose to return to the chronology, in particular [Mother of Baby D]'s confinement and [Baby D]'s birth. I'm going to begin by reading a statement from a witness called Julie Anne Robson.

Her statement is signed with the declaration, which the jury have heard, on 20 June 2019.

MR JUSTICE GOSS: You'll remember, this is agreed evidence, that's why it's being read.

MR ASTBURY: "I am Julie Anne Robson. I am a registered midwife."

She gives her PIN number and qualifications. She's been employed at the Countess of Chester Hospital from July 2007 to the present as 2019:

"I am a band 6 rotational midwife on the labour ward, antenatal and postnatal ward, and antenatal clinic. The statement has been produced with reference not [sic] [Mother of Baby D]'s case notes, my personal recollection, and a statement that I previously submitted to Her Majesty's Coroner.

"I first met [Mother of Baby D] on Thursday, 18 June 2015 when she attended the antenatal day unit at 11.30 hours with a history of having ruptured her membrane at 4 am that morning. She presented with obvious clear liquor, draining, and no uterine contractions.

"My role would be to assess both maternal and foetal well-being and I note from my records that this was her first pregnancy and that she was low risk, having received midwife-led care in the antenatal period.

"I recorded [Mother of Baby D]'s vital observations, including pulse, temperature and blood pressure, which were all within normal parameters. Urinalysis was clear.

"[Mother of Baby D] confirmed she was happy with her baby's movements. On abdominal palpation, the baby was presenting cephalic in a longitudinal lie. Symphysis fundal height measurement was 39 centimetres and greater than would be expected for gestation, therefore I performed an ultrasound scan. The ultrasound scan confirmed normal liquor volume at 3.3cm and positive umbilical artery Doppler flow. Finally, I performed a cardiotocograph, known as a CTG, which met criteria and was reassuring.

"Trust policy for the management of preterm rupture of membranes includes twice weekly outpatient monitoring for maternal and foetal well-being in the ANDU, and women are prescribed oral antibiotics. The aim is for delivery at 37 completed weeks' gestation if maternal and foetal well-being remain satisfactory. [Mother of Baby D] would have been 37 weeks' gestation the following day and eligible for induction of labour.

"As a midwife working in the ANDU it is not normal practice to book a woman for induction of labour until she has completed 40 weeks of pregnancy without discussing it with a senior obstetrician prior. I therefore contacted the senior registrar, Dr Finney, to discuss further management and plan for induction. I do not recall the details of our conversation or why the decision was made not to commence oral antibiotics. However, an appointment was made for [Mother of Baby D] to attend for induction the following day at 8.30 on the labour ward.

"I discharged [Mother of Baby D] home at 12.45, giving her advice on how to monitor herself and baby's well-being, to observe foetal movements and any changes in colour or odour of the liquor she was draining. As is my usual practice, I would have advised her about early signs of infection and to contact the labour ward if she had any concerns or felt unwell prior to her induction. This is the last contact that I had with [Mother of Baby D]."

My Lord, I call, please, Dr Joanne Davies.

DR JOANNE DAVIES (sworn)

Examination-in-chief by MR ASTBURY

MR ASTBURY: Could we begin with your full name, please.

DAVIES: Joanne Elizabeth Davies.

ASTBURY: Thank you. And your profession, please.

DAVIES: A consultant in obstetrics and gynaecology.

ASTBURY: Thank you. I know the temptation, because I'm asking the questions, is to direct them at me. If you could please try and project them to the back of the room, we know then that everyone who needs to hear you can hear you. I'd be very grateful, thank you.

You, I think, qualified as a medical doctor in 1994?

DAVIES: Yes.

ASTBURY: When did you become a consultant?

DAVIES: I became a locum consultant in October 2004 and then a substantive in April 2005.

ASTBURY: Thank you. And where have you been employed since you became a consultant?

DAVIES: All of the time at the Countess of Chester.

ASTBURY: Which department please?

DAVIES: The obstetrics and gynaecology department.

ASTBURY: And do you hold a particular role in that department?

DAVIES: I'm a generalist consultant in obstetrics and gynaecology but I am also a special interest in maternal medicine.

ASTBURY: I'm just going to ask you -- someone is keeping a note of what you say and some of the terms are quite technical so if I could ask you to slow down a little bit then we know there won't be any problems.

Your responsibilities, please, within the unit as a consultant obstetrician?

DAVIES: Caring for women during pregnancy, essentially, particularly with high-risk conditions, so problems with previous pregnancies and then women who have pre-existing medical disorders. And then sort of -- the sort of clinical, administrative and management role within that which then also involves reviewing case incidents.

ASTBURY: Your focus is on the mother?

DAVIES: Yes.

ASTBURY: Is that both pre and post-natally?

DAVIES: Yes.

ASTBURY: Do you have any responsibility for the child once the child is delivered?

DAVIES: No.

ASTBURY: With that in mind, you've been asked to provide a statement concerning the treatment of [Mother of Baby D] during the birth of her daughter [Baby D] back in June 2015. I don't think you actually met [Mother of Baby D] until, sadly, after [Baby D]'s death at the hospital.

DAVIES: That's correct.

ASTBURY: But you have used notes to put together a history of the treatment that she received; is that right?

DAVIES: That's correct.

ASTBURY: Thank you. And we will go to those notes in a moment, but was [Mother of Baby D]'s pregnancy considered a low or a high-risk pregnancy?

DAVIES: She was a low-risk pregnancy.

ASTBURY: Are you aware she attended on routine occasions?

DAVIES: I think there was a couple of attendances for fairly routine stuff.

ASTBURY: We've heard that she presented for the first time to the hospital at 36 weeks and 6 days' gestation?

DAVIES: That's correct.

ASTBURY: And her presentation was with ruptured membranes?

DAVIES: Yes.

ASTBURY: We just heard that at the time she attended the hospital in that regard, she was very close to 37 weeks' gestation.

DAVIES: I think short of about 12 hours.

ASTBURY: Is that a significant milestone?

DAVIES: Yes.

ASTBURY: Why's that?

DAVIES: Essentially, term is 37 weeks and above, and preterm is below 37 weeks.

ASTBURY: Okay. You have confirmed that [Mother of Baby D] was admitted to the labour ward for induction at just after midnight on 16 June 2015; is that correct?

DAVIES: I think when I looked at that statement I think that date is wrong. I think it was 20 June she actually got admitted to the --

ASTBURY: Thank you. And the indication at that stage was a spontaneous rupture of the membranes the previous day?

DAVIES: Yes.

ASTBURY: If we could go to those notes, please. They're going to appear on a screen before you. They're the basis for your statement and I'll take you through them.

My Lord, these notes don't have the J numbers that everyone's become familiar with yet. They are paginated so we'll rely on the pages as they appear for now, but we'll ensure it's replaced with the appropriate document.

Hopefully, we can see at the bottom that the first of these pages is numbered 240. Could you describe what these notes are, please?

DAVIES: These are handwritten maternity notes and they -- it obviously has [Mother of Baby D]'s name at the top and these are notes taken -- it looks like a midwifery signature.

The top part of it is -- we use standardised stickers to relay certain documentation and then the second part of the note is midwifery notes with regards to labour. And then the first doctor entry is the sort of different handwriting occurring (overspeaking) --

ASTBURY: If I can just ask you to pause there.

MR JUSTICE GOSS: Yes. Could you sit closer to the microphone and keep your voice up? In fact, would you mind pulling the microphone slightly towards you? The request is because someone is transcribing what you're saying in a different room and they're having difficulty hearing.

DAVIES: Okay.

MR JUSTICE GOSS: Thank you.

MR ASTBURY: I'm going to take you to the notes you relied upon in compiling your statement and I am going to ask you to just explain in brief terms what each of the notes means and that will present hopefully the chronology that you've relied on in your document.

If we can turn, please, first to, on this document, page number 240, which I think we're at, and if we go to the lower part, there's an entry at 02.50 hours. Could you explain that note to us, please?

DAVIES: Yes. As you can see, it's dated and timed, as you would expect, and it's an entry made by ST1, which is the level of doctor, which is the first year of a junior doctor who is specialising in obstetrics and gynaecology. I think the name is Bhatt. It's her entry of her review at that time. So P0 means it's a lady on her first pregnancy. She has put she's 37 plus 1 at that point. "SROM" refers to spontaneous rupture of the membranes on 18 June at 04.00. They are clear and a little bit pink and she's referred to two times Prostin with a tick to means that she has had two Prostin.

ASTBURY: Pause there for a moment: spontaneous rupture of membrane, just explain that to us, please.

DAVIES: Part of the labour process is that the waters go, that's the more generic term. Sometimes the waters go before labour starts, as in this case, and labour then doesn't follow. Or sometimes they go actually in the middle of labour.

ASTBURY: Right. So I think you described it as waters breaking.

That's perhaps what more of us may recognise it as. The significance, please, of the note that, presumably this is the fluid, is clear and pink?

DAVIES: You use that as a marker of whether there's any concern about the baby. So you might be concerned if there was what's called meconium, which is baby's poo, which could suggest the baby had been in distress. You also might be looking for very heavily bloodstained liquor which might mean there had been bleed behind the placenta, or you might be looking for offensive liquor that perhaps looks like pus, which you might see with an infection.

So that's why the doctor's written that it was clear, pinky. Clear is completely normal, pinky is the sort of the -- it's very slightly blood tinged, usually from the cervix starting to dilate. That's when we get that appearance.

ASTBURY: Two times Prostin?

DAVIES: So the treatment for -- because she hadn't gone into labour, then we then want to bring the labour on, or induce the labour, and the management of that is a prostaglandin, which is the hormone treatment which is goes into the vagina to start the process of labour.

And the treatment at that time was for two separate doses of the prostaglandin into the vagina. So that refers to -- that's been given.

ASTBURY: That indicates that treatment started with two administrations?

DAVIES: Yes. She would have had one and then, 6 hours later, she would have had a second one so that process generally takes at least 12 hours.

ASTBURY: Okay. These notes don't flow altogether chronologically. So if we could go next to page 255.

The next entry you rely on is given by Dr Bhatt on the same shift, 20 June, at 07.15. You have commented on the CTG assessment being reassuring. Can you explain that for us please?

DAVIES: So CTG stands for cardiotocograph and it is a foetal heart monitor that sits on to the lady's abdomen, monitoring the foetal heart and also monitoring if there any contractions. And what this sticker is here -- as a doctor you go and look at the tracing that is produced and you look at various factors within it, which you can see she's circled. And then she's come to the

conclusion from that circling that the factors altogether was that the CTG at that time was reassuring.

ASTBURY: Temperature's recorded?

DAVIES: Yes. You can see that there's other factors on this sticker. The maternal pulse is within the normal range of. The temperature is normal at 36.6. At this time her contractions are recorded at about one every 10 minutes. Still reports that the liquor or the fluid is clear and the reporting at that time is that she's 2 centimetres dilated.

ASTBURY: If we scroll down that page, any other information on that particular page?

DAVIES: Yes. So essentially when you go as a doctor to review a patient the whole thing is to look at the whole picture, so it's quite common to rewrite again what you know about the case so far. So Dr Bhatt has written "progress" and she's reiterated the SRM or the rupture of membranes or the waters have gone at 04.00 on 18 June. She's put that she was 2 centimetres at 03.00 on 20 June and in brackets that was after the two lots of the prostaglandin or Prostin. She's had then Syntocinon, which is an intravenous infusion to bring on the labour and she's said that started at 03.05. And now she's reporting that she's still 2 centimetres dilated at 07.05 and she's put there that the dose of the oxytocin at this time was 60ml per hour.

ASTBURY: And dilation, please, the significance of it?

DAVIES: There's no change from the previous examination.

ASTBURY: Okay. What does the dilation in short refer to?

DAVIES: You need to be 10 centimetres dilated to have a baby.

So you go from a completely closed cervix to slowly progressing to 10 centimetres.

ASTBURY: Right, okay. In light of everything that Dr Bhatt has noted is there a plan set out?

DAVIES: Yes. She's planned at this point to increase the dose of oxytocin up to the maximum rate, which is 96ml per hour, planned to re-examine in 4 hours, and to aim for contractions to be four to five every 10 minutes.

ASTBURY: The next note on which you comment appears at page 257, please. It's timed at 08.50. Dr Dinardo's note we can see in the slightly bolder manuscript.

DAVIES: Yes, this was at 08.50 and it's a routine consultant ward round by Dr Dinardo, which is routinely done on everyone on the labour ward.

ASTBURY: Pausing there, Dr Dinardo's position, please?

DAVIES: She's also a consultant obstetrician and gynaecologist in the unit.

ASTBURY: Thank you. Sorry to interrupt.

DAVIES: So again you can see she's taken a brief summary of the case. So a 32-year-old lady -- primate means first pregnancy -- gestation 37 plus 1., BMI is weight of 29.

Again, she's put then when the ruptured membranes occurred on 18 June that the induction of labour process -- that's -- the IOL stands for "induction of labour" -- started on 19 June, with the two times Prostin. BS stands for Bishop score. This is a score that we use of the cervix when we are doing induction of labour because dilation isn't the only important thing, there are other factors such as how soft the cervix is and the position of the cervix. So she was merely defining what the score of the cervix was.

ASTBURY: What does 3 tell you about that?

DAVIES: Quite unfavourable still at that point. So certainly not in active labour at that point.

ASTBURY: Right.

DAVIES: Then she's said, however following that score, we then started the Syntocinon drip, which was commenced at 03.00, and that she had been on the 96ml, which is the maximum rate, since 08.00. So it had been -- it gets increased every half an hour incrementally and that's what had been happening over the night. She's written that the contractions are irregular, which would suggest to me that we're still not in established labour, that the pains are mild, and she has written the internal os is closed, 2 centimetres long, and the head is minus 3.

What that is referring to this sort of Bishop score. So the neck of the womb, you've got an outside bit and the inside bit, from that she thinks the inside bit is still actually closed although the outside bit has been slightly opened by the initial drugs. The head refers to how low the head is coming down into the vagina and by minus 3 it's still quite high up in the pelvis.

And she has put "query forewaters", which -- when the waters have gone, sometimes they can go up from high up at the top part

of the uterus and you get the fluid coming out, which is why she was being induced. But sometimes the bit in front of the baby's head that you can feel vaginally hasn't got a hole in it and it's like a balloon full of fluids and sometimes you have to then go back and try again to see if you can make another hole in the forewaters, which is the bit just in front of the head.

ASTBURY: Pausing there, the membrane is ruptured, some of the fluid is drained, but some may -- this is the query -- have collected near the baby's head and not been able to escape?

DAVIES: Yes.

ASTBURY: Again, from Dr Dinardo there's a plan.

DAVIES: Yes. So she said:

"Repeat the vaginal examination at 11.00."

And I think that relates to -- the last examination had been 4 hours before that, so you would normally do an examination every 4 hours.

ASTBURY: The next note upon which you comment appears at page 260, please, and is timed at 11.25. I think this is an entry from a Dr Pelicaric(?); is that right?

DAVIES: Yes, I don't know and I've never met Dr Pelicaric.

He was doing a locum shift that weekend, I think.

ASTBURY: Again what --

DAVIES: Harder to read this one!

ASTBURY: The elements upon which you've commented upon:

"CTG reactive."

Which I think we can see six lines down.

DAVIES: Yes. He's done the same again, he's done a summary of what's happened so far and at this point he's put:

"CTG reactive, normal trace."

He's put the PV, which is vaginal examination, he has put:

"Cervix 1 centimetre. Long, very posterior. 1 centimetre dilated. Head is high and blotting."

So that refers to what I was talking about before: you can still feel the head high up in the pelvis rather than low in the vagina. He's put "clear" but then in brackets he has put:

"Bloodstained liquor draining."

ASTBURY: It seems to -- what does that tell us? That seems to be almost contradictory.

DAVIES: It does seem to be contradictory, yes.

ASTBURY: I think the other comment you've made at that stage in respect of this is:

"Contacting (sic) well on Syntocinon."

DAVIES: Yes. So higher up he's put, he says:

"On Syntocinon from today."

And then he has put:

"Contracting well for the last 2 to 3 hours where it was just tightening before."

So we have started this drip but we start at a very low dose and we build it up slowly and by looking at the situation it would appear that the contractions had become increasing both in timing and in strength, which is what you'd expect from the drug that we're giving.

So it's only really been for the last 2 to 3 hours that we're starting to have regular, stronger contractions.

ASTBURY: Okay. Now, below that sentence that we discussed a moment or two ago, I think it says "both couple tired". Just expand on that for us, please, if you can.

DAVIES: Well, I think -- I can only read what you can:

"Both couple are tired and asking for an emergency caesarean section."

Which I think is understandable. They've obviously been in the hospital for 2 days now and they are no closer to having their baby. That's what we try to do in labour, is have a two-way conversation. So they've obviously verbalised that and the doctor's written a conversation with [Mother of Baby D], the situation explained.

The situation really being at this time that we're only just starting to get her into labour, we're only just starting to get regular contractions. And then it goes on to say:

"We would advise that we plan to continue with vaginal delivery for the next 3 to 4 hours and then make a final plan."

And then he has written there obviously he's left them to chat face-to-face, ie we, as medical staff, left them alone to discuss that advice that we gave them.

ASTBURY: Okay. The next note that you comment upon is presumably the next review because it's at 3.10 that afternoon and it's at page 265. It's the same handwriting, so it's Dr Pelicaric again. Again you've commented that the CTG is reactive.

DAVIES: Yes.

ASTBURY: Is that a normal trace?

DAVIES: Yes:

"CTG reactive, normal trace, and contracting well on Syntocinon."

However, the vaginal findings are very similar to previously, with only 1 centimetre dilated. So there's a conversation with the couple. Obviously the patient and the husband are very tired and feels that...

(Pause). Not sure what that says. But asking for emergency caesarean section, which was decided as the plan to go ahead with and at this point he then called the theatre team, did the consent form, and informed the consultant and then made the decision to do a category 2 emergency caesarean, which was within an hour.

ASTBURY: Okay. We know that an emergency caesarean followed that afternoon. And you from the maternity notes, although they're not now available to you, were able to check the initial details of the birth. And that of course is where your responsibility ceased as far as [Baby D] was concerned.

Where there is a poor outcome, for example a death with a child in these circumstances, is it the normal course of events to conduct a review?

DAVIES: It is, yes.

ASTBURY: And was a review carried out in the case of [Baby D]?

DAVIES: Yes.

ASTBURY: What's the purpose of the review?

DAVIES: I think several purposes. The first purpose is to try and ascertain from a patient safety point of view what has happened and to make sure that there has not been any sort of individual member of staff working outside of guidelines that should not be carrying on with work.

That's a very rare finding from a review, but that is sort of the priority, initially, from a safety point of view.

And then the second is from a learning point of view -- again, it might be if there was a guideline that was perhaps difficult and it wasn't reading well that the sooner we discovered that, we could put that into place for the next shift, that that would be important to do.

And thirdly, it's -- obviously you've got two parents who are grieving and the sooner you can try and give them some information, if there's any to be had, that also helps the basis of your conversation with them afterwards.

ASTBURY: Okay. Bearing in mind you told us about your -- the parameters of your responsibility, did your review concentrate on any particular aspect of the care?

DAVIES: So our review would have been entirely from the minute [Mother of Baby D] became pregnant to the minute she delivered, so it would have been purely obstetric care, whereas my neonatal colleagues concentrated on the care of [Baby D] as soon as she was born. So I was very much up to the point of delivery.

ASTBURY: Is that an unusual way to divide the responsibilities or is that --

DAVIES: No. We do joint reviews all of the time because that's -- we have different areas of expertise and we also then get other people in. So for instance if -- sometimes we get an anaesthetist in if it's relevant, sometimes we get theatre staff in if it's relevant, depending on what the incident is.

ASTBURY: Would you ever comment on the neonatal side of things?

DAVIES: No, I wouldn't, unless -- as I say, we do joint reviews so we're meant to -- we obviously get some expertise of what is normally picked up, so if I saw something glaring that I didn't think somebody else had seen, I'd say, "Have you considered this?" But in this particular case, as far as I remember, I

think we did it separately, so I wasn't there for the neonatal review.

ASTBURY: And the outcome of your initial review, please?

DAVIES: The initial review showed that her care antenatally and during labour had followed the guidelines.

ASTBURY: All right. Was that the end of the review? Was there a further review?

DAVIES: So we do an immediate incident review -- so this is done -- it's usually supposed to be done within 72 hours of the incident to get that sort of urgent immediate learning. And then you then do a more in-depth review and the case at that particular time used to be discussed -- taken and discussed at a joint meeting between obstetricians, midwives and paediatricians.

ASTBURY: Limited to Chester?

DAVIES: Sorry?

ASTBURY: Limited to Chester or on a wider scale?

DAVIES: At the time in 2015 it was limited to Chester.

ASTBURY: Okay. And what was the outcome of that further review?

DAVIES: So on presenting the case, as far as I remember I think it was one the senior midwives at the time just said, well, she wasn't 37 weeks therefore she wasn't what we would call a term rupture of membrane, she was a preterm rupture of membranes, therefore the guideline wasn't completely followed. And it was one of those discussions where probably half the people in the room said, well, we don't think that because she was 12 hours off 37 weeks, and the other half of the room said, well, she was in theory a premature rupture of membranes, therefore the guideline wasn't completely followed.

ASTBURY: So up to 37 weeks, the guideline says antibiotics?

DAVIES: No, sorry, up to 37 weeks, then the additional thing would have been to start oral antibiotics on diagnosis of the waters going.

ASTBURY: Right. But here there was some disagreement given the proximity of the rupture to that 37-week point?

DAVIES: Yes. Because the commonest people we're seeing with preterm rupture of membranes are anything -- we see people from

30 weeks, you know, 34 weeks, so you know this was very unusual that it was literally the 12 hours before.

ASTBURY: And what is the risk when membranes rupture?

DAVIES: The risk is the same whether you're preterm or term of infection. So the membranes are a barrier between the outside world and inside the uterus. So when they go, you get an increased risk of infection.

ASTBURY: Okay. Does that risk of infection progress proportionately or consistently or does it accelerate as time goes by?

DAVIES: It's meant to be worse after 24 hours. The risk starts to get worse 24 hours after. That's the sort of guideline for a term rupture of membranes. A preterm rupture of membranes, they're sort of -- there's people who have ruptured membranes for many days and many weeks sometimes that we manage and some people never get infected and other people get infected very quickly.

ASTBURY: I think in this case there was a longer than 24-hour period between membrane and birth -- sorry, rupture of membrane. Was that a significant feature to have in mind?

DAVIES: It's not. So the guideline is -- is that you leave somebody -- if -- for 24 hours to see if they labour by themselves, because often you get the waters going and then labour happens by itself. So that's why you give the first 24 hours. If at 24 hours the waters -- they haven't gone into labour, that's when you offer to induce somebody, but we have to accept that the induction process takes at least 24 hours in the majority of women, particularly in their first pregnancy. So it is not unusual to find somebody perhaps reaching their third day after the waters have gone before they've had a baby.

ASTBURY: With all those features in mind what conclusion, if any, was reached by that second review?

DAVIES: I think the only conclusion was is -- that we missed giving an oral antibiotic the night that [Mother of Baby D] came in.

That would have been the guideline for preterm rupture of membranes. The next part of the guideline is that you then arrange to induce somebody when they are 37 weeks. So we would not have delivered her any sooner, we would not have induced her any sooner, and the care during labour would not have been any different. So the difficulty that we have at the meeting was saying, well, we didn't feel that one dose of oral antibiotic

would have changed the outcome because the oral antibiotics are obviously a very low dose antibiotic.

ASTBURY: Was there any evidence of infection at [Baby D]'s birth?

DAVIES: No. I mean the whole -- during labour, labour is monitored very carefully so there are observations done throughout labour. And in particular, in this situation, when you've got ruptured membranes you are looking for signs of infection that you can either treat with intravenous antibiotics or, if you're worried about a baby, then in that situation doing a caesarean earlier. That's where I had felt from the initial review that the guideline had been followed, every single observation had been done as it should have been done, and there was absolutely no evidence from [Mother of Baby D]'s temperature, her blood pressure, her -- the liquor we were talking about, there was no evidence of infection from her during the labour. And the CTG, this foetal heart monitoring, that can be the indicator sometimes of infection, for instance some of the parameters change with infection, and that showed absolutely no evidence of infection.

ASTBURY: How would infection have manifested itself at the birth if there had been such an infection?

DAVIES: As I say, I might have expected [Mother of Baby D] herself to show a temperature or a high pulse rate in labour. And then -- certainly when we do the caesarean section, if there's an infection of liquor then you get very offensive smelling liquor when you do the operation or you may even see pus and we saw no evidence of that.

MR ASTBURY: Thank you, doctor. I have no more questions but if you can wait there, please.

Cross-examination by MR MYERS

MR MYERS: Dr Davies, can I just check. You have told us about a review that was conducted into [Mother of Baby D] and [Baby D] after [Baby D]'s death. And you are the -- were you the obstetric and gynaecological lead for that?

DAVIES: Yes, I was.

MYERS: And who was the neonatal lead for that, please?

DAVIES: I'm afraid I can't recall.

MYERS: Was there a neonatal lead for that?

DAVIES: As far as I remember.

MYERS: Would there be a record somewhere of who was the neonatal lead?

DAVIES: Yes.

MYERS: Is there any formal record made of the review?

DAVIES: There is, which I refer to in my statement, but I must say I haven't seen it since, many years ago.

MYERS: Your position was that good care had been provided; is that right?

DAVIES: As I say, it was on that initial review at 72 hours, yes.

MYERS: And that trust guidance had been followed?

DAVIES: Yes.

MYERS: And that was your view on the initial review?

DAVIES: Yes.

MYERS: Did that view ever change?

DAVIES: It did after this joint meeting that we had. I -- I had to agree, yes, she was 12 hours short of 37 weeks.

MYERS: Did your review come to any conclusions about [Baby D]'s condition at birth?

DAVIES: Mine didn't because I don't do a neonatal review.

MYERS: Right. So although you've been asked questions about evidence of infection at birth for [Baby D] and things like that, your review didn't actually go into looking at the picture for [Baby D] from the point of birth onwards?

DAVIES: No.

MYERS: To what extent is the content of this review designed to meet any potential criticism of the hospital arising out of the care of [Mother of Baby D] and, by implication, [Baby D]?

DAVIES: Sorry, I don't understand the question.

MYERS: Right. Sometimes people may have a complaint about the care they've received; that's true, isn't it?

DAVIES: Yes.

MYERS: With that in mind, to what extent is the review that you and the neonatal lead are conducting designed to meet any such criticism?

DAVIES: It's meant to be a complete and thorough review so that we can then meet with parents and be very clear about what we have found. In 2015 I think those sort of reviews were owned by the trust, whereas nowadays we do do a trust -- a review with an external examiner and there's a much tighter process of sharing that with both the patient and with external...

MYERS: Right. Were you, at the time of any aspect of this review, whether it was the earlier one or the later one, were you aware of any criticism or any question of action being taken against the trust by [Mother of Baby D]?

DAVIES: I don't know to be honest. I met with [Mother of Baby D] and her husband several times and I think we talked about where to go from here, which we always talk about with people about the complaints process and about the legal process and how they can take it further if they wish to. But I don't know if I -- I don't remember being aware if they did take it further that way, especially then when they had their next baby and I was looking after them and I was really totally focusing on that rather than whether they were having a legal action against the trust because I think that obviously mars the case sometimes. So I'm not completely aware if they had a legal action against the trust.

MYERS: You were unaware of that?

DAVIES: Yes.

MYERS: Did you, as part of your part of the review, review the care of [Mother of Baby D] from when she first attended the hospital?

DAVIES: Yes.

MYERS: I'd like to be clear about this: do you accept there were any shortcomings or potential shortcomings in her care?

DAVIES: Yes, she did not get the antibiotics.

MYERS: Right. There are things I'll ask other witnesses about the condition of [Baby D] after her birth, given what you've said, Dr Davies. I've got them here, I won't ask you because

you've explained that at that point you're not involved in that part of the review.

Just on the question of infection then, infection in neonates is a leading cause of death for babies, isn't it?

DAVIES: Yes.

MYERS: And there can be infection arising either because of things that happen during the birth process -- that's one time there can be infection, isn't it? I know you're nodding. You have to say yes or no.

DAVIES: Yes. Infection can arise even before they've started the birth process, so we're finding out more and more now of inflammation that happens long before a lady comes in, a couple of days, you know, in labour, you can then get infection that happens once the waters have gone while you are waiting to labour or during labour.

And then, yes, of course, you can then get infection of a baby once the baby is born.

MYERS: Yes. Once the baby has left the mother -- and in hospital, infection can be acquired at that time as well, can't it?

DAVIES: Yes.

MYERS: So far as the risk of infection from a mother to a baby is concerned, sometimes, as you've described, you might be able to identify that a mother has an infection, that might be obvious, mightn't it --

DAVIES: Yes.

MYERS: -- from the signs you have talked about? Sometimes if you're looking at things like temperature or heart rate a mother might have an infection and it not be evident from that?

DAVIES: That's right. That's why we would often send the placenta, for instance, which we did in this case, because you might then see the placenta has got huge amounts of pathological changes that you can see under a microscope, which were not present on this placenta.

MYERS: But there is always the residual risk of infection passing from the mother, or from some part of her body, within her body, to the child at the time of birth, isn't there?

DAVIES: There is, yes. That's why the paediatricians do have a set of risk factors that they look for as to which babies they screen for infection.

MYERS: If the membranes rupture in a mother, then that is potentially increasing a risk of infection, potentially, isn't it?

DAVIES: It is.

MYERS: And as you've explained to us, certainly it's recognised that risk of infection increases after 24 hours; that's how you consider it?

DAVIES: Yes.

MYERS: So it's for that reason that a mother in the position that [Mother of Baby D] was in should be given oral antibiotics; is that correct?

DAVIES: Yes.

MYERS: And whatever the findings, as a matter of fact, the failure to do that does increase the risk of infection, doesn't it?

MR JUSTICE GOSS: For whom?

MR MYERS: For the child.

DAVIES: Um, as I say, I... I... I am in doubt that the 12-hour -- 12 hours of one dose of oral erythromycin would have had any effect in this case.

MYERS: You may be in doubt, you don't know, do you?

DAVIES: I don't know.

MYERS: That's the truth of it?

DAVIES: I don't know.

MYERS: What we do know, Dr Davies, is that you have guidelines as to when oral antibiotics should be given, don't you?

DAVIES: Yes.

MYERS: And they're set out in guidance documents for the trust, aren't they?

DAVIES: They are, yes.

MYERS: They come into two categories. There's a category for the management of rupture of membranes in someone who's preterm and management for the rupture of membranes for someone who is term; is that correct?

DAVIES: That's correct.

MYERS: Whether it's by 12 hours or not, as a fact, [Mother of Baby D] came within the preterm rupture guideline, didn't she?

DAVIES: She did.

MYERS: And it's in that guideline that we see acknowledged the risk of infection from preterm rupture of membranes, don't we?

DAVIES: Yes.

MYERS: Just so it's quite clear to the members of the jury, when you've talked about guidance and what have you, the guidance that a mother whose membranes rupture preterm should receive oral antibiotics is set out in that guideline, isn't it?

DAVIES: It is, yes.

MYERS: You've explained that the risk of infection begins to increase after 24 hours of rupture?

DAVIES: Yes.

MYERS: Do you agree that whatever that risk is, by the time there has been a rupture for 60 hours, that is therefore an increase in that level of risk?

DAVIES: Yes, it is.

MYERS: And in the case of [Mother of Baby D], by the time of delivery, the membranes had ruptured for 60 hours or had been ruptured for 60 hours, hadn't they?

DAVIES: They had.

MR MYERS: The remaining questions I have on the topic, my Lord, relate to the question of [Baby D] from the point of birth onwards, so following the evidence of this witness, I won't ask Dr Davies about that.

MR JUSTICE GOSS: No, thank you very much.

Re-examination by MR ASTBURY

MR ASTBURY: Just one question, please, arising. You mentioned the placenta being examined and I think you said there wasn't any. Can I just ask, there wasn't any what?

DAVIES: So the placenta goes for histological examination and essentially, when cells have got infection, then there are numerous changes under the microscope that can be seen. So obviously after [Baby D] died, we spent time waiting to get the results back because we just didn't feel it had acted like infection. Then when we got the post-mortem back and the placental findings back there were just no changes of infection whatsoever in the placenta which you would have been expecting to build up over these 60 hours. So that's plenty of time for the placenta to start showing these changes of infection and it didn't show them.

ASTBURY: You used a phrase "acted like infection". What would you expect if it acted like infection?

DAVIES: I'm sorry, I don't know...

ASTBURY: I'll just give you the context of it, thank you. When you got the post-mortem findings and the placental findings you said "it wasn't acting like infection"?

DAVIES: I think I meant while we were waiting to find out why she died, I just didn't think infection was going to be the cause because there had been no signs of infection whatsoever. And it was therefore at this joint meeting we had with everyone, it was a surprise to me when they said the pathologist has found congenital pneumonia, and that still didn't make sense to me because there were no other signs of infection throughout anywhere else in [Baby D] and, as I say, in the placenta or the membranes that went to look -- under the microscope.

MR ASTBURY: Thank you.

Further cross-examination by MR MYERS

MR MYERS: I wonder if we can clarify one matter arising out of that, my Lord.

MR JUSTICE GOSS: Certainly. There's a matter that I want clarification on. We were talking about infection infection, but it's important to identify the evidence of who had any infection and who didn't have any infection, not who might have got an infection by reason of ruptured membranes and so on. I think it's important to know whether there was any pathological evidence of anyone having an infection.

MR MYERS: Let me -- what I wanted to ask is in relation to that so maybe I can deal with it to start with (overspeaking) --

MR JUSTICE GOSS: I'll leave it to you, Mr Myers. If I'm still unclear, I'll ask further questions.

MR MYERS: I've asked you about risk of infection. We'll leave risk to one side now and discuss that in terms of evidence found of infection. Taking [Mother of Baby D] first of all, did you identify for sure evidence of infection in her at any stage pre the birth of [Baby D]?

DAVIES: No.

MYERS: And that relates also to the analysis of the placenta that you undertook?

DAVIES: Yes. The other thing to comment on is that sometimes in these patients -- sorry, the mother's side of things, often you get the temperature and the signs of infection after the baby is born, which we didn't see with [Mother of Baby D]. She didn't develop a temperature at all in those sort of first 24/48 hours after birth either.

MYERS: Thank you for dealing with that then. The next thing is with [Baby D]. You've made it plain, and I've recognised in the questions that I've asked, that you're not dealing with [Baby D] in the period immediately after her birth and there may be questions to ask there. But you made reference, in answer to questions a moment ago, about congenital pneumonia.

DAVIES: Mm-hm.

MYERS: So can you confirm with us, there was a post-mortem conducted on [Baby D] after her death; that's correct, isn't it? And the finding of the pathologist who undertook that post-mortem was that pneumonia was present in [Baby D]; that's correct, isn't it? The pathologist concluded that at that stage cause of death was pneumonia with acute lung injury.

DAVIES: Yes.

MYERS: And it was the opinion of that pathologist, whose name is Dr Jo McPartland, that pneumonia was already present at birth?

DAVIES: Yes.

MYERS: So for those people who aren't familiar with the expressions, you use the expression congenital pneumonia. Congenital means the baby, in this case [Baby D], was born with that condition?

DAVIES: That's correct.

MYERS: Which is why on your evidence, Dr Davies, we have the conundrum of you don't identify any specific signs of infection in the mother but you recognise that the post-mortem identified congenital pneumonia in the baby?

DAVIES: Yes.

MR MYERS: It's against that background that we've been asking the questions about antibiotics and risk, but my Lord, that's as far as I can take it on the material I have.

MR JUSTICE GOSS: Thank you very much.

MR ASTBURY: Is that clear, my Lord?

MR JUSTICE GOSS: Yes, that makes it clearer, the situation.

Thank you very much. That completes your evidence, thank you very much for coming and giving it. You're free to go, but please don't discuss this case with anyone until it's all over --

DAVIES: Okay.

MR JUSTICE GOSS: -- and your evidence, obviously.

Thank you.

(The witness withdrew)

MR ASTBURY: My Lord, before a short break, there's a statement to read.

MR JUSTICE GOSS: That's convenient. Well --

MR ASTBURY: I'll read it now and then we don't have to --

MR JUSTICE GOSS: All right, read it now. There's another short statement to be read.

Witness statement of ANNA McMANUS (read)

MR ASTBURY: This is a statement from Anna McManus, signed on 25 July 2018:

"I am a registered midwife, having qualified in April 2008, and I'm currently employed as a hospital-based midwife at the Countess of Chester Hospital.

"On Saturday, 20 June 2015, I worked from 8 am to 8.30 pm. I was involved in the care of [Mother of Baby D], who later gave birth to [Baby D].

"[Mother of Baby D]'s waters had broken spontaneously at 36 weeks and 6 days into her pregnancy and it was now 37 weeks and 1 day and she had already started the first part of the induction process.

"[Mother of Baby D] had been started on a hormone drip to help induce contractions. The frequency of this drip was increased with the intention of making the labour progress and for her cervix to open. [Mother of Baby D]'s observations were monitored and she remained within normal limits throughout her pregnancy. The baby was also continually monitored and hourly assessments were conducted, all of which were normal.

"[Mother of Baby D] was examined every 4 hours to see how far her cervix had dilated and to see how she was responding to the hormones. It was clear that she hadn't changed much from when she had started the process and following a discussion with the registrar, Dr Conrad, it was agreed that the delivery would be done by caesarean section.

"[Mother of Baby D] was taken into theatre and during the operation her pain was managed by the anaesthetist, administering medication down the epidural that [Mother of Baby D] already had in place.

"The operation was straightforward and uneventful and at 16.01 hours, Baby [Baby D] was born. She was born in good condition and a 2-minute cord clamping delay was utilised to give her extra blood supply and help boost her blood iron levels.

"[Baby D] was then shown to her parents before being dried, weighed and generally checked over. There were no concerns for her at this time. The newborn was given an Apgar score at 1 minute of age and 5 minutes of age, each element for heart rate, respiratory effort, muscle tone, response to stimulation and skin colouration can score up to 2 points, giving a maximum of 10 points. [Baby D] scored 8 initially due to her colour, she was quite pale and covered in a white vernix. However, after 5 minutes, she started to pink up and I scored her with a 9, with only her extremities remaining pale.

"[Baby D] went back to her parents and I checked the placenta to ensure it was complete and that there were no abnormalities to it. When I returned to [Mother of Baby D], I noticed that [Baby D] appeared grey and, on picking her up, she seemed quite floppy. A paediatrician was called and I took her to the

Resuscitaire. [Baby D] did not respond to stimulation and I gave her five rescue breaths. I could see chest movement but she remained floppy.

"I then conducted intermittent positive pressure ventilation (IPPV) for 2 minutes, after which she started to cry. This can happen to babies that are born by caesarean section as they still have mucus inside their lungs, which during a normal birth is squeezed out of them and disappears during delivery. This was the thought of Dr Chowdhury, who arrived and examined her shortly afterwards.

"It was around 5 pm when I noticed that [Baby D]'s grunting that was intermittent and had been quiet was becoming louder and more persistent. [Baby D] was also showing no interest in breastfeeding, and when I gave her a vitamin K injection, she did not react how I would have expected. [Baby D]'s colour had gone off-pink again and although her observations were normal I thought she might have an infection. I decided to contact the registrar, Sarah Rylance, and express my concerns.

"It was agreed that [Baby D] would be transferred to the neonatal unit for an infection screen. Dr Chowdhury took [Baby D] to nursery number 1 and I followed shortly afterwards to fully brief Dr Rylance. This was the only involvement I had with [Baby D] and I was shocked when a few days later I became aware that she had sadly died."

That's the statement of Anna McManus.

MR JUSTICE GOSS: Thank you very much.

We'll have our break now, members of the jury. The next witness is going to be screened, so that will be done during the break, and we'll continue in 10 minutes.

Thank you very much.

(3.07 pm)

(A short break)

(3.22 pm)

MR JUSTICE GOSS: I'm sorry that was longer than had been expected. Yes.

MR ASTBURY: Thank you, my Lord.

MS LISA WALKER (sworn)

Examination-in-chief by MR ASTBURY

MR ASTBURY: Can we start with your full name, please.

WALKER: It's Lisa Anne Walker.

ASTBURY: And your profession, please?

WALKER: Neonatal assistant.

ASTBURY: Tell us, please, a little bit about that role.

WALKER: Okay. So it's a band 4 role. We don't look after intensive care or high dependency, it's just special care babies that we look after.

ASTBURY: We've heard a little bit about the structure at the neonatal unit at Chester. Were you employed at Chester, I should confirm, first --

WALKER: Yes.

ASTBURY: -- back in June 2015. And that there were rooms 1, 2, 3 and 4 --

WALKER: Yes.

ASTBURY: -- of varying acuity? Which rooms did you work in?

WALKER: Three and 4.

ASTBURY: What would your roles be in rooms 3 and 4?

WALKER: It's just to take care of the special care babies.

We would look after babies on oxygen, nasal cannula oxygen, or obviously babies that are needing help with feeds, nasogastric tubes, and mainly just supporting them, teaching parents parentcraft.

ASTBURY: Okay. We've heard there was a distinction between the condition of babies in rooms 3 and 4 in comparison to rooms 1 and 2; is that right?

WALKER: Yes, it is.

ASTBURY: Would you ever have cause to go into rooms 1 and 2?

WALKER: No.

ASTBURY: All right. How long had you been doing that job at Chester?

WALKER: I'd been there since 2008.

ASTBURY: Okay. And as a neonatal assistant throughout that period?

WALKER: Yes.

ASTBURY: Now, we've heard a little bit about the shift handover that the nurses would have. Would you be involved in a similar process at the start of each of your shifts?

WALKER: Yes, we all go in together and have handover on the individual ward round and the babies and then we're allocated the babies in handover for that night or day shift.

ASTBURY: So like the band 5s and 6s, you would have your own allocated babies, but in rooms 3 and 4 as opposed to the higher acuity rooms?

WALKER: Yes.

ASTBURY: Okay. Were there certain tasks you could carry out with the babies as opposed to -- or you couldn't carry out with the babies in comparison to the band 5 and 6 nurses?

WALKER: We wouldn't look after intensive care babies on CPAP or Optiflow, or obviously intensive care babies on -- intubated or anything like that. It's just special care babies.

ASTBURY: And as far as medication, could you administer medication?

WALKER: The only medication we can administer is vitamins.

ASTBURY: Okay. I want to ask you, please, about a baby called [Baby D], okay --

WALKER: Yes.

ASTBURY: -- who I think you were able to recall when you provided a statement to the police?

WALKER: Yes.

ASTBURY: Can you tell us, please, what you recall of baby [Baby D]?

WALKER: It was near to the end of my shift. I was going home and [Baby D] was being brought through from labour ward into neonatal unit.

ASTBURY: Let's pause there. She had just come from the labour ward?

WALKER: Yes.

ASTBURY: We know that to be 20 June 2015?

WALKER: From my statement, yes.

ASTBURY: Yes. Sorry, describe what you saw when you saw [Baby D].

WALKER: So I saw the doctor come through -- so there's double doors between the labour ward and neonatal unit. So as I seen him approach the double doors, I opened the door, looked down at [Baby D], and she looked very blue in colour.

ASTBURY: Right, okay. And when you saw [Baby D] looking blue in colour, what did you think?

WALKER: I immediately shouted for help.

ASTBURY: Okay. And did help come?

WALKER: Yes, it did, straightaway.

ASTBURY: Do you recall who it was?

WALKER: I do, yes. It was [Nurse A].

ASTBURY: What happened once [Nurse A] had arrived?

WALKER: I took the baby off the doctor, wheeled the baby into nursery 1, placed the baby in the incubator on a sats machine and then [Nurse A] asked me to go and get some more help, which -- I went and got help.

ASTBURY: Okay. Can you remember which room [Baby D] went in?

WALKER: She went into room 1.

ASTBURY: What did the doctor do who you'd seen bring her through the double doors?

WALKER: He looked shocked that I shouted for help and was wondering why I shouted for help.

ASTBURY: Do you remember where he went once [Baby D] went into room 1?

WALKER: He followed us into room 1 and sat by the computer.

ASTBURY: Okay. What did you make of the doctor's demeanour?

WALKER: Very -- like he didn't know what was going on, like shocked.

ASTBURY: I think as a consequence of what you saw, you completed a form -- we've heard about Datix forms --

WALKER: That's correct.

ASTBURY: -- to express your concerns as to what you found?

WALKER: Yes.

ASTBURY: All right. Did you have any involvement with [Baby D]'s care once she had been taken into room 1?

WALKER: No.

ASTBURY: What did you do next?

WALKER: I just went and got help and then obviously help came and I just left the room then.

ASTBURY: You had your allocated babies in rooms 3 and 4 to continue caring for?

WALKER: Yes, and it was handover time.

ASTBURY: Right, okay. You also told the police about another incident that you recalled.

WALKER: Yes.

ASTBURY: Can you tell us, please, about the other incident that you described?

WALKER: I was working in room 3 at the time, I think there was about three babies and there was myself and Lucy working in there with the allocated babies.

ASTBURY: I'm going to ask you to pause there because I know the answer to these questions, but do you remember the date this took place?

WALKER: I don't.

ASTBURY: Do you remember the name of the babies involved?

WALKER: I don't.

ASTBURY: Are you able to tell us in relation to the incident that you told us about with [Baby D] whether it was before or after?

WALKER: I... I don't know.

ASTBURY: No, all right. So you can't tell us how long before or after the incident you just told us about?

WALKER: No.

ASTBURY: Having interrupted you, I apologise. So you were in the room. Which room was it?

WALKER: Room 3.

ASTBURY: Anyone else in there apart from you and Ms Letby?

WALKER: No.

ASTBURY: And how many babies?

WALKER: I think it was three.

ASTBURY: Tell us what you recall happening, please.

WALKER: I was in there at the time, on the left-hand side of the room, and I think Lucy was on the right-hand side of the room. I think we were both feeding babies at the time.

The saturation monitor alarmed, it goes red and then it alarms, so the baby was desatting.

ASTBURY: Let's pause there. So you're feeding a baby?

WALKER: Yes.

ASTBURY: You said Ms Letby is feeding a baby?

WALKER: Yes.

ASTBURY: How was that being done. First of all you, how were you feeding the baby?

WALKER: I can't remember.

ASTBURY: How was Ms Letby feeding the baby?

WALKER: A nasogastric tube.

ASTBURY: Right. So just practically, what does that involve for a nurse like you or Ms Letby?

WALKER: In regards to feeds?

ASTBURY: To the feeding through a nasogastric tube.

WALKER: So it's obviously a tube that's inserted through your nose, into the tummy, and then babies that can't bottle feed, they get really tired quickly so we use the tube feed. So it's a 10ml syringe that's screwed on to the tube and then the milk is poured in 10ml at a time and it's gravity that takes it.

ASTBURY: We've heard the tube goes through the nose and into the baby's tummy. Where does the syringe attach to the tube?

WALKER: On the very end.

ASTBURY: And is that elevated in some way to make sure that the milk goes in?

WALKER: Yes. It depends on how you hold it, so with gravity --

ASTBURY: Okay, it's a syringe. Is it a syringe, would you ever apply pressure to the syringe or does it simply drip through using gravity?

WALKER: It all depends if there's additives in the feed, if it's Gaviscon or fortifier added then the milk is thickened, so then that would be plunged very slowly, but if it's just milk, it's just gravity.

ASTBURY: Okay. So it can be plunged, but only if there's something in the milk, did you say, to make it thicker?

WALKER: Yes.

ASTBURY: And do you recall on this occasion whether it was simply drip feeding or whether the plunger was being used?

WALKER: I'm not sure.

ASTBURY: So in relation to where you were, where was Ms Letby?

WALKER: On the right-hand side.

ASTBURY: Your right-hand side?

WALKER: Left. I'm left, she's on the right.

ASTBURY: I think in fact you provided the police with a plan of where you were standing when you say this incident happened. If we have a quick look at that, please. If we go to room 3 on the left-hand side of the plan.

Thank you. Do you recognise that handwriting?

WALKER: Yes.

ASTBURY: We can see a door on the right of the room. We can see a sink in the far corner.

WALKER: Yes.

ASTBURY: I think it's pretty self-explanatory. You've got Ms Letby in the right-hand corner as you would walk into the room; is that right?

WALKER: Yes.

ASTBURY: And you are in the far left-hand corner from the same doorway?

WALKER: Yes.

ASTBURY: Okay. There are three marks there. What do those three marks indicate?

WALKER: That's where the cots are with the babies in.

ASTBURY: So that's as you remember the room to be laid out?

WALKER: Yes.

ASTBURY: So you're both feeding your respective babies?

WALKER: Yes.

ASTBURY: And what drew your attention to Ms Letby at that point?

WALKER: It was the alarm going off and the baby desatting and then the baby not picking up, so I went over to help.

ASTBURY: All right. So what would the alarm be attached to?

WALKER: The baby's foot or hand.

ASTBURY: We've heard about different types of monitors in different rooms.

WALKER: Yes.

ASTBURY: Are there a particular type of monitor in -- let's take room 3 as the example -- a particular type of monitor there?

WALKER: That would be a Masimo, not a Philips monitor. The Philips monitor is like a square TV. This is just a monitor that's on a stand and it only records the heart rate and the saturation levels.

ASTBURY: Okay. Is that a fixed monitor or a portable monitor?

WALKER: It's a portable.

ASTBURY: Was it the alarm for that device that you were telling us about?

WALKER: Yes.

ASTBURY: Is there more than one type of alarm or is it just a single tone?

WALKER: There's an alarm for a desaturation or an alarm for oversaturation levels. So there's a higher limit and a lower limit.

ASTBURY: That's on the oxygen saturations in the blood as they're being monitored?

WALKER: Yes.

ASTBURY: All right. And are you able to say which one it was that went off on that occasion?

WALKER: It was the lower one, so it was desatting.

ASTBURY: Okay. What, if anything, did you do when you heard the alarm activate?

WALKER: I went over to help.

ASTBURY: Is that the thing you would normally do in such a situation?

WALKER: Um, yes, it would, if the nurse -- or if the baby wasn't picking up, yes.

ASTBURY: So what, if anything, did Ms Letby do when the alarm went off?

WALKER: She stopped the feed, gave gentle stimulation, and then I think the baby needed some oxygen.

ASTBURY: So we've heard that sometimes a tickle or a touch, something like that, will pick the baby up again; is that your experience?

WALKER: Yes.

ASTBURY: And was that tried in the first instance?

WALKER: Yes. As far as I can remember, yes.

ASTBURY: Was that successful or not?

WALKER: No.

ASTBURY: So what was the next stage if there was one?

WALKER: Facial oxygen.

ASTBURY: All right. Who administered facial oxygen?

WALKER: Lucy.

ASTBURY: Where would that oxygen be obtained from?

WALKER: It's in the wall by each cot space.

ASTBURY: And how would it look to a layperson like me if it was being administered?

WALKER: So it's just a facial mask that goes over the baby's nose and mouth.

ASTBURY: Did the baby respond to the help with the oxygen?

WALKER: Not at first, no.

ASTBURY: Okay. So did the saturations continue to fall or did they just remain at a low level?

WALKER: I can't remember what they were.

ASTBURY: What happened to the alarm?

WALKER: I don't know.

ASTBURY: Okay. Tell us what happened next then, please, when the baby didn't immediately respond to the additional oxygen.

WALKER: So then I think I saw a nurse walk past, Kate, so I shouted for help again.

ASTBURY: Kate who?

WALKER: Bissell.

ASTBURY: Okay. Where was Kate Bissell?

WALKER: She was on the unit, just walking past the door.

ASTBURY: Any reason why you asked for help?

WALKER: Because the baby wasn't picking up.

ASTBURY: Is that something you would ordinarily do?

WALKER: Shout for help? I shout for help all the time, yes.

ASTBURY: Right, okay. Did Ms Bissell respond?

WALKER: She did, yes.

ASTBURY: Anybody else?

WALKER: I think there was a doctor sat outside on the computer, who came as well.

ASTBURY: Do you remember the doctor's name at all?

WALKER: I don't.

ASTBURY: All right. Tell us, please, what happened when Ms Bissell and the doctor came in?

WALKER: The oxygen obviously then was working, gentle stimulation was given, and then the baby recovered.

ASTBURY: Okay. Are you able to say how long it took before the baby recovered?

WALKER: I don't know.

ASTBURY: Once the baby had recovered, what happened then?

WALKER: The doctor and Kate had left the room and then basically -- not shouted at, but Lucy had said, "Why did you

shout for help?" To me enough help -- you can't have enough help.

ASTBURY: She asked you why you shouted for help. In what way did she ask you?

WALKER: Quite firmly.

ASTBURY: How did you feel about that?

WALKER: Shocked.

ASTBURY: Why?

WALKER: Because you can't have enough help in that situation.

ASTBURY: Okay. Did you explain to her why you asked for help?

WALKER: I don't think I did, no.

ASTBURY: Why not?

WALKER: Because you trust your colleagues, don't you?

ASTBURY: Okay. How did you feel when she said this to you?

WALKER: Quite taken aback and shocked.

ASTBURY: Why?

WALKER: Because it's something you wouldn't think a nurse would say, "Why are you shouting for help?", if you clearly need it.

ASTBURY: What was her demeanour when she was talking to you?

WALKER: She was quite firm.

ASTBURY: Okay. You can't remember the name of the baby or the doctor, but is there any reason why it sticks in your memory?

WALKER: It's because I was told off for shouting for help.

ASTBURY: Okay. Did you ever discuss it with her again?

WALKER: No.

ASTBURY: What would you expect -- in your experience what would other members of staff have done in such circumstances?

WALKER: They would have done the same.

MR ASTBURY: Thank you. If you could wait there, please.

Cross-examination by MR MYERS

MR MYERS: I don't know if it's Ms Walker or Mrs Walker?

WALKER: Ms Walker is fine.

MYERS: Ms Walker, I'm just going to ask you a couple of questions, not a great deal. You've told us about two incidents. One of them involved [Baby D] and a doctor.

WALKER: Yes.

MYERS: The other one involved a baby that Lucy Letby was looking after, who isn't [Baby D].

WALKER: That's correct.

MYERS: I just want to ask you about that one first, then I'll ask you about the other one. The one involving Lucy Letby, you're not sure when that happened. I'm not criticising you for that, but you're just not sure?

WALKER: No.

MYERS: You don't know the name of the child --

WALKER: No.

MYERS: -- is that right? You don't remember the sex of the child?

WALKER: No.

MYERS: And just so we're quite clear, so no one misunderstands, you didn't see anything with regard to Ms Letby's actions or treatment of the baby that caused you any concern at all, did you?

WALKER: Not at all, no.

MYERS: No, not at all, all right. She'd been feeding the baby as you'd been feeding another baby; is that right?

WALKER: Yes.

MYERS: And you became aware, because the monitor sounded, that the oxygen level had fallen to some extent; is that right?

WALKER: That's correct.

MYERS: I think you know in your experience, Ms Walker, it's not actually unusual for the oxygen level to fall when a baby's being fed, is it?

WALKER: Not at all.

MYERS: That happens. And you saw Ms Letby stop the feed. I'm just checking that's right?

WALKER: Yes.

MYERS: She gave gentle stimulation, which is what you'd expect at first and then, when that didn't seem to work, she then gave the baby some oxygen; is that right?

WALKER: Yes.

MYERS: It's about that point when you called Kate Bissell to come and help?

WALKER: Yes.

MYERS: And Kate Bissell and a doctor came in; is that correct?

WALKER: Yes.

MYERS: And I think in fact, although they came in, by that point nobody really needed to do anything because the oxygen levels had increased?

WALKER: Yes.

MYERS: All right, thanks. But as you've told us, afterwards there was a discussion from Ms Letby as to why you thought you needed to call for help?

WALKER: Yes.

MYERS: And did -- the impression that you got was that she wasn't so much annoyed as she was just thinking that she didn't need any help?

WALKER: I didn't take it like that. She was cross that I shouted for help.

MYERS: Okay. I think you told the police:

"Lucy's demeanour when she said to me what she did wasn't really being annoyed, I don't think, I think it was saying she would have been fine and didn't need any help."

That's what you told the police.

WALKER: Okay.

MYERS: All right. Anyway, the baby was fine?

WALKER: Yes.

MYERS: All right. That involves a baby that we're not concerned with here in this case.

I'm going to ask you about [Baby D], who is a baby that we are concerned with. You saw [Baby D] on the time she was being brought into the neonatal unit; is that correct?

WALKER: That's correct.

MYERS: And you saw that she looked blue in colour?

WALKER: Yes.

MYERS: And you saw that the doctor who she was with didn't appear to be responding at all to that?

WALKER: Yes.

MYERS: Now, that is something that you were unhappy about when you witnessed that?

WALKER: Yes.

MYERS: You took the cot and you called for help, didn't you?

WALKER: Yes.

MYERS: And then [Nurse A] came and took [Baby D] into the nursery, where she was put into an incubator?

WALKER: That's correct.

MYERS: And you have a system, don't you, at the hospital where if you see a matter that causes concern, you can report that?

WALKER: Yes.

MYERS: And that's called the Datix system; is that correct?

WALKER: That's correct.

MYERS: So given what you saw on that occasion with that doctor and [Baby D], you did make a report of that on Datix, didn't you?

WALKER: I did.

MR MYERS: Okay. That's all I wanted to ask, Ms Walker.

Thank you very much.

MR ASTBURY: I have nothing further.

Does my Lord have any questions?

Questions from THE JUDGE

MR JUSTICE GOSS: Just this. The incident that involved Lucy Letby, you can't remember when it was --

WALKER: No.

MR JUSTICE GOSS: -- in relation to this earlier incident concerning [Baby D]? Can you remember whether it was a night shift or a day shift?

WALKER: It was a day shift.

MR JUSTICE GOSS: It was a day shift, thank you.

Thank you very much. That completes your evidence.

Thank you for coming and giving it. This witness isn't giving evidence again?

MR ASTBURY: I'll check, but I don't think so. No.

MR JUSTICE GOSS: All right.

You won't be required to come and give evidence again, so thank you very much for coming and giving evidence this afternoon. Please don't talk to anyone who knows anything about this case until it's all over.

All right? Thank you very much. If you just wait there for the moment.

MR ASTBURY: My Lord, I'm afraid that's as far as we can go today, for reasons that I think my Lord knows about with the next witness.

MR JUSTICE GOSS: All right. Yes, we can't take it any further this afternoon, the evidence. We'd have to have a break in any event. 10.30 tomorrow, ladies and gentlemen. Please remember your obligations and responsibilities as jurors not to speak to anyone apart from each other when you're all together about anyone or anything to do with this case or conduct any research into anything to do with this case or any of the people involved in it. Thank you very much indeed.

(In the absence of the jury)

MR JUSTICE GOSS: I'm going to rise now. You just stay where you are until you're told to move, all right?

Thank you very much.

(3.48 pm)

(The court adjourned until 10.30 am on Tuesday, 8 November 2022)