24 October 2022
Babies A & B

CONTENTS

Monday, 24 October 2022
(10.30 am)

(In the presence of the jury)

[Nurse A] (continued)

Examination-in-chief by MR ASTBURY (continued)

MR ASTBURY: [Nurse A], we concluded on Friday -- good morning, I should say -- with the events on 8 June 2015 and concerning [Baby A]. I would like to move on now, please, to events the following night, 9 June.

I think you were on duty that night?

NURSE A: I was.

ASTBURY: Your shift was 7.30, commencing at 7.30?

NURSE A: Yes.

ASTBURY: And you told us on Friday about the routine of the initial huddle and then going to the bedside for your, as it were, bespoke handover for the baby for whom you were designated. If I could just ask Mr Murphy, please, to go initially to slide 143 on [Baby B]'s sequence of events, please.

I don't think we need to click into it. We can see there your arrival at 7.27 that evening via the swipe system on the door to the neonatal unit.

If we move on, please, to slide 145. If we can go into that slide, please. We can see there represented on the table those who were on duty, including the consultants, the registrar and senior house officer, nurses and nursery nurses.

Next slide, please, Mr Murphy. This is a diagram of the location of various babies, the staff that were allocated in the context of the neonatal unit itself.

Can you see that clearly, [Nurse A]?

NURSE A: Yes.

ASTBURY: Thank you. We can see, in nursery 1, [Baby B].

You, according to this, can you confirm, were the designated nurse?

NURSE A: I was.

ASTBURY: And according to you, you had a second, certainly for part of the shift, a second designated baby in the same nursery, JE?

NURSE A: I hadn't remembered that. If that's the case --

ASTBURY: Okay. We can see from this that, in nursery 3, Lucy Letby had two babies allocated, located in nursery 3?

NURSE A: Yes.

ASTBURY: I won't take you through all of them. Do you recall who you took over from on the day shift?

NURSE A: I think it was Jo Williams.

ASTBURY: Okay. Were any concerns raised with you about [Baby B]'s welfare during the course of the day shift?

NURSE A: No. She'd had a good day from what I recall. The parents had been there and had cuddles and [Baby B] had had a good day.

ASTBURY: Okay. Just a little bit of trouble hearing you from behind me. I'm so sorry.

NURSE A: Sorry.

ASTBURY: I didn't remind you this morning, my fault. Just try and keep that voice up so the back row of the jury -- then we can be confident --

NURSE A: Sorry. I don't remember any concerns being handed over to me. [Baby B] had had a good day, had continued to improve from my memory. Obviously mum and dad were very upset, I know they had cuddles, so it was -- just handover was unremarkable and that she, thankfully, was doing well.

ASTBURY: Okay. You mentioned mum and dad.

NURSE A: Yes.

ASTBURY: Did you see them during the course of your shift?

NURSE A: Yes. Mum and dad, I think, were there during handover and for the first part of my shift. Mum was still fairly recently after her caesarean, they were still -- mum was still, I believe, an inpatient upstairs and I know that dad and grandma had permission to stay as well, from what I recall.

ASTBURY: Okay. Did there come a point where they left?

NURSE A: Yes, there did. I'd gone over the plan with them for [Baby B]'s care for the night. They wanted to know if anything changed at all, no matter how small. I'd reassured them that obviously if anything changed I would make sure that if I couldn't come and tell them, somebody else would contact them. I reassured them the best I could that we were happy with how [Baby B] was progressing, that we had no concerns about how she was at that point. She was doing well and I encouraged them to go and try and get some rest, but also that they could come, all of them or one of them, at any point in the night or phone down at any point.

ASTBURY: Right. Did there come a point where they did accept your encouragement and go and get some rest?

NURSE A: Yes. I think they knew they had to look after themselves as well.

ASTBURY: So returning to your duties, I think you -- certainly we've heard that there are checks that are undertaken when you first come on duty --

NURSE A: Yes.

ASTBURY: -- to satisfy yourself everything is shipshape and Bristol fashion?

NURSE A: Yes.

ASTBURY: Then you, thereafter, maintain hourly observations?

NURSE A: Yes, because [Baby B] was receiving CPAP, then she would have hourly observations and less regular temperature checks. We do those hourly.

ASTBURY: Okay. I'm not going to take you to them on the sequence of events, but were those checks carried out each hour through the night?

NURSE A: Yes, we document them every hour. You're in the room, you are constantly looking and aware if the monitors alarm at all, and then we document them every hour and document how much has gone through on the infusions and things.

ASTBURY: Do you remember leaving nursery 1 during the early part of your shift up until about midnight that night?

NURSE A: I can't confirm at all whether I left. It wouldn't have been for long if I did, maybe to get something or...

ASTBURY: Okay. Just dealing then with that period, could I ask Mr Murphy, please, to take us to 150.

If we can click into that, please. This is a note you wrote retrospectively at about -- well, at 5.45 the following morning --

NURSE A: Yes.

ASTBURY: -- but it covers the period I have just asked you about.

This is the analyst's summary of what you write. We can go and check it in a moment. But between 8 pm and 00.20, if I can put it that way:

"Continued on CPAP in air for start of shift."

You were telling us before she was on CPAP, which we know is breathing assistance, but just with air:

"Tolerated well, no bradys."

That I think is a --

NURSE A: Bradycardia, slow heart rate.

ASTBURY: Thank you. And desats which is, I think, a fall in oxygen level?

NURSE A: In oxygen level.

ASTBURY: "Tolerating 3ml DEBM..."

NURSE A: Donor-expressed breast milk.

ASTBURY: "... two-hourly."

NURSE A: Yes.

ASTBURY: And:

"All obs satisfactory. Active and handling well."

NURSE A: Yes, that's right.

ASTBURY: Could I just ask Mr Murphy to go to the original note, please, to ensure that that's all we need.

I think it's on the right-hand side about halfway down.

(Pause)

While there's a hold-up, I can -- I don't know whether others can make it out on the screen. It's about halfway down on the right-hand side and I think, I hope I can say this, it's exactly what it says on the tin. It's what the analyst has put on the page before.

So if we can perhaps move on from there while the computer catches up.

I want to ask you, please, and I've mentioned that your hourly reviews appear on this sequence of events, but I'm going to move ahead, please, to a note that you made about an incident just before midnight on 9 June.

It's at entry 210, please.

We'll rely on the summary for now and then we'll double-check it:

"Shortly before midnight [Baby B] desaturated to 75%."

NURSE A: Yes.

ASTBURY: Perhaps if you just refresh your memory from that and tell us what you recall of that incident.

NURSE A: So CPAP is given just nasally on babies, either by prongs or a mask.

ASTBURY: Pausing there, prongs -- two, as it were, tubes that go inside the nose?

NURSE A: Yes. They're very short and quite wide, so they fill the nostrils, so you get a good seal. And the mask sits round the nose so you get a good seal and they're held on, secured to a hat, a special hat.

ASTBURY: The masks or the prongs?

NURSE A: Both.

ASTBURY: Are the prongs part of the mask?

NURSE A: No, they're separate. You can change that little bit of the interface from one to the other if need be. So [Baby B] had prongs in at this point.

ASTBURY: Okay. You say that they're secured by the hat?

NURSE A: Yes.

ASTBURY: Just tell us how that works.

NURSE A: The hats are fitted, so you have to measure the baby's head and get the right size hat. And then the interface of the CPAP has two little ties from it that then weave through three holes on each side of the hat so they hold it securely in place.

ASTBURY: For those who can't see, you're indicating this sort of area here (indicating) --

NURSE A: Yes, there's holes up the side of the hat --

ASTBURY: -- and that's where they pass through?

NURSE A: -- and they take those through the three holes.

ASTBURY: The tape I should say, thank you.

How were you alerted to the fact the prongs had --

NURSE A: So the CPAP driver, the machine, will have sounded an alarm to say the pressure's dropped and also [Baby B]'s monitor alarmed to say her oxygen level had dropped. So though I said in the other note she'd had no bradycardias or desaturations and her levels dropped here, it was because she had knocked or moved

and her prongs had come out. So I would have classed a desaturation as something that happened when nothing else had changed.

ASTBURY: All right. I'm guessing not, from what you told us, but is that an unusual thing to happen?

NURSE A: No. I mean, you secure the CPAP securely but you can't do it too tightly because that's going to be really uncomfortable for the babies and cause indents and even their skin to break down. So it's got to be as secure as you can get it to get the seal, but if the baby moves then it can come out and sometimes, as babies start to feel better, they push it out themselves sometimes because it's there on their face.

ASTBURY: You note here suggests:

"Took a little while to recover."

NURSE A: Yes, and I gave her a little bit of oxygen but that's not uncommon. CPAP provides a pressure that, though [Baby B] was doing all her breathing herself, it takes a little bit of the work out of it because it helps keep the lungs a little bit inflated --

ASTBURY: Okay.

NURSE A: -- when she breathes out. So there's a chance that maybe her air sacs in her lungs had closed down a little bit and it just took a little while for the CPAP to --

ASTBURY: Your note continues:

"HR remained stable."

NURSE A: Heart rate.

ASTBURY: "Good resp effort throughout."

NURSE A: So breathing well, not -- you know, making a good breathing effort.

ASTBURY: "Once settled CBG taken?"

NURSE A: Capillary blood gas.

ASTBURY: Which was normal, according to the note?

NURSE A: Yes.

ASTBURY: And as it happened, this suggests Dr Lambie was on the unit. Do you remember speaking to Dr Lambie?

NURSE A: Not directly, but I must have done. I'd have probably just said, "Oh, [Baby B]'s prongs came out". I can't remember whether she was actually -- she may well have been due a blood gas around that time anyway or I may have decided to do it because she had the desaturation after her prongs had come out.

ASTBURY: You mentioned that [Baby B] was receiving some milk.

NURSE A: Yes.

ASTBURY: Was she being fed in any other way?

NURSE A: She had an infusion going through her -- I think she had a long line at that point.

ASTBURY: Infusion? Could you explain that to us.

NURSE A: So what you might call a drip, an intravenous bag of fluids with a line going through a pump at a set rate through -- I think she had a long line at that point.

ASTBURY: Perhaps if we could go to 212, please. Is there a particular name for the fluids that you were talking about being on the drip?

NURSE A: I was going to say TPN, but it's the Babiven.

ASTBURY: Okay. Total parenteral nutrition?

NURSE A: Yes.

ASTBURY: That's the full title and is Babiven the brand name, is it?

NURSE A: Yes.

ASTBURY: Presumably you call it both during the course --

NURSE A: And the lipids is part of that as well.

ASTBURY: I'm going to ask you about that in a second. I suspect you've settled on what's almost in the centre of the page where it says "Babiven start-up"?

NURSE A: Yes.

ASTBURY: And to the left it says "LL", does that assist with how she was receiving it?

NURSE A: Yes, long line, as I thought.

ASTBURY: So in addition to the milk, she was on a drip of nutrition, fluid nutrition?

NURSE A: Yes.

ASTBURY: That was travelling via the long line?

NURSE A: Yes.

ASTBURY: We've heard a little bit about the long line from Dr Harkness, but that was via a long line. I think you mentioned it went via a pump.

NURSE A: Yes. So to make sure that the right amount is given, the line coming -- the infusion line coming from the bag of fluid goes through a special pump where it can monitor -- well, it delivers a set rate, whatever you set the rate on the pump to. It also detects if there's an air bubble coming down from the bag. It can detect the pressure going -- that's it taking to put the fluid through the line. What else? You can set it to infuse a set amount, so it'll stop infusing once -- it depends what you are using it for.

ASTBURY: So it effectively regulates --

NURSE A: Yes.

ASTBURY: -- what's going in --

NURSE A: Yes.

ASTBURY: -- and, as you said, will detect an air bubble that comes down the line from the TPN?

NURSE A: Yes.

ASTBURY: Would it allow it to pass through?

NURSE A: No. So especially with TPN, because that's under a cover, a plastic bag that you can't see through because it has to be protected from the light, if the bag empties and air starts coming down then that'll detect it and stop the infusion so it doesn't go any further.

ASTBURY: Right. For those of us who have never been in a ward with this sort of thing, where does the bag sit?

NURSE A: So on -- it's on a drip stand, so it's hanging on the drip stand and then --

ASTBURY: It has to be above the patient, does it?

NURSE A: It has to be above the machine really -- so that's if it's a bag. For Babiven it would be a bag.

ASTBURY: All right and it has a set rate that you put in the pump?

NURSE A: Yes.

ASTBURY: You have to cover the bag, did you say, because it's affected by light --

NURSE A: Light sensitive, yes.

ASTBURY: And how long ordinarily would a bag be expected to last?

NURSE A: For most of our babies the bags lasted for the full 48 hours because they were having such a small amount per hour. And then they got changed 48-hourly.

ASTBURY: We may go into this in a bit more detail in later cases, but it's described as "start-up Babiven" on this feeding chart or this intensive care chart. Is it always start-up or does that change?

NURSE A: No, so we had start-up bags that were stocked on the unit --

ASTBURY: Does the name pretty well tell us what they're there for?

NURSE A: Yes. It has a slightly different... Slightly... Um...

Because it's got various trace elements and things in it. So it has slightly different combination of things than later bags.

ASTBURY: Is that designed for a particular stage of a baby's life?

NURSE A: When it starts, yes.

ASTBURY: And what succeeds the start-up formula?

NURSE A: At Chester it was often made up -- it was -- there were sort of follow-on standard bags that followed on, but most of

the time, based on blood results, the doctor would order specific bags for --

ASTBURY: And do you know where they would be made up?

NURSE A: In CIVAS, which is the sterile drugs preparation department.

ASTBURY: Not in the neonatal unit?

NURSE A: No.

ASTBURY: All right. If we could then move please to the next slide, 213. This document is headed:

"Prescription confirmation for neonatal parenteral nutrition."

NURSE A: Yes.

ASTBURY: And we can see on the top left underneath that particular heading, "[Baby B]".

NURSE A: Yes.

ASTBURY: [Baby B] allocated her mum's surname at that stage?

NURSE A: Yes, that's correct.

ASTBURY: If we scroll down we can see various measurements of Peditrace, Solivito and water?

NURSE A: Yes.

ASTBURY: And on the right, the elemental content?

NURSE A: Yes.

ASTBURY: There's mention underneath on the left:

"Lipid feed supplied in separate syringe."

I think you mentioned that --

NURSE A: Yes, that's correct.

ASTBURY: Just hold on a second because I'd like to scroll down the document a little bit more, please. More again, please, Mr Murphy. Some handwriting towards the bottom.

If we pause there. At the top:

"For administration for up to 48 hours commencing at a time before midnight on 9 June."

NURSE A: Yes.

ASTBURY: We can see a signature from the pharmacist?

NURSE A: Yes.

ASTBURY: And then handwritten, "Lipid", a reference number?

NURSE A: Yes.

ASTBURY: A date?

NURSE A: Yes.

ASTBURY: So we've just gone past midnight by the look of it because the time to the right is 00.05.

NURSE A: Yes.

ASTBURY: Is that to denote the time?

NURSE A: Yes --

ASTBURY: So five past midnight. Do you recognise the signature underneath?

NURSE A: I do.

ASTBURY: Whose is that, please?

NURSE A: Lucy Letby's.

ASTBURY: How does lipid or how is lipid administered to the baby?

NURSE A: It comes in a syringe, which you connect to an infusion line. And rather than going through a pump, the syringe goes into what we call a syringe driver. Again, that can be programmed to -- that's programmed for a set rate and/or a set volume, depending what you need.

ASTBURY: So does that not enter then the same long line?

NURSE A: Further down.

ASTBURY: Further down?

NURSE A: Yes. So they're connected further down.

ASTBURY: So there's a connection on the long line to allow other things to be added through it; is that right?

NURSE A: Yes. Some long lines are double lumen, which means they've got two separate sides running down the one line. I honestly don't know whether [Baby B] had a single lumen or a double lumen. With IV you can then put a sort of connector on that means you can run two or more things together, so they join just before they go into the baby.

ASTBURY: Okay. Do they join before the pump or after the pump?

NURSE A: After the pump.

ASTBURY: If we could scroll down, I think there's a second page on this, please. If we go -- so this is another record of the administration of the fluid, the neonatal parenteral nutrition we've been taking about?

NURSE A: Yes.

ASTBURY: If we scroll down, we see [Baby B]'s name on the top right, and if we scroll down to day 3 in the left-hand box, please.

So day 3 of [Baby B]'s life?

NURSE A: Yes.

ASTBURY: 9 June. If we read across, please, the top line: Babiven Maintenance, Solivito and Peditrace. We can see some measurements there. If we go across, we see what appears to be "A Brunton".

NURSE A: Yes.

ASTBURY: Who --

NURSE A: Dr Brunton.

ASTBURY: Thank you, yes, we've heard already from Dr Brunton.

If we continue to read across, tell me please what the date and time signify, 10 June at 00.05.

NURSE A: So it's the time it was put up and started, the bag was changed.

ASTBURY: Okay. In the left hand -- to the left hand of that, are they two signatures?

NURSE A: Yes.

ASTBURY: Whose are they, please?

NURSE A: The top one is mine, the [Initials of Nurse A]. And underneath is Lucy's, Lucy Letby's.

ASTBURY: Right. Is there a reason why there are two signatures?

NURSE A: Because everything has to be double-checked.

ASTBURY: So in the case of TPN, briefly what does double-checking involve?

NURSE A: Making sure that it's prescribed correctly, checking the bags and date, that the bag is for who it says it is, if it's a specific bag. We used to check that what was written on the sheet that you showed before, the list of things, matched the list of things that was on the label on the bag.

ASTBURY: All right.

NURSE A: Putting it up and checking that the rate and the pump is correct.

ASTBURY: Okay. Is that a strict rule for two people?

NURSE A: Yes.

ASTBURY: Is there any significance in one signature appears to be over the other, is there any significance in that?

NURSE A: Not necessarily. I think on some charts, not on this, where the diagonal line divides the box, it may say first checker, you know, administrator and checker. But quite often whoever signs it first will sign in one place and whoever signs it second will sign in the other.

ASTBURY: And if we go to the row below, there's the lipid being introduced, is it?

NURSE A: Yes.

ASTBURY: And we have the same -- if we go over to the right-hand side, we can see in fact two times, there's 10 June at 00.05?

NURSE A: Yes.

ASTBURY: And there's also 23.55. Can you help with us that?

NURSE A: I don't know what that top column is. That far right, if we -- I can't remember what... Oh, "date and time finished". So that's the time and date, so I've put it up at 00.05 and then, on the following shift, I've changed it to 23.55.

ASTBURY: So that's what that means. Just the lipid --

NURSE A: So we do it 24-hourly so --

ASTBURY: What's next to the lipid? Is that just the lipid that would have been changed?

NURSE A: Yes, because the bags lasted 48 hours.

ASTBURY: As well as the TPN?

NURSE A: No, the TPN, the Babiven that we put up on the 10th at 00.05 would have lasted 48 hours from then.

ASTBURY: Okay. Just scrolling to the top document again, and particularly the signature, is there any reason why this has been signed again, do you know?

NURSE A: So it's signing to say that we've double-checked it with the bag. You can see the lipid and the number underneath it is the number off the syringe, so just to record the batch number of the syringe.

ASTBURY: Your signature not there?

NURSE A: No, my signature is not there.

ASTBURY: Does that tell you anything?

NURSE A: Quite possibly an oversight because I've signed it on the other two charts.

ASTBURY: All right. So lipids and TPN hung, if I can use your term, at 00.05?

NURSE A: Yes.

ASTBURY: If we go on to the next slide, please, 214.

Go into the document, thanks. Go to the foot of the document.

An observation chart. We've seen these before. If we can scroll down. This is -- I'm sorry, can we check the times on the top of this, please? I should have done that first. The document itself, just the times across the top of it.

NURSE A: This is the fourth column.

ASTBURY: This starts at 9 pm as opposed to midnight. It starts at 9 pm. The date on the top is 10 June.

NURSE A: Mm-hm.

ASTBURY: But most of the form, of course, will be 10 June, so I don't know whether we can read anything into that.

Could we scroll down to the bottom, please? We talked before about your hourly checks.

NURSE A: Yes.

ASTBURY: Looking at the bottom, does the nurse who's done the checks initial the bottom of the form?

NURSE A: Yes.

ASTBURY: And the first three initials, do you recognise those?

NURSE A: They're mine.

ASTBURY: Okay. There's a gap at midnight but you've told us what you were doing around midnight. Is that significant?

NURSE A: I think... Have I recorded -- are other observations recorded higher up.

ASTBURY: Can we scroll up just that column, please, and double-check it?

NURSE A: Yes, the heart rate and the respirations have been done.

She didn't need her temperature doing. I haven't written in the incubator temperature and the humidity.

I'm guessing either something interrupted me finishing the bottom of the chart --

ASTBURY: Okay. We may come to that in a minute. The 1 o'clock entry, they're not your initials?

NURSE A: No.

ASTBURY: Do you recognise whose they are?

NURSE A: They're Lucy Letby's.

ASTBURY: Do you remember why Lucy Letby might have been doing those observations at 1 am?

NURSE A: Quite likely because it was just after [Baby B] had had an episode and I would have been in the room, but maybe I was talking to parents or doing something else with [Baby B].

ASTBURY: All right. Well, you mention an episode.

NURSE A: Mm-hm.

ASTBURY: Can you tell us, firstly, what time you think that episode was?

NURSE A: Um... Around half past midnight, maybe just before.

ASTBURY: We can look at the note in a minute, but I'd just like to first of all see what you remember. Tell us about what you remember, please, of that incident.

NURSE A: So I remember I was -- I had gloves on, I was drawing medication up -- I can't tell you which baby it was for.

As we said, there was another baby in the room.

ASTBURY: Where were you?

NURSE A: I was standing -- so in the intensive care room, [Baby B] was at the far end and there's sort of a half wall across and I was just by there. I couldn't see [Baby B] directly but, you know, I was in the room and if I looked down the wall I could see her.

ASTBURY: Why couldn't you see [Baby B] directly?

NURSE A: Just because of the half wall --

ASTBURY: Were you on the other side then of the half wall?

NURSE A: Yes.

ASTBURY: All right. Okay. Why would you have gloves on?

NURSE A: Because I was drawing intravenous medication up.

ASTBURY: Okay. All right. Sorry, I interrupted you. You're in nursery 1, you have told us where you were.

NURSE A: Yes.

ASTBURY: What happened?

NURSE A: [Baby B]'s monitor alarmed and Lucy went to her because I was in the middle of preparing the drugs. So Lucy went to her.

ASTBURY: Where had Lucy been?

NURSE A: Standing with me checking the medication.

ASTBURY: Right.

NURSE A: And then Lucy said, "She's apnoeic, she's not breathing", and asked me to go and help.

ASTBURY: Okay. And did you?

NURSE A: Yes.

ASTBURY: Did anyone else go to the cot with you?

NURSE A: There was -- I believe there was only the two of us in the room at that point, so I went over. Sometimes babies do become apnoeic, have too long a pause in their breathing, so, you know, we're used to dealing with that and quite often they recover quickly from that. If they don't then you ask for help from doctors.

ASTBURY: Did [Baby B] recover quickly from that?

NURSE A: No.

ASTBURY: So what happened next?

NURSE A: We had to use the Neopuff to give her breaths because she wasn't breathing herself. She was very pale, she had a blotchy -- blotchiness to her skin. Dr Lambie came and we had to resuscitate her and we called [Dr B] in -- I think she was at home at that point, but she was the consultant on call that night. However, [Baby B] did recover well and didn't need any resuscitation medication.

ASTBURY: Can I break that down a little bit? So you go over, she didn't, did you say, initially respond?

NURSE A: Yes.

ASTBURY: So was it you who administered the Neopuff? Is that your recollection?

NURSE A: (Pause). I may have done for a short while. I'm certain that by the time [Dr B] and parents arrived, I was on the other side of the incubator.

ASTBURY: Okay. How did -- when you were at the incubator, how did [Baby B] appear?

NURSE A: She suddenly looked very ill. She looked very like her brother had done the night before with the pale, white -- with this purple blotchy discolouration (indicating).

ASTBURY: So you were indicating your chest, I think, with your hand.

NURSE A: Yes.

ASTBURY: Just whereabouts was it?

NURSE A: Generally. From my recollection, it was all over. I'm doing this (indicating), but yeah, I...

ASTBURY: Can you describe where on her body you saw it?

NURSE A: It was all over from what I recollect.

ASTBURY: Okay. You mentioned it was like her brother's?

NURSE A: Yes, as I said on Friday, when we were -- that's how [Baby A] had appeared too. I just... I just remember thinking, "No, not again", you know.

ASTBURY: Okay.

NURSE A: As I said on Friday, I'd not seen anything like that before and then to see his sister with the same appearance... Um...

ASTBURY: Okay. You mentioned putting out a call, an emergency call. We've heard a little bit about that.

NURSE A: Yes. I know Dr Lambie had been on the ward shortly before because I'd done the blood gas and discussed it with her and I can't remember whether she'd left or whether she was still on the unit at the time. I know she was there quite quickly and I know we asked for [Dr B] at the same time because we were so concerned because of what had happened with [Baby A] the night before. And I also asked for somebody to go straight upstairs and get mum and dad and --

ASTBURY: Right, okay. What did, if anything, Dr Lambie do when she arrived?

NURSE A: I know we intubated [Baby B], so put the breathing tube in.

ASTBURY: Okay. Any other measures necessary at that stage?

NURSE A: We were breathing for her. I think she had a few chest compressions as well, but then didn't need any medication. Her heartbeat was good, heart rate was back.

ASTBURY: Let's then have a look, if we can, please, at the note that you made at the time. 218, please, Mr Murphy.

Just have a quick read of that for me, please.

(Pause)

NURSE A: Yes.

ASTBURY: We're just going to see if we can get the original note.

That's a note, I'm going to suggest -- do you recognise making the note that you made?

NURSE A: I've seen the original previously and, yes, that's how I recall the --

ASTBURY: So written in retrospect at 7.29 am?

NURSE A: Yes.

ASTBURY: Headed "Significant events":

"00.30. Sudden desaturation to 50%. Cyanosed in appearance."

What does that mean?

NURSE A: So bluish --

ASTBURY: Okay.

NURSE A: -- tinge.

ASTBURY: "Centrally shut down"?

NURSE A: So very pale, not a good capillary refill, so peripherally there's not much circulation going on.

ASTBURY: How do you remember measure capillary refill time?

NURSE A: You can -- by pressing on the chest area for 5 seconds and then releasing and counting how long it takes for the colour to return.

ASTBURY: "Limp and apnoeic"?

NURSE A: Yes.

ASTBURY: "CMV"?

NURSE A: Continuous mandatory ventilation, so breaths via the Neopuff mask.

ASTBURY: Okay. And "chest movement seen". And then:

"Colour changed rapidly to purple blotchiness with white patches. Starting to become bradycardic.

Emergency call for doctors put out. Continued with Neopuff via Guedel airway."

What's a Guedel airway?

NURSE A: It's a little airway that you can put in. It sits over the tongue and holds the tongue out of the way. It's got a hole down the middle of it so you can then put the mask on. It's just a little more -- it's a way of making sure the airway's secure so you can give the breaths.

ASTBURY: How long did this -- are you able to say -- collapse continue for?

NURSE A: Um... My recollection is that she did start to stabilise quite quickly, maybe 10/15 minutes of -- and she was looking better.

ASTBURY: Okay. Did the family come --

NURSE A: Yes.

ASTBURY: -- in response to your alert?

NURSE A: Yes.

ASTBURY: The next note that you made of what followed is at 2.30, please.

So this is a continuation by the look of it of the note you made at 7.29?

NURSE A: Yes.

ASTBURY: It continues on from the last:

"... [until] Dr Lambie arrived. Became bradycardic to 80s. Successfully intubated [I think that should say] by Dr Lambie and HR improved quickly."

That's heart rate?

NURSE A: Yes.

ASTBURY: "0.9% saline bolus given and colour started to improve almost as quickly as it had deteriorated."

NURSE A: Yes.

ASTBURY: Which colour was that?

NURSE A: The purply/white blotches.

ASTBURY: "Started to breathe for self. Morphine commenced and placed on ventilator."

NURSE A: Yes.

ASTBURY: And you give the rate as "30 SIMV"?

NURSE A: Synchronised intermittent mandatory ventilation.

ASTBURY: Thank you.

NURSE A: Just a mode of delivering ventilation.

ASTBURY: What does the 20/6 stand for?

NURSE A: So that's the pressures. So the 20 is the peak inspiratory pressure, so that's the highest pressure they're breathing in. The 6 is the peak, the peak -- end expiratory pressure. And that's -- so that's the same as the CPAP provides. It's just keeping a little bit of pressure in the lungs.

ASTBURY: So the highest and the lowest?

NURSE A: Yes.

ASTBURY: And that's at 00.50?

NURSE A: Yes.

ASTBURY: And you add that:

"Parents had been called to the unit as requested after doctors had been contacted. Kept fully informed throughout at cot side."

NURSE A: Yes.

ASTBURY: So how did [Baby B] fare after her recovery?

NURSE A: She did well. I looked after her again the following night and she was back on CPAP, she'd been extubated, taken off the ventilator, in the day, and she did well.

ASTBURY: Okay. So you had the following night shift as well?

NURSE A: Yes, I believe.

ASTBURY: Beginning 10 June?

NURSE A: Yes.

ASTBURY: Any other significant collapses or alarms?

NURSE A: No.

ASTBURY: I haven't taken you through them, but the jury have seen on the sequence of events quite a few messages between you and Ms Letby by WhatsApp. Was that a regular occurrence, you chatting on the WhatsApp?

NURSE A: We were friends.

ASTBURY: Okay. I'm not going to take you through them all. I'd just like to ask you about one of them, please, which is at 297.

So that's a message from you to Lucy Letby. From what you told us, that was the third of those night shifts with [Baby B] --

NURSE A: Yes.

ASTBURY: -- that you described. And you tell her:

"We also have a 30/40..."

NURSE A: So pregnancy is 40 weeks' gestation, so this baby was 30 weeks' gestation --

ASTBURY: Okay.

NURSE A: -- so 10 weeks early.

ASTBURY: "800 grams" is that?

NURSE A: Yes, little for 30 weeks.

ASTBURY: Okay. And, "New twins" --

NURSE A: Yes.

ASTBURY: -- "T1 girl, T2 boy"?

NURSE A: Yes.

ASTBURY: "Boy vented and in [Baby A]'s space."

NURSE A: Yes.

ASTBURY: Now, is that the twin boy or is that the first baby that you're talking about? Can you remember?

NURSE A: I don't know.

ASTBURY: The jury are going to hear about a 30-week baby weighing 800 grams and born on 10 June. Do you happen to remember the baby's name that you were talking about in that message?

NURSE A: Um... Only because of this.

MR ASTBURY: Okay. I won't take that any further.

Thank you.

I have no more questions for you, thank you. If you wait there, please.

Cross-examination by MR MYERS

MR MYERS: [Nurse A], I'm going to ask you some questions on behalf of Lucy Letby. I'm going to ask some questions that deal with some general matters first of all and then we'll have a look at some of what happened with [Baby A] and some of the things that happened with [Baby B].

Just by way of general matters, just some questions about the kind of babies you look after in the unit.

Can I ask you about that first?

NURSE A: So at this time Chester was a level 2 unit, so it could look babies from 27 weeks' gestation and above.

MYERS: They can be quite fragile little children, can't they?

NURSE A: They can, yes.

MYERS: And they require careful observation whilst they're with you?

NURSE A: Yes.

MYERS: And it's important, isn't it, to be able to spot problems early on?

NURSE A: Yes.

MYERS: Because they can deteriorate rapidly if a problem takes hold, can't they?

NURSE A: They can, yes.

MYERS: In your experience -- this is general, I'm not talking about the particular cases we're talking about here -- but generally, bradycardia, which is a slowing heartbeat, is not unusual in neonates?

NURSE A: No.

MYERS: And desaturations, so when the breathing rate changes and the oxygen in their blood lowers, that can happen as well, can't it?

NURSE A: Yes.

MYERS: And there are occasions when they can even be apnoeic, so they stop breathing for a period?

NURSE A: Yes.

MYERS: We've heard something about the handling, the actual practicalities of handling these kind of little babies.

NURSE A: Yes.

MYERS: And something which can happen is the mere act of handling can make them stressed, can't it?

NURSE A: It can, yes.

MYERS: And it's in fact possible for them to desaturate on handling? I'm not talking about [Baby A] or [Baby B] at this point, these are general points.

NURSE A: They can, yes.

MYERS: They can desaturate on handling. If you, I'm asking about you, see one of the babies who may be has a slight desaturation

or some initial issue, do you always intervene or do you sometimes just wait to see what happens next?

NURSE A: It could be that you wait to see. You wouldn't wait indefinitely to see.

MYERS: No. But might you wait just to see if, I think the expression is, self-corrects?

NURSE A: Yes.

MYERS: If a baby is on a ventilator and there's an apparent desaturation, depending on the size of the desaturation, might you wait then to see if the baby self-corrects?

NURSE A: Um... You might in certain circumstances.

MYERS: So it depends on the circumstances?

NURSE A: Yes.

MYERS: So obviously if it was some enormous drop in oxygen, you'd probably react very quickly to call for help?

NURSE A: Yes.

MYERS: If it was at an early stage, you might just wait to see if it self-corrects?

NURSE A: It'd partly depend on the baby.

MYERS: Yes, all right.

I'm going to ask you next about staffing in the unit, staffing levels. On Friday you gave us some evidence about this. It was suggested to you that to deal with the issues you might get people to come in and work extra shifts or be flexible with the rota to try and cover what you had to do --

NURSE A: Yes.

MYERS: -- to try and cover what you had to do. That's what you said in answer to some suggestions that were made to you.

I just want to go back to some of the things you said right away at the beginning of your evidence, please, [Nurse A].

There were definitely periods when you were short-staffed, weren't there?

NURSE A: Yes.

MYERS: And there were times when it was okay?

NURSE A: Yes.

MYERS: You didn't always on the unit manage to meet the BAPM recommended staffing levels, did you?

NURSE A: That's correct, yes.

MYERS: None of this I'm suggesting is any of the fault of nursing staff, can I make that plain?

NURSE A: Yes.

MYERS: It's just the reality of the situation. As a fact, there were some shifts when they were just too short-staffed, weren't they?

NURSE A: Yes.

MYERS: I just want to ask you next about the doctors, if I may, please.

NURSE A: Yes.

MYERS: We're getting the hang of this now, but there's different levels of doctor who would assist on the unit and work there, weren't there?

NURSE A: There are, yes.

MYERS: And at the top, in terms of experience, generally speaking, are the consultants; is that correct?

NURSE A: That's correct.

MYERS: At the time we are looking at, from June 2015 to June 2016, were there seven paediatric consultants. Do you know how many there were?

NURSE A: Yes, seven sounds right.

MYERS: Were those paediatric consultants shared between the paediatric wards and the neonatal unit?

NURSE A: They were, yes.

MYERS: So when we're talking about the seven consultants in the case, they covered actually all the paediatric services in the Countess of Chester Hospital, from the smallest to the oldest?

NURSE A: That's right, yes.

MYERS: And heading the paediatric department, were there two particular lead consultants?

NURSE A: Yes. So there was the neonatal lead and then there was the medical director.

MYERS: The neonatal lead, was that Stephen Brearey?

NURSE A: Yes.

MYERS: He was a consultant paediatrician?

NURSE A: Yes.

MYERS: But he's neonatal lead for the unit?

NURSE A: Yes.

MYERS: And then was Dr Ravi Jayaram, was he in effect the lead clinician for children's services?

NURSE A: He was, yes.

MYERS: So the two of them are the kind of, in terms of managing the services and the unit, the top consultants?

NURSE A: Yes.

MYERS: The lead consultants?

NURSE A: Yes.

MYERS: You've explained how the consultants are shared between the paediatric wards and the neonatal unit; yes?

NURSE A: Yes.

MYERS: During the week, one of those consultants would be designated paediatrician of the week for the neonatal unit; is that correct?

NURSE A: That's correct, yes.

MYERS: Right. And the other six would be then based on the paediatric ward?

NURSE A: Um... Yes, they... They would still do some of the on-calls.

MYERS: Some of the on-calls?

NURSE A: Yes.

MYERS: But in terms of designated to duties, in the course of a week six of them would be for the paediatric wards and one would be paediatrician of the week for the neonatal unit?

NURSE A: There'd be a named consultant for the paediatric ward for the week as well --

MYERS: Right.

NURSE A: -- and then the other five would be doing various clinics and other things. I couldn't tell you exactly.

But both sides had a named consultant for the week.

MYERS: Both sides had a named consultant. Would the six of them who weren't named for the neonatal unit be based over on the paediatric wards during the week?

NURSE A: Not necessarily. They might be in clinic, they might be doing office work, they might -- like the ward round on the neonatal unit would involve the paediatrician of the week there, then on the paediatric ward it would be that paediatrician of the week, it wouldn't necessarily be all of them.

MYERS: Would it be fair to say that the bulk of the focus in terms of man and womanpower with consultants was on the paediatric wards rather than the neonatal unit?

NURSE A: Yes.

MYERS: You made mention to Lucy Letby being a friend.

NURSE A: Yes.

MYERS: I just want to ask a few questions about Ms Letby, if I could. You're aware that she studied nursing at Chester University before qualifying, didn't she?

NURSE A: She did.

MYERS: And in fact, did she come to the neonatal unit in Chester to work there during her training?

NURSE A: She did, twice.

MYERS: Twice. And then that's where she eventually came to when she qualified?

NURSE A: Yes.

MYERS: And in fact, one of the occasions when she came to the neonatal unit, did you have a role of monitoring her at that stage as a student?

NURSE A: As a mentor. I thought it was both.

MYERS: Both what, please?

NURSE A: Both times.

MYERS: Both times. So you'd met her when she was a student?

NURSE A: I had.

MYERS: And that would have been around perhaps 2010 to 2011?

NURSE A: Yes.

MYERS: And then once she came to the unit, you were working with her; is that correct?

NURSE A: Yes.

MYERS: And you got to know her quite well then?

NURSE A: Yes, we were good friends.

MYERS: And you worked closely for a period of years?

NURSE A: Yes.

MYERS: We know the allegations we're dealing with here, we know that, but your experience of her when you were working with her was that she was highly professional, wasn't it?

NURSE A: It was, yes.

MYERS: And your experience of her was that she was dedicated to the work she was doing?

NURSE A: It was, yes.

MYERS: You were asked some questions about the contact and communications that you had.

NURSE A: Yes.

MYERS: It would be quite usual for you and Ms Letby to message each other day to day?

NURSE A: Yes. Maybe not every day. Yes, we messaged.

MYERS: When you messaged, I make it plain, there's no criticism being made with this, but when you messaged you might message about things to do with work?

NURSE A: Yes.

MYERS: Or you might message about social things?

NURSE A: Yes.

MYERS: Personal things?

NURSE A: Yes.

MYERS: Whatever was on your minds. And it wasn't just Ms Letby that you would message like that, you'd have other members of staff you might communicate with, would you?

NURSE A: Um... Yeah, um... One other in particular that I was good friends with.

MYERS: All right.

NURSE A: Others -- yes, but not to...

MYERS: So in other words, if it's someone you're friends with on the unit, you might talk about what's going on at work or in your personal life or social life?

NURSE A: Yes.

MYERS: And would you sometimes talk in your messaging about babies and what had happened on the unit with them?

NURSE A: A little.

MYERS: We've just seen a message just now the prosecution took you to, didn't they?

NURSE A: Mm-hm.

MYERS: And would you sometimes talk about how the experience was for the parents of those babies?

NURSE A: Um... Yes, we might do.

MYERS: And in your experience, I can't ask you to speak for every member of staff there, sometimes did you get quite close to parents, get to know them and get close to them?

NURSE A: Um... Do you mean at work?

MYERS: Let's start with at work. Sometimes you'd get on particularly well maybe with some parents, you try to get on with them all, but you might get on particularly well?

NURSE A: Yes.

MYERS: And sometimes did you ever remain friends with parents afterwards, after they'd left the unit?

NURSE A: Um... Not... Not often, no.

MYERS: Not often. Did you sometimes?

NURSE A: Um... (Pause). Yeah.

MYERS: Yes, okay. And are there some even -- I'm making no criticism of this -- where you might remain friends, for instance, via Facebook or something like that?

NURSE A: Not to a big degree.

MYERS: Not to a big degree, but to some then?

NURSE A: Yes.

MYERS: Did it sometimes happen that if a baby did die on the unit staff might go to the baby's funeral?

NURSE A: Yes, if that was what the parents wanted.

MYERS: Yes. So if the parents were all right with that.

NURSE A: Sometimes parents wanted staff to go.

MYERS: All right. Let's move forwards to 8 June, which is the events concerning [Baby A].

You were shift leader on the night of 8 June when you came on at 7.30; is that correct?

NURSE A: Yes.

MYERS: As a general rule is one of the ideas behind the shift leader that they are able to step in as and when required?

NURSE A: Yes.

MYERS: So ideally, you'd try to not have a designated child, ideally?

NURSE A: Ideally.

MYERS: But in reality, because of the way staffing was, you might have to deal with one or more?

NURSE A: Yes, yes.

MYERS: Were there any particular duties that went with being a shift leader?

NURSE A: There were certain checks you might carry out, checking cover on the rota, oncoming shifts.

MYERS: We know there's some fridges on the unit that are kept, storage fridges.

NURSE A: Yes.

MYERS: Are they secure fridges?

NURSE A: Some of them are.

MYERS: Who keeps the keys to those fridges?

NURSE A: There's a bunch of keys and they'll be on those. I'm trying to think which. Yeah, they would just be on those.

MYERS: Who'd be in charge of that bunch of keys?

NURSE A: Um ... They weren't always with one person. It might be that they started off with the shift leader, but if somebody needed medication checking, you needed to give medication, you might give them the keys and then they may check it with someone else.

MYERS: In theory they start with the shift leader?

NURSE A: Yes.

MYERS: And if somebody needs to use them to get medication, they may come and ask for them and use them to enter the fridge to get what they need to get?

NURSE A: Yes.

MYERS: When you came on as shift leader, are you told if there's any particular problems going on on the unit at that point as part of the handover process?

NURSE A: Yes.

MYERS: So did there come a point when you knew it was thought [Baby A] might have a UVC in the wrong position when you came on?

NURSE A: Yes, I think I was probably told that as part of the shift leader to shift leader handover. But it's not an uncommon occurrence when these lines are inserted.

MYERS: If they are inserted in the wrong place, the idea is to get them into the right place as quickly as you can, isn't it?

NURSE A: Yes.

MYERS: Not much point having a line that a baby needs for things if it's going to the wrong place, is there?

NURSE A: No.

MYERS: Did you become aware at some point that the long line he'd been given was suspected also to be in the wrong position?

NURSE A: Um...

MYERS: Or did you not? Don't guess if you can't remember.

NURSE A: No. I don't think I was told that before his collapse.

MYERS: Were you told that after his collapse, that there was a concern it had been in the wrong position?

NURSE A: I think it was removed during his collapse because of that --

MYERS: Yes, it was. It was removed during it.

NURSE A: -- because of that question.

MYERS: Right. So you became aware that it was suspected the long line was in the wrong position?

NURSE A: Yes.

MYERS: But it was removed?

NURSE A: Yes.

MYERS: Were you made aware that he'd been without fluids or dextrose for a period of hours?

NURSE A: I can't remember.

MYERS: Around about the time that the handover was taking place, maybe towards the end of it, were you aware that [Baby A] was due to receive some dextrose, some fluids?

NURSE A: I think, again, possibly as the shift leader to shift leader handover, it would be that they were going to start some fluids.

MYERS: Right. It's important fluids go into the line as soon as possible, isn't it?

NURSE A: Yes.

MYERS: One moment, please, [Nurse A].

(Pause)

If fluids are going to be given to a baby, there will be two nurses involved in that process, won't there?

NURSE A: Yes.

MYERS: One of them checks the fluid and the other one is connecting the bag to the line to the baby?

NURSE A: Yes. So you're both checking it and then one of you will connect it.

MYERS: The one connecting it will have to be scrubbed and sterile; is that correct?

NURSE A: Yes, they'd have sterile gloves on. They wouldn't be in a full sterile gown, but they'd have sterile gloves on if it was a central line like this.

MYERS: That's right. Can you help us with who it was that checked the bag and who it was that connected the bag and actually started the process?

NURSE A: I can't. I wasn't in that room at that point.

MYERS: No. Well, I'm just going to ask you to have a look at something that you said in your interview to the police, just to see if we can assist with this. It's an interview from 30

January 2018 and I'm going to ask that it can be shown to you, his Lordship and the barristers.

It's at K1679, please.

I'm going to ask that this goes up so you can see it and read the page and I'm going to ask you some questions about it.

If you could read that page to yourself, [Nurse A].

(Pause)

NURSE A: Yes.

MYERS: Can I ask you again, having had the chance to read what you said to the police in January 2018, if you can help us with who it was who connected the fluids to the line?

NURSE A: It appears that then I was able to say that it was Mel that done it.

MYERS: It was, wasn't it? It was Mel. Just to assist with this, Mel -- Lucy Letby came on to the handover to take over with [Baby A], didn't she?

NURSE A: Yes.

MYERS: And Mel was due to run the fluids through the line, wasn't she?

NURSE A: Yes.

MYERS: And Lucy Letby assisted with that, didn't she?

NURSE A: Yes.

MYERS: Ms Letby is the person who checked the fluid; is that correct?

NURSE A: Yes.

MYERS: And you were able to tell the police that Mel Taylor was sterile from doing the line, in other words wearing the sterilised gloves; that's correct, isn't it?

NURSE A: Yes.

MYERS: And you said -- I'm just looking down towards the end of the section:

"It made sense, Lucy taking over. So they checked those fluids together, they checked the bag was correct, that it matched the prescription, that the infusion pump was set to the right rate. Mel connected the fluids and pressed start."

NURSE A: I've -- yes.

MYERS: All right. And it helps sometimes to go back, but that's what happened, isn't it?

NURSE A: Yes.

MYERS: All right, thank you.

I'm going to ask you next about when [Baby A] collapsed. At some point before that took place, you had left the unit for a brief period, hadn't you?

NURSE A: I had, yes.

MYERS: And it was when you came back that you could see the activity over towards -- in the nursery where [Baby A] was; is that correct?

NURSE A: Yes.

MYERS: Were there doors and you could see straight through them?

NURSE A: Where the doors are that you swipe to get through, they had glass panels in them.

MYERS: Yes.

NURSE A: The corridor went straight down and the nursery that [Baby A] was in was directly ahead of you and the door tended to be open most of the time, so I could see directly to his cot space.

MYERS: We've got a map. I wonder if you can look in the folder in front of you. It will be behind divider 4. Just so everyone can follow exactly what you're saying the view was as you came back on.

If you go behind divider 4 and anyone else who wishes to see it, but I know, ladies and gentlemen, you've already seen the map.

If you take time to get your eye on that, [Nurse A].

NURSE A: If you took outside the unit to the white bit of corridor where the donor bank -- the donor milk room is --

MYERS: Yes, that's helpful.

NURSE A: -- and the staff room.

MYERS: And in the middle of the plan at the bottom we can see it says "blood bank/donor milk".

NURSE A: Yes. So I came out of the room there (indicating) --

MYERS: All right.

NURSE A: -- and turned towards the unit and you can see the red locked doors.

MYERS: Yes.

NURSE A: So those doors have a glass panel in them, in both doors, so you can see into the unit. If you look down that bit of corridor you can see the door into the nursery, nursery 1, which was where [Baby A] was, and to the right of that, that is a window. So with the door open and that window you can see directly into nursery 1 and [Baby A] was in that space directly opposite the window and door.

MYERS: And that's what you could -- you could see something happening there as you came through that door?

NURSE A: Yes.

MYERS: We can see, if it helps, the time that you came through that door to help us with timings if we look at slide 180, please, on the [Baby A] timeline.

We probably don't need to go behind the slide itself. At 20.20 is when you walk in, so it'll be at about that point that you see this happening?

NURSE A: Yes.

MYERS: You told us on Friday that your memories of the resuscitation have been clear; is that right?

NURSE A: The... The... Yes. There were little bits I couldn't answer as to who gave drugs and things, but for the majority, yes, my --

MYERS: And you were asked on Friday about the discolouration on [Baby A]. Do you remember that you were asked about that?

NURSE A: Yes.

MYERS: You said a number of things. You said that you'd never seen a baby look like that before?

NURSE A: No.

MYERS: That he was very white, with kind of purply blotches?

NURSE A: Yes.

MYERS: And you said he was cyanotic as well, which we now know, if we didn't before, is a kind of blue colour?

NURSE A: Yes.

MYERS: You told us there was a purply blotchiness with white that you had not seen before over his body.

NURSE A: Yes.

MYERS: In fact, you were asked, "Any particular area?" -- this is on Friday -- and you said:

"Well, everywhere -- maybe more the torso but I can't remember clearly."

NURSE A: My impression is it was everywhere.

MYERS: What you said was how unusual it was?

NURSE A: Yes.

MYERS: So it was a remarkable display, this discolouration, wasn't it?

NURSE A: Yes, it was.

MYERS: That's what you told us on Friday. After the interview where you have just looked at a bit of it there, you made a statement to the police. Do you remember you made a statement based on what you'd said in the interview?

NURSE A: Yes.

MYERS: And that statement was in May 2018?

NURSE A: Yes.

MYERS: When you made that statement, I'm going to remind you of something you said when you were asked about [Baby A] and the description you gave them, not the description you gave on Friday. When you made the statement, [Nurse A], you said:

"He was centrally very pale and unusually his limbs were what I can only describe as white."

And that's all you said about discolouration, [Nurse A], all you said.

NURSE A: Okay.

MYERS: You didn't mention an unusual discolouration, did you?

NURSE A: It's not...

MYERS: Or purple blotchiness or anything like that, you didn't?

NURSE A: Okay.

MYERS: And although on Friday you said maybe there was more discolouration on his torso, when you made the statement to the police back in 2018, 4 years ago, you said:

"Centrally he was very pale."

Yes? And you've explained to us centrally means this area on the central part of the body; yes?

NURSE A: Yes.

MYERS: That's right, isn't it? That's different from the description you gave us on Friday, isn't it?

NURSE A: Yes.

MYERS: Now, after you'd been interviewed about [Baby A] and after you made your statement in 2018 saying that:

"Centrally he was very pale and unusually his limbs were what I can only describe as white."

That's all you said then -- a couple of months later you were interviewed by the police about [Baby B], weren't you?

NURSE A: Yes.

MYERS: And you then made a statement about [Baby B] to the police. I'm not expecting you to remember all the dates. If it helps you made that statement in July 2018. So that comes a couple of months after the [Baby A] statement. It was when you went back and made the statement about [Baby B] that you added the details that [Baby A] looked like [Baby B].

NURSE A: Okay.

MYERS: Right. I'm going to have a look at how it is we get to this position with you. Are you able to help us with how it is that you say [Baby A] looked like [Baby B] in the second interview but at the one where you first gave the account you said how pale and white he was? Can you explain that difference?

NURSE A: No.

MYERS: Were there people who you were talking about this to, who in some way maybe jogged your memory, that wasn't [Baby A] like that, don't you think you need it to say [Baby A] was like that? Did anyone say that to you?

NURSE A: Um... No, I can't remember specifically anyone saying that to me and I tended not to discuss... Um...

I don't know, maybe thinking about it more...

MYERS: Have you imposed what you saw on [Baby B] on to your memory of [Baby A], if it's possible to answer that, or might you?

NURSE A: I don't -- I don't know whether it's possible to answer that. I don't know whether maybe I... I thought about it more after my interview with [Baby A] and realised that actually that was what he'd looked like. I don't know, it could be either.

MYERS: But the fact is when you were interviewed about [Baby A] -- which was 3 years after it took place, wasn't it?

NURSE A: It was.

MYERS: Yes. Even though you've told us there was a very unusual and striking colour, that isn't what you said in the interview, is it?

NURSE A: No.

MYERS: No. And in fact, isn't it the case that [Baby A]'s colour was different from [Baby B]'s when he collapsed?

NURSE A: I don't know that I can answer that now.

MYERS: All right. Let me just finish with [Baby A], my Lord, in perhaps just a moment or two.

Just before I move on to that, there was a lot of talk about people on the unit about these -- what they said were these rashes and these patterns, wasn't there?

NURSE A: Um... Yes, I think there was.

MYERS: Yes. And people discussing what they said they'd seen or heard other people had seen?

NURSE A: Yes.

MR JUSTICE GOSS: Is that generally or is it over a specific period?

MR MYERS: I'll narrow it down, my Lord.

MR JUSTICE GOSS: It's just you've left it completely open.

MR MYERS: Firstly, at the time this all happened, was there a lot of discussion about rashes?

NURSE A: Yes, I think maybe there was because it was so unusual.

MYERS: Yes. And then out of interest, in the years that followed, was there some discussion about rashes?

NURSE A: Um... I can't... I mean, it's over 5 years since I left the unit, so I... I left the unit before either of those interviews.

MYERS: Yes.

NURSE A: So I can't say what was being discussed on the unit because I didn't work there around the time. The police weren't involved till just before I left, so it doesn't come to mind that --

MYERS: There were discussions around about the time these things happened, you remember that?

NURSE A: Yes, we discussed the twins as, you know, a way of supporting each other as well.

MYERS: So actually, then, before you came to make the statement to the police, where you said [Baby A] was white, you had already discussed the twins with other people?

NURSE A: Years before.

MYERS: Yes. Thank you. Just this before we conclude with asking about [Baby A]: do you recall that after he had died, there was a conversation about it might be important to keep the TPN bag that had been used to check the fluids in it?

NURSE A: I do.

MYERS: Do you recall who it was who suggested that that could be done?

NURSE A: I believe it was Lucy Letby.

MYERS: Did you hear Dr Jayaram at any point make such a suggestion about that?

NURSE A: Not that I recall.

MYERS: Do you recall whether in fact she did put it in a paper bag and label it and put it in the sluice room?

NURSE A: I can't remember --

MYERS: None of those things?

NURSE A: -- in that detail.

MYERS: Do you recall whether other people were in agreement that that bag should be checked?

NURSE A: I can't recall.

MYERS: You do --

NURSE A: I know I talked to Lucy about it.

MYERS: All right.

Finally this: we've heard about how one of the things that happens when there is, sadly, a death is, if the parents wish, a memory box is put together?

NURSE A: Yes.

MYERS: Did you and Lucy Letby talk about doing a memory box for [Baby A]'s parents?

NURSE A: I can't remember a specific conversation, but I'm sure we did. I was shift leader.

MYERS: And doing that is part of a number of things that are done when there's a bereavement or unit or may be done, isn't it?

NURSE A: Yes.

MYERS: I just want to put up, if we could, finally, document D6, Mr Murphy, if you can. This comes from the exhibit pages 1141 to 1142. Just enlarge the top half so the jury can follow what it is we have here.

Are you familiar with -- are you aware of the existence of a document like this, [Nurse A]?

NURSE A: Yes.

MYERS: And it's a checklist that's followed in the event of a neonatal death on the unit, isn't it?

NURSE A: It is, yes.

MYERS: We can see here this relates to [Baby A], we can see that on the left. Then we can see there's a whole list of steps that can be taken?

NURSE A: Yes.

MYERS: So when in this case, for instance, we hear about a minister of religion being asked for or requested, that's a formal part of this procedure, potentially, isn't it?

NURSE A: Yes.

MYERS: Likewise photos being taken of a baby, that's a formal part of the procedure, if the parents consent?

NURSE A: Yes.

MYERS: If we carry on to go down, we can see at the bottom there, "Consent for hand and footprints"?

NURSE A: Yes.

MYERS: And then the nurse who's dealt with it, with that measure, will then date it and sign it; is that correct?

NURSE A: Yes, that's correct.

MYERS: We can see where Ms Letby has been involved with this in the case of [Baby A]?

NURSE A: Yes.

MYERS: Scroll down to the bottom half, please. In fact, could we pause it there? Just to note the sort of things: ID bands and names, clothes and hat, treasure box. All of those are things you have to consider, aren't they, [Nurse A]?

NURSE A: Yes.

MYERS: If we go to the bottom of the page, please. Just enlarge that so we can see it.

Again we can see other actions taken:

"Parents informed of the bereavement coordinator role."

That's signed by a different nurse at that point, isn't it? Is it "N Blease"?

NURSE A: Yes.

MYERS: And then down below there the NNU bereavement information and there is a big signature at an angle; is that Minna Lappalainen's signature?

NURSE A: Yes.

MYERS: So a number of nurses may deal with different aspects of this process?

NURSE A: Yes.

MR MYERS: Thank you very much.

My Lord, could we stop there?

MR JUSTICE GOSS: Yes, certainly.

We'll have a 10-minute break now. Thank you very much, members of the jury.

(12.02 pm)

(A short break)

(12.15 pm)

MR JUSTICE GOSS: We'll have to break off no later than 12.50 because the computers have to reboot and the system will go off.

MR MYERS: Yes. I've heard that. In fact, I think I will have finished by then, my Lord.

MR JUSTICE GOSS: And that clock in fact is a minute or two fast, I think. Go by the digital clock.

MR MYERS: I'll keep my eye on it, my Lord.

[Nurse A], just some questions about [Baby B] now if I could, please. I'm going to ask Mr Murphy to put something up on screen called the neonatal review for [Baby B].

If we just scroll down to line 30. Then we're going to look between lines 30 and 32. Unfortunately they are over a page break so we will look at line 30 first -- oh, there we are, we can manage it. Thank you, Mr Murphy. If we just enlarge to be on line 32 so we can see what we have here. That's great, thank you very much.

This is a chart that's been constructed by the prosecution just out of records from the unit to show, so far as we can see, who was where and doing what at particular times on the unit. I'm not going to expect you to know all that's in here. I just have a couple of questions about a couple of entries.

Can you see that at line 30 it records you doing a prescription for a baby labelled as HM at 10.20 that evening?

NURSE A: Yes.

MYERS: Then we can see that your name next appears on here at about, on line 32, 11 pm, 23.00, where you're doing observations for JE; can you see that?

NURSE A: Yes.

MYERS: All right. Now, nothing here is critical of you, I just want you to help us with this. If we look at that, there's about 40 minutes between line 30 and line 32, isn't there?

NURSE A: Yes.

MYERS: We've gone from 22.20 to 23.00?

NURSE A: Yes.

MYERS: That 40 minutes would have been taken up just doing a prescription for HM, would it?

NURSE A: No.

MYERS: There's nothing sinister or odd about the fact that we next see you recorded 40 minutes later, is there?

NURSE A: No --

MYERS: No.

NURSE A: -- not at all.

MYERS: Not at all. And if somebody was to say to you, "Ah, well, [Nurse A], can you please tell us what you were doing at 22.37", would you have any clue form what we have on this chart? Could you possibly remember?

NURSE A: No, not specifically.

MYERS: No.

NURSE A: I would know where I was and what I was doing generally.

MYERS: Well, you mean within the unit or on the unit?

NURSE A: Well, it would be... If I left the room at all, it would be briefly, otherwise I'd be in the room observing my patients, just not recording it.

MYERS: But could you actually remember independently at all, if someone just gives you a time and says, fill in the gap, tell us what you were doing, could you do that?

NURSE A: No.

MYERS: Again, I'm not being critical of you for that at all.

Don't worry why I ask that. I just wanted to see if you could help us with that.

NURSE A: Okay.

MYERS: Thank you, [Nurse A].

We can take that down now, please.

We've heard about blood gas and how blood gas is taken on the unit.

NURSE A: Yes.

MYERS: And are there sometimes two nurses present when blood gas is being read?

NURSE A: Yes, there may well be, yes.

MYERS: And might one of the nurses, for instance, go and take off the blood for analysis and the other one write down in the record what the readings are?

NURSE A: So at this time, you can see on the map we had earlier --

MYERS: Shall we take it out so you can explain it to us?

NURSE A: Yes.

MYERS: This is about the location of the blood gas machine?

NURSE A: It is.

MYERS: I don't think we've had that pinpointed yet, so this would be helpful. It was behind divider 4. If you could help us with where the blood gas machine would be.

NURSE A: So where the red locked door coming into the unit is next to the staff room --

MYERS: So the door you'd said you'd come in through the day before?

NURSE A: Yes, our way to the corridor. So it's immediately on the left there.

MYERS: On the neonatal unit side of the --

NURSE A: It's on the neonatal side of the door.

MYERS: Right.

NURSE A: In the green box in -- a little small room that says "blood gas" next to the staff room that's labelled K.

MYERS: And there's a machine in there for blood gas, is there?

NURSE A: At this time there was a machine in there, so a capillary blood gas, which is what I'd recorded or I had recorded what was taken. So I -- so because there was a little way to go and it meant somebody physically having to take the little tube of blood to the machine and put it in the machine and wait for the result, then you would sometimes, if there wasn't -- if you were in a room on your own, you wouldn't want to leave, especially nursery 1, you wouldn't want to leave the babies for that length of time, so you'd ask somebody to what we call "run the gas" for you.

MYERS: Let's just go back over that so we're clear: if for instance you're going to leave nurse 1 and that would leave it empty, you might ask another nurse to do the gas or to be in the nursery, or one or the other?

NURSE A: One or the other. Probably more usually to take the gas to the machine.

MYERS: And might they then enter in on the record the readings on the gas?

NURSE A: Yes, that's perfectly reasonable.

MYERS: All right, thank you.

Just leading up to the actual marked deterioration of [Baby B] at 12.30 on the morning of the 10th, I think you've described to us that you had been preparing some medication for [Baby B] at the time it happened; is that right?

NURSE A: I said I was preparing medication. I didn't know who for.

MYERS: That may not matter. You'd been preparing medication?

NURSE A: Yes.

MYERS: And Ms Letby had been assisting you with that?

NURSE A: Yes.

MYERS: So the two of you are together at this point?

NURSE A: In nursery 1, yes.

MYERS: And in fact, because [Baby B] had had the event with the prongs, you had kept an eye on her, hadn't you?

NURSE A: I would keep an eye on any baby that was on respiratory support, yes.

MYERS: When the monitor sounded, who was the first person to go over?

NURSE A: Lucy.

MYERS: And then did you go and join Lucy over by the --

NURSE A: She called me over.

MYERS: She called you over?

NURSE A: Yes.

MYERS: And then a little later, once this was all over, you made a note, didn't you, in the nursing records to record what had taken place?

NURSE A: Yes.

MYERS: I'm going to ask if we can have a look at that, please.

It's at slide 218. If we go behind that, please, to the actual nursing notes I'd be grateful. Can we just tap on the actual page, the nursing page of the exhibit, please?

We're just going to read the entry that's relevant, which is the bottom right-hand corner, and then it actually goes over on to the next page of the nursing notes, which I think follows on from this.

So you made the entry at 7.30, nearly, that morning, if we look at the top, 07.29?

NURSE A: Yes.

MYERS: And you put:

"00.30. Sudden desaturation to 50%. Cyanosed in appearance, centrally shut down, limp, apnoeic."

You mention the Neopuff and you put this:

"Colour changed rapidly to purple blotchiness with white patches."

And that was a description of the colour that you saw on [Baby B], isn't it?

NURSE A: Yes.

MYERS: And you put that in at 7.29 that morning, didn't you?

NURSE A: Yes.

MYERS: Again this isn't asked critically, [Nurse A], if you could help us with this: why is it that you would write something like that on these nursing records? I'm not criticising you for it, but why would you?

NURSE A: Because I was doing an account of what happened overnight. That's the communication going forward to other shifts to refer back to. I... I can't recall exactly why my notes weren't written until 7.40 in the morning.

MYERS: I'm not critical of that at all.

NURSE A: I'm just saying, I -- I would have -- you try to write them as contemporaneously as possible. So I put the time in there because I'm writing in retrospect so that it's a clear note of what I saw.

MYERS: When you put in are those details that you can remember that are potentially relevant, don't you?

NURSE A: Yes, I put the details about the baby.

MYERS: And certainly something like when you came to make these notes up, noting a rash like this, a skin discolouration, that's a pretty significant observation, isn't it?

NURSE A: Yes.

MYERS: Again, I'm not disagreeing with you, it's exactly the sort of thing you'd expect to put into notes that you're making if you witness something like that, isn't it?

NURSE A: Yes.

MYERS: In fact, if we go over the page, I think you note that the colour vanished fairly rapidly or improved. It goes on to say:

"Became bradycardic to the 80s..."

That's heart rate, isn't it?

NURSE A: Yes.

MYERS: "Successfully [is that intubated?] by Dr Lambie..."

NURSE A: Yes.

MYERS: "... and heart rate improved quickly. 0.9% saline bolus given and colour started to improve almost as quickly as it had deteriorated."

NURSE A: Yes.

MYERS: And in fact, in the circumstances, there was a fairly rapid recovery for [Baby B], wasn't there?

NURSE A: There was, yes.

MYERS: And then afterwards, you, quite properly, spent some time with [Baby B]'s family, didn't you --

NURSE A: I did, yes, at the cot side, yes.

MYERS: -- reassuring them?

NURSE A: Yes.

MYERS: And you've been asked about entries that may have been made in observations by Ms Letby in the period that followed the collapse.

NURSE A: Yes.

MYERS: But if you're dealing with the family, someone still has to monitor what's happening and make the observations, don't they?

NURSE A: Yes. In my note there it says:

"Placed on ventilator at 00.50..."

So ten to 1 in the morning. I don't -- the 1 o'clock observations -- we looked at the charts earlier -- were signed by Lucy. It could have even been we were both -- she was writing and I was... It's not unusual.

MYERS: And certainly once you're occupied with the family, somebody still has to do the monitoring and record what's seen?

NURSE A: Yes.

MR MYERS: Thank you very much, [Nurse A].

Re-examination by MR ASTBURY

MR ASTBURY: Just bear with me one second, please.

(Pause)

I just want to ask a question, but I just want to make sure that I'm accurate in that which I --

MR JUSTICE GOSS: Certainly, yes, take your time.

(Pause)

MR ASTBURY: You were asked, [Nurse A], two questions on effectively the same subject. The first one was the extent to which you may have been influenced by others about what you saw the first time in comparison to what you saw the second time with [Baby A] and [Baby B] respectively --

NURSE A: Yes.

ASTBURY: -- and in particular, whether anyone had suggested to you that you should say that they were the same?

NURSE A: Yes.

ASTBURY: Was there ever a conversation where anyone suggested what you should say about those two events?

NURSE A: No, not at all.

ASTBURY: What would your reaction have been if anyone had tried to influence what you were proposing to say?

NURSE A: In all probability I probably would have spoken to one of the officers to say, "X said this to me".

ASTBURY: Right. And you were asked whether in some way, and it quite rightly was qualified that it's a difficult one for you to answer, but that in some way you'd superimposed your recollection of [Baby B] on the events with [Baby A]. On Friday you gave us quite your role in [Baby A]'s resuscitation; do you remember?

NURSE A: Yes.

ASTBURY: And can I ask, did you get a clear look at [Baby A] during the course of that resuscitation?

NURSE A: Yes.

ASTBURY: This morning, when you spoke of what you saw on [Baby B]'s -- the discolouration you saw in [Baby B], you said you thought at the time, "Not again".

NURSE A: Yes.

ASTBURY: Can you just explain to us why you thought, "Not again", please?

NURSE A: As I said on Friday, [Baby A]'s deterioration was very sudden, to an unusual degree of suddenness. Babies can become poorly very quickly, but there's usually some indication that that's happening. To have a baby that's doing well on CPAP, which is -- you know, yes, he was needing support, yes, he was ill, but we had no undue concerns about him. To go from that to not responding to resuscitation and looking how he did as quickly as he did is very unusual.

And then [Baby B] had been good throughout the evening for me, she'd been good throughout the day, that was my handover on her, she'd been good throughout the evening.

Yes, she'd dropped her oxygen levels a little when her prongs were out of place, but she needed a little bit of oxygen and she recovered. I didn't think of that as anything untoward.

But again, she became ill very quickly, she deteriorated very quickly, and then this colouring -- I mean, I know now that it was not related to mum's medical condition at all, but because of the suddenness of [Baby A]'s collapse I know there had been concerns that did that play any part.

This is 24 hours later. It's just a little more.

We didn't know, we didn't have any answers to what had happened with [Baby A]. And you never want any baby to die, you know. We want to help them all go home with their families. That's always been my goal. And to see her deteriorate so quickly and look so similar, I was -- it was... Yeah, that's why I said, "No, not again".

You don't want any baby to die in any circumstance.

MR ASTBURY: We understand, all right. Thank you. Nothing further from me. Thank you. Does my Lord have any questions?

Questions from THE JUDGE

MR JUSTICE GOSS: You just said that you were good friends with -- do you remember being asked about being friendly with other members of staff?

NURSE A: Yes.

MR JUSTICE GOSS: And you implied, as is not uncommon, you're friendlier -- more friendly with some than others. And you said:

"I one was good friends with one other member of staff."

Who was that?

NURSE A: [Nurse C].

MR JUSTICE GOSS: Right, thank you. You also said:

"It's over 5 years since I left the unit."

Can you remember when you left the unit?

NURSE A: I can, yes.

MR JUSTICE GOSS: It was when?

NURSE A: September 2017. I had to work 2 months' notice, otherwise it would have been earlier.

MR JUSTICE GOSS: Was that the hospital as a whole you left?

NURSE A: Yes.

MR JUSTICE GOSS: So you left the Countess of Chester?

NURSE A: I left the trust, yes.

MR JUSTICE GOSS: Fine. Nothing arising out of those?

I was just clearing up those. Thank you.

Thank you very much. That completes your evidence.

MR ASTBURY: The next witness won't require the screens, so we'll need to set up the court again, I'm afraid.

MR JUSTICE GOSS: Yes. In which case by the time we've done all that, it's going to be almost 10 to when we have to shut down for the computers to reboot. Sorry about this, there's no control over it. This is the allotted time. I don't know who allots it, someone in the cloud or whatever it is that we don't know much about, but it comes through automatically and there's nothing that can be done about it. All right?

So we'll just take an early lunch and say can you be ready, please, to start at perhaps, say, 1.55, all right, so we don't lose any undue time? Thank you very much. This is the least inconvenient way of doing this.

So be ready, please, to continue at 1.55. Thank you very much.

(In the absence of the jury)

MR ASTBURY: Neither of the next two witnesses require special measures, so we can crack on, as it were, this afternoon.

MR JUSTICE GOSS: Thank you very much. I think if we do get on to the third witness scheduled for today then that witness requires special measures; am I right?

MR ASTBURY: Yes. Whether we do or not...

MR JUSTICE GOSS: Let's wait and see. We won't anticipate anything. All right, thank you very much indeed.

Thank you very much for coming and giving evidence in relation to this. Please don't talk to anyone about your evidence or this case.

(12.38 pm)

(The short adjournment)

(1.55 pm)

(In the absence of the jury)

MR ASTBURY: We are just waiting for Dr Lambie. She's on her way from the waiting suite. Can I pass up a couple of documents to assist, I hope?

(Handed)

MR JUSTICE GOSS: Thank you.

MR ASTBURY: The top document, my Lord, is a grid which breaks down the witnesses per count and may assist my Lord when it comes to "Is this witness coming back?"

In fact, Dr Lambie won't be back because she's only required in these two particular --

MR JUSTICE GOSS: That's very helpful.

MR ASTBURY: It's the defence's document, the grid.

MR MYERS: The reason I rise to say that is they were given to assist the prosecution. There will be times when there may be witnesses dispensed with and occasionally some witnesses will have to be added to that as we go along. But that's the only reason I raise that. We did that to assist.

MR JUSTICE GOSS: It's a living document?

MR MYERS: It is.

MR JUSTICE GOSS: It's a very helpful reference document.

MR ASTBURY: There's also a document that breaks down witnesses for each count.

MR JUSTICE GOSS: Excellent. Thank you. Good, thank you very much.

(Pause)

Can you assure me that Dr Lambie is on their way in the sense --

MR ASTBURY: We sent someone down to chase them up.

(Pause)

MR JUSTICE GOSS: Right. Jury in then, please.

(In the presence of the jury)

MR JUSTICE GOSS: Sorry about the slight delay, members of the jury. We're waiting for the next witness, Dr Lambie, who is apparently on her way to this courtroom from somewhere else in this building, not from outside. She'll be here literally any second now.

(Pause)

DR RACHEL LAMBIE (affirmed)

Examination-in-chief by MR ASTBURY

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

LAMBIE: Dr Rachel Lambie.

ASTBURY: Thank you. When, Dr Lambie, did you first qualify, please?

LAMBIE: I qualified in 2002.

ASTBURY: And your present position? I don't need to know where but your present status.

LAMBIE: I'm a consultant community paediatrician at Leighton Hospital, which is in Crewe.

ASTBURY: You qualified, I think, back in 2002; is that right?

LAMBIE: Yes.

ASTBURY: But I want to ask you, please, about events when you were at the Countess of Chester Hospital in June of 2015. At what level were you at that time in your career?

LAMBIE: I was what's called an ST6, so it's a registrar, so the more senior side of your training as a paediatric trainee.

ASTBURY: We have heard ST stands for specialist training; is that right?

LAMBIE: That's correct.

ASTBURY: And the 6 depicts what?

LAMBIE: It's the number of years, so the total number of years of training is 8 or 9 --

ASTBURY: Do you remember the shift that you were working on 8 June of 2015?

LAMBIE: I do, yes.

ASTBURY: Could you tell us, please?

LAMBIE: So I was the paediatric registrar on call starting a night shift. In Chester specifically that means that I would have been covering the general paediatric ward and the neonatal ward overnight.

ASTBURY: Okay. At what time would you have come on duty?

LAMBIE: Looking at my statements, the rota then was starting at 8 o'clock at night and finishing between 8 and 10 in the morning.

ASTBURY: We've heard something about nurses' handovers. Did doctors have a similar process where they'd hand over between shifts?

LAMBIE: Yes. Between the day shift and the night shift you would meet in a room and the day staff would hand over to the night, and then vice versa in the morning.

ASTBURY: And the topic of conversations during those handovers would be?

LAMBIE: It's the children on the paediatric ward and the babies on the neonatal ward. The main reasons is to highlight children or babies that you're particularly concerned about, but there would always be a brief summary of all the children involved.

ASTBURY: Dealing specifically first, please, with 8 June, because we're going to come on and ask you about events on the 9th as well. If we can concentrate on the 8th please, do you recall receiving an emergency call on the evening of the 8th?

LAMBIE: Yes. According to my statement it was about half an hour into handover, so handover would have started at about 8 o'clock

and around 8.30 there was what's called a crash call, so that's the most urgent call that would have come through on my bleep, asking me to attend an emergency in the neonatal unit.

ASTBURY: And what -- it may seem obvious, but what is the response to an emergency call like that?

LAMBIE: So if at all possible, you run. The idea is to get there as quickly as possible.

ASTBURY: Do you remember where you were when that emergency call was made?

LAMBIE: I don't, but I -- it would have been on the paediatric ward, that's usually where handover was. So fairly close to the neonatal unit.

ASTBURY: If we could just -- I'm going to show you from time to time some slides on the screen in front of you, if you bear with me. I know you haven't seen these but if you can bear with me. I'm just going to ask Mr Murphy, can we please have [Baby A]'s sequence of events, 191, please.

If we look at that, do you recall the means by which you would enter the maternity -- sorry, the neonatal unit back in 2015?

LAMBIE: Yes. There were main doors, so you went along a corridor through double doors into the unit.

ASTBURY: Were they open to the public or did they have a security device?

LAMBIE: I can't recall, but standard policy for paediatric and neonatal units was to have a swipe to get in.

ASTBURY: Okay. If we look at that screen, the swipe data that we have available, I don't think it's contentious, suggests that -- if we can click behind it -- you went through the maternity neonatal entrance doors at 8.28 that evening.

Could you tell us, please, what you saw when the entered the unit?

LAMBIE: So I recall as you entered the unit you immediately came to the area where the most sick children were, the high dependency effectively, and there was an active resuscitation taking place for the child that we're discussing.

ASTBURY: That's [Baby A]?

LAMBIE: [Baby A].

ASTBURY: Who was present, please?

LAMBIE: Dr Harkness, who was my colleague, who's also a registrar, was in charge, was leading resuscitation, and I recall there were nurses present.

ASTBURY: Are you able to recall what any of those individuals were doing when you arrived?

LAMBIE: Specifically, no, other than I can remember the resuscitation was underway.

ASTBURY: So you came upon it once it was already underway?

LAMBIE: Yes.

ASTBURY: Did you play any part in the resuscitation?

LAMBIE: I did. I asked if I could be of assistance and I joined in. I can't recall whether I took over the airway or the chest compressions. It's quite common to do both because you cycle around, but I definitely took part in the resuscitation, yes.

ASTBURY: Okay. Are you able to say how long you were involved in that resuscitation?

LAMBIE: Looking at my notes, it looks as if the resuscitation went on for about 30 to 40 minutes.

ASTBURY: Does anyone in particular take the lead during the course of a resuscitation like this?

LAMBIE: Yes, it's the most senior clinician on duty at that time, which would have been Dr Harkness when I arrived, and then if another more senior clinician arrives, they will then usually take over.

ASTBURY: Okay. And did there come a point where a more senior clinician did arrive?

LAMBIE: Yes. The daytime consultant, Dr Jayaram, was called as well and when he arrived he would have then led the resuscitation.

ASTBURY: We've heard something of the resuscitation and you told us how long you think it lasted. Can you tell us, please, how it came to an end?

LAMBIE: I recall Dr Jayaram asking everyone, so you do a round, and it's good practice that the consultant will ask everyone

involved, "I think it's time to stop, is there anything else you would like to do or you think we need to do?" and I do recall Dr Jayaram going around the room and asking everyone involved, "Is there anything else you think we should do or are you happy to stop?"

MR JUSTICE GOSS: Sorry to interrupt, that's medical and nursing staff, is it?

LAMBIE: Yes. Anybody.

MR JUSTICE GOSS: Anybody in the room? Right. That was implicit but I just wanted it to be clear.

MR ASTBURY: Thank you.

Do you recall what ultimately the decision was?

LAMBIE: So my recollection is that everyone said no and agreed to stop.

ASTBURY: And what happens at that point?

LAMBIE: So at that point I took a step back, I appreciated that Dr Jayaram and Dr Harkness needed time. I was aware the parents were coming. I was also in the middle of handover so I took a step back and I left the neonatal unit and then continued with handover or whatever I was needed for on the paediatric ward.

ASTBURY: Do you recall making any notes in respect of [Baby A]'s treatment that night?

LAMBIE: Looking back on the notes I made -- in my statement I saw I didn't make any documentation personally, no.

ASTBURY: Okay. Had you had any other contact with [Baby A] other than that period you have just described to us?

LAMBIE: Not that I recall, no.

ASTBURY: In situations such as that, what is the approved practice in respect of equipment, any medical equipment in place?

LAMBIE: So it's good practice for everything to be left. If there are any lines in place or tubes in place good practice is for them to be left for the coroner.

ASTBURY: And as you've described to us when you took that step back and went to deal with other matters, was that -- did you have any more involvement with [Baby A] after that night?

LAMBIE: No, I didn't.

ASTBURY: I want to move on, please, to the following night shift, 9 June, or it begins on 9 June and obviously runs into 10 June. Same process again with coming on duty and handover?

LAMBIE: Yes.

ASTBURY: And I want to ask you, please, about your involvement that night with [Baby A]'s twin, [Baby B]. Do you recall [Baby B]?

LAMBIE: I do. So looking back at my notes it was about 12.30, so that would be the morning of the 10th. Again there was a crash call, so the most urgent call on the bleep, directing me to go to the neonatal unit urgently. When I arrived I was directed to [Baby B]'s bedside, [Baby A]'s twin. I could see that somebody was using a bag and mask ventilation to breathe for her and I've documented that she had had an apnoea unexpectedly, so I must have been told that she had stopped breathing quickly and unexpectedly.

ASTBURY: I'm going to interrupt you, if I may, I'm sorry. I want to break it down a little bit, if I may, and I'd like to do that firstly by going please to [Baby B]'s sequence of events chart and entry 216, please.

If we click on 216. I think that shows you entering the neonatal ward at 00.23. Does that accord with your recollection?

LAMBIE: Yes, about half past 12.

ASTBURY: All right. If we move on, please, to 219 and 220.

We have at 12.31 -- click into that, please -- entering the maternity ward. Pausing there, if we go to the next slide, please, which is the fast bleep, that's timed slightly later at 00.33. Is it possible that you'd been in the neonatal ward slightly before the crash call was put out?

LAMBIE: It is possible.

ASTBURY: Okay. If we can move on to 225, please. 224, my mistake. I do apologise.

It seems to show you going back into the maternity (sic) ward a couple of minutes later in response, presumably, to the fast bleep; yes?

LAMBIE: Possibly, yes.

ASTBURY: Thank you. Tell us, please, what you found on this occasion. You found [Baby B] being -- did you say?

LAMBIE: So looking at my notes, I've documented that when I arrived somebody was breathing for her, they were using what's called a bag-and-mask ventilation. So she would have had a mask over her mouth and somebody was using a bag to blow oxygen and air into her lungs to help her breathe. I have also documented that she had an apnoea. Quickly --

ASTBURY: We can look at your note in a minute. Sorry to interrupt you. I wonder what you can recall from your own recollection before we go to the notes. If you can't remember anything, we'll just go straight to the notes.

LAMBIE: From my recollection, what the most memorable thing is -- was [Baby B]'s colour. So when I -- I do remember she was being resuscitated when I arrived and she was a very dusky, pale grey colour. And as we were helping her, she was then developing widespread blotches, is probably the best way of describing it, patches of a purply/red colour. They would flush up, last about a few seconds, 10 seconds, and then disappear and then appear elsewhere. They were flitting around her body.

ASTBURY: Which areas of her body, please?

LAMBIE: All over.

ASTBURY: Right.

LAMBIE: So whatever bit of her body I could see, you could see these coming and going on her body.

ASTBURY: Okay. Anything else you can remember before we go to your notes?

LAMBIE: I can remember that each one lasted about 10 seconds, disappeared, and then moved. And then as we started to treat her and she got better they subsided and went away.

ASTBURY: Did they subside altogether?

LAMBIE: They did, yes.

ASTBURY: All right. What was [Baby B]'s progress during the course of this treatment and thereafter?

LAMBIE: So she recovered quickly. I took over her breathing more securely by putting a breathing tube down and taking over her breathing for her. After about 10 minutes she started moving for

herself and recovered, but it took about half an hour for her colour to improve. So the patches weren't there for 30 minutes but it took that time for her general greyness to disappear and her normal pink colour to return.

ASTBURY: And extent of any recovery thereafter?

LAMBIE: Very quickly.

ASTBURY: Perhaps we should go to your notes because it's appropriate. 243, please. Your notes appear in more than one location on this slide, but the full copy is at 243, so we'll go to 243, please.

Can you see that clearly?

LAMBIE: I can, yes.

ASTBURY: It's getting better, I can see that. Can you confirm they are your notes first of all?

LAMBIE: Yes.

ASTBURY: Can you talk us through, please, what they inform us?

LAMBIE: I've written in retrospect at 02.30, so after the event.

I've referred to a crash call, so an urgent call to the neonatal unit, which is NNU, at just after 00.30. I've written that bag and mask ventilation is in process, and that's the mask over the mouth that's attached to a bag that's blowing air and oxygen into her lungs. Do you want me to talk through each --

ASTBURY: Yes, please.

LAMBIE: I've written that she's had an acute apnoea, which means she stopped breathing very suddenly with no warning.

I have described a widespread purple discolouration of the skin with white patches. So discolouration is just the changes of the skin colour. And her heart rate gradually dropping: at its lowest it was 80-90.

ASTBURY: Where should it be?

LAMBIE: Round about 120 to 160.

ASTBURY: Then it says:

"Neopuff and Guedel."

LAMBIE: This is my intervention. A Neopuff is a piece of equipment that's attached to the bedside of a lot of the cots. It effectively does the same as a bag and mask.

It is a tube with a mask on the end that you place over the baby's nose and mouth and then the machine blows the air into the baby rather than you pushing the bag. So I've used the Neopuff.

The Guedel airway's a very short bit of plastic tubing that goes into the mouth. It effectively pushes the tongue to one side to give you a much more safe airway to work with. So I have used both, which I tend to do quite often, to help with her breathing.

I have then written:

"Good chest wall movements."

Which means that she's responding well, so I know I've got an open airway, I know I am getting that air and oxygen into her lungs.

ASTBURY: Thank you.

LAMBIE: "Increased pressure to 35."

That means that I have just had to tweak the pressures up a little bit on the Neopuff but that's not out of normal, really.

ASTBURY: Pausing there, that's the pressure of the --

LAMBIE: The machine that's blowing the air in.

ASTBURY: Thank you.

LAMBIE: Because of -- her heart rate was dropping and her discolouration, I've decided to go for a more secure airway. I do recall I was worried that we were peri-arrest or about to arrest, the heart was about to stop, because of her discolouration and her heart rate dropping. So I've decided to intubate, which means putting a breathing tube, an ET tube, through her mouth into her lungs. Size 3 to 3.5 is quite normal for a child that age.

The first -- I've written "second attempt" so the first one wasn't successful so I have put a second one in and it is successful. I've secured it 7 centimetres at the lips. That's normal for a child that age. The reason you document that is if you need to re-intubate her it helps the next person know where the tube can sit. And I have put in brackets:

"Vocal cords look normal."

So that means I have had a good view when I have put the tube in and there wasn't anything abnormal.

ASTBURY: Thank you.

LAMBIE: I have then given a bolus -- NaCl is sodium chloride or salty water. We use that as part of resuscitation.

I've given her 10ml per kilo, which is a standard value volume for a child. The reason for that is to give the heart a bit more blood to push against. The heart works more effectively if you stretch the muscle, so as part of resuscitation you very often give them some salty water.

"CRF" means capillary refill time. That's when you press the chest for 3 seconds and let go and you want it to be round about 2 to 3 seconds. And what -- you're trying to look at how effectively the heart is working to do that --

ASTBURY: So what --

LAMBIE: -- that (overspeaking).

ASTBURY: Sorry to interrupt. When you press the skin and you release, what are you looking for?

LAMBIE: So I'm looking -- it needs to flash back within about 2 to 3 seconds.

I've written 3 to 4, which fits with the situation, telling me that her heart isn't working quite as well as it should be or her body is shutting down, so it's taking that little bit longer for that blood to come to the surface.

ASTBURY: Okay.

LAMBIE: Then I've written she's responded well. So after the intervention, her capillary refill has gone back down to 2, 3 seconds, so I've explained what I've done and her capillary refill is getting better.

Within 10 minutes she's becoming active and breathing. So within 10 minutes of my breathing for her with her endotracheal tube and all the above interventions, she's now starting to wriggle and move herself and breathe for herself.

ASTBURY: Sorry to interrupt again. What does that tell you in this context?

LAMBIE: What I have done has worked, so the interventions I have done have worked and she is recovering.

ASTBURY: That activity, that movement is all a positive sign of recovery?

LAMBIE: Yes.

ASTBURY: Sorry to interrupt.

LAMBIE: I've then written "Morphine bolus [tick]". That tells me I'm planning to keep her on the ventilator. If you have a child that's alert -- becoming alert and wriggling, they don't like being ventilated, so it's kind to give them some morphine to settle them on the ventilator.

ASTBURY: What's the effect of the morphine?

LAMBIE: It's to sedate them.

ASTBURY: All right. I've interrupted again, I do apologise.

LAMBIE: Not at all. I have then requested bloods to be done urgently. "Coag" is coagulation, to check the blood is able to clot itself correctly. "FBC" is full blood counts. U&Es is urea and electrolytes, that's kidney function. CRP is a protein marker that looks for inflammation. Dimer is another protein that looks for inflammation. And fibrinogen is part of the blood.

A lot of these markers will be high or low depending on if there's infection. That's the main thing we're looking for.

ASTBURY: Okay.

LAMBIE: Do you want me to continue?

ASTBURY: Yes, please.

LAMBIE: "Placed on" -- so she's already on the ventilator so that means I have hooked her on to ventilator and I'm planning to keep her on it. I have written:

"Needing morphine infusion to settle."

So you start with a bolus to sedate her and make her feel more calm and then you continue that with a continuous infusion. Infusion just means you're giving that morphine continuously rather than in one umph --

MR JUSTICE GOSS: I think when you said continuously you mean --

LAMBIE: Ongoing.

MR JUSTICE GOSS: Ongoing but not morphine going in all the time?

LAMBIE: No, it's a controlled drip so it keeps them --

MR JUSTICE GOSS: On a timed driver, presumably, so much in at such and such a time?

LAMBIE: Yes.

Then I've written "[Dr B] arrived". That's [Dr B] who would have been my consultant on call at that time.

MR ASTBURY: This is written chronologically. That's the stage where [Dr B] arrived. That's after we've had this movement and this activity and signs of improvement?

LAMBIE: Judging by what I've written, yes.

ASTBURY: All right, thanks. If we can carry on.

LAMBIE: I have then documented the gradual improvement in her perfusion. So perfusion is blood supply, particularly to the skin, "over the next 30 minutes" that says. I've given a second bolus of 10ml per kilo. Again, it's standard to give the fluid in packets of 10ml per kilo rather than overloading a child.

ASTBURY: And that fluid, again, is that saline again?

LAMBIE: That's salty water, saline, yes. Again that would be me wanting to make sure that her perfusion is staying well so I am not happy with her completely so I have given her a second to make sure that her heart has got enough fluid to pump against.

ASTBURY: Thank you.

LAMBIE: Then what follows is ABC, so this is a way of documenting -- making sure you haven't forgotten anything. So a lot of doctors follow an ABC approach when they're looking after children and then documenting it. So A is airway. ETT is the endotracheal tube or that breathing tube that I've put in her mouth. It's a 3 tube, which is fine for her, set at 7 centimetres at the lips. T1 on the X-ray that's -- I have done an X-ray and on the X-ray you look where the tip of the tube is and that's the bone in the chest and that's where it should be sitting, so I know it's in the correct position.

ASTBURY: Very good, thank you.

LAMBIE: B is breathing. SIMV is referring to the mode of ventilation we use, so it's the way the machine is delivering that oxygen.

20/6, that's the pressure that the machine is using and that's fairly standard for a baby that age. A rate of 30 is 30 breaths a minute, which again is normal for a child that age.

Capital A in a circle means she is in air and her saturations are 96. That means the amount of oxygen in her blood is 96% adequate.

ASTBURY: Pausing there, the significance of her being in air?

LAMBIE: Was very important. So I wasn't needing to give any supplemental oxygen.

ASTBURY: Is that another sign of improvement?

LAMBIE: Absolutely, but it's also a sign, a very positive sign.

So if this was caused by sepsis or an infection, for example, she wouldn't necessarily be in air, I'd be expecting to need to give her supplemental oxygen. So air tells me that she's in a good state at this moment in time.

ASTBURY: So no additional oxygen required?

LAMBIE: No.

ASTBURY: Sorry, I interrupted again. We've got a diagram.

LAMBIE: That's a diagram of the chest. So that's of the lungs.

The left-hand one has a kink in it because that's where your heart would be. And the arrow going through it means that's normal. So that means I've listened with a stethoscope, I couldn't hear anything out of the ordinary, and that's my way of documenting it.

I've already written "good" -- "AE" is air entry and "BL" is bilaterally. So I've listened with a stethoscope, I can't hear anything that's worrying me.

MR JUSTICE GOSS: Bilaterally means both sides?

LAMBIE: Both sides.

"CHR" is chest X-ray. "Nil acute" means nothing acute. So at that moment in time there were no changes on that X-ray that I could see.

And again, I would be looking for: is there a collapsed lung, is there an infection, anything that could explain what had happened. And I couldn't see anything on that chest X-ray at that time.

"Gas" means a blood gas. That's a specific blood test looking at all the different parts of her blood to do with air, carbon dioxide, and that's all -- it's not hugely out of ordinary considering what had just appeared.

MR ASTBURY: Thank you.

LAMBIE: So A is airway, B is breathing, C is cardiovascular, which is the heart and also the blood vessels and the skin. Her heart rate at this time is 130/140, which back up to the normal for a child her age.

"Perfusion improving peripherally" means the blood supply to her skin on the outer bits of her body is now improving. "Centrally" means the chest particularly and that's 2 to 3 seconds, which is much more back to normal.

Her blood pressure 48 -- "mean" means the average, "peripheral" means I've done it on the arm or on the leg and that's okay for her.

ASTBURY: Thank you.

LAMBIE: The next -- "abdo" is abdomen. That's a standard way of depicting an abdomen in medical notes. So what you are looking at is -- the two lines at the top are where the abdomen joins the chest here (indicating) and then it goes down to the bottom of the legs. And the four lines going to the side are your sides. I have written:

"Abdo [abdomen] is full and mildly distended."

That means it's a little bit bloated to look at.

That's not hugely unusual because we've just been pumping air and oxygen into her body. Quite often you get a little bit that gets trapped in the stomach. So the fact that I have written mildly distended is not a big surprise.

I have written:

"No bleeding from the umbilicus."

I have written that because sometimes if you have a collapse because of sepsis or a severe infection it can affect the bleeding, how easily your blood clots, and you can oozing of blood from the umbilicus. I don't know if that refers back to something that happened in the previous few days, I don't recall.

I have written:

"Bowel sounds are normal."

Again, if you have a tummy that is big and bloated you worry that that could be a sign of infection, in which case -- in the tummy, in which case the bowel sounds are very quiet or not there at all, but I have documented they were there and they are healthy.

ASTBURY: Thank you. I think the next -- is that AFN?

LAMBIE: Yes, AFN is your anterior fontanelle, so the soft spot on a baby, and N in a circle is normal. Again, if you have a baby who's very unwell with an infection or meningitis, anything like that, you can get increased pressure in the brain and the soft spot will literally bulge, so I have written that it is normal.

I have written that she is moving all four limbs, so that's your arms and your legs, she's moving them. The tick is she's moving them okay.

I have written -- "imp" is my impression. So this is a very unusual event that I hadn't seen before or after. And I've written:

"Could this be widespread sepsis?"

So sepsis is a severe infection that's spreading through the bloodstream:

"Could this be a coagulopathy?"

Coagulation is how easily your blood clots and "opathy" means there is a problem with it. So I'm asking myself: is there a problem with her blood clotting? Then I've grouped them both together, "DIC".

DIC is a form -- it's what happens to your blood, particularly if a child or a baby has a really severe infection, a lot of your clotting factors or the bits in your blood that help the

blood to clot don't work properly or just disappear and that constellation, that group of things, is called DIC.

So my plan: I've crash-called [Dr B], so that means I've called or I have asked somebody to call my consultant urgently because I appreciate the potential seriousness of the situation. I've contacted haem --

"haem" is haematology, so the doctors in the doctors, and technicians that look after blood products. I have contacted them to order FFP and platelets. So FFP and platelets are products that you can give to a child or a baby if there is a clotting disorder. So if this was the case that [Baby B] had an overwhelming infection where parts of her blood weren't working properly, I might need to give her extra ones quickly. Because I didn't know at that time, I have just asked them to make sure they've got them ready.

And I've written "awaiting coagulation". So that's me waiting the blood test, the coag test, to see if I need to give those two blood products.

I have said, "Need BC". BC is blood culture, so we need to take a sample of her blood urgently to send to the lab to see if we can grow any bacteria or -- is there any signs of infection on that.

I have also planned to do a head ultrasound. So this would be for the following day or the next few days. This is if there is an overwhelming infection in the baby or the baby's had a tremendous collapse that's needing a lot of help, it can have consequences on the brain and sometimes you can see these by doing an ultrasound scan of the brain. You can do that through the baby's soft spot.

I've also asked for the parents to be called urgently. Personally, I tend to involve parents quite early on if the children (sic) is very unwell or particularly if it's unexpected. I had a low threshold to contact parents to ask them to come in.

Then the last one is "IV teicoplanin". Teicoplanin is an antibiotic -- sorry, teicoplanin and cefotaxime.

So those are two antibiotics that cover lots of different types of bacteria. She has got a long line in situ. A long line is like a straw, plastic straw that goes into the skin and then burrows internally and the tip of it is near the heart. It's a way of getting fluids, antibiotics, anything into the baby that needs it for a long period of time. So if you have cannula or piece of plastic in the skin, it doesn't last that long, whereas

a long line lasts longer. You can also put chemicals through it which are a little more irritant that you wouldn't be able to put through a shorter one and [Baby B] had a long line in already.

ASTBURY: Does that suggest they were going to be administered via the long line?

LAMBIE: I would have asked them to be, yes. So that's me saying we don't need to worry about getting any more access, we have access, so we can give the antibiotics that way.

ASTBURY: Okay. Then we have another heading, "Bloods".

LAMBIE: These are the blood results that have come through. So the first set are the kidney function. "U&C" is urea and creatine. I have highlighted those because they're a little bit high but then we have had to do resuscitation on her so it is not hugely unexpected for them to be marginally high.

ASTBURY: I'm going to pause you. When you say they're high, are they the ones on the left (overspeaking) the double line under them?

LAMBIE: -- abnormal.

ASTBURY: So they are the two that --

LAMBIE: That are abnormal --

ASTBURY: -- stood out?

LAMBIE: Yes.

ASTBURY: Okay.

LAMBIE: Underneath I have written "CRP". That's the C-reactive protein. That is a protein marker that looks for inflammation. 1 is normal. So anything under 10 you don't tend to worry about. So at that time that tells me that there was no background of infection at that time.

ASTBURY: So even though that's on your list of possibilities, that's the result from the bloods that you took?

LAMBIE: At that time, yes. You would need to repeat it. So it doesn't say that there wasn't an infection, it just says at that moment in time when I took those bloods there wasn't overwhelming inflammation.

ASTBURY: Thank you, carry on.

LAMBIE: The next set is PT, APTT and FIB. That's all the blood clotting results for coagulation I was referring to.

And they're -- I can't recall the normal numbers off the top of my head but I haven't underlined them so that tells me they would have been normal.

ASTBURY: Right.

LAMBIE: The next set is haemoglobin, so that is the full blood count. Haemoglobin, which is the red cells. The white count is the white cells. So they're all normal.

Platelets. They're part of your clotting system.

They're a little bit low and I've written underneath "clump". Quite often on the blood results the people that analyse it will say if they have seen them, I can't recall because I haven't got the result in front of me, but the fact I've written clump -- I assume that means on the result they said they had clumped and it's not unusual it's just, unfortunately, the test doesn't always work.

ASTBURY: Right.

LAMBIE: D-dimer is "awaiting" -- that's another part of the clotting I'm waiting to come back. And then the repeat gas that I've done is normal.

ASTBURY: Thank you very much.

You told us that [Baby B] recovered very quickly from this episode. Did you continue to monitor through the shift, through the remainder of the night shift.

LAMBIE: I would have. Without seeing my notes, I can't recall if I've documented anything, but from personal experience if I've had to be involved that much with a child, then I would have stayed fairly close by unless I was called away.

ASTBURY: And had you had contact with [Baby B] before this episode took place?

LAMBIE: I can't recall without looking at my notes.

MR ASTBURY: All right. I have no more questions, but if you could wait there, please.

Cross-examination by MR MYERS

MR MYERS: Dr Lambie, you were involved in the responses to both [Baby A]'s and [Baby B]'s collapses on successive nights; is that correct?

LAMBIE: Yes.

MYERS: Just a few questions about [Baby A] and a few questions about [Baby B]. Dealing with the first night, 8 June, you arrived, didn't you, as Dr Harkness and nursing staff were already providing respiratory support?

LAMBIE: Yes.

MYERS: And to be clear about this, you were there, however, before Dr Jayaram attended?

LAMBIE: Yes.

MYERS: And Dr Jayaram is the senior consultant, as it happens, who was crash-called to come to this event?

LAMBIE: Yes.

MYERS: You remained there as resuscitation was conducted with [Baby A], didn't you?

LAMBIE: Yes.

MYERS: And you took part in that resuscitation?

LAMBIE: Yes.

MYERS: And you were there until the point when collectively the decision was taken that it had to stop?

LAMBIE: Yes.

MYERS: And after that, your involvement ceased?

LAMBIE: Yes.

MYERS: All right, thank you.

The following night, into the early hours, in fact, of the morning of the 10th, you were involved in responding to what happened with [Baby B], weren't you?

LAMBIE: Yes.

MYERS: I'm interested to ask you what it was in particular that you noticed about [Baby B], the discolouration.

LAMBIE: So I recall that she was a very -- what we call, dusky, so a grey-white, colour, and then there were patches of discolouration of the skin that were sort of reddy/purple. It would flash up, it last around 10 seconds, disappear and then reappear, and it was flitting round her body.

MYERS: I'm assisted by your statement that you have had the chance of reading before you came into court, but that was something which stood out with [Baby B], wasn't it?

LAMBIE: Yes.

MYERS: And you describe it as "a very strange and profound colour change"?

LAMBIE: Yes.

MYERS: And it was something that you hadn't ever seen before?

LAMBIE: No.

MYERS: And something you haven't seen since or you hadn't seen since is at the time you made your witness statement?

LAMBIE: I have seen similar rashes but not like that, no.

MYERS: And the description you gave, and let me just check we're clear with this:

"It was very grey and pale looking, flushes of what looked like bruising or reddening under the skin."

LAMBIE: Yes.

MYERS: And they would appear for maybe 10 seconds and then go but appear somewhere else?

LAMBIE: Yes.

MYERS: Is that right? And it struck you really because you hadn't seen anything like that before?

LAMBIE: No.

MYERS: This is just for you to explain to us -- I'm not challenging anything you say about your notes -- but if a doctor sees something like that, would you expect them to make a note of it in their record of what took place?

LAMBIE: That's a very difficult question to answer. If it had an outcome then yes. It does depend on the situation at hand, what you document.

MYERS: All right. Shall we have a look at what you documented just with regard to that, please? We'll look, please, if we could at S221. We've just looked at it in fact.

If we go to the first page, please. We just come down to see what you put, Dr Lambie. Scroll down the page. We can see you've put in fact:

"Had acute apnoea..."

Is that "with no warning"?

LAMBIE: Yes.

MYERS: "Widespread purple discolouration of skin with white patches."

LAMBIE: Yes.

MYERS: And that's the reference to the rash that you saw?

LAMBIE: Yes.

MYERS: Plainly, something that you considered significant enough to put into these notes?

LAMBIE: Yes.

MYERS: Because it was something that was a remarkable feature, first of all, wasn't it?

LAMBIE: Yes.

MYERS: And you would expect that to be put in if a remarkable feature like that is identified?

LAMBIE: It's something that I wouldn't be surprised to see, yes.

MYERS: And in fact, you made reference later on when you were talking about intubation, the importance of putting it in as a record so that people who come afterwards can see what has happened?

LAMBIE: Yes.

MYERS: And the notes are important for that as well, aren't they?

LAMBIE: Yes.

MYERS: Should they include, so far as you're able, relevant observations as to what you have seen (overspeaking) took place?

LAMBIE: Good practice would be.

MYERS: Good practice would be, wouldn't it?

LAMBIE: Yes.

MYERS: In fact the discolourations that you saw began to fade within 10 minutes/20 minutes, something like that?

LAMBIE: No, within -- each one was there for about 10 seconds and would disappear.

MYERS: But overall, was there a period when her colouration began to settle back to something like normal?

LAMBIE: Yes, so her background, the greyness, the whiteness overall, about 30 minutes later.

MYERS: About 30 minutes. And if we just scroll down, please, what we have in the notes, can we see in the centre of the page:

"Gradual improvement in perfusion over the next 30 minutes"?

LAMBIE: Yes.

MYERS: And so that was the colour beginning to fade -- what you'd been witnessing beginning to fade altogether?

LAMBIE: Her background colour improving, yes.

MYERS: Her background colour. And the purple patches or the blotches you have described, did they stop appearing as well?

LAMBIE: Yes, but prior to -- they didn't last the full 30 minutes.

MYERS: Oh right, sorry. So they had stopped and then by 30 minutes the background colour had improved as well?

LAMBIE: Yes, her background duskiness took a lot longer to improve than the rash.

MYERS: And in fact, fortunately, she made what appears to be a fairly rapid recovery after that?

LAMBIE: Yes.

MR MYERS: Thank you very much.

Re-examination by MR ASTBURY

MR ASTBURY: Just one matter: you clarified that the background colour took about 30 minutes to resolve?

Those flitting patches that came and went, how long before they resolved?

LAMBIE: I think I've written it in my statement if I could refer back.

ASTBURY: Yes, of course. Let's see if we can find you a copy.

If I can have a moment please.

MR JUSTICE GOSS: I think what the witness is going to say is, if she's shown the statement, she'll say, "That's the figure". Why isn't she just told what the figure is? It might save some time.

MR ASTBURY: I'm happy to do so, my Lord. I might need a minute to find it.

MR JUSTICE GOSS: Whilst that's being looked for may I ask you a question that doesn't relate to that. It does relate to the document we've just been looking at, which is your note made on 9 June afterwards. At the top left, Mr Murphy, we can see date and time under the heading date and time, 9 June 2015, 02.30, and then a note that follows.

LAMBIE: Yes.

MR JUSTICE GOSS: Did you make that whole note at 2.30 or did you start it at 2.30 and add to it at some time later than that? Do you see what I mean?

LAMBIE: Yes.

MR JUSTICE GOSS: So when you get the bloods back and everything, had you got them back by 2.30?

LAMBIE: I can't recall. I would have written the beginning -- what I have written, I would have written it and then signed it. If I'd then come back with the blood results I would normally have written that with a new time and signed that. My practice is normally to sign each time I've written in the notes.

MR JUSTICE GOSS: I don't know whether looking at it again helps you. When you get down to the bottom, the bloods --

LAMBIE: So the last (overspeaking).

MR JUSTICE GOSS: There are two lots of bloods, aren't there?

LAMBIE: So those bloods would have been later, so I've written it after signing. So the bloods would correspond -- are more likely to correspond to the X-ray sticker.

MR JUSTICE GOSS: I see. So if we go to where it says "bloods", where the cursor is at the moment, you've signed that and that's 2.30, that means what appears above there was written --

LAMBIE: At 2.30.

MR JUSTICE GOSS: And then some time later, when you've got the blood results, you've written that part there. And the X-ray review?

LAMBIE: I've signed it -- I put them next to each other. So I don't recall, but I imagine I would have put it all in at the same time.

MR JUSTICE GOSS: And do you know when that was? How long would it normally be to get bloods back?

LAMBIE: At that time, within about sort of half an hour to an hour, I imagine, particularly if it's called through urgently.

MR JUSTICE GOSS: Still on the same shift anyway?

LAMBIE: Absolutely.

MR JUSTICE GOSS: Sorry, I just wanted to clarify that.

Thank you.

MR ASTBURY: So what you say of the rash, I'm not sure it does answer the question:

"[Baby B]'s appearance was very grey and pale looking with flushes of what looked like bruising/reddening under the skin. These blotches would appear briefly for 10 seconds or so and then disappear."

So I'm sorry if I didn't make the question clear.

I wondered how long those incidents of 10 seconds or so lasted in comparison to the 30 minutes or so it took for the background colour to resolve?

LAMBIE: I think I have put in my statement it was longer but it wasn't the full 30 minutes.

ASTBURY: Right, okay. Is that your recollection now?

LAMBIE: Yes.

ASTBURY: Thank you.

MR JUSTICE GOSS: So it was over a period but under 30 minutes.

MR ASTBURY: Less than 30 minutes.

LAMBIE: I'm sure I've written it in my statement, the time.

ASTBURY: Sorry, if it is, we can't find it. I don't think anyone else is able to find it either.

MR JUSTICE GOSS: Anyway, your firm recollection is that those went on for a time but not as long as 30 minutes?

LAMBIE: Yes.

MR JUSTICE GOSS: And it was after 30 minutes that really the normal colour was --

LAMBIE: Yes.

MR JUSTICE GOSS: -- was back? All right. I think we understand that. Thank you very much.

MR ASTBURY: Thank you, my Lord.

MR JUSTICE GOSS: Thank you very much. That completes your evidence and I think it completes your evidence for this trial. In other words, you will not have to come back again. So thank you very much for coming and giving your evidence. You're free to go. But don't talk to anyone -- not that you're likely to see anyone in fact given that you now work elsewhere, but thank you very much for coming.

(The witness withdrew)

MR ASTBURY: My Lord, the next witness will be Dr Jayaram.

I have told by Witness Support it'll be a minute or two.

It's the same member of staff.

MR JUSTICE GOSS: Right. No mysteries about this -- I don't like people having mysteries because mysteries lead to speculation and speculation can be very dangerous.

It's simply this: there is a person, the lady you'll have seen, she's from Witness Support who comes in and goes out, entirely unconnected with the case. Usually volunteers, in fact. And there's only one of them available, so that lady has to escort one witness down and bring the next one up. In the old days, as I will call them, the witnesses would all just be sitting outside waiting to be called in. I think occasionally on television dramas you still see that's what's suggested happens, but it doesn't actually happen.

A lot of what you see on television isn't accurate in relation to dramas. I'm not talking about factual programmes. Sometimes they get blurred, those two.

(Pause)

Whilst we're waiting, I'll tell you this. We're going to finish slightly earlier on Wednesday, about 3.45. Certainly not sitting beyond 3.45, so any time between 3.30 and 3.45 we'll be breaking off if that's of any help to you. And on Friday, we'll be finishing much earlier, 2.45 or thereabouts, but I'll remind you of that nearlier the time. I may, I'll canvass with counsel, and I'll put this in your minds at this stage, I may consider suggesting we start at 10 on Friday as we're going to finish so much earlier so we can get some more work done. So think about that and if there's a problem for anyone starting at 10, please say so.

Otherwise we'll come back to that later in the week.

But so far as Wednesday is concerned, definitely no later than 3.45.

(Pause)

DR RAVI JAYARAM (affirmed)

Examination-in-chief by MR ASTBURY

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

JAYARAM: Ravi Jayaram.

ASTBURY: Dr Jayaram, I know I'm asking the questions and the polite thing to do is to give the answers to me, but if you

could try and direct your answers to the back row of the jury, please, we then know that everyone who needs to hear you can hear you.

JAYARAM: I'll do my best.

ASTBURY: Thank you very much. Sometimes there's a temptation when you sit to let your voice drop, but if you can try and keep it up, but that would be very helpful.

Dr Jayaram, your present status, please?

JAYARAM: I'm a consultant paediatrician at the Countess of Chester Hospital.

ASTBURY: Thank you. When did you qualify as a doctor?

JAYARAM: I qualified in June 1990.

ASTBURY: And how long have you been at Chester in your capacity as a consultant?

JAYARAM: I started as a consultant at the Countess of Chester in December 2004.

ASTBURY: In April 2009 did you take an additional role as consultant at Chester?

JAYARAM: Yes, in April 2009 I took on the role of what at the time was called clinical director and then got re-branded as lead clinician, which essentially means administrative head of department.

ASTBURY: Which department was that?

JAYARAM: That's the department of paediatrics.

ASTBURY: Did you have responsibilities in addition to paediatrics?

JAYARAM: As well as my clinical work as clinical director/lead clinician I was very much involved in management, so development of the service, dealing with incidents, liaising with senior management if we had issues around staffing or equipment or general service development I was the point of contact with more senior management and if they had issues that any needed to feed back to us I was the point of contact for them. And that's an additional role on top of the clinical job.

ASTBURY: I want to ask you to cast your mind back, please, to June of 2015. How many consultants would there have been in the department then?

JAYARAM: At that time we had seven consultant paediatricians working in the acute paediatric service.

ASTBURY: Okay. You're the first consultant from whom we've heard. We have heard something of how the doctors worked and the nurses worked. What was the shift rota for consultants?

JAYARAM: So as consultants, the way we worked is that for -- at that time, one week in every seven we were called paediatrician of the week or people would refer to it as the hot work. In that hot week, which at that time we started on a Monday morning and carried on through to the following Monday morning, we would be responsible for acute admissions. So we were responsible for the care of children on the children's assessment unit, who'd been referred by A&E and by GPs. We were responsible for the care of children on the children's ward. We were responsible for the babies on the neonatal unit as well and babies on the post-natal wards.

The way it worked was that during the day, Monday to Friday, in theory we had our normal fixed commitments cancelled, so we wouldn't have had outpatient clinics.

In theory we wouldn't have had scheduled meetings, which meant that we were free to deal with things as they came.

The way it worked during the hot week is that Monday 8.30 to 4.30 or 8.30 to 4 we would be responsible for everything: overseeing everything, overseeing the work of the junior doctors. We'd have a handover at 4 o'clock and there would be another consultant who would be on call from 4 o'clock to the following morning. So that person could be called at any time if they were needed.

Then on weekends we did, as paediatrician of the week, a weekend on call where we started taking the on-call from Friday morning and we finished being on call on the Monday morning.

Now, that meant that in theory we could potentially be in hospital the whole time, but usually it meant that you were there during the days, but not at nights, but you could get called in at any time.

The rest of the cycle in the 6 weeks we did our day-to-day jobs. So we had our outpatient clinics, we were teaching medical students, teaching and training, audit meetings, management meetings, quality and governance meetings, the general day-to-

day admin. And when you weren't on your hot week, we did what was called a 1:7 rota, so out of hours one of us, 1 in 7 on average, would be on call out of hours.

ASTBURY: When you were on call out of hours were you expected to be within a certain distance of the hospital?

JAYARAM: The contract states that you have to be either within 10 miles -- I think it's 10 miles of the hospital or be available within 30 minutes if you're called in in an emergency. Most of us were well within those two.

Consultants who lived further away actually lived on site in one of the flats in the hospital when they were on call --

ASTBURY: So --

JAYARAM: -- so we were easily accessible.

ASTBURY: All right. I want to deal please with 8 June specifically and a child called [Baby A]. Do you remember what your position, your role, your rota was that particular day?

JAYARAM: So on that day I was down to be the consultant on call.

The way we worked at that time on Mondays is that the -- and I can't remember whether I had taken over as paediatrician of the week because I don't think I did because I was on call that Monday. What would happen is that on the Monday, the person who had been paediatrician of the week would finish at lunchtime.

They'd have handed over to another paediatrician of the week. I think on that day, because I was on call, I actually took over covering for emergencies in the afternoon. I was actually in an outpatient clinic, which is -- it's a small unit, it's next door to the neonatal unit.

ASTBURY: Okay. Do you recall receiving an emergency alert in respect of [Baby A]?

JAYARAM: Yes. That was later on in the evening. I'd had a couple of discussions about X-rays regarding [Baby A] through the afternoon. I had an emergency, I think it was some time after 8 pm. I can't remember the exact time. It's stated in my statement.

ASTBURY: I'm conscious that you will have discussed his treatment both before and when you arrived, but I'm going to concentrate, if I can, on just what you saw and what you heard in the course of that evening. Okay?

JAYARAM: Do you want it from the time I got the emergency call?

ASTBURY: I can probably help with you that because if we can go to the sequence of events, please, and tile number 202.

So you can see there, the swipe data suggests that you entered the neonatal unit at 8.34 that evening.

JAYARAM: Right.

ASTBURY: Can you tell us, please, why you attended?

JAYARAM: So I'd had an emergency call from the neonatal unit to attend. Dr David Harkness was one of my registrars, who was in attendance with [Baby A] -- sorry, am I allowed to refer to the babies by name?

ASTBURY: Yes.

JAYARAM: It's easier and I think it's the right thing to do.

I was asked to attend by David Harkness. I can't remember exactly who called me. I suspect that the call had gone to switchboard and they'd paged me with a voice message through my pager or phone to come direct to the neonatal unit.

When I arrived, Dr Harkness was there. I think by that stage he had intubated. He'd told me that what had happened was that whilst he was attending to another baby and he was scrubbed, which meant that he was in sterile gear doing a procedure, he had been called because [Baby A] had become apnoeic. [Baby A] was on what was called CPAP, which is non-invasive ventilation to support his breathing, but this had happened very suddenly.

He had become apnoeic, Dr Harkness had stopped what he was doing and had attended. I believe that [Baby A] had had resuscitation, some breaths given through a Neopuff, which is a non-invasive mask, to give some breaths, and the chest had moved. And because he wasn't breathing spontaneously Dr Harkness had intubated him.

So I think at the time I arrived, and correct me if I'm wrong, he had been intubated. Dr Harkness told me that he'd actually seen the tube pass through the vocal cords, which is important, because sometimes endotracheal tubes can be misplaced, but if you actually visualise it going through the vocal cords, then you know it's in the right place. [Baby A] was receiving breaths through that tube with the Neopuff.

I noted that [Baby A] looked very pale. I noted that the chest was moving and moving equally and I noted at that time he did have a heart rate on the monitor of 90 to 100 and the electrical

rhythm noted on the monitor was what we call sinus rhythm, which is a normal electrical rhythm. That's the normal electrical activity of the heart.

ASTBURY: Can I just ask you to pause there?

JAYARAM: Yes, of course.

ASTBURY: Apnoeic, can you just explain to us?

JAYARAM: Apnoeic means that basically you've stopped breathing, so there was no evidence of any spontaneous breathing.

ASTBURY: And the heart rate that you'd have expected?

JAYARAM: We normally expect a heart rate in a baby to be above 100. Now, the heart rate can be lower and it can be normal. It's important that the heart rate is enough to be able to pump blood around the body. In this situation the baby was apnoeic and so breaths had been given. And the heart rate was 90 to 100, which is a little bit lower than one would expect, but it was lower than it had been before he became apnoeic. So it had dropped slightly.

ASTBURY: And then you started to tell us about electrical activity.

JAYARAM: Yes. So obviously, the way the heart muscle works is a very coordinated pulse of electrical impulses that go through to the different chambers of the chart. When we look at an ECG trace, we know from the patterns on the ECG whether that electrical conduction is moving as it should be, the various waves we call the P waves, the QRS complex and the T wave. And on the monitor at that time, although the heart rate was lower than one would expect, the pattern of the electrical activity was normal electrical activity.

You can sometimes get abnormalities of electrical conduction that can lead to the heart not beating properly and they can be associated with fairly typical and well-recognised abnormal patterns on the ECG trace.

ASTBURY: So remind us, please, how did you interpret what you could -- could you see this on a monitor?

JAYARAM: Yes, you could see this on a monitor above the incubator and the rhythm was -- you could see a P wave followed by QRS complexes, followed by a T wave. So this, at the point I arrived, is what we called sinus rhythm, which is the normal electrical activity. That doesn't necessarily mean that the

heart is beating effectively; you can see electrical activity and the heart muscle may not be pumping properly.

ASTBURY: I'm just going to ask you to pause again. I'm sorry.

A note is being made elsewhere of what you're saying and I think they're just -- my fault entirely -- they are just struggling to keep up.

JAYARAM: Sorry, I'll try and slow down.

ASTBURY: It is my fault, please don't apologise. You were telling us about the heart muscle.

JAYARAM: Mm.

ASTBURY: If you could pick up there, a little bit more slowly, please.

JAYARAM: So the reason the pumping chambers of the heart pump is because of coordinated electrical impulses that start in the atria, which are the two chambers at the top of the heart, that pump blood into the big chambers, the ventricles. There's a pacemaker, called the sinus, that sends an impulse to a thing called the node, which then sends an impulse through the rest of the heart. We know from the ECG, which is the heart tracing, the curves and lines that you see on the strips, whether that sequence of electricity is functioning as it should. We call normal electrical activity sinus rhythm. And in sinus rhythm you see a P wave, followed by a QRS complex, followed by a T wave. That's the classical picture.

When I looked at the monitor, when I arrived --

ASTBURY: Bit more slowly again.

MR JUSTICE GOSS: Just slow it down a bit, (a), because it's complex to listen to, but it's even more difficult to transcribe it and there is live transcription going on.

JAYARAM: Absolutely, not a problem.

When I looked at the monitor, what I could see, although the heart rate was lower than I would expect, was what we call sinus rhythm. So it was clear that there was a P wave, followed by a QRS complex, followed by a T wave. Which suggests that there wasn't -- whatever was causing the lower heart rate, it wasn't a problem with electrical conduction through the heart.

You can have evidence of electrical conduction without the heart actually pumping, but most of the time when we see something on

a monitor, if you can hear heart sounds and feel pulses, in that situation, the heart muscle will be working. There is a situation known as pulseless electrical activity where you see electrical activity, but actually the heart muscle isn't pumping, which can occur.

There wasn't anything, when I came, to suggest abnormal electrical activity. You can get problems with the pumping of the heart muscle related to abnormal electrical activity as well, but when you see those, you will see fairly stereotypical patterns on the ECG that you know are associated with some of those abnormal electrical patterns.

MR ASTBURY: Okay. So what you could see was normal?

JAYARAM: Yes.

ASTBURY: I think you described -- [Baby A] was pale?

JAYARAM: He was pale, he was pale. And what I didn't really give any clinical significance to at the time was sort of unusual patches of discolouration. It's interesting because it's the first time I'd seen that and I didn't actually think at the time it was of any clinical significance, so didn't actually record it in the notes.

But they were definitely there.

I can't remember how long those were present for throughout the process of resuscitation. But what I did notice was that, as well as being pale, he was quite floppy as well. There was no obvious spontaneous movement. And he definitely didn't seem to have been trying to breathe spontaneously.

When we intubate babies, as you can imagine, it's not a particularly pleasant sensation, we've got a tube between the vocal cords, so for a baby to tolerate intubation suggests that they are not really aware that it's happening, if that makes sense. When I very first started in paediatrics in the early 1990s, we routinely, when we intubated babies, didn't give any sedation, and I remember fully intubating babies who were fully conscious and them fighting and it was not a very nice experience. We don't do that anymore.

But in a resuscitation situation, if we're intubating a baby and the baby actually tolerates intubation, it's a sign that they probably haven't really felt you doing that. It's a sign that, in terms of their conscious level, it's lower than it might have been otherwise.

ASTBURY: Okay. So just going back to the unusual appearance, could you describe it in a bit more detail?

JAYARAM: Yes. So obviously, when the circulation is poor or babies haven't got enough oxygen in their system, they will become -- they'll go from pink to pale to blue -- or the technical term is cyanosed. [Baby A] was very pale to blue, but there were unusual -- the best way to describe them is pink patches that appeared mainly, I recall, on the torso, on the abdomen, which seemed to sort of appear and disappear and flit around. And I'd never really seen anything like this before. But my focus at the time really was very much on what we call ABC: airway, breathing, circulation.

So that's probably my best description of that.

ASTBURY: Okay. Are you able to say how long that went on for?

JAYARAM: I can't, I can't remember how long that went on for.

ASTBURY: So you told us he was intubated. Tell us then, please, how his treatment progressed from there.

JAYARAM: What happened next was unusual in my experience and the reason I say it's unusual, and I'm going to -- I feel as if I'm giving the jury a medical school lecture, so I do apologise. But I'm going to take a step back to give some context to what I'm about to say.

Unlike in adults where the primary, most common cause of arrest is primarily a problem with the heart, babies and children can, but very rarely, have a primary heart problem, so -- I hope this doesn't happen -- I could collapse now and it would be unexpected.

Generally, when babies get as far as having apnoeas, arresting, it's usually the end point of other pathological processes. Usually, when a baby gets to that point, there have been signs leading up to the event that will have given us clues. So in a situation of, for example, dehydration or fluid depletion or blood loss, we will see the heart rate gradually go up over a period of time and that's the body's response to not having enough volume in the circulation.

The heart is trying to maintain what is called the cardiac output. The cardiac output is a function of how fast your heart is beating and how much blood is being pumped out with each contraction. And if, to give the example of dehydration, your cardiac output is lower because there's less being pumped out, your body will speed your heart rate up.

What was unusual in this situation was that the heart rate had been fairly stable and this happened suddenly. Sometimes, particularly in a situation where there may be infection around, you can get blood vessels that become leaky peripherally, blood vessels that dilate up and your blood pressure drops. But again in this situation, there hadn't to this point been any observations that [Baby A] had had cooler hands and feet, there hadn't been any situation to suggest that he'd become faster with his breathing, slower with his breathing. His observations had been stable up to the --

MR JUSTICE GOSS: Sorry to interrupt you. Some water?

I thought that's what you were gesturing. Don't apologise.

(Pause)

JUROR: Sorry about that.

MR JUSTICE GOSS: Sorry to interrupt you but it had to be done.

JAYARAM: So this situation was unusual because it seemed that in the sequence of events the first thing that had happened was that [Baby A] had become apnoeic, he'd stopped breathing.

So if babies who are premature become apnoeic there's a number of things that we have to consider could cause that. We know that premature babies can sometimes forget to breathe. The respiratory centre that makes us breathe without thinking about it isn't mature and they can have what are known as apnoeas of prematurity.

Generally, if you have an apnoea of prematurity, it usually stimulates the baby and they'll start breathing again.

Sometimes --

ASTBURY: Stimulate, what does that mean?

JAYARAM: You prod them, for want of a better description. So you do something. If that doesn't work then, if it's an apnoea of prematurity, giving them some breaths again, if the apnoea is picked up and their oxygen levels have already begun to drop, giving them some breaths, getting gas into their lungs, they will start to breathe again.

This was unusual because he had not really been reported to be having any apnoeic spells but he had the apnoea.

The next thing then is if you become apnoeic and you're not breathing effectively, then ultimately you are not going to get

oxygen into your lungs, carbon dioxide out. If you don't get oxygen into your lungs the blood that is pumping through your lungs won't be able to pick up that oxygen, therefore the blood going around your body doesn't have as much oxygen, and therefore you can spiral downwards.

So usually in a situation, if a baby's had a prolonged apnoea, which is an apnoea of prematurity, when you bag them, so a colloquial term, when you use the Neopuff and breathe for them and you are basically inflating the lungs and getting gas into the lungs and you've got a heart that is pumping enough to pump blood through the lungs, what should happen is that the blood travelling through the lungs should become oxygenated, should go back round the body, and you should turn the problem around.

What was unusual here is that in spite of absolutely appropriate and timely manoeuvres from the team who were there at the time he had an apnoea, and they documented that the chest was moving, so gas must have been going in and out of the lungs, the heart rate, instead of picking up, continued to drop.

You can sometimes have acute events and certainly in a baby on CPAP, continuous positive airway pressure, a non-invasive ventilation where we are blowing a pressure to help to keep the lungs open, there is a risk of what's called a pneumothorax, which is essentially where one of the small pockets at the end of the lungs, the alveoli, can pop. So air goes into the lung and leaks out of the lung and accumulates in the space between the lung and the chest wall. And in that situation babies can become apnoeic, but again you would usually notice -- the first sign of that wouldn't be that they suddenly became apnoeic, you'd see a sudden increase in the amount of oxygen that they were needing to maintain their oxygen saturations. And if that's not picked up then it might lead to respiratory arrest and cardio-respiratory arrest.

Again, this didn't really fit with pneumothorax, (1) because it was sudden and (2), the comment was made that both sides of the chest were moving when the lungs were being inflated with the Neopuff.

If you've got a pneumothorax, you don't really see that side of the chest moving, you'll see reduced movement on one side and reduced breath sounds on one side.

So this was unusual to me because this didn't really fit with anything I'd ever seen in a newborn or a premature baby before. I have seen lots of babies have apnoeas, I have seen lots of babies who need to have Neopuff ventilations. I have seen some babies who don't respond, and if they don't respond, it's usually because there's been something else going on in terms of

pneumothoraces or evolving RDS, the lung condition that premature babies get through maturity.

But as I said at the start of this bit of the lecture, this didn't fit because it was very, very sudden. It didn't fit. All these other things you would usually see as the end point of other things that had been going on prior to this and you would have had clues from observations that had been made.

And even when [Baby A] was intubated, so we knew that gas was going in and out of the lungs, what should have happened is his heart rate should have picked up. And what actually happened was his heart rate began to drop.

And we generally say if the heart rate drops below 60, even if the heart is pumping, it is probably not going to be pumping effectively to get blood both up to the lungs and around the body, and then we start cardiac compressions.

It still doesn't fit, to me, with any disease process that I've ever seen, learned about, read about, in my career, why he didn't respond as he should have done.

One of the things, and I'll take another step -- and this comes more perhaps from resuscitation of older children. We have a sort of an algorithm to think through in terms of the sorts of things that could cause these unusual collapses. We talk about the four Hs and the four Ts.

So we talk about hypoxia. Hypoxia is when enough oxygen in your system and hypoxia can lead to collapse, but actually, until the point he became apnoeic, his oxygen saturations were okay. So although hypoxia was a subsequent thing, it doesn't really fit as a cause of the collapse.

Hypovolaemia. So if you have not had enough fluid and your circulation is empty, that can lead to things, but in that situation you would begin to see, well before it led to any acute consequence, signs that hypovolaemia was happening in terms of feeling cold peripherally, an increase in heart rate over time as well, and it would be unusual for that to present with an acute apnoeic episode out of the blue.

Electrolyte imbalances, so hypokalaemia, (inaudible: coughing), so abnormal potassium levels, abnormal calcium levels. Again, there was no evidence of any issues around electrolyte problems.

And hypothermia. Hypothermia is really on the list.

This is more sort of older children that are found lying in the park in the middle of winter unconscious and we know that

hypothermia can sometimes cause arrest and it's usually because of cardiac arrhythmias where we don't see sinus rhythm and there was no evidence of that --

ASTBURY: Can I ask you to pause. It's very intensive and there's a lot of information. So is my impression right that you go through, and we're going to go through a few more in a minute, when you are faced with a situation you look at the alternatives and whether you can eliminate them or not?

JAYARAM: I think the important thing, first of all, is to deal with the acute problem. We secure the airway, breathing, circulation. You have to make sure that you can get all of that right first before then thinking, I wonder what's caused all of this. You could argue surely we need to work out what's going on first before we can do something about it. But in these acute situations it's very much: get the airway/breathing/circulation right and then think about why has this happened. Because if you try to be too clever and stand there for 10 minutes thinking, I wonder what's causing it, by the time you have worked it out, it might be too late. And the basic interventions at the start of all of these things are the same regardless.

So we are thinking through things and I mentioned the four Hs and we also think about the four Ts. So tension pneumothorax. That's where one of the alveoli/lung sacs pops and the lung collapses down.

There's no evidence of that.

Toxicity. So could this be due to some kind of overdose of a drug or anything else that's gone in.

It's always something you have to consider. It's unusual on a neonatal unit.

A very rare situation, which I've never seen in a newborn, called cardiac tamponade, where essentially a leak develops in the wall of the heart muscle and blood leaks out into the sac around the heart so the heart can't beat. Again, I have never seen that in neonatology.

The last T is what is known as thromboembolic phenomenon. That is classically if you have a clot in your leg and it flies off -- the mechanism there is that would then get into the right side of the heart, get into the blood circulation to the lungs, and prevent blood from flowing into the lungs.

Now, again, I have never seen that happen in newborns in my life because generally it's something when you have been on a long-haul flight and you have a clot. So it didn't really fit at the

time with any of these things. But that wasn't really the foremost of my thoughts at that time. The foremost of my thoughts was to deal with what we were seeing in front of us.

And at the point the heart rate dropped down to 60 we switch into -- we have fairly clear algorithms of what we do and when and we went into that mode. So CPR went on, CPR meaning breaths in conjunction with cardiac compressions. And the idea of that is you are basically doing the heart's job for it. You are trying, in simple terms, to keep blood flowing and to keep the baby breathing.

But in spite of those efforts, and in spite of various drugs that were given -- adrenaline, sodium bicarbonate, glucose -- we give what's called volume as well. So as we're thinking through those Hs and Ts, we give what is called a bolus of normal saline. If the circulation is empty, you pour more into the circulation and that should help things to pick up. If the sugar's low, we give glucose. If you have very high acid levels in the blood from having prolonged periods of low oxygen and anaerobic respiration, we will give sodium bicarbonate because if there's a very acidic environment it can affect how the heart muscle functions.

But in spite of all of these interventions, he didn't turn around.

ASTBURY: Pausing there, I'm sorry, you mentioned I think adrenaline.

JAYARAM: Yes.

ASTBURY: So what -- just while we're on the point of what you can give and the effect, what would adrenaline do?

JAYARAM: Adrenaline is interesting and the use of adrenaline certainly in newborn resuscitation, when babies are first born, is controversial because everything's extrapolated from studies in adults and children. But essentially what adrenaline can do is stimulate the heart muscle. It might improve blood flow through the coronary arteries which carry blood to the heart. It basically helps to stimulate the heart.

In practice, in resuscitation in newborns, by the time we get to the stage where we are needing to use adrenaline in arrest situations, it's not very often that we have a successful outcome.

ASTBURY: I'm sorry, when I interrupted you about adrenaline you were about to tell us the next stage.

JAYARAM: Yes. So we gave adrenaline, I forget, it's in the statement, three or four rounds of it, I can't remember entirely.

We would give glucose. There was no evidence of a low glucose. And again hypoglycaemia, a low glucose, would very rarely -- in fact I have never known it present with an acute apnoea.

Low blood sugars can sometimes cause a seizure, a fit. Seizures can present as apnoeas, but usually if a baby is having a seizure you would see the heart rate go up. So in a situation of a fit where you have abnormal electrical activity of the brain, you would see the heart rate go higher. So it didn't really fit with that.

As I mentioned, sodium bicarbonate. I think really I can't think of a baby that I've looked after where we've got as far as using sodium bicarbonate in resuscitation where the outcome has been good in terms of actually getting the baby back or of long-term neurodevelopmental outcome.

So it was unusual because, for me, thinking back to what happened with [Baby A], it didn't fit with the usual patterns of what I would expect to happen.

I can't explain why he had the apnoea. It could have been just an apnoea of prematurity. But if it was, he should have responded, he probably wouldn't have even needed to have any artificial breaths given and then certainly when he had artificial breaths given and his chest was clearly moving, he should have picked up and he didn't. And then when his heart rate dropped, which still makes no sense to me, there should have been some response to some of the interventions that we did. It may not have been that we would have had a successful outcome, but I would anticipate with adrenaline, if the heart rate is still present, you would still see some response.

And later in the resuscitation we did see evidence of a heart rate and hear a heartbeat but it was ineffective, so we would still call that an arrest situation and it was short-lived.

It was a difficult situation because I'd not had any dealings with [Baby A] to that point. It was the first time that I'd really had any contact with his family, which is an awful situation to be in, in that situation as a paediatrician, when the first thing you have to say to a family is that, number 1, I'm not sure what's going on and, number 2, I don't think we're going to be able to bring him back.

ASTBURY: Did you have that conversation with the family?

JAYARAM: Yes.

ASTBURY: Did you discuss it amongst the other professionals?

JAYARAM: Yes, absolutely. In these situations, and thankfully they don't happen too often, it's very much a -- well, it should be a collaborative decision. It's certainly not for me as a consultant to say, I think we should stop and I don't care what anyone else thinks.

Ultimately, it's a decision between myself, my team and the family, and it's my job as a consultant to be as balanced and realistic as we possibly can. It's probably one of the worst parts of the job that I have to do as a consultant.

ASTBURY: And we know that you reached that point where you had that conversation.

JAYARAM: Yes, absolutely. Generally, after about 20 minutes, we know that actually we could potentially carry on and there have been situations I've been in where we have carried on and children have got a heart rate back and they've survived, but generally with a lot of neurodevelopmental problems. And occasionally you'll get a child who is a miracle baby and does really well, but in this situation we never really got much back and I think we went on -- again, it's in my statement, but I think we attempted resuscitation for well over 30 minutes in this situation.

ASTBURY: When efforts were abandoned or -- what's the practice then? What do the clinicians do at that stage?

JAYARAM: So what we generally do is at that point, having discussed things with the family, is talk to the family, explain things and really give them some private time with the baby.

Can I just -- sorry, I've just remembered one other thing that we did during resuscitation. I was talking about thinking about why these things happen. One of the things that we did -- two things that we did during the resuscitation.

I think people may already have talked about the umbilical venous catheter, which we put in through the umbilicus to give fluids and medications. It had gone into one of the veins towards the liver and it was slightly longer than it should be. So we just pulled it back slightly. It's fine to give glucose through there but we don't want adrenaline going into the liver. So we pulled that back at the time there was no other source of emergency drug administration. And we also suggested taking the long line out -- and the reason for that is at this time we didn't know why this had happened and although I'd seen sinus

rhythm, so there was no evidence of an abnormal electrical rhythm, one of the complications that can happen with a long line, if it goes all the way into the right atrium, the chamber of the heart, is -- I mentioned this thing called the sinus, which is the pacemaker -- it can sit on the sinus and cause abnormal rhythms. And given we didn't know what was going on and at that point the long line was unnecessary, I said, well, let's take the long line out.

In retrospect, I actually don't think it was related to the long line at all in terms of the fact that there was never any abnormal electrical rhythm seen, but we did that as well. I should have mentioned that earlier.

ASTBURY: That leads me on to equipment really because you told us you took the long line out. What's the best practice with equipment that the baby is already attached to the baby (overspeaking) UVC? So after death, is there a practice --

JAYARAM: Ordinarily we would, particularly in this situation, because it was unexplained and I knew that we would be -- I was going to discuss [Baby A] with the coroner, we would leave as much in as possible. So we should be leaving tubes and lines and things in as a matter of course. I can't remember what we did with [Baby A] but the long line came out in the course of resuscitation as an active decision.

MR JUSTICE GOSS: It was left in we know.

MR ASTBURY: All right. So having withdrawn and left the family to be with the baby, any further involvement with either of the children?

JAYARAM: No, so after that, I spoke with Dr Harkness, my registrar, who was devastated because obviously he had done this procedure shortly before and he was really concerned that this had happened as a consequence of the long line he'd put in. We looked at the X-ray together and it was slightly longer in than one would want it to be, but certainly not in a position where it would have caused any abnormal heart rhythm.

ASTBURY: Pause there: which X-ray are we talking about?

JAYARAM: I think it must have been the X-ray that was done after the long line was put in.

ASTBURY: So when you say the long line --

JAYARAM: (Overspeaking).

ASTBURY: -- looking at the long line?

JAYARAM: Yes. Just to look at the long line. I said to him I think it's extremely unlikely because (1) it's not in a position where you would expect it to cause a rhythm problem and (2) we didn't see any abnormal electrical activity.

ASTBURY: Would you have expected to see that on the monitor when (overspeaking) --

JAYARAM: Yes, absolutely. If the long line had caused a problem, (1) I wouldn't have expected an apnoea to be the first presentation, I would have expected to see an abnormal electrical rhythm first -- and usually if that's recognised your first intervention is to withdraw the long line a little bit so that is not in a position where it could be causing rhythm -- and I have seen this many times, putting umbilical venous catheters in, where if they go in too far into the heart, you can actually see a change in rhythm and you pull it back and, you know, the rhythm becomes normal and there was no evidence of that at all.

So after that I then spoke to the coroner and I documented a number of thoughts in the notes about things that could have happened: could this have been a pneumothorax, could there be any evidence of infection or sepsis? But I really didn't -- couldn't explain the sequence of -- why this sequence of events had happened.

I didn't explain why it had happened in the first place and I couldn't explain why the physiological responses as expected to appropriate and timely interventions did not happen as they should have done and I spoke with Mr Rheinberg, the coroner, that evening who said it was going to go to the coroners.

MR ASTBURY: Very good. Dr Jayaram, I have no more questions for you. If you could wait there, please.

Cross-examination by MR MYERS

MR MYERS: You are one of the two consultants with responsibility for the operation of this unit, aren't you, Dr Jayaram.

JAYARAM: I was at the time, yes.

MYERS: Yes. And you have given us a very fulsome explanation, setting out why, for example, it was no fault of anyone involved in this resuscitation, in the course of the resuscitation, that [Baby A] died. You have gone to some lengths to explain that, haven't you?

JAYARAM: Yes.

MYERS: And you've got to some lengths to explain to everybody why, on your assessment of the situation, there's nothing relating to his treatment, as you understand it to be, that makes your unit responsible for his death?

JAYARAM: Absolutely not, yes, I agree.

MYERS: And you have explained a lot of that to us, haven't you?

JAYARAM: I have.

MYERS: When you went to see the police to make a witness statement to them, and this is the first statement you made, on 18 September 2017, you dealt in some detail with the question of discolouration to [Baby A], didn't you?

JAYARAM: I did.

MYERS: You may want to check, but you didn't spend much time talking to them about P waves, QRS or T waves, did you?

JAYARAM: It wasn't relevant because they were normal.

MYERS: What was relevant was the discolouration, wasn't it?

JAYARAM: In retrospect, yes.

MYERS: Well, when you made that statement, wasn't it?

JAYARAM: Yes, at that time.

MYERS: Yes. And you have mentioned it today, haven't you, in your evidence?

JAYARAM: I have.

MYERS: Amongst the references to QRS and T waves and other things like, haven't you?

JAYARAM: I have yes.

MYERS: But as you say, when you went to the police -- when you spoke to them, I'm going to remind you what you said about the discolouration, you said:

"He had unusual discolouration."

For my Lord's note, it's page 12 of the statement:

"He had unusual discolouration. You'd expect babies to look fairly ghastly and pale and grey but he had an odd sort of discolouration where there were flitting patches of pink areas on the background of blue/grey skin. These patches seemed to appear and disappear. It wasn't like the rash seen with meningococcal sepsis, which is caused by blood vessels bursting..."

And that would stay, wouldn't it, Dr Jayaram, a meningococcal rash would remain?

JAYARAM: Yes, absolutely.

MYERS: "It wasn't like that. It would flit and reappear and disappear. It didn't fit with anything I'd ever seen before."

Your words Dr Jayaram; yes?

JAYARAM: Yes. I think it fits with what I've just said earlier as well.

MYERS: You went into rather more detail in your police statement, didn't you? It's only been a small part of what you have said this afternoon so far, hasn't it?

JAYARAM: Okay.

MYERS: "I would describe the marks as blotches which were fairly ill-defined, about 1-2cm, not discretely round but blotchy patches of brighter pinkness on a background of blue/grey."

And that was your recollection, was it, of what you'd seen on [Baby A]?

JAYARAM: Yes.

MYERS: And you were able to give that recollection a couple of years later in September 2017, weren't you?

JAYARAM: Yes.

MYERS: And you described it most particularly as something you had not encountered before?

JAYARAM: To that point, no.

MYERS: Extraordinary, in fact, on your experience at that point, wasn't it?

JAYARAM: At that point absolutely.

MYERS: Let's go and have a look at the notes that you made at the time, please, Dr Jayaram. In fact, they're at pages 1067 and 1068 on the system, Mr Murphy.

If we go to the timeline, it only has the first page of the notes, but there is a PDF towards the end of the [Baby A] section which has pages 1067 and 1068 together. Do you remember, ladies and gentlemen, it's possible to get to the exhibits by going across to the menu on the right-hand side? You may find it easier to find this by going across to the right-hand menu, clicking on "by SOE". Then if you go down it's almost the last but one on that right-had side and you'll find pages 1067 and 1068. We'll have them on the screen so you can follow them, Dr Jayaram.

We can see on 8 June 2015 the notes are made at 11.25 evening, aren't they? Yes?

JAYARAM: Yes.

MYERS: So you've had 3 hours to consider what took place before you did the notes, approximately?

JAYARAM: I think in that time it was an extremely busy time.

I had to speak with the coroner, I had to counsel staff, I had other things to do, because I was on call as well, so there are other events going on on the other side.

So it's not unusual for notes to actually be written later than that. In fact, there's been times when I've had to do notes even later.

MYERS: All right. But just so we can see, the note starts then and then the page -- I don't think we have it in the timeline but it is on the system, so we can see over the page, page 1068, sorry 11, 1068. Just to remind us of the length of this entry.

In fact, let's stay here. We'll come to page 1068 in a moment. Let's just enlarge the top half and see what we have here. The first half. This, you can see, says you were called around 20.26 and you arrived at 20.33. You can see that, can't you?

JAYARAM: Yes.

MYERS: And it gives some background, so at the time you come to make this note you were able to put down relevant information, weren't you?

JAYARAM: I was.

MYERS: "Twin 2 born 31++ weeks. Maternal --"

JAYARAM: Plus 2 weeks (overspeaking).

MYERS: The maternal situation, some background, the general position. If we just carry on scrolling down, please.

We can see:

"Umbilical venous line inserted by Dr Sally Ogden."

(Inaudible) -- well, the jury have heard about that taking place, Dr Jayaram. Two attempts to insert it but it wasn't properly sited. You are aware of that, aren't you?

JAYARAM: Yes.

MYERS: You say it was removed so that the resuscitation drugs didn't go to the wrong part of the body, don't you?

JAYARAM: No, we didn't -- at the time of the resuscitation there was a UVC in and we withdrew it slightly so that I was confident that the tip of it would have been in the inferior vena cava, not in the hepatic vein, in terms of administering the resuscitation drugs.

MYERS: Yes. Because the UVC was in the wrong place at the time it had been sited, wasn't it?

JAYARAM: Well, when one is putting a UVC in, it is very well recognised, not through anyone's fault or technique, that they can go into the vein towards the liver. And this is not the ideal place. They can still be used and they would not cause acute harm. But ideally, you would not want to leave them there long term because of the risk of clots forming on the end of them, because of the risk of infection, and certainly in a resuscitation you would want the resuscitation drugs going into the one of the bigger veins to get around the body.

MYERS: Yes. So what --

JAYARAM: So, yes, it was in the site that we would not have wanted it to go to, and you can call it the wrong site if you want, but I don't like that term wrong site because it implies that someone had done something wrongly, and this is a recognised issue with the insertion of umbilical venous catheters.

MYERS: It hadn't been put in the right place, had it?

JAYARAM: It had gone through the umbilical cord, because you can see that bit. You don't really have any control over that where it goes, which is why we do X-rays to check position.

MYERS: You told us you moved it before administering resuscitation drugs. That's what you tell us.

JAYARAM: Yes.

MYERS: Yes?

JAYARAM: Yes.

MYERS: And you moved it because where it was sited, in the hepatic vein, the portal vein into the liver, was not the appropriate place for it to be. That's why you moved it.

JAYARAM: Certainly not for giving resuscitation drugs.

MYERS: No, and so moving it would have been an important thing to do, wouldn't it?

JAYARAM: We could have given the resuscitation drugs in the position it was in, but actually withdrawing it slightly would have made it safer to give those resuscitation drugs. But in a resuscitation situation you have to make snap decisions and use your judgment as to what the safest and most timely thing to do is.

MYERS: Let's carry on down here. You have got:

"Umbilical venous line inserted by Dr Ogden and Dr MacCarrick."

We've heard about that:

"On chest X-ray, line had entered smaller..."

Is that smaller vein?

"... and was not in the inferior vena cava."

JAYARAM: Yes:

"Query portal vein or mesenteric vein."

MYERS: You put in about discussions that took place. Can you see:

"Discussed with me, advised removing"?

JAYARAM: Yes.

MYERS: You were able to put down significant things that had taken place in these notes, weren't you?

JAYARAM: Yes.

MYERS: Including even discussions you'd had about things?

JAYARAM: Absolutely.

MYERS: "Reinserted by Dr Ogden."

A little bit more detail about that. I'm not going to read through all of this. We've got the timings. At 19.30 can you see the nurse handover?

JAYARAM: Yes.

MYERS: "Nurse handover UVC had been removed. However, left in situ."

Yes?

JAYARAM: Yes. So it had been reported that it had been removed but it was actually still in position.

MYERS: I'm just seeing that you had sufficient time, Dr Jayaram, to include in these notes important matters that had arisen in relation to [Baby A] and you did have, didn't you?

JAYARAM: Yes.

MYERS: What's that? Is that:

"Plan was to insert peripheral" --

JAYARAM: "Peripheral long line."

MYERS: So we go down:

"Inserted by David Harkness."

And we have heard about that:

"Chest X-ray seen at 20.10."

It says down here:

"Crossed the midline in the superior vena cava and the right subclavian."

That will be right subclavian vein, won't it?

JAYARAM: Yes.

MYERS: Coming in up here (indicating)?

JAYARAM: Yes.

MYERS: Let's go over now to page 1068. Can we enlarge the top part?

"Plan was to pull this back after another long line had been inserted in another patient."

Then we've got reference to the 6% dextrose infusing.

JAYARAM: Sorry, that's 10% (overspeaking).

MYERS: Sorry, 10%, my fault --

JAYARAM: It's my writing, I apologise.

MYERS: Then we have:

"At 20.26 sudden apnoea."

JAYARAM: Yes.

MR JUSTICE GOSS: "Apnoeic spell", I think.

MR MYERS: Thank you, my Lord. Then we go through -- is that bag valve mask?

JAYARAM: "Bag valve mask ventilation commenced with Dr Harkness."

And chest movement --

MYERS: Next we come to colour:

"Legs noted to look very white and pale before cardiac arrest."

Yes?

JAYARAM: Yes. That's from what Dr Harkness told me because I wasn't there at the time.

MYERS: Yes:

"Legs looked white and pale before cardiac arrest.

CPR commenced."

Were you there when CPR commenced?

JAYARAM: I was there when CPR commenced because when I arrived the heart rate was 90 to 100 and then it dropped down.

MYERS: Did CPR commence after cardiac arrest?

JAYARAM: CPR actually commenced before cardiac arrest in terms of the definition of -- if you're using the definition of cardiac arrest as the heart stopping, but we start CPR generally when the heart rate drops below 60 because we know that below 60, even if the heart is pumping, it is very unlikely that it is going to be pumping adequately -- to pump blood around the body and supply the organs of the body.

MYERS: It had started then. Weren't you there in fact at the time it has got down here:

"Legs noted to look very white?"

That would be you there then, wouldn't it?

JAYARAM: Yes.

MYERS: That would be what you saw, wouldn't it? That would be what you saw, wouldn't it, Dr Jayaram?

JAYARAM: Yes.

MYERS: Nowhere in here -- we'll go through with other things in it, but nowhere in here is there any reference to you can see what you told the police when you went to see them:

"Unusual discolouration, flitting patches of pink areas on the background of blue/grey skin. Patches seem to appear and disappear. It didn't fit with anything I'd ever seen before."

Patches of bright pinkness on a background of blue/grey. Why on earth is "didn't fit with anything I had every seen before" and that description not included in these notes?

JAYARAM: Because as I stated, at the time I did not appreciate the clinical significance of this whatsoever. Over time, having seen this on further occasions, and in retrospect, absolutely. At the time of this and even at the time that I did a statement for the coroner, I hadn't really considered this clinically significant.

It's a somewhat clumsy analogy, but the first time somebody died of COVID in China, nobody probably recognised that it was COVID. Probably not the second or the third. But over time you see patterns. Then when you see patterns you try and put it all together.

Now, as a clinician, as all clinicians, we are trained to be fully aware of the dangers of cognitive bias and confirmation bias. And I suspect my learned friend might suggest to me that this is something that's a false memory but I sure you absolutely that it's not and I wouldn't be sitting here under oath saying that I saw these things. I agree entirely it is not documented there. But there were many things that went on that I probably didn't document either.

MYERS: You've documented details of the history, haven't you?

JAYARAM: Yes, that's relevant.

MYERS: You've documented details of what took place when you weren't even there, haven't you?

JAYARAM: Yes.

MYERS: You have documented colour where you say white and pale, so colour is in your mind, isn't it? Can you help us with why it was, if you were trying to work out what had happened, as you've described, you didn't document that you'd seen something that didn't fit with anything you'd ever seen before?

JAYARAM: Because to my mind it did not fit, it was not clinically relevant to the presentation that we'd seen. The white legs could have been because you're thinking poor circulation, you've got a catheter in a vein, is it affecting blood flow to the legs, which is unlikely in a venous cater; that can happen in arterial catheters.

One of the things in my mind was this in the right place. Yes, it was in the portal vein, but it was in the venous system no the arterial system. But to my mind, at the time these notes were written, the clinical significance of this discolouration did not really occur to me and that's why it's not documented.

MYERS: It's not in them because unlike anything you ever saw at the time; that's the truth of it, isn't it?

JAYARAM: Sorry, could you reframe that? I'm not quite sure what you're asking me.

MYERS: I'm sorry. It's unlike anything you actually saw at the time. That's why it's not in the notes, Dr Jayaram.

MR JUSTICE GOSS: I think the question is you didn't actually see it; is that what you're saying?

MR MYERS: It is, yes, my Lord.

JAYARAM: You're suggesting I didn't see it? No, absolutely I saw it, and I have no reason to confabulate why I might have seen it and I find it as a -- as a professional, as a paediatrician of 30 years, as a doctor of 32 years, if my character was such that I would make things up, I would hope that friends, colleagues, managers, nurses, patients, parents, would have picked that up well before now --

MYERS: So you have a --

JAYARAM: -- and flagged it up.

MYERS: You have an expectation that everyone would believe whatever you say, Dr Jayaram? Can I just clarify that with you?

JAYARAM: No, of course I don't have an expectation that everybody believes what I say. I think you've -- I'm not sure where that's come from.

MYERS: Let's carry on with the notes:

"CPR commenced. Resuscitation proceeded [is that?] as documented" --

JAYARAM: Progressed.

MYERS: "... as documented by Drs Harkness and Wood. Resus..."

What does that say? Could you help us?

JAYARAM: "Resuscitation drugs given via the UVC.

Dr Rachel Lambie ST6 also present."

MYERS: Can we just look down a moment, please:

"Rhythm on monitor."

JAYARAM: Yes:

"Low voltage complexes seen."

MYERS: Just pausing there, for what it's worth, it doesn't actually say anything about the UVC having been pulled away from where it had been sited in the liver, does it?

JAYARAM: No, it doesn't.

MYERS: Right. Are you sure that's something that happened, Dr Jayaram?

JAYARAM: Um... I remember doing it because I remember, even this time on, saying it should be done. Even if it wasn't done and even if the UVC had still remained in the portal vein, I don't think it would have made any difference to the efficacy or lack of efficacy of those drugs.

MYERS: Let's move down to see what's on the bottom half of this, please. A reference to the rhythm on the monitor.

Then details of the resuscitation. And sadly, the end of life. The coroner informed. And the remaining matters there and questioning about the question marks about the IVH. And related to, is that UVC --

JAYARAM: Yes.

MYERS: "... related to UVC in abnormal position."

You called it an abnormal position there, don't you, Dr Jayaram?

JAYARAM: It is abnormal, but it's not a wrong position.

MYERS: Abnormal right position, you're saying?

JAYARAM: No, no, no. I'm not saying that at all. I'm not saying that at all. Let's get -- a wrong position, what I would regard as wrong is if it had gone all the way into the right atrium and it was potentially causing rhythm problems. It's in an abnormal position but it's a recognised position that it can go into. And the reason I put a lot of things there, if you look through my thought processes -- and this is what I was saying at the time, you think through, you deal with a situation in front of you and then think through things.

As I've said, although the line was in the right atrium -- was query in the right atrium, which it wasn't, this is talking about the long line, the initial apnoea was not related to an arrhythmia.

Tamponade, that is one of the Ts, I talked about potential ruptures of the heart muscle and blood in the pericardium, the bag around the heart, affecting the heart contracting, but that is extremely rare and there was nothing to suggest that.

IVH stands for intraventricular haemorrhage. So babies that are premature can have bleeds in their brain. There's no reason for that to have happened in this situation. It usually happens in much more premature babies and it usually happens in babies who have been much more unstable for a longer period of time.

And again, to an extent, in this situation I was really clutching at straws. I could not explain and so I put in my thoughts, could it be related to the UVC in an abnormal position, but I really couldn't think of any, and I still can't think of any, explanation for what happened in the sequence of events with [Baby A] that could be explained by the UVC being in the portal vein.

It does not explain in any way why he might have had an apnoeic spell. It does not make any sense at all that he'd have an apnoeic spell because the umbilical venous catheter was in a sub-optimal position.

MYERS: Was the umbilical venous catheter used to put the adrenaline into [Baby A]?

JAYARAM: It would have been, yes.

MYERS: What do you mean when you said earlier:

"The use of adrenaline in newborn babies is controversial"?

JAYARAM: If you look at the newborn resuscitation guidelines, we use it because it is in all the resuscitation algorithms. It is controversial because no one is really sure how in newborns it works or if whether in newborns it works. But extrapolating from adult evidence and evidence in resuscitation of older children, it's in the algorithms.

What's important in any resuscitation, newborn child or adult, is good effective cardiopulmonary resuscitation because with good effective cardiopulmonary resuscitation, by which I mean we're getting oxygenated gas into the lungs and getting carbon dioxide out and we're doing good cardiac compressions to get blood flowing through the lungs, you should be able to keep a baby going whilst you're treating an underlying problem.

And in this situation, it didn't make sense because, in spite of good ventilation of the lungs and gas clearly getting into the lungs, the heart still didn't pick up.

And if this had been a situation where this baby had been extremely unwell with a rising heart rate and dropping blood pressure for several hours, it could have been the end point of

things, but up until the point of this event happening he'd been completely stable.

MYERS: You know that the day after this, although you weren't present, there was an event concerning [Baby A]'s sister [Baby B], don't you?

JAYARAM: I'm aware of that, yes.

MYERS: Yes. Well, people would have been talking about it on the unit, wouldn't they, after it had happened?

JAYARAM: Well, as clinicians we discuss cases with each other.

MYERS: Yes. And people would have talked about the fact that she had had a marked rash with -- that was moving around her body and purple, yes? You're aware of that?

JAYARAM: Yes.

MYERS: People were talking about that, weren't they? We're also going to hear that, sadly, on 22 June 2015, a little baby called [Baby D] died. You know all about that?

JAYARAM: Yes.

MYERS: We'll get there in due course with the evidence. When [Baby D] died, there were discussions about a possible rash on her as well, weren't there?

JAYARAM: That's correct.

MYERS: And that's on 22 June, so about 2 weeks after this, perhaps a little less than that. Whether or not the rashes having anything to do with air embolus is going to be dealt with in due course in this case, I'm not going to ask you to give your opinion on that, Dr Jayaram. But let me ask you this: you didn't see the rash on [Baby B] yourself, did you?

JAYARAM: No.

MYERS: And with [Baby D], did you see that one yourself?

JAYARAM: No, I wasn't there.

MYERS: But after [Baby D] had died, you actually looked up, didn't you, a research paper called vascular embolism --

"Pulmonary Vascular Embolism in Newborns"? You looked that up, didn't you?

JAYARAM: I looked -- well, I didn't specifically go to look that up. As a group of clinicians -- and I'm sure, as you interview my colleagues down the line -- by this stage we'd had a run of very unusual and seemingly inexplicable episodes with babies who'd been relatively stable, in fact quite stable, suddenly deteriorating, and this had been a common theme. And, as a group, going back to the analogy I used before, when we start seeing something we're not familiar with, we have to start questioning as clinicians, as scientists, we have to start thinking, "Well, what on earth could be going on here?"

MYERS: So in those circumstances you decided to have a look for any relevant learning?

JAYARAM: I looked for many things. I looked up many neonatal conditions. I couldn't find anything that really fitted with sudden deterioration associated with this kind of discolouration and lack of response to appropriate interventions.

MYERS: And --

JAYARAM: And so as part of my literature search, which I think as a good clinician we have to -- you know, I much prefer dealing with things that I know what I'm dealing with because it makes life much easier, and part of medicine is dealing with uncertainty, very little of what we do in medicine is black and white, it's dealing with uncertainty and managing shades of grey.

But yes, so I did a search. I didn't specifically search that paper, but I was thinking, "What could cause this kind of discolouration?" I knew that lines had been in and I -- really just out of curiosity, because I was aware of -- I wasn't aware of air embolism in newborns. We all as doctors we are taught at medical school about the danger of air embolism; if you inject air through a cannula into somebody it can cause harm and kill them.

So really, just in a literature search, I think, well, you know, unusual things and thinking about going back to Hs and the Ts, thromboembolism, thinking what could potentially stop blood going to the lungs because it was clear by this time, if I was thinking through this from a physiological point of view, we had gas going in and out of the lungs, if blood was flowing through the lungs, if blood could make it into the lungs to go past the alveoli, the air sacs, to pick up that oxygen, it should have come back to the heart and been pumped around the body and the baby should have got better. And thromboembolic phenomena -- and, as I say, normally it doesn't really happen in babies, but an embolism is -- a thrombus is a clot, an embolism is anything that flies off and causes a blockage.

I actually didn't actually specifically look for air embolism, I just looked at "embolism newborn" and alighted on this scientific paper, which was a case review from a long time ago, published in the Archives of Disease and Childhood, which is the main paediatric journal in the UK, describing a series of accidental air embolism events, and it described exactly this pattern of discolouration.

MYERS: All right. So I just want to be clear. When I asked, did you do some research after [Baby D]'s death into this paper, the answer to that, without wishing to be rude, is: yes, you did?

JAYARAM: Yes.

MYERS: Thank you. Now, everyone had been -- well, you say your colleagues as a group had been talking about these deaths, so that research is conducted. Do you recall when it was you came across that paper?

JAYARAM: I can't remember.

MYERS: But within days of [Baby D]'s death, as you were discussing this; is that correct?

JAYARAM: I think so, but I can't be sure.

MYERS: All right.

JAYARAM: I can... It may be in one of my statements, I can't remember exactly when.

MYERS: All right. If it is --

JAYARAM: It was clearly not before [Baby D]'s death.

MYERS: Plainly not. But it was some time shortly afterwards, wasn't it?

JAYARAM: Yes.

MYERS: Now, in your witness statement you also deal with a statement that you made to the coroner with regard to [Baby A] and perhaps you could -- Dr Jayaram's witness statement could be put up. It's at page 18, Mr Murphy, so Dr Jayaram can see it and his Lordship and the barristers.

Whilst we wait for Mr Murphy to put that on the screen, let me ask you about this. You made the statement that -- for an inquest that was to be held into [Baby A]'s death, didn't you?

JAYARAM: Yes.

MYERS: And you know an inquest is held before a coroner; correct?

JAYARAM: That's correct.

MYERS: And it's a formal inquiry to see if cause of death can be established and to review the circumstances of the death, isn't it?

JAYARAM: That's correct.

MYERS: Of course it's important to provide all relevant information, all relevant detail, isn't it? You agree, don't you?

JAYARAM: I agree.

MYERS: You made a formal statement to the coroner on 24 July 2015. So that statement was made about two and a half months after [Baby A] had died and some time after [Baby D] had died, about a month or so after [Baby D] had died. Of course by that time, as you described to us, there'd been plenty of conversations with your colleagues about what had happened with [Baby A], hadn't there?

JAYARAM: There had.

MYERS: And plenty of discussions about the -- what you say is the skin discolourations. We've got the statement here if you want to look through it. You can see the start is on the screen. It's incorporated in your witness statement on page 18. Can you where see it starts:

"I am Dr Ravi Jayaram..."?

JAYARAM: Yes.

MYERS: I'm not going to go through all of it, I'm going to summarise what you put in it. You put in it your position at Chester Hospital. You put in the background for [Baby A], his relevant delivery history, natal history. You put in what you were doing in the outpatient clinic that afternoon.

Go down the page. You put in what had happened with the UVCs. Continue over the page, please. About the discussion of X-rays by Dr Ogden with you during the course of the day, the decision [Baby A] should go on intravenous feeds. So far, so good. That's all there, isn't it, Dr Jayaram?

JAYARAM: It is.

MYERS: Right. Moving on, you deal with the point at which Dr Ogden handed over to David Harkness, who is the duty registrar, and the insertion of the long line into the elbow, the inside fold of the elbow. You talk about what happened after that and the plan for the long line to be pulled back so it sat in the left subclavian vein.

Then if we move down the page, please, so we're into -- a couple of pages in now. 20.26. You talk about [Baby A]'s deterioration; yes? Now, this comes about 6 weeks after it all took place, doesn't it, Dr Jayaram?

JAYARAM: Yes.

MYERS: And you set out what took place in the course of that deterioration and what happened.

Move down the page, please, to when you arrive at 20.33:

"CPR ongoing."

You deal with:

"The only access was the UVC."

You describe there -- there you describe it's pulled back to ensure the inferior vena cava rather than the portal vein is the only available venous access and you talk about the drugs that were administered. Then you talk about talking to the family. That's a summary, isn't it, of what is about a three-page statement to the coroner for a formal inquiry? Do you make reference in the course of that statement to the rash you described with the colouring patches, the flitting patches, and something that didn't fit with anything you'd ever seen before?

JAYARAM: No, I haven't. And --

MYERS: Given what you've said -- sorry.

JAYARAM: And I can explain that because when I do a coroner's statement, it has to be factual, it has to be based on what I'd written in the notes. I can't do a coroner's statement (inaudible) something else in and at that time again -- and I can't remember exactly when I looked up "air embolism" and found that paper. You may have the date there. I presume it was before writing this statement from what you're saying.

In a Coroner's Court, as my learned friend absolutely says, it's to establish cause of death and, if there isn't, should there be

anything else. And my concluding remarks to the coroner when I gave evidence were that I could not explain how this had happened. It wasn't my job there to say, "I think it could have been this". My job is to say I couldn't explain it and that's what I said because at that time I had no evidence, I had no reason, apart from association, to say, "I think there could have been an air embolism".

Certainly there was a discolouration.

MYERS: So the statement to the coroner contains things that are not in your notes, doesn't it, Dr Jayaram?

JAYARAM: I beg your pardon?

MYERS: Your statement to the coroner does contain --

JAYARAM: Yes.

MYERS: -- things that aren't in your notes.

JAYARAM: For example, the UVC. But I remember --

MYERS: So, for example, pulling back the UVC?

JAYARAM: Yes.

MYERS: So when you tell the jury you don't put in a statement to the coroner anything that isn't in the notes, that's not right, is it?

JAYARAM: I accept that.

MYERS: Yes. Now, the coroner wants to know what cause of death is; yes?

JAYARAM: Yes.

MYERS: And you've told us all in some detail here what your views were in all of that, haven't you?

JAYARAM: I've told you what I think it wasn't.

MYERS: Yes. And you've told us all about the discussions with your colleagues because you really wanted to understand what had taken place and you know very well that the description of a rash that occupied the place in your witness statement that it did, that you had never seen before, was plainly relevant if that was a detail you could give. Do you agree, it would be plainly relevant to the coroner?

JAYARAM: In retrospect, absolutely.

MYERS: In retrospect? Are you seriously suggesting that this is not relevant to a coroner:

"Unusual discolouration, flitting patches of pink areas on a background of blue/grey skin, appearing to appear and disappear, like a rash with meningococcal sepsis, which is caused by blood vessels bursting, flitting, reappearing, disappearing, didn't fit with anything I'd seen before, described the marks as blotches, which were fairly ill-defined, about 1 to 2 centimetres, not discretely round, but blotchy patches of brighter pinkness on a background of bluey/grey."

You didn't think that was relevant to tell the coroner; is that what you're saying?

JAYARAM: At that time one of the reasons I didn't put it into the statement was, as I said, it wasn't in the notes and unlike sort of pulling back the UVC, which I remembered at the time I wrote this statement, it wasn't there, and although I -- and I still wasn't aware of the clinical relevance. I'd had some ideas. It's not my job to be the coroner. It's my job to explain that I couldn't explain what was going on.

MYERS: You give the coroner the physical findings and observations that you made at the time and could make at the time, don't you?

JAYARAM: Yes.

MYERS: Yes. And then the coroner decides what's made of that.

That's correct, isn't it?

JAYARAM: That's correct.

MYERS: Now, you first spoke to the police about this in June 2017, didn't you? That's when you were first interviewed by the police as a witness about these events?

JAYARAM: Yes.

MYERS: Certainly by the time you spoke to the police, you'd read what's in the paper, hadn't you?

JAYARAM: Yes.

MYERS: The research paper?

JAYARAM: Yes.

MYERS: And, as we've seen, you were able to give the police a description by that point of a rash on a bluey/grey background with bright pinkness; yes? I'd just like to put up the paper that you looked at, one page from it, page 24946.

If we could just enlarge, please, there's a section that's been highlighted -- this is in the paper. We may see the again in the course of the case, but let's just put in this section because this is a section that has a description I'd like to ask you about. This is where it describes in the paper that you later read colouring that is said to in certain circumstances be associated in the paper with air embolus and it describes this:

"Blanching and migrating areas of cutaneous pallor were noted in several cases and one of our own cases we noted bright pink vessels against a generally cyanosed..."

Cynaosed is blue, isn't it?

JAYARAM: It is, yes.

MYERS: "... cutaneous background."

So the paper, Dr Jayaram, the paper that you read at some point mentions moving patches of skin colour, doesn't it? The paper mentions bright pink against a blue background, doesn't it?

JAYARAM: It does.

MYERS: Yes. What you said to the police when you went to make your statement in 2017 was made after you had read this paper, wasn't it?

JAYARAM: It was.

MYERS: When you were interviewed?

JAYARAM: Yes.

MYERS: And you told the police about bright pinkness on a background of blue/grey, yes?

JAYARAM: Yes.

MYERS: You didn't mention bright pinkness on a background of blue/grey in your notes at the time, did you?

JAYARAM: I didn't at the time --

MYERS: No.

JAYARAM: -- because I wasn't aware of the clinical significance.

MYERS: And you didn't mention bright pinkness on a background of blue/grey when you made your statement to the coroner, did you?

JAYARAM: No, I didn't.

MYERS: Has your description of what you said to the police and you say now been influenced by what you read in that paper, Dr Jayaram?

JAYARAM: I would say it hasn't. And the reason being, as I say, it is very easy to have confirmation bias. I remember reading this paper for the very first time and reading about this description and really feeling quite cold and worried.

Now, it is a matter of regret for me that I didn't mention this to the coroner in the statements or at the time. At the time, and I think I -- I can't remember the date of the coroner's inquest, I don't know if you have when it happened. I know it was quite a long time after I did the statement.

MYERS: I'm sure we can find out what it is.

JAYARAM: Because that would be really helpful.

MYERS: Well, tell us what it is you want to say about it, please.

JAYARAM: Well, the reason is at the time of the coroner's inquest -- and I can't remember quite when it was -- we as a group of clinicians had already begun to raise concern to members of the more senior management team in the hospital about the association that we'd seen with an individual being present in these situations and we at that time were -- how do I say this diplomatically? -- being told that really we shouldn't be saying such things and not to make a fuss. It's more complicated than that, but essentially.

So I think at the time of the inquest, my concern -- and it is a matter of regret that I didn't mention these -- is that had I suggested this and this could have been happening, I didn't really have any hard evidence apart from the association that we'd seen, and it's a matter of regret, I wish I'd been more courageous at that time.

MYERS: There's absolutely nothing preventing you reporting to a coroner visual signs, as you've described to this jury, if you saw them, is there?

JAYARAM: There isn't.

MYERS: No. And nothing about those visual signs and reporting, let's remind ourselves, the shifting pink against a blue background that didn't fit with anything you'd seen before. It's a straightforward clinical observation isn't it?

JAYARAM: It is.

MYERS: And you didn't report it. So can I just be clear and can you help us? Has the description you read in that paper influenced what you're saying to the police and to us about the colours you now say you saw?

JAYARAM: No. Absolutely not. Categorically.

MR MYERS: My Lord, there will be other matters to deal with with Dr Jayaram in due course.

MR JUSTICE GOSS: Do you have any more questions at this stage?

MR MYERS: Not at this stage.

MR JUSTICE GOSS: Thank you very much. Yes, Dr Jayaram will be coming back.

You'll be coming back again. I'm just going to see if there are any more questions at this stage.

MR ASTBURY: No, thank you, my Lord. Does my Lord have any questions at this stage?

MR JUSTICE GOSS: I don't. Thank you very much.

MR ASTBURY: May Dr Jayaram be released?

MR JUSTICE GOSS: Certainly.

That completes your evidence at this stage for today and at this stage, so you don't have to come back tomorrow, but you will have to come back later in the trial as I think you knew in any event.

JAYARAM: Yes.

MR JUSTICE GOSS: It is of vital importance -- and this is said to every witness who doesn't complete their evidence -- that you do not speak to anyone about this case or any of the questions you've been asked or the evidence you've given in relation to them in particular -- that applies to anyone, you shouldn't talk

to anyone about it, but in particular, obviously, to anyone who's a witness in this case.

JAYARAM: Absolutely.

MR JUSTICE GOSS: That's of critical importance.

JAYARAM: Yes, fully understood.

MR JUSTICE GOSS: Thank you very much indeed.

Right. There we are, members of the jury. That's it for today. Could you be ready, please, to recommence at 10.30 tomorrow morning?

As far as you're concerned, madam, I've been very conscious of your indisposition.

JUROR: I'm going to try to get some antibiotics this evening.

MR JUSTICE GOSS: The important thing is, if you're not okay, please just let us know. Don't worry, don't suffer. You mustn't suffer because you've got to be able to concentrate. Obviously do what you can, all right? But if you are not fit then you must ring in and report that fact, as I said at the very beginning, so we know what the situation is. You're not alone in coughing, there are a few coughs going around, but I think, as I've already said more than once, it's that time of year, and not just the ongoing problem that we've got, which has been referred to in the evidence this afternoon in a completely different context.

Right. Thank you very much. Of course, remember your obligations as jurors and responsibilities. No research and no conversation with anyone who's not a fellow juror and when you're all together so that everyone can hear what's being said. Thank you very much indeed.

(In the absence of the jury)

(The witness withdrew)

MR JUSTICE GOSS: I think one of the problems is the air probably gets staler as the day goes on. It certainly gets hotter. That is notorious for exacerbating throat irritations.

MR ASTBURY: Yes.

MR JUSTICE GOSS: Right. Thank you very much.

(4.16 pm)

(The court adjourned until 10.30 am on Tuesday, 25 October 2022)