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Housekeeping

Thursday, 9 February 2023
(10.30 am)

(In the presence of the jury)

MR ASTBURY: My Lord, I recall Dr John Gibbs, please.

DR JOHN GIBBS (recalled)

Examination-in-chief by MR ASTBURY

MR ASTBURY: Doctor, could you state your name for the record, please?

GIBBS: I'm John Gibbs.

ASTBURY: Thank you. You have come today to assist us with your involvement with a baby by the name of [Baby I]?

GIBBS: That's correct.

ASTBURY: Do you recall [Baby I] from her time at the neonatal unit at Chester?

GIBBS: Yes.

ASTBURY: Is it right, or are you aware, that [Baby I] spent some time within the unit as an inpatient?

GIBBS: Yes.

ASTBURY: Is it right that you dealt with her on two occasions, on 21 September 2015 and 27 September 2015?

GIBBS: Yes. I examined her then as part -- I was paediatrician of the week and I was doing routine ward rounds on the neonatal unit on those days.

ASTBURY: That was during the course of one of her stays at Chester.

You were aware, were you, that she -- sorry, before we move on from the 21st, did you find on the 21st and the 27th any respiratory difficulties with [Baby I]?

GIBBS: No.

ASTBURY: And was her physical examination normal at that time when you saw her?

GIBBS: Yes.

ASTBURY: Thank you. We've heard about a series of incidents on the 13th, the 14th and 15 October 2015. Were you involved in any of those incidents involving [Baby I]?

GIBBS: Not as far as I can remember, no.

ASTBURY: Thank you. Are you aware she then went and spent some time at Arrowe Park Hospital?

GIBBS: Yes, a couple of days, I think.

ASTBURY: When she returned from Arrowe Park on 17 October, was [Baby I]'s condition considered to be stable?

GIBBS: I believe so, yes.

ASTBURY: When did you, please, next become involved with the treatment of [Baby I]?

GIBBS: As far as I can recall, it was when I was called in urgently in the very early hours of the morning of 23 October.

ASTBURY: Were you aware, when you were called in, of [Baby I]'s most recent course of progress since her return from Arrowe Park?

GIBBS: Yes, because we have regular handovers each time we're on call in the evening and I knew she'd been stable. People were happy with her progress. The only concern was we were not sure what was happening with her abdomen and she was awaiting transfer to Alder Hey Hospital to have an investigation of her bowel, an imaging investigation. Because of that, she was not supposed to be fed by mouth. But she was fine and from a

breathing point of view, which is important in premature babies, her breathing was fine at that time.

ASTBURY: Do you recall the time that you were asked -- you told us you were called in urgently to see [Baby I] as the on-call consultant, do you remember roughly what time that was?

GIBBS: I know it was in the middle of the night. Having reviewed the notes, I was called at about -- I think it was 00.05, as stated in the notes.

ASTBURY: Do you have an independent recollection of those events or have you relied to any extent on the notes that you made at the time?

GIBBS: It's both. I have some memory of the events. I don't remember them in absolute detail from 7 years ago. But I've reviewed them in the notes as well, the notes I took at the time or shortly after each event.

ASTBURY: Do you recall who asked for you to come in as a matter of urgency?

GIBBS: Who actually phoned me, no, I don't remember. It's often switchboard, actually, who -- someone on the switchboard is asked to get hold of you urgently as a consultant on call. I found out quite quickly, either maybe at the telephone call or as soon as I arrived in the hospital, it was the registrar on call, Dr Chang, that wanted me there.

ASTBURY: Perhaps if we go to your notes, Dr Gibbs, please. Could we begin, please, at tile 108?

We have access to the swipe data, as you can see, that was recorded at the time. If we click behind it, that shows us that you were arriving through the neonatal doors, I think, yes, at 00.06. Does that accord with your recollection?

GIBBS: Well, I don't remember exactly what time I arrived, but I wrote in the notes that I was called about five past and thought I'd arrived about quarter past. So obviously what I was recording in the notes is slightly different to what the door data was saying.

ASTBURY: Do you remember where you were when you were called?

GIBBS: At home.

ASTBURY: We'll go to the next note, please, at 110, Mr Murphy, timed at 00.45. Would that be written in retrospect?

GIBBS: Yes.

ASTBURY: So the times are being recalled in retrospect as well?

GIBBS: Yes. That's what I've put:

"Called at [and that squiggle line is meant to stand for approximately] 00.05. Arrived at 00.10 to 00.15."

But as you say, the door says I was in at 6 minutes past so those times are probably slightly inaccurate.

ASTBURY: Do you have any independent recollection of what you found when you arrived on the neonatal unit?

GIBBS: Well, [Baby I] was being resuscitated at the time.

ASTBURY: And do you remember who was present at the time?

GIBBS: Well, Dr Rachel Chang, the registrar, was there, and two of the -- there are other nurses around on the unit, but the two nurses mainly involved with [Baby I] were Staff Nurse Lucy Letby and Staff Nurse Ashleigh Hudson.

ASTBURY: Do you recall what you were told when you arrived?

GIBBS: That [Baby I] -- the nurses -- and I don't remember -- I think it was Ashleigh Hudson, but the nurses were telling me that she'd suddenly seemed very distressed and was making an abnormal cry. That was about 10 minutes or so before I arrived -- so just before midnight, roughly -- and then she'd rapidly deteriorated, her oxygen saturation, which was being measured, dropped, and her heart rate dropped. And they were so concerned that they needed to take over her breathing.

The usual sequence of events, and I wasn't there for it, would be the nurses or nurse with [Baby I] would have initiated the support and called the registrar, which was Dr Chang.

ASTBURY: Yes.

GIBBS: But that had happened before I'd arrived. But they were all there helping [Baby I] when I arrived.

ASTBURY: Okay. What was [Baby I]'s status with respect to ventilation when you arrived; do you recall?

GIBBS: She was being ventilated with a Neopuff device through an endotracheal tube.

ASTBURY: Were you told who'd fitted that endotracheal tube and when?

GIBBS: It had been Rachel Chang, shortly before I arrived. And also I was told that [Baby I] had had to have chest compressions, but those had -- to help support her circulation, but those had stopped by the time I'd arrived, so it was just for a few minutes she'd needed that support, but she was continuing to need breathing support at the time I arrived.

ASTBURY: Thank you. If we go to your note then, please:

"On arrival [you have noted], intubated and Neopuff ventilated."

GIBBS: Yes.

ASTBURY: Does that say "receiving bolus of saline"?

GIBBS: Yes.

ASTBURY: So that was taking place when you arrived?

GIBBS: Yes.

ASTBURY: You've given a description of [Baby I]. Could you take us through that, please?

GIBBS: So [Baby I] was active, which meant she was moving. She had a pink-coloured face but she was pale and mottled in her trunk and peripheries. That's an indication of reduced circulation, but we would expect that giving some fluid should improve her circulation. As I said, the saline was being given at the time and as a bolus means given quite quickly. Her colour steadily improved over the next 5 minutes and then she became pink all over.

ASTBURY: It says "mottled" -- what are the next few words, sorry?

"Blue"?

GIBBS: "Mottled blue trunk and peripheries."

That means her limbs and her trunk were mottled and blue.

ASTBURY: So the colour you noted is blue?

GIBBS: In her body, but pink in her face, yes. Then her colour improved and became pink all over.

ASTBURY: Right, okay. The mottling was to the abdomen, did you say?

GIBBS: Abdomen and limbs.

ASTBURY: Right:

"Colour steadily improved over next 5 minutes."

Is that --

GIBBS: Yes.

ASTBURY: And she became pink all over?

GIBBS: Yes.

ASTBURY: Just explain the next entry to us, please.

GIBBS: I have put in quotation marks "fighting when placed on ventilator". Fighting meaning she was active, resisting, looking as though she was fighting the ventilator. And when we ventilate patients, a patient of any age needs to cooperate with ventilation. Often they do because they're semi-conscious or unconscious because they're unwell and needing ventilation, or sometimes they've been given medication to relax them, so that they won't fight/resist the ventilation.

Otherwise ventilation becomes very difficult if a patient is trying to breathe by themselves at the same time as a ventilator's trying to breathe and often one counteracts the other.

ASTBURY: Does the fact that [Baby I] was fighting the ventilator tell you anything about her condition?

GIBBS: Yes, it's a very good sign. It's usually a condition that someone's fairly well and doesn't want to be ventilated. The fact that her colour had improved and she was resisting being ventilated were good signs.

ASTBURY: Does that then say underneath "good air entry"?

GIBBS: Yes, it's "good AE" for air entry and then in brackets "with own breaths", so this is -- she was actually taking her own breaths now rather than the ventilator giving her breaths and you could hear good air entry throughout her chest.

ASTBURY: Is that "crackles"?

GIBBS: "Crackles on inspiration." So although there was good air entry all over, there were some crackles. It just means moist, likely to be some secretions in the airways, and you could hear the crackles when [Baby I] was breathing in.

ASTBURY: Is that "cap refill"?

GIBBS: Yes. Cap refill, for capillary refill, is less than 2 seconds, which again is a good sign related to circulation. I hadn't recorded the capillary refill at the time a little earlier when her limbs had been mottled and blue and pale and it would have been well over 2 seconds and that's a slow, reduced circulation.

By this stage, though, after attempting to put [Baby I] on the ventilator, she was fighting the ventilator, she was pink all over, and just pressing on her skin for 5 seconds and releasing it, the skin colour returned within 2 seconds, which is a sign of normal circulation or good circulation.

ASTBURY: Thank you. And something about distension, could you tell us about?

GIBBS: That's:

"Mod [for moderate] abdo [abdominal] distension."

So her tummy was a little distended at this stage.

ASTBURY: Did you examine her tummy at all; do you recall?

GIBBS: Well, I would have done to have written down moderately distended. I can't remember if I put my hand -- very likely I had examined [Baby I] and put my hand on her tummy, but you can see distension just visibly sometimes, so by saying moderate abdominal distension, that's normally a visual inspection, but likely I would have felt her tummy as well. And if I'd found anything abnormal on feeling her tummy, I would have normally recorded it, so I presumably didn't to have not recorded anything.

ASTBURY: So the only observation is the distension itself?

GIBBS: It's a little swollen, yes.

ASTBURY: Is that "chest X-ray"?

GIBBS: Yes.

ASTBURY: And do you recall looking at an X-ray that had been recently taken?

GIBBS: Yes.

ASTBURY: And you've noted there what you saw?

GIBBS: Yes.

ASTBURY: Is that chronic?

GIBBS: It's "chronic, thickened airway changes". So it just means that the airway -- the sort of linear lines across the chest due to the airway markings were a little more -- more prominent than usual. The reason I say chronic, meaning long-standing, is that it was a similar appearance on [Baby I]'s previous X-rays, so that hadn't changed. It's a sign of chronic lung disease of prematurity.

ASTBURY: If we just pause there, please, and if we can come away from that note and look at tile 116. So this was the X-ray taken at 00.23, which would have been before you made your note.

GIBBS: Before I made the notes, but I would have been there when it was taken from my arrival.

ASTBURY: Thank you. Do you recall, was this the X-ray you were shown?

GIBBS: It looks like it and I'm just checking at the bottom, it does say -- yes, it's taken on 23/10, as you say, at 00.23.

ASTBURY: So that thickening, is that apparent as you look now?

GIBBS: Yes, particularly -- so the airway down -- the right airway here -- that's the airway in the centre, that's the -- the white either side is the wall of the airway and you don't normally see the airways that easily. That's because [Baby I] has slight thickened airways.

And similarly on the left-hand side, it's seen through the heart shadow, you can see that sort of black line there (indicating), the equivalent to these black lines here (indicating). They show up because there's white outside that as well but you can't see that through the heart.

These lines over here (indicating) and even the sort of cobweb appearance throughout the rest of the lungs is just more prominent lungs markings. But this is similar to [Baby I]'s previous X-rays, so that's why I say it's a chronic change, it's not a new change in her that night.

ASTBURY: And what does it mean?

GIBBS: It's signs -- an appearance they have in an X-ray in a baby that's usually been ventilated for prematurity. We call it surfactant-deficient respiratory disease of prematurity, which [Baby I] had been in the first 10 days or so of her life. And she'd needed ventilation when she deteriorated at other times over the previous 11 weeks. And unfortunately, a side effect of ventilating, particularly small babies, is that it can cause some lung damage. That side effect is well worth having in order to stay alive, but it leaves some damage in the lungs and you can see that by these thickened airway markings.

ASTBURY: So it's a sign of the ventilation that she had --

GIBBS: Had in the past. But chronic lung disease usually improves and resolves in babies, but can take up to a year or two to resolve completely.

ASTBURY: Does it cause you as you look now and cast your mind back to 00.25 on 23 October, did it cause you any great concern at the time?

GIBBS: No, because it's the same as on a previous X-ray, so there hadn't been any new change. The reason to do the X-rays is to try and understand why [Baby I] had suddenly collapsed just before midnight.

ASTBURY: Thank you. Can we return to the note, please. It was 110. "In view of vigorous movement", is that?

GIBBS: Yes.

ASTBURY: Could you take us through that part of your note, please?

GIBBS: So:

"In view of vigorous movements and resisting ventilation, decided to extubate (rather than morphine and paralysis to facilitate ventilation)."

So this was my decision on what to do with [Baby I] next to support her. Often, when a baby has deteriorated and needed help with breathing to the extent of needing an endotracheal tube inserting, the disorder or disease that would have caused that deterioration doesn't go away suddenly and the endotracheal tube needs to stay in the windpipe and a baby would need to continue ventilating.

Unusually, [Baby I] was behaving very differently: she was vigorous, active, fighting, resisting the ventilation, her

circulation had improved. So a baby in that state, if you're going to continue ventilation, you have to sedate them, and [Baby I] was being so vigorous that I felt she would not just need sedation, which would be the morphine, sedation and pain relief, she'd need paralysis as well, which is what indeed she'd had in the past when she'd a deterioration and needed longer-term ventilation for several days. But she was looking so good and I couldn't understand what natural disease would have caused her deterioration and yet she's recovered so rapidly.

So either I had to knock her out, sedate her heavily, paralyse her, and carry on ventilating her or take the endotracheal tube out and see how she managed.

Given her vigorous active state, I decided to take the endotracheal tube -- well, I asked Dr Chang, I think it was, to take it out.

ASTBURY: Just before we move on from that point, what you could see for yourself, her vigorous movements in comparison to what you knew had happened half an hour or so before --

GIBBS: Yes.

ASTBURY: -- you said it didn't -- you didn't understand, you expected, did you, that that continuing (overspeaking) --

GIBBS: Yes. Babies collapse because something has affected them. And usually it'd be some sort of disease process. It's true that sometimes babies can deteriorate -- premature babies can deteriorate very quickly. Usually we'd hope to have some warning that they were deteriorating; that's why we monitor and perform observations on babies. In [Baby I]'s case, so I was told, she'd been fine up to just before midnight, her breathing had been fine, her tummy had been soft and not distended, so she had rapidly deteriorated shortly before midnight.

But although some diseases, some disorders, can come on quickly -- and the common disorders will be infection or haemorrhage or necrotising enterocolitis, a problem we'd wondered about in [Baby I] during her 11 weeks on the unit, or severe lung disease -- it can sometimes deteriorate and come on quickly, but once you have deteriorated to the extent of needing ventilating it's not going to go away suddenly. And so a child should be -- I expected [Baby I] to be floppy, unresponsive, not resisting being ventilated. So I couldn't understand what natural disease had affected her that she'd recovered so quickly.

ASTBURY: So that decision to extubate, was that taken in consultation with anybody else? Did you discuss it with any other clinician?

GIBBS: I would always normally -- I can't remember exactly. I would always normally discuss with the other colleagues involved in supporting a patient at the time, which would have been the nurses and Dr Chang. But it would be my decision rather than saying anyone else decided to take the tube out.

ASTBURY: Right. You've then noted your impression. Take us through that, please.

GIBBS: Yes. I've already mentioned that -- and I didn't write that down -- I couldn't think of a natural disease process that had caused [Baby I] to suddenly deteriorate so rapidly and then to recover so well with some support. So from the history I'd given of [Baby I]'s developing distress, crying just before midnight, and then rapidly deteriorating, I'd assumed something had upset her, made her unhappy, and then she'd suffered generalised lung collapse, and that's very stiff, small-volume lungs, due to her distress and her crying.

When anyone cries, you breathe out, you breathe out forcibly when you're crying. And [Baby I] had had a short period, I was told, of -- and I wasn't there so I don't know exactly what it was like -- unusual cry, seeming in distress and then rapidly deteriorating. So something had upset her.

We knew she was hungry because she was not being fed into her tummy, she was being fed intravenously, awaiting investigations in Liverpool. But hunger doesn't usually -- does not cause someone to suddenly be in severe pain, appear to be in pain, and then rapidly deteriorate. So it appeared to be something else rather than just being hungry.

Once you've got distressed and breathed out heavily, your lungs can collapse down a bit because they're getting smaller. And because [Baby I] had chronic lung disease of prematurity, it would be more difficult then to re-inflate the lungs. That's what I'd supposed had happened, but I must admit I wasn't sure what had happened to cause that collapse.

ASTBURY: Is there anything on the X-ray that we've just looked at to support that suspicion?

GIBBS: Um... No, because -- I mean, my suspicion was that she'd cried in distress and her lungs had become much smaller and then it was difficult for her to breathe.

But by the time the X-ray was taken she'd been given breathing support, an endotracheal tube had been put down, and her lungs on that X-ray we've just seen are reasonably well expanded, but it was taken after the event that caused her collapse.

ASTBURY: Okay. You've marked "No changes on X-ray". What's that last word on that note, please? So "impression" and you have taken us through it, but I think it says at the end, "CXR" and does that say "likely"?

GIBBS: Oh, sorry:

"From the history, vigorous movements once resuscitated and no changes on chest X-ray."

And it's:

"Likely generalised lung collapse."

I was trying to retrospectively work out what had happened to her, so it's likely that there'd been general collapse of her lungs, meaning just becoming smaller because she'd been very distressed with crying and that had caused her lungs to become small. And the smaller the lungs are -- like a balloon, the smaller it is, the harder it is to blow up and a moderately large balloon is easier to blow up, so I had assumed that was why she had got into so much trouble. But I admit, I was struggling to understand exactly what had happened to [Baby I].

ASTBURY: Okay. If we move on to your plan, please:

"No septic screen at present."

GIBBS: Yes. If infection had caused the collapse in [Baby I] then she would need a septic screen, blood samples and probably also a lumbar puncture to look for possible infection and to start antibiotics. All of that is moderately distressing for a baby. We do it because it's important to treat infection, but for a baby like [Baby I] that had just suffered a severe episode of distress that had caused her to collapse and almost stop breathing, I didn't want to undertake other investigations that I didn't think were necessary at the time, to cause her further distress and therefore perhaps a further similar collapse.

I didn't think she was likely to be infected because if she was and it had caused her collapse, she would not have recovered so quickly and looked so vigorous and active within minutes of being overwhelmed by infection. So I thought we would not do a septic screen:

"Instead offer sucrose if distressed."

So that's sugar, really, sugar water. Sounds strange. It's a common practice we do with neonates, to give a little bit of water -- even babies who are not being fed into their tummy, like [Baby I], a little bit of water just trickled on to the tongue or inside the cheek, the sugar gives a little -- it seems to give a little enjoyment to the babies, it's thought it can release natural endorphins -- that's like morphine, opiates in the brain -- which soothes babies and calms them down. We do that if we're going to put cannulas into babies or take bloods from babies as a form of pain relief and to settle a baby.

So I felt that given [Baby I] had had this period of sudden distress and rapidly collapsed that we'd try to overcome any distress or discomfort, if she was displaying any, by giving her sucrose and not actually undertaking further investigations at this time.

ASTBURY: Right. Is this if (overspeaking) --

GIBBS: Yes. I felt a bit uncomfortable about [Baby I] because I didn't understand properly why she had collapsed. So if she did it again we thought, fine, in that case will just have to ventilate her and continue ventilating her and probably -- in brackets it says "with paralysis", assuming she was fighting the ventilation like she had previously.

ASTBURY: Did that conclude your contact with [Baby I] on that particular occasion?

GIBBS: Yes.

ASTBURY: And do you recall how [Baby I] was when you left her?

GIBBS: She seemed stable, she was -- the tube had been -- the endotracheal tube had been taken out. I think she was in air. I have tried to look at her observations at this time between midnight and 1 o'clock in the morning and I don't think they were recorded, not on the standard observation charts. They might be somewhere in her record, I haven't been able to see them, but I think the nurses were rather busy helping [Baby I] at this time rather than doing the routine hourly observations.

But I think she was in air, she wasn't needing any other respiratory support, and she seemed settled. She was sucking her dummy, looking like a well baby when I left. Otherwise I shouldn't have left.

ASTBURY: Okay. Any significance in sucking a dummy?

GIBBS: Yes, it's an indication of a baby who -- ill babies don't suck their dummy, they're very quiet and lethargic. A baby sucking a dummy is part of a normal reflex. It may indicate a hungry baby, but [Baby I] was behaving normally at that time.

ASTBURY: Were you content to leave her at that point?

GIBBS: Yes, in the care of the nurses and Dr Chang.

ASTBURY: Yes. Were you called back that morning?

GIBBS: Unfortunately, I was. Probably less than half an hour later after I'd got home I had another phone call that [Baby I] had collapsed again, so I quickly returned to the neonatal unit.

ASTBURY: Thank you. If we could go, please, to tile 149. Just click behind that, please. So that suggests your return at 01.23, doctor. Is that consistent with your recollection?

GIBBS: I don't remember exactly what time I returned. I think in the notes that we'll look at in a moment, written in retrospect as usual, I think I thought it was about 01.25, so given a couple of minutes, that's fine.

ASTBURY: Yes. Let's go to that note, please, 193, Mr Murphy.

So written at 02.15, as you rightly said:

"Called back to the hospital at 01.18 and arrived at 01.25."

GIBBS: Yes. This is [Baby I]'s condition now at the time I'd arrived.

ASTBURY: Do you recall what you were told when you arrived?

GIBBS: That [Baby I] had done the same thing, that she'd -- which I presume meant she'd had an episode of distress and rapidly deteriorated again and her oxygen levels had dropped, her heart rate had dropped, and the nurses looking after her and Dr Chang -- and I don't know what order, they were all there when I got in again -- had had to support her breathing again. Dr Chang had put another endotracheal tube in.

ASTBURY: Again, as you arrived, do you remember the scene as you arrived, that second occasion?

GIBBS: Well, roughly. The nurses and Dr Chang were all around [Baby I], supporting her. She was receiving chest compressions this time. She wasn't -- she had been receiving chest compressions for a short while after her first collapse but she

wasn't receiving those chest compressions when I arrived after that first collapse.

After the second collapse the chest compressions were in progress as well as [Baby I] being ventilated through her endotracheal tube.

ASTBURY: You told us Dr Chang was there. Do you remember any of the other staff who were present?

GIBBS: Well, the same two staff nurses.

ASTBURY: You remember that?

GIBBS: They were there, yes.

ASTBURY: Do you remember what others may have been doing when you arrived?

GIBBS: I can't remember precisely what everyone was doing, no.

ASTBURY: Let's go back to your note. So as you said, you have noted what you found; is that right?

GIBBS: Yes.

ASTBURY: Intubated?

GIBBS: "Intubated, Neopuff ventilation, chest compression."

ASTBURY: Okay. You then noted "poor perfusion"?

GIBBS: Yes.

ASTBURY: And again you've made an entry about mottling.

GIBBS: "Mottling and purple and white in colour."

ASTBURY: Can you describe it to us again, what you saw on this occasion?

GIBBS: On the second occasion it was all over [Baby I], the whole of her body was affected, indicating poor perfusion.

ASTBURY: Right. You've then put:

"[Question mark] good air entry/chest movement."

Is that right?

GIBBS: Yes.

ASTBURY: That's something you'd have seen?

GIBBS: Yes. By the question mark, it means not clear that there was good air entry or chest movement.

ASTBURY: Okay.

GIBBS: So we changed the Neopuff device, which I think has been described for the court in the past.

ASTBURY: Yes, it has, thank you.

GIBBS: Changed over to a bag, just putting a collapsable/compressible bag on to the endotracheal tube. It's an alternative way of providing ventilation.

Sometimes with the bag you can, it depends how hard you press, achieve higher pressure.

ASTBURY: And in brackets, you've written what, please?

GIBBS: "Changed bag with overriding [I think it's 'of'] blow-off valve."

On this bag there's a little valve which prevents you producing too high a pressure when you squeeze the bag, but because at this stage I was concerned we weren't actually moving any air and oxygen in and out of [Baby I]'s lungs, you can override the valve just by putting your finger on it and it allows you to achieve a higher pressure to inflate the lungs better.

ASTBURY: Then you've revisited in your next note the chest movement. Could you tell us what you have noted there?

GIBBS: "[Arrow] [meaning 'led to'] good chest movement and air entry, but crackles on inspiration."

So using the bag and higher pressure, we were now getting air and oxygen in and out of [Baby I]'s lungs.

ASTBURY: Okay.

GIBBS: Despite that, though, the saturations weren't good at 70%.

ASTBURY: So the air is going in and out but the level of oxygen in the blood is not recovering; is that right?

GIBBS: It's still low, it's in the 70s. And worryingly, even more worryingly, [Baby I]'s pulse rate was low at 50-60; it should be well over 100 in a baby of [Baby I]'s age.

ASTBURY: Is that "starting"?

GIBBS: "Showing." "Showing 2:1", really. It's 2:1. It's:
"2:1 or 3:1 heart block."

And we only know that because [Baby I] had a heart rate monitor measuring the electrical activity of her heart on the screen and 2:1 and 3:1 just means -- if I step back a bit, when you look at the electrical heart rate trace, you see a little blip at the beginning followed by a larger deviation and that's electricity going around the heart as it beats. That little blip at the beginning should be followed by the larger deviation of electricity and in [Baby I] she was having little blips with no main electrical activity following it.

And sometimes she would have two little blips before you would get the main electrical contraction of the heart, sometimes she'd have three little blips. All that means is abnormal heart response. So she was showing an abnormal, slow rhythm.

ASTBURY: Thank you. You have then noted that she was given repeated adrenaline?

GIBBS: Yes.

ASTBURY: You have told us before the purpose of adrenaline.

GIBBS: Yes, it's to stimulate the heart to contract more forcibly --

ASTBURY: Is there any significance (inaudible: distorted) --

GIBBS: Erm, when --

ASTBURY: Just pause for a moment, doctor.

MR JUSTICE GOSS: I don't know what's happened.

MR ASTBURY: It was a remote microphone playing up.

I asked you about the significance, if any, of the adrenaline.

GIBBS: Well, it's quite worrying when you need to use adrenaline in any patient because it means they've collapsed and their heart isn't functioning properly.

It could be anything from not functioning at all to not functioning properly.

In [Baby I]'s case her heart was still beating but abnormally slowly with very poor circulation from the purple mottled colour she was showing and with abnormal rhythms on the electrical tracing, the ECG, that we were recording.

So the adrenaline is to stimulate the heart. It speeds the heart up, but it also causes the heart muscle to contract more forcibly. But when you need to use adrenaline, it means the patient is very ill.

ASTBURY: We can see there reference to:

"Repeated adrenaline at 10ml per kilogram saline bolus."

And also a dose of bicarbonate (overspeaking) is that to reduce the acidity of the blood (overspeaking) --

GIBBS: That's right. When there's poor circulation acid builds up, so bicarbonate helps to counter that. If acid builds up then a patient doesn't respond as well to adrenaline. These are all drugs used in the resuscitation of very ill patients.

ASTBURY: You've explained to us the remaining in 3:1 heart block and the rate, is that --

GIBBS: Still staying slow at about -- the squiggle means "approximately" -- 60.

ASTBURY: "No response..." -- could you read the rest of that?

GIBBS: "No response to 100 [micrograms] of atropine."

It's a drug we occasionally use in cardiac arrest or severe illness situations to try and speed the heart up, but unfortunately [Baby I] didn't respond to that:

"Also no response to 0.3ml/kg of 10% calcium gluconate."

Again, calcium is a drug we occasionally use in cardiac arrest. It helps to -- it also helps to improve heart contraction, or that's the intention of it anyway.

Then:

"Given 0.2ml of 1:1,000 adrenaline."

Just trying a stronger -- the normal adrenaline we use is called 1:10,000. We'd gone up tenfold to 1:1,000 at times to try and get some response from [Baby I].

ASTBURY: If we can scroll down a little, please, Mr Murphy.

GIBBS: Temporarily, [Baby I]'s heart did respond:

"Heart rate [that's an arrow up] [increased] to 120-130 and narrow complexes with ST elevation."

The ST elevation is a -- isn't a very reliable sign just on a heart rate monitor, it sometimes means some ischaemia, lack of blood getting to the heart. But the ECG heart rate changes are bizarre and variable when you're in a cardiac arrest situation. It just means the heart isn't working, really.

But the heart rate had increased from around 60 or less up to 120, which is a more normal heart rate, but sadly, only temporarily.

ASTBURY: We've heard that from time to time a resuscitation will be paused for those sort of things to be checked.

Is that one of those points in the resuscitation?

GIBBS: At the bit where we're talking about -- yes -- once you see a heart rate change you then check the pulses to see whether you can feel a pulse. If someone's pressing on the chest that should give you a pulse hopefully so you have to pause the pressing on the chest and you feel either the arm, the brachial pulse, or the groin, the femoral pulse, to see if there's a spontaneous pulse, [Baby I]'s own pulse.

ASTBURY: I think that probably introduces us to the next entry, which confirms that the brachial and the femoral pulses were palpable.

GIBBS: Yes, you could feel a pulse. For the first time during the resuscitation [Baby I] was producing her own pulses, so the heart was recovering slightly. So we stopped the chest compressions at 01.45 --

ASTBURY: You put a note there saying resuscitation had started -- is that at --

GIBBS: At 1.16, yes, half an hour. And 29 minutes into the resuscitation there was a pulse palpable. The saturations were fairly good at 95% to 100%, but this is with [Baby I] being ventilated with, it would have been likely, 100% oxygen. But she's still remained mottled and poorly perfused. And because of

the poor perfusion, but she now has her own pulse back, she was given some saline to try and improve the circulation, to give a little bit more volume into her blood system.

ASTBURY: And that's the next entry, we can see, "given" --

GIBBS: "2ml of 10ml per kilogram..."

Sorry, given the second because she'd had one dose before, so given the second bolus of 10ml per kilogram saline.

ASTBURY: Then, unfortunately, 5 minutes later can you take us through the entry (overspeaking), please?

GIBBS: Despite the brief improvement, and this was just an improvement with the heart returning, [Baby I] was still not breathing by herself, she was needing to have the ventilation done for her. But 5 minutes later, her heart rate dropped down to 70, saturations dropped, and we no longer could feel any brachial or femoral pulse, so she'd lost her own pulse. So therefore cardiac compressions were restarted.

ASTBURY: So that's -- just checking your note -- 5 minutes after you initially found something?

GIBBS: Yes.

ASTBURY: There's then another dose of adrenaline.

GIBBS: Yes, further adrenaline given, but without any response, in other words, without an increase in heart rate or any pulses becoming palpable when we weren't pressing on her chest.

And then given more atropine. So we're going through the same drugs again, really, to try and hopefully get another improvement out of [Baby I], but so far the only improvement we had was a pulse, no breathing from [Baby I].

ASTBURY: Okay. Does that then say:

"Increase in heart rate on monitor"?

Unfortunately, the last word on the line after adrenaline is blocked out by our pagination, but looking at the next line, is that "increase in HR"?

GIBBS: Sorry, right. Yes, behind the red number is:

"Temporary increase in heart rate on the monitor to about 100 for 2 or 3 minutes, before falling back again to 40 to 50."

ASTBURY: And then that same heart block that you've explained to us?

GIBBS: Yes. I've lost it on my screen, I'm afraid.

MR JUSTICE GOSS: I've lost it on mine too. It's back again.

(Pause)

Bottom right-hand corner where we see in red J14923 and under that it reads:

"Temporary increase in heart rate on monitor to around 100 for only 2 to 3 minutes before falling to 40 to 50 with heart block 2:1 or 3:1."

So you repeat that:

"No pulse palpable, spontaneous during the" --

MR ASTBURY: If we can carry on down, please. It continues -- it describes the duration of the second episode. So what you just said is the situation during the course of that second attempt --

GIBBS: Yes. We didn't get a return of -- spontaneous return of [Baby I]'s own pulse.

ASTBURY: Does that say --

GIBBS: "Good chest movement and air entry with ventilation."

So the ventilation -- at the beginning it was difficult to get chest movement, that's why I added the bag and the high pressure. But throughout this part of the resuscitation, only because nurses and doctors were giving the ventilation to [Baby I], her chest was moving well, but she wasn't breathing herself and she was no longer producing any spontaneous pulse herself. And her parents had arrived by this stage.

ASTBURY: So it's to them, presumably, that the next paragraph refers when you talk about explaining [Baby I] was not responding?

GIBBS: Yes. The resuscitation was still continuing, although I've written all this in retrospect, just after this has ended, but:

"Explained that [Baby I] wasn't responding to this resuscitation that we were giving her and although her heart was beating, there was no effective circulation."

So we had no pulse.

ASTBURY: Okay. Your next entry is at 02.10 and the heart is down to 40 per minute; is that right?

GIBBS: That's right, yes, "No pulse".

ASTBURY: In brackets "Heartbeat..."?

GIBBS: "Audible." If we listen with a stethoscope we can hear the heart beating but not strongly enough to produce any pulse that you could feel.

ASTBURY: And therefore not strong enough to pump blood around (overspeaking) --

GIBBS: That's right, yes.

ASTBURY: That's without cardiac --

GIBBS: Yes, there was no pulse when we weren't giving cardiac compression.

ASTBURY: "No respiratory effort"; is that right?

GIBBS: [Baby I] wasn't making any respiratory effort, no.

ASTBURY: You then comment on her pupils.

GIBBS: Yes, her were pupils fixed and dilated. That means when you look at the pupils, the black part of the eye, they were very wide, which is a bad sign. It's a sign of lack of oxygen to the brain. In itself that's not a reason to stop resuscitation because occasionally medication drugs can cause that, but not adrenaline, adrenaline causes very small pupils. But that was a worrying sign as well. But the main worrying sign was we'd been trying to help [Baby I] with vigorous resuscitation for not quite an hour, 50 minutes or so, and she still had no pulse of her own, she wasn't making any breathing effort of her own, and because we tried so many doses -- I think eight doses of adrenaline -- it's usually futile to continue. In fact, it's often futile to continue up to eight doses of adrenaline, but we had had a brief response for 5 minutes in the middle of the resuscitation, only to the extent of [Baby I] having a pulse, not breathing by herself. That's why we carried on for a rather long resuscitation but decided at this stage we needed to stop.

ASTBURY: Okay. You then noted that [Baby I] was extubated and handed to her parents?

GIBBS: Yes.

ASTBURY: And then a short while later, at 02.30, you have noted that you examined [Baby I] while in her parents' arms.

There was no respiratory movement, no heart sounds, you commented again on her pupils and you have indicated that [Baby I] has passed away?

GIBBS: Yes. It was later that morning, not at 02.30 in the morning, that I phoned the coroner's officer to report [Baby I]'s death because I didn't know or couldn't understand why she had collapsed and died.

ASTBURY: Let's just go then, for the sake of completeness, please, to tile 227.

GIBBS: Am I allowed to comment on the (inaudible: coughing) coroner on the post-mortem cause of death?

ASTBURY: I think we're going to hear, thank you, from a pathologist.

GIBBS: Right.

ASTBURY: If we can just scroll down to your entry there. That's 9.40, later that same morning, and you report -- you have named the coroner's officer there. Can you explain -- can you just tell us what you've noted there, what you told the coroner?

GIBBS: "Explained to the coroner's officer that cannot assign a clear cause of death, probable coroner's post-mortem, but he will check with the coroner."

We asked the coroner -- we report deaths to the coroner. It's the coroner's decision whether to undertake a post-mortem to try to determine the cause of death. That's why I say probably I felt [Baby I] needed a post-mortem, but it's the coroner's decision. So at this stage I could only say she probably will have a post-mortem.

ASTBURY: Okay. We know that a post-mortem indeed followed.

Do you happen to recall where you were when you informed the coroner's officer?

GIBBS: No, I don't. I would have been somewhere in the hospital, I don't know exactly where, when I phoned.

Probably on the neonatal unit.

ASTBURY: Okay. Does that note reflect your view of the situation at the time you contacted the coroner?

GIBBS: Yes.

MR ASTBURY: Thank you, Dr Gibbs. I have no more questions, but if you could wait there for a moment, please.

Cross-examination by MR MYERS

MR MYERS: Could we put up tile 110, please, Mr Murphy?

If we scroll down a little bit towards the bottom of the page, and Dr Gibbs, if you follow it down. Can you see it says just above plan, "Generalised lung collapse"?

GIBBS: Yes.

MYERS: The entry says:

"Generalised lung collapse. Very swift."

Is that "small-volume lungs"?

GIBBS: Yes:

"Very stiff small-volume lungs."

MYERS: Thank you:

"Very stiff small-volume lungs due to distress and crying."

GIBBS: That was my presumption at why [Baby I] had collapsed, but I wasn't sure.

MYERS: All right. Next, I would be grateful if we could go to the notes -- they're not in the carousel, but they're at 14927.

There was a debrief, wasn't there, after [Baby I]'s death?

GIBBS: Yes.

MYERS: We'll have a look at what appeared there, please. This is something which is generally held, isn't it, after there'd been a death; is that correct?

GIBBS: Yes.

MYERS: And this took place on 9 November 2015.

GIBBS: Yes, just after -- 2 weeks after [Baby I]'s death.

MYERS: It says "11.00 debrief meeting" and then is there a list of the people who were present for the debrief.

GIBBS: Yes.

MYERS: It has the Reverend John Kingsley; is he the hospital chaplain?

GIBBS: Yes, he'd started to attend the debrief meetings because we'd had a sudden increase in deaths in 2015, despite nothing else changing, clinical practices hadn't changed, staffing levels hadn't changed from previous years.

MYERS: Then we've got Staff Nurse Ashleigh Hudson?

GIBBS: Yes.

MYERS: Staff Nurse Lucy Letby?

GIBBS: Yes.

MYERS: And you?

GIBBS: Yes. The other person that ought to have been there is registrar Dr Rachel Chang, but we try to arrange these meetings when people are available. It depends how busy she was and whether she was on the shift this day. And this is already 2 weeks after the event, so sometimes we have to hold a debrief meeting without all the relevant people there.

MYERS: Thank you looking through what it says:

"Discussed briefly overall cause of illness since prem delivery."

Is that right?

GIBBS: Yes.

MYERS: "Discussed episodes of sudden" -- is that cardio (overspeaking)?

GIBBS: Cardiorespiratory.

MYERS: "... cardiorespiratory deterioration [and then] the week before death, then again at the time of death."

And then it says:

"Seemed fine and stable prior to episodes of sudden collapse."

Is that a reference to the sudden collapse on the night of the 22nd into 23 October, the night you were there?

GIBBS: Yes. But it's... We'd been reviewing briefly -- we weren't doing a detailed review of the extensive notes in [Baby I], we were briefly reviewing her history, so we had looked back over the collapses she'd had previously. I can't recall, because it would have been my opinion together with the two staff nurses, so whether we were talking just about the collapses on the night of the 23rd or the previous collapses, I can't be sure. I hadn't been involved in those previous collapses directly.

MYERS: Then you've got, is that "except" -- what's the next word? "Accept [something] removing"?

GIBBS: "That."

MYERS: "Accept that removing ETT after first collapse might not have helped."

GIBBS: Yes.

MYERS: Is that acknowledging that there's a possibility it might have been better to leave it in?

GIBBS: Yes, it says "might". The reason it's might, not that they did not help, is it was unclear why [Baby I] had collapsed, so depending on why she'd collapsed, keeping the endotracheal tube in might have helped. But as I've explained, I couldn't understand any natural disease process that had affected [Baby I] that had caused her to collapse and recover so quickly that required the endotracheal tube remaining in. And [Baby I] was behaving as though she did not need an endotracheal tube by fighting ventilation and being very active.

MYERS: All right. With hindsight, looking at all options, it might have been better to leave it?

GIBBS: Yes, because my plan was if [Baby I] had collapsed again we would put the tube in and keep it in and of course I wasn't expecting half an hour later, after I got home, to be called back because she had collapsed again.

MYERS: And then it says -- and this goes on to what you have told us about:

"Generally agreed [Baby I] was very active, fighting ventilation and [something] need" --

GIBBS: "Remained stable."

MYERS: "... for 40 to 45 minutes post-extubation."

GIBBS: After her first collapse when the tube was taken out.

MYERS: All right. Then you have put?

GIBBS: "Poor response to" --

MYERS: "Poor response to second resuscitation might have been due to..."?

GIBBS: "Heart being compromised."

MYERS: "... heart being compromised by previous..."?

GIBBS: "Cardiorespiratory collapses."

MYERS: And does that reflect the fact that over time, as there are a succession of collapses, that in itself might leave the baby weaker and less well able to deal with further collapses?

GIBBS: Yes, once they had collapsed, yes.

MYERS: That's what I wanted to ask you about, but let me read through to the end since we have the note:

"Nursing staff felt resuscitations were well-run. John Kingsley reminded Lucy and Ashleigh that..."

And it's difficult to see what's under the number.

GIBBS: I think it's "he" or something.

MYERS: (Overspeaking).

GIBBS: "His colleagues."

MYERS: "His colleagues will..."

GIBBS: "... will come in to talk to parents or bless a child if they wish, even if already baptised as in [Baby I]'s case."

MR MYERS: Thank you, Dr Gibbs. I just wanted to clarify what was in that.

MR ASTBURY: I have no more questions. Does my Lord have any?

MR JUSTICE GOSS: No, thank you very much.

MR ASTBURY: We think we will see Dr Gibbs again.

MR JUSTICE GOSS: Thank you for coming back, Dr Gibbs, and I'm sorry you've had a couple of false starts in relation to coming back again.

GIBBS: Can't be helped.

MR JUSTICE GOSS: But these things can't be helped. But thank you very much and you will be coming back so please don't talk to anyone about anything to do with this case in the meantime.

GIBBS: Okay.

MR JUSTICE GOSS: Thank you.

GIBBS: Thank you.

(The witness withdrew)

DR DEWI EVANS (recalled)

Examination-in-chief by MR JOHNSON

MR JOHNSON: Welcome back, Dr Evans. Could you confirm your identity for the sake of the recording, please?

EVANS: Dr Dewi Evans.

JOHNSON: Thank you. Dr Evans, in the complicated case of [Baby I], have you written several reports?

EVANS: I have, yes.

JOHNSON: Was your first sift on 18 November 2017?

EVANS: The 8th.

JOHNSON: The 8th, I beg your pardon.

EVANS: 8 November 2017, yes.

JOHNSON: Your more substantive review on 31 March 2018?

EVANS: May.

JOHNSON: May, sorry, yes.

EVANS: 31 May 2018.

JOHNSON: My eyesight. Your next report, I'll see if I get this one right, 25 March 2019?

EVANS: Correct.

JOHNSON: And then I think at least three further reports dealing with various issues, one in October 2021?

EVANS: One on 24 June 2021, one on 19 October 2021, 21 October 2021 --

JOHNSON: Right.

EVANS: -- and the 29 October 2021 and one recently (inaudible) September. So there have been quite a few.

JOHNSON: I'd like to use, as the basis of your evidence, the substantive report of 31 May 2018, but weaving in the corrections that you have since introduced.

EVANS: Yes.

JOHNSON: As in all the other cases of which you have spoken, did you receive a large bundle of medical evidence or medical records relating to the treatment of [Baby I] at several different hospitals?

EVANS: I did. They totalled nearly 2,000 pages, yes.

JOHNSON: Did those records, as in other cases, include X-rays?

EVANS: They did.

JOHNSON: Did you record [Baby I]'s movements between where she was born at the Liverpool Women's Hospital to Chester, back to Liverpool, back to Chester, then to Arrowe Park and back to Chester, where, sadly, she died on 23 October 2015?

EVANS: I did, yes.

JOHNSON: Thank you. I'd like to deal with the events the jury have heard about primarily. It may be that you're asked about other issues, but I'm going to confine my questions to the events that the jury have been through in the sequences for. All right? Starting with the first event, which was 30 September 2015, it's set out in your report at paragraph 34, I think.

EVANS: Yes, 34.

JOHNSON: Did you review [Baby I]'s situation and behaviour and presentation on that day?

EVANS: I did, I did, and the initial entry, my paragraph 34, was noting that she was a little pale, but handled well.

The abdominal examination had noted that her abdomen was full, but soft, and she had a reducible umbilical hernia, which is a common finding in premature babies.

In other words, her examination was the same as before and the day before she was self-ventilating in air. In other words she was not requiring additional oxygen and she was not requiring any kind of ventilatory support.

So she was breathing on her own.

Then later, on 30 September, she became extremely unwell, had a large vomit, became apnoeic, ie she stopped breathing, and her oxygen saturation dropped to the 30s. Oxygen saturation should be in the mid to high 90s in babies, so a drop to the 30s is extremely disturbing and is literally life-threatening and so she required bagging, in other words she needed resuscitation measures.

JOHNSON: Yes. What time was that, please?

EVANS: That was -- right, that was mid-afternoon, 13.36 hours, that's when she needed resuscitation. Then later, by 16.30 hours, so later that afternoon, she was pink, in other words normal colour, her heart rate was 130, normal again, her oxygen saturation was now 99%, and she was in air, in other words perfectly normal, and her respiration rate was 28, which is within the normal range. There's a note that the chest was clear, which is clinical shorthand for normal, and the only concern was that her abdomen was distended, that was the word they used, but there were bowel sounds in all areas. In other words, her intestines were working because the bowel sounds could be heard. So therefore, this was a very surprising and sudden onset collapse out of a baby who was previously in a very stable condition.

Another entry noted that she had a respiratory arrest, ie apnoea, stopped breathing, and she was also distressed on handling. So she was an upset little baby.

JOHNSON: Yes. Is this at 10 pm on the 30th?

EVANS: Yes, 10 pm on the 30th. When they did the blood gas at that time, her blood gas values were satisfactory. If you have breathing difficulties, your carbon dioxide value increases. Her carbon dioxide value was 5.8, which is acceptable. If you have some other problem, your pH value or your bicarbonate value or

your lactate value becomes abnormal, they were all within normal limits. So therefore, she made a good recovery following her resuscitation.

JOHNSON: So far as subsequent events were concerned, what in effect happened after that?

EVANS: Moving on, there was an entry at, again, 22.35 hours, so late at night, again noting that she had become apnoeic, stopped breathing, and bradycardic, her heart rate had fallen, there was chest movement with the Neopuff. But the other important factor was that the entry that noted:

"Aspirated NGT air ++ (sic)."

What that means is that she had a nasogastric tube in, NGT, and air, a lot of air, had been apparently aspirated. Normally, you would only get a little bit of air when you -- what nurses do, sorry, let's... You place a syringe on top of the nasogastric tube and you suck up on the syringe and you'd normally get 1/2/3ml of air maybe.

So therefore, for a nurse to enter "air +++" (sic), it doesn't actually measure the volume of air that was aspirated, but three pluses is usually the greatest number of pluses a nurse will use when aspirating air.

She also aspirated 2ml of milk, which is quite acceptable. That's just a couple of millilitres of milk. That's not a concern. And of course she had vomited. So obviously, all of the milk had disappeared from her stomach as a result of the vomiting.

So therefore by that time there were chest movements, in other words she was breathing normally again, and her sats -- sats meaning oxygen saturation -- and her heart rate had normalised.

As I noted a couple of minutes ago, she was breathing in air with saturations of 99%. Therefore she'd had this extraordinary sudden onset collapse, she'd vomited, loads of air had been aspirated from the NG tube and she had rather promptly recovered.

Then a chest X-ray was actually reported as showing splinting of the diaphragm due to bowel distension and moderately severe bowel distension involving the small and large intestine.

I'm not a radiologist, but I've seen these X-rays or X-ray, we've heard the radiology opinion from Professor Owen Arthurs, but the X-ray shows very striking evidence of lots of air in the abdomen and, as we have noted in an earlier case, if there's a

lot of air in the abdomen, ie in the stomach, and in the intestine, that interferes with a baby's diaphragmatic movement, and the diaphragm needs to move up and down for a baby to be able to breathe properly.

JOHNSON: All right. Just dealing with the vomiting, lest it's not entirely clear, was that at 16.30 on the afternoon of 30 September? Your paragraph 35.

EVANS: Yes. She had a huge vomit at 16.30, yes. I've described it as a large vomit.

JOHNSON: Yes. And thereafter, she had been nil by mouth; is that right?

EVANS: Yes.

JOHNSON: Okay. If the jury want to remind themselves, my Lord, it's in divider 12 of the number 2 jury bundle and it's in the first section of documents there, page 14780.

I don't know where your copy has gone, Dr Evans.

Somebody's removed the documents from the witness box for some reason. You'll find about half a dozen documents or so, starting with the observation charts, moving on to the blood gas record, and then the feeding charts. It's document J14780. We see noted there 16.30:

"Large vomit plus apnoea."

EVANS: Yes.

JOHNSON: Then what may be an arrow, I don't know. And then "NBM", nil by mouth.

EVANS: Yes.

JOHNSON: So that's what we have called event number 1.

Event number 2, 13 October. You, and indeed the jury, may recall this as being an event that happened in nursery number 2 --

EVANS: Yes.

JOHNSON: -- shortly after Ashleigh Hudson had been helping a colleague in nursery number 1.

EVANS: Yes.

JOHNSON: We heard evidence that Ashleigh Hudson had returned to the nursery, the lights had been off, and Lucy Letby, said Ashleigh Hudson, was standing in the doorway and made reference to [Baby I]'s appearance.

EVANS: Yes.

JOHNSON: Right. So taking up that event, and in your report, please, Dr Evans, it's your paragraph 45; is that right?

EVANS: Yes, yes.

JOHNSON: What did you in particular note about that event?

EVANS: Well, this was a far more serious event than event number 1. What I noted was that an entry during the early hours, timed at 03.36 hours, said [Baby I] had been found "blue, apnoeic in cot", in other words her colour had drained, she was cyanosed, she was a blue colour, which is what happens if you stop breathing, and she was apnoeic, in other words she was not breathing.

So this led to her needing resuscitation, so she required CPR, in other words chest compressions, and needed intubation, in other words an endotracheal tube was passed into her trachea, into the lungs, and she also required adrenaline on three occasions. She required saline, in other words an intravenous bolus of fluids, salt fluid. She also required sodium bicarbonate, which one gives if the baby becomes acidotic, and she also required dextrose.

All of this was given between 03.31 hours and 03.45 hours, so she had very, very intensive resuscitation over a very short period of time. And the entry notes that by 03.45 hours, there were signs of life and I was present when the local medical and nursing team described this last week.

So her heart rate increased to 100, cardiac compression was stopped, ventilation was continued, and she was transferred to ITU, in other words to a nursery 1, and in terms of treatment, infection is always a consideration when a baby collapses, so she was given some new antibiotics. She was given metronidazole, which is the antibiotic one uses if one suspects necrotising enterocolitis. She was also given ciprofloxacin, which is a broad spectrum antibiotic, which is very effective for what we call Gram-negative organisms. So she had that, so she responded very well --

JOHNSON: Yes.

EVANS: -- but following what I would consider extraordinary efforts to get her going.

JOHNSON: Yes. Moving on to incident number 3, Dr Evans, which occurred getting towards the end of the night shift of the 13th into 14 October 2015. You deal with this in one of your subsequent reports.

EVANS: I dealt with it initially in paragraph 51, then I dealt with it in more detail in a subsequent report, but for some reason I left this out of my summary.

JOHNSON: All right. Well, let's deal with your more detailed analysis of what happened, please, Dr Evans.

EVANS: Yes.

JOHNSON: It's at page 2 of 4 of your report of 25 March 2019.

What event was it that you noted, first of all, so far as events in the early part of 14 October were concerned?

EVANS: Right. Again, very similar event to the one the previous day. So again, desaturations of oxygen at 07.00 hours on 14 October, and despite being on high pressure ventilation and in 100% oxygen. So again, her heart rate at 07.45 hours in the morning -- this is the morning of the 14th, this is my paragraph 51.

JOHNSON: Can we start with events just before 6 am on the 14th, please, which is I think is your previous paragraph.

EVANS: Yes. Sorry, this is my paragraph 50. So this is just before 6 am on 14 October. [Baby I] had deteriorated. Her heart rate was 180, which is slightly higher than it should be. Her abdomen is distended and mottled. So her abdomen is larger than it should be. It's mottled, in other words the colour of the abdomen is normal, which could be due to poor perfusion of blood into the abdominal area. And the entry also notes that she was tender on palpation. In other words, when you placed your hand on the abdomen, she responded -- she would have responded and you could have -- an experienced doctor would have picked up that her abdomen was tender, and she actually received a morphine infusion.

So that was the early marker during the early hours of 14 October that she was unwell. Then later she had a significant deterioration at 7 am, not improving with bagging, and she was on high pressure ventilation. As I noted, the pressures were 34/5 and pressures of over 25/5 are usually considered to be

pretty high in a premature baby. Again, she was in 100% oxygen. So she was really an unwell baby.

Continuing the sequence, by 07.45, her heart rate was below 60 and she received a saline bolus again and adrenaline and bicarbonate, and the consultant arrived at just before 8 am and they considered her condition -- they considered transferring her to Alder Hey Hospital because of concerns regarding her abdomen. But she stabilised and by 6 pm, in other words 12 hours later or 10 hours later, she was now back in 26% oxygen, in other words hardly requiring any oxygen at all, and she was still on ventilation but the pressures now were low, 16/5 -- that's a very low pressure -- the respiratory rate was 35, which is again pretty normal.

Dobutamine, which is a sort of adrenaline-type drug, had been stopped, the morphine was reduced, and the entry by 9.30 pm had shown that she was in a stable condition.

That's the information I got from the medical notes.

JOHNSON: Yes. So that's incident 3, your summary, in effect --

EVANS: Yes.

JOHNSON: -- of the evidence that we've heard?

EVANS: Yes.

JOHNSON: Moving on to [Baby I]'s final collapse on night shift of the 22nd into 23 October, you deal initially with this in your report of 31 March 2018.

EVANS: Yes.

JOHNSON: So far as your pagination is concerned, it may be your page 28 (inaudible) 32 at the bottom of the page.

I don't know if you have the same print as I have.

EVANS: What's the paragraph number?

JOHNSON: There aren't any paragraph numbers in the version I've got, I'm afraid.

EVANS: Right.

JOHNSON: But you run through things chronologically, so it's the last three pages or so of your report.

EVANS: Yes. The paragraph starting:

"[Baby I]'s final collapse occurred around midnight...?"

JOHNSON: Just before that because I'd like to deal with the lead-up to that. Do you summarise the events of the 22nd into 23 October?

EVANS: Yes. This is in my paragraph 67 where I note:

"The entry timed at 03.04 hours on 22 October noted that her oxygen saturation is 96% and above."

In other words, normal:

"There is no increased work of breathing."

In other words, you know, she's breathing satisfactorily:

"There's a long line in place [that's an intravenous line to give fluids] and she's receiving her nutrition intravenously."

Again, the other bit of good news is that the aspirates -- and I mean the aspirates from the nasogastric tube -- are minimal, in other words normal, and the abdomen is soft and non-distended. So therefore [Baby I] was now a stable baby.

JOHNSON: All right. If we can look at that in the paper version behind divider 12. It may help the jury just to remind themselves of this. It's in the fourth set of paper documents, so it has the blue 4 in the top right-hand corner. It's at the back of divider 12 there, Dr Evans.

We're looking at J15034 through to 15035, which gives us [Baby I]'s observations if you've got those.

In handwriting, towards the bottom of the page, do we have the saturation levels --

EVANS: Yes.

JOHNSON: -- of [Baby I] from --

EVANS: Yes. This is the chart I'm talking about.

JOHNSON: Thank you. And that covers, as we can see, the 20th, 21st and indeed part of 22 October?

EVANS: Yes.

JOHNSON: The last --

EVANS: It does.

JOHNSON: -- five columns are the 22nd, I think?

EVANS: Yes, it goes up to -- yes, it does.

JOHNSON: Just reading across, do we see SaO2, which is the saturation levels of [Baby I]?

EVANS: Yes.

JOHNSON: Do we see that they are consistently high for the 20th, 21st and 22 October?

EVANS: Yes, they're all in the high 90s, mid to high 90s, which is absolutely normal.

JOHNSON: Do we see that throughout that period of time [Baby I] was in air?

EVANS: She was in air, in other words she was not requiring additional oxygen.

JOHNSON: And turning over on to the final page of that document, which is the 22nd, so it runs to the beginning of the final shift, we see there that that deals with 11 am through to 11 pm?

EVANS: Yes.

JOHNSON: 11 pm hasn't been filled in for reasons that Ashleigh Hudson told us about.

EVANS: Yes.

JOHNSON: But do we see that also [Baby I]'s saturation levels are there recorded in handwriting?

EVANS: Yes.

JOHNSON: 100, 95, 97 and 96%?

EVANS: So high 90s, normal.

JOHNSON: And always in air?

EVANS: And again in air, yes.

JOHNSON: 21 being the fractional percentage of oxygen in air?

EVANS: Correct.

JOHNSON: Yes.

MR JUSTICE GOSS: Could I just interrupt you there? Is that the last sheet in that section?

MR JOHNSON: It should be. Is it not in your Lordship's?

MR JUSTICE GOSS: I put it behind the... I had it behind the...

MR JOHNSON: It's not the final sheet.

MR JUSTICE GOSS: The reason is that Dr Evans -- it wasn't -- when we turned over from the previous sheet, he didn't have it as the next sheet. Could you put it behind? I'm just asking to rejig the witness box bundle. Take it out and if you could put it behind the previous observation chart so it forms the sequence, essentially. Do you see my point?

EVANS: Yes.

MR JOHNSON: So the pagination runs correctly.

MR JUSTICE GOSS: Thank you very much.

MR JOHNSON: All right. So you noted [Baby I]'s saturations, first of all. Did you move on to also note the fact that she, at just before midnight, was rooting?

EVANS: Yes.

JOHNSON: Which we've heard about, both last week and indeed this morning from, I think, Dr Gibbs.

EVANS: Yes. Rooting is a very pleasant, normal reflex of newborn babies. What it means is that if you place a finger, your finger, against their lip, the side of their lip --

MR JUSTICE GOSS: We've heard it described.

EVANS: All right. It's a sign of well-being.

MR JOHNSON: Yes.

MR JUSTICE GOSS: Thank you.

MR JOHNSON: We then heard of the collapse of [Baby I]; is that right?

EVANS: Correct, yes.

JOHNSON: And you have set out in general terms the circumstances surrounding that collapse in your various reports; is that right?

EVANS: I have, yes.

MR JOHNSON: All right. I'm going to move on to your opinions. My Lord, that may be the best point for a break.

MR JUSTICE GOSS: Yes. We'll have our 10-minute break now, please, members of the jury. Dr Evans, thank you very much.

(11.58 am)

(A short break)

(12.08 pm)

MR JOHNSON: Dr Evans, I want to deal with these incidents one by one if we can, please. Starting with Wednesday, 30 September.

EVANS: Yes.

JOHNSON: If I can just ask Mr Murphy to help us by putting the first sequence of events on to the screens, please. If we go to tile 73 first, please. These are the notes of [Dr A] and no doubt you and the jury remember [Dr A]'s witness statement and indeed the notes -- the witness statement being read and the notes being referred to.

If we can just remind ourselves, this is an event that is recorded as having happened at 16.30 that afternoon. There are [Dr A]'s handwritten notes concerning the vomit that you've already told us about; is that right?

EVANS: Yes.

JOHNSON: Then there was a subsequent desaturation at about 19.00 hours, so at just before the handover from Lucy Letby to Nurse Bernadette Butterworth.

EVANS: Yes.

JOHNSON: [Dr A]'s notes, so far as that are concerned, are at tile 97. If we can go to tile 97, please, Mr Murphy, because there was a point that I need to pick up from that.

It's the same note in effect. That, at the top of the page, is a note from what happened at 16.30.

If we scroll down the page, please, we come to a note made by [Dr A] arising out of the chest X-ray, about which we heard evidence. Do you remember that?

EVANS: Yes.

JOHNSON: In the third line of [Dr A]'s note we can see:

"No air in biliary tree. No falciform ligament."

You may recall his Lordship invited us to help the jury with what that actually meant when it was read out.

Can you just help us with that in the context of this particular X-ray and what had happened to [Baby I]?

EVANS: Yes. Simply there was no air in the biliary tree, in other words there was no air -- the absence of air in the biliary tree is a normal finding.

JOHNSON: What is the biliary tree?

EVANS: The biliary tree is the bit underneath the liver where the gall bladder -- and the gall bladder drains from the liver into the intestine.

JOHNSON: So is it part of the digestive process?

EVANS: It's part of the digestive process, yes. So it's the tube that connects the pancreas, the gall bladder, yes, and where the -- yes, that's what it is.

JOHNSON: Falciform ligament?

EVANS: I'm not sure -- it's simply saying that there's no air there, that's all.

JOHNSON: So is this in the context of investigating whether there's some digestive abnormality to which the vomiting might be attributable?

EVANS: Yes, in this particular case they were concerned about necrotising enterocolitis on a number of occasions. If you have a baby with suspected necrotising enterocolitis, one of the serious things, serious findings, is that you get perforation of the intestine.

If you get perforation of the intestine, you get leakage of air into the abdomen and that air may be found on the abdominal X-ray. Therefore the absence of this air means there is no air.

Therefore you cannot explain any of this on the basis of any kind of intestinal catastrophe.

JOHNSON: Okay. So dealing with [Baby I]'s collapses and her vomiting at 16.30 on 30 September, just to put this into context, can we go back to the paper documents, please, behind divider 12 at the beginning. It should be the second page in, which is 14715.

EVANS: Yes.

JOHNSON: Do we see there, Dr Evans, that hourly observations of [Baby I] had begun at 3 pm, 15.00 hours?

EVANS: Correct.

JOHNSON: Do we see that [Baby I] had no respiratory support?

EVANS: Correct.

JOHNSON: Her sats were 96 and 95, 93, 100% in oxygen, between 15.00 and 20.00 hours.

EVANS: In air, actually.

JOHNSON: Sorry, yes, in air.

EVANS: In air, yes. Normal oxygen saturations, not requiring oxygen, extra oxygen.

JOHNSON: Yes. So what conclusions did you draw so far as the episodes of desaturation and the episode of vomiting was concerned at 16.30 and 19.00 hours on that first occasion, 30 September?

EVANS: The conclusion I drew was that something had happened out of the blue. If she had been sickening for an infection or one of the complications that one gets with premature babies, I would have expected over the previous hour or two or three or more, for instance, for her to need a little bit of oxygen support. I would have expected her heart rate to change, to increase.

There might have been drops in her oxygen saturation.

There was none of this. So she was entirely stable right until she suddenly collapsed.

My conclusion was that she had collapsed as a result of some kind of event and, looking at the X-rays and looking at the clinical pattern, my opinion was that [Baby I] had been

subjected to an infusion of air, in other words air had been injected into her stomach. If you have a large infusion of air into the stomach that interferes with the ability of the diaphragm to move up and down, therefore that interferes with your breathing.

Anything that interferes with your breathing will quickly reduce your oxygen to your tissues, reducing your oxygen saturation, and then reducing your heart rate. In [Baby I]'s case she had a large -- what was described as a large vomit.

JOHNSON: Yes.

EVANS: The large vomit was therapeutic because by vomiting, she was reducing the pressure in her abdomen and therefore making it easier for her to breathe. And on top of that, as we described a few minutes ago, she had a nasogastric tube in and someone aspirated "air +++", three pluses. So therefore that would have reduced the abdominal pressure even more, and this is what led to her recovery.

JOHNSON: Yes, all right. Just dealing with the issue of splinting of the diaphragm, if we go to the X-ray, please, at tile 78, what does that show us?

EVANS: Right. Now, I'm not a radiologist, but that is the diaphragm, that area there (indicating). Below the diaphragm you've got loads and loads of air in the whole of the intestine. There's lots and lots of air everywhere. I think that's the stomach (indicating) -- I'm not too sure if it's the stomach or a large bowel, actually.

JOHNSON: I think Dr Arthurs told us that that was part of the bowel.

EVANS: Yes, I think so. Anyway, we've got a large amount of air, and Dr Arthurs knows much more about this than me, in the whole of the abdomen. If you have air in the abdomen, you know, that's the whole of the abdomen all round there (indicating), that diaphragm would normally move up and down. But if there's a lot of air there, in the abdomen, it cannot move up and down effectively, and that will lead to the oxygen desaturation, which would have led to the collapse.

The other point I make here is that these are the lungs -- and it's not the best quality X-ray, that's not a criticism, but there's no sign of lung collapse and there's no sign of pneumothorax.

JOHNSON: So in your opinion, just to be absolutely clear, so far as [Baby I]'s desaturations on 30 September was concerned, your view was the cause of that was?

EVANS: Splinting of the diaphragm caused by an injection of air into the stomach, increasing pressure within the abdomen, interfering with diaphragm movement and therefore causing her collapse.

JOHNSON: Yes, all right. Can we move on to 13 October, please, Dr Evans. Just to remind us all, this is the occasion when [Baby I] was found collapsed in nursery 2 --

EVANS: Yes.

JOHNSON: -- in the early hours of the morning.

EVANS: Yes.

JOHNSON: This was at about 03.20 on the morning of the 13th.

EVANS: Yes.

JOHNSON: The apnoea alarm hadn't sounded, as we heard from Ashleigh Hudson.

EVANS: Correct.

JOHNSON: But her saturations and heart rate had both dropped and she required some resuscitation, including adrenaline?

EVANS: She needed an awful lot of resuscitation, actually, and her condition -- this is event 2. Her condition on this occasion was much worse than on event 1. Her heart rate had dropped, had recorded values of 50, which is very low for a baby, it should be 120 or more. Her oxygen saturation was very low, had dropped to 53, that's extremely low and placing her life at risk. And I also noted that at one stage they were unable to detect a heart rate. So therefore, if they were unable to detect the heart rate it suggests that her heart was not pumping normally.

So the resuscitation they introduced was incredibly vigorous, adrenaline on three occasions and, as earlier, bicarbonate, dextrose and saline boluses. They then did an abdominal X-ray and this was -- I'm sure we can see it, it shows lots of air in the stomach and in the intestines.

JOHNSON: Just to remind us of the degree of breathing support or not that [Baby I] was getting in the immediate time before this collapse, if we go in the paper documents, please, to the second

divider in section 12. The documents with the blue 2 in the right-hand corner.

If we find the observation chart that's numbered J14719, we can see that as from 7 am on 11 October, [Baby I] had been having her temperature checked only.

There'd been no checks of her heart or of her respirations. Is that right, first of all?

EVANS: That's what the statement says, yes.

JOHNSON: Okay.

EVANS: That's what the chart says, sorry.

JOHNSON: It does. We then see, reading across, that although somebody hasn't written in 12 October, it should be written in between 21.30 and 09.30?

EVANS: Yes.

JOHNSON: Which are the fifth and sixth columns from the right respectively. And it would follow that 13 October, in other words the time immediately before this collapse, begins in the very final column on that page?

EVANS: Yes.

JOHNSON: So at 01.30, we can see that [Baby I] was on no respiratory support. She was in air; is that right?

EVANS: Sorry, where?

JOHNSON: We're looking at the very final column on page 14719.

EVANS: Right, okay. Yes, she's in air, yes.

JOHNSON: Then immediately after the collapse is the first column on the next page, 14720. We see that she'd been intubated, her respiration level being marked with a cross in circles; is that right?

EVANS: Correct, yes.

JOHNSON: That she was on 15-minute observations, which then went to half an hour and then in due course went to an hour?

EVANS: Yes, that's correct.

JOHNSON: So looking at the collapse, the fact that she was on no support at the time and looking at the nature of the collapse, what conclusions did you reach as to the cause for [Baby I]'s collapse at 03.20 that morning?

EVANS: I came to a similar conclusion to event 1 because, again, the collapse was unexpected, she was stable before all of this, but it was much more serious on this occasion, it required even more robust resuscitation, but there had been some kind of incident where her breathing and heart rate had been compromised. I think there's an X-ray somewhere.

JOHNSON: There is.

EVANS: That shows again lots of gas in the abdomen.

JOHNSON: Yes. Sorry, it was on my screen, I've just lost it.

It's about 4.30 that morning, the X-ray. I'll just find it. If Mr Murphy could go to [Baby I] 2, please.

Tile number 80. It's an X-ray at 04.25 hours.

So just by reference, perhaps using the mouse that you have there, Dr Evans, can you, in short form, talk us through what you're talking about?

EVANS: My mouse has stopped working.

(Pause)

Right. So this X-ray shows the chest and about half of the abdomen, so again we've got --

JOHNSON: I think we know the lungs --

EVANS: The lungs are there (indicating), they're okay. And here (indicating) you've got loads and loads of air in the intestines. Lots and lots more air than you'd anticipate, than you'd expect normally. That's all one can say, really.

JOHNSON: Yes. You've already told us that your opinion was it was in effect that air that had caused this desaturation; is that right?

EVANS: Something had occurred to interfere with her breathing, so again we're back to splinting the diaphragm. So that is -- given what had happened on event 1, we're seeing a similar pattern of sudden onset deterioration, from which she recovered following robust resuscitation, yes.

JOHNSON: It may be that you'll be asked in more detail to look at the surrounding circumstances, but so far as you were concerned, was there any suggestion in the surrounding circumstances preceding or indeed immediately succeeding this incident that would give cause to believe that there were some benign cause for what happened to [Baby I] at that time on the 13th?

EVANS: Well, up until, you know, the time she suddenly deteriorated, she appeared to be well. She was in the nursery, the lights were down, as we heard. It was early morning. A nurse had -- she was on monitoring.

A nurse had moved away to prepare milk, I think. So this was a nice, well prem baby, simply being looked after in a neonatal unit until she would have been well enough or big enough to go home. So there weren't any warning signs as far as one could tell that would have alerted any nurse or doctor to the possibility that [Baby I] would suddenly have collapsed during the early hours of the morning.

JOHNSON: Thank you. Now, moving on to the third event, which was between 5 am and 7.45 am or so the following day, 14 October. I'm now turning, Dr Evans, to your subsequent report of 25 March 2019.

If Mr Murphy could help us, please, and we go to the third sequence of events for [Baby I]. Tile 70 first of all, please. This is the marker for the first event on the 14th. The second event is at 07.45 and the marker or the record of that is in Dr Neame's notes at tile 115. What conclusions did you draw about this collapse, please, Dr Evans?

EVANS: Similarly to events 1 and 2, that again she had stabilised following event 2, but then on this occasion her abdomen had become very distended, areas of discolouration. The examination noted:

"Abdomen firm and distended."

So again, that her condition had deteriorated as a result of some kind of event that had interfered with her breathing and I really came to a similar conclusion to the one I did for events 1 and 2.

In the report I said -- it states:

"The events of the early hours of 14 October are also suspicious and suggestive of inappropriate care, most likely due to the perpetrator injecting a large volume of air into the stomach via a nasogastric tube."

So that was my opinion at that time.

JOHNSON: Just taking that opinion and looking at alternatives, so far as infections or anything like that were concerned, could you see in the records any suggestion of a sort of benign explanation which could account for what happened to [Baby I] when she collapsed?

EVANS: There was no evidence of it. Secondly, her response to resuscitation is not what one would expect if she had an infection.

Infections tend -- as a result of infection, babies tend to recover over a number of days, not over a matter of minutes or an hour or so or less. So there was no sign of any other complication. There was no collapsed lung, there was no pneumothorax, there was no infection.

Again, I think we had X-rays that showed this astonishing large amount of -- volume of air.

JOHNSON: Yes. If anyone wants to refer to it, and if Mr Murphy could quickly put it on to the screen, please, it's tile 129.

Let's start with tile 85, which is after the earlier of the two collapses. This is an X-ray taken at 06.05, following the collapse at about 5 am.

EVANS: Again, here we are, this is lungs as before, no collapse. That's the diaphragm there (indicating). The whole of this is the abdomen (indicating) and it is absolutely full of air. And this degree of air would be likely to cause interference with breathing. If you look here, I think this here is a nasogastric tube (indicating), so she did have a nasogastric tube in her stomach at the time. So again, I formed a view similar to the view I'd formed regarding events 1 and 2.

JOHNSON: The X-ray taken later that morning was taken at just after 8 o'clock. It's tile 129, please, Mr Murphy.

I think the report suggests that it's a similar picture to the one that had been seen earlier in the day.

EVANS: Yes.

JOHNSON: Is that a fair summary?

EVANS: I think that's a fair comment, actually, yes, lots of air.

JOHNSON: The jury already have that evidence in the sequence of events in the form of Dr Wright's report. And of course Professor Arthurs has already given us his view.

So moving on, if we may, please, to [Baby I]'s final collapse and her untimely death.

EVANS: Yes.

JOHNSON: And going back to your original -- your fuller report, please. Dr Evans, can you talk us through, please, what in your view was the cause for [Baby I]'s final collapse and death?

EVANS: Yes. I thought on this occasion that she was subjected to an infusion of air again. But on this occasion, I think it was more likely that the air was injected into the blood circulation. Going back over the previous few days, she'd been stable, she'd stabilised, she was recorded as breathing spontaneously in air, her oxygen saturations were 96% or higher. In other words, a very stable, well baby. We've talked about rooting, so that's fine.

But suddenly, she collapses, as we heard from Dr Gibbs' evidence this morning.

JOHNSON: Yes, okay. As we have with the others, if we may, let's go to the paper documents to remind ourselves of the picture. So this is divider 4. Right at the beginning of divider 4 is the observations chart, which is page 15034.

EVANS: We're still in section 12, are we?

JOHNSON: We're in section 12, the fourth divider. The first page is the one we were looking at before. I think we've looked at it at some stage anyway. It's the 20th, the 21st and 22 October --

EVANS: Yes.

JOHNSON: -- and it runs through on the following page, 15035, to 23.00 hours on 22 October.

EVANS: Yes.

JOHNSON: And of course, 23.00 hours was left blank for the reasons given to us in evidence by Ashleigh Hudson.

EVANS: Yes.

JOHNSON: But just concentrating on the general picture, we've got heart rate, respiration rate, temperature, saturations in air, and the position of a probe.

EVANS: Yes.

JOHNSON: They're all features that are recorded in this data on two separate pages?

EVANS: Yes.

JOHNSON: What is the general picture so far as whether or not [Baby I] was a well child or whether there was something to suggest there was something wrong?

EVANS: [Baby I] from these results was a very stable baby. Her heart rate was around 140, which is normal for a baby of this age. Her respirations were 40 to 50, which is normal for a baby this age.

Oxygen saturations, she was on continuous monitoring, but we've got four values here, 100, 95, 97, 96, can't get better than that, so despite being known to have chronic lung disease she was not needing additional oxygen, so that's very satisfactory. And she was in air, in other words 21% oxygen. So this was a stable baby from this account.

By this time, of course, she was several weeks old, she was about 1.8 kilograms from memory, so she was now a good size.

JOHNSON: We heard from Ashleigh Hudson about [Baby I]'s relentless cry at about the time of the first collapse at about midnight. And then that being repeated on the second occasion.

EVANS: Yes. I think the relentless crying from Ashleigh Hudson's opinion was on the first part of the --

JOHNSON: Both collapses, yes.

EVANS: So Ashleigh Hudson's evidence was very moving because nurses and doctors know what one would call a normal cry sounds like because babies will cry if they're hungry, they'll cry if you take blood tests from them because it hurts. But it was clear that this was a very abnormal, different kind of cry, and I would have interpreted that cry as the cry of a baby who was in pain and a cry of a baby who was severely distressed. In other words, this baby was in severe pain from the description we heard from the local team last week and this morning. That is an extremely disturbing phenomenon. We heard it in previous cases about this abnormal cry. So there was no obvious explanation why she was crying relentlessly and it was very loud. That's what we heard.

JOHNSON: Yes.

EVANS: Because there wasn't -- it wasn't as if somebody was shoving needles into her or, you know, causing her harm at all. So this was an extremely disturbing phenomenon.

JOHNSON: And thus you concluded, so far as the causes of her collapse and ultimately her death were concerned, that was the result of what?

EVANS: I think she was a victim of having air injected into her blood circulation. This also probably explains her crying, her distress, and the failure of the medical team the second time round to save her life.

MR JOHNSON: Thank you, Dr Evans. Would you wait there, please?

Cross-examination by MR MYERS

MR MYERS: Dr Evans, do you agree that [Baby I] was in general a very poorly baby regardless of the particular events that we're looking at?

EVANS: No, I don't, actually.

MYERS: Do you agree that she had recurrent episodes of abdominal distension regardless of the events that we're looking at?

EVANS: She did.

MYERS: Do you agree that she had recurrent desaturations regardless of the events we're looking at?

EVANS: Yes, she did.

MYERS: Do you agree that she required oxygen in various ways, not all the time, but through periods of her time on the neonatal unit?

EVANS: Yes.

MYERS: Do you agree there were periods when she had infection or suspected infection and received treatment for that?

EVANS: Yes, she did.

MYERS: Do you agree that there were periods when she had suspected NEC and received treatment for that?

EVANS: Yes.

MYERS: Do you agree that she failed to put weight on as would have been expected?

EVANS: Her weight gain was -- could have been a bit better, but there are explanations for that, as for the reasons that we've been discussing this morning, yes.

MYERS: Do you agree that the failure to put on weight could be a consequence of the cumulative problems with her ill health over time?

EVANS: Yes.

MYERS: We've been looking at four events. There's an additional matter I'd like to ask you about, Dr Evans, about 23 August 2015.

EVANS: Yes. I'm familiar with that event, yes.

MYERS: There are abdominal -- there's abdominal distension identified in the case of [Baby I] on that day, isn't there?

EVANS: There is, yes.

MYERS: And there'd been radiographs of that, haven't there?

EVANS: Yes.

MYERS: I'm turning to just ask you this. In your first two reports, so the report on 8 November 2017 and the report on 31 May 2017, in both of those you set out that you formed the view she'd received a large bolus of air via the NGT, the nasogastric tube, didn't you?

EVANS: That was my opinion at the time, yes.

MYERS: In other words, something was done to her that should not have been done to her?

EVANS: Something like that, yes.

MYERS: Moving to event 1, 30 September 2015, you've given evidence to us just now that in your opinion this arises because of splinting of the diaphragm by an injection of air into the stomach.

EVANS: That was my opinion and that was the report of the local radiologist as well in relation to the X-ray taken at the time.

MYERS: In relation to splinting of diaphragm. The local radiologist didn't say anything about injecting air into the stomach?

EVANS: No, splinting of the diaphragm, I said.

MYERS: When you made your first report, your opinion was that this was due to air injected in the stomach via a syringe down the NGT, wasn't it?

EVANS: Something like that, yes.

MYERS: And you repeated that in your second report, didn't you?

EVANS: I did.

MYERS: How much air would it take to cause that to happen?

EVANS: A lot, but what I can't say, and nobody can say, is how much because what you cannot do, you cannot carry out some kind of research where you inject increasing amounts of air into a baby's stomach until they either vomit or stop breathing. I mean, that would be grossly unethical and therefore you cannot carry out a research study to do that.

What we do know is that normally, babies will have a small amount of air in the stomach because they swallow air, and that doesn't cause them any problems. We also know that babies who are on CPAP will get air into the stomach, and that normally doesn't cause them problems.

Therefore, for a baby to vomit, that's the first point, means that she would have had an awful lot of air injected into the stomach. Professor Arthurs suggests more than 20ml in his evidence, but he cannot give a figure. You would need to give an awful lot of air and milk for a baby to vomit because you don't vomit air, you only vomit liquid. And of course, the nurse who applied the syringe to the nasogastric tube got out "air +++."

My experience from these cases -- I don't know of any baby that's had more than three pluses of air ascribed to them. So therefore, she must have had an awful lot of air injected into the stomach to cause both the vomiting and the collapse.

MYERS: Do you know how long it would take for the air to be injected as you're suggesting, let's say at the time of the event at 4.30 in the afternoon?

EVANS: No.

MYERS: How can quickly would there be vomiting and desaturation if the abdomen has been splinted?

EVANS: I can't say. You can't say.

MYERS: Help us.

EVANS: You can't say. I suspect it'd be quite quick, but again, because this is something that's incredibly rare, this is incredibly unusual, the cases that we're hearing about in this trial are incredibly unusual in their presentations. It's not possible to give an exact volume of air and it's not possible to give an exact time in terms of minutes following the injection of air that the baby would vomit. But I suspect that the greater the volume of air injected, then the earlier -- sorry, the quicker the baby would vomit, but I wouldn't want to put a time on it.

MYERS: Is there any data or research that you have as to how this mechanism would work?

EVANS: No, the only times I've seen events like this is in this -- are in these series of cases.

MYERS: So this is something you have come up with for this series of cases, is it?

EVANS: What you do in clinical medicine is you look at all options and once you've excluded every other option, then maybe you're left with -- maybe you're left with just one explanation. And in my opinion, this is the explanation in this particular case.

MYERS: To be clear, you cannot tell us how much air would be involved?

EVANS: No (overspeaking).

MYERS: You cannot tell us how long it would take for that air to be put in?

EVANS: No, just quite a bit.

MYERS: And you cannot tell us how quickly there would be a reaction to that air having been put in?

EVANS: It would have occurred quickly, but given the rarity of this and the fact that one -- well, first of all, one cannot do research to check this out because it would be unethical, partly because of the rarity of the phenomenon, and thirdly, people who

inject air inappropriately into babies' stomachs tend not to record the volume of air they've injected into it.

MYERS: But there is in fact no clear basis to show air has been injected into this stomach at all, is there?

EVANS: Oh yes, there is, because we've got these abdominal X-rays with loads of air in them and that air got in there somehow and the only way that air can get into the gastrointestinal is into the oesophagus, into the stomach. Therefore that's pretty compelling evidence that air has gone in and the fact that on this occasion and in previous cases when the NG tube was aspirated lots of air came out. Therefore we know the air's gone in because it's come out. It couldn't have come out if it hadn't gone in in the first place.

MYERS: Did you accept what Professor Arthurs says with regards to the radiograph on 30 September, that there are features of NEC in association with that?

EVANS: He showed one marker of NEC on one of the X-rays and he showed a little circle at the bottom, the bottom left looking at the X-ray, so the bottom right quadrant of the X-ray. I think that's the only finding he noted where he said maybe that could be due to NEC.

MYERS: When we come to the episode round about 7.30 pm in the evening, you've identified from the notes of Bernadette Butterworth the entry "aspiration +++", haven't you?

EVANS: Yes.

MYERS: And you heard the evidence from Nurse Butterworth that that took place after the Neopuff had been used on [Baby I]; you recall that?

EVANS: Oh yes. If she'd had resuscitation, then of course that's an explanation for the air, but of course the air was in there beforehand, which is why she had collapsed in the first place.

MYERS: No, you don't know that, Dr Evans.

EVANS: She had abdominal distension which was noted at the time of her collapse.

MYERS: You have been listening to the evidence in the course of the case, haven't you?

EVANS: Yes.

MYERS: You heard Nurse Butterworth say she saw the stomach extend as the Neopuff was being used on it?

EVANS: Yes, I did, actually.

MYERS: Which can be a cause of stomach distension, can't it?

EVANS: It would have added to the distension she had before.

MYERS: And what we have on 30 September is actually consistent with [Baby I]'s ongoing condition, isn't it?

EVANS: No, it's not. No, it's not. I'll just mention necrotising enterocolitis. First of all, I think the medical and clinical team in Chester were very sharp in querying NEC in prem babies. That's good practice because early intervention can stop the NEC getting worse.

In this particular baby, there's little -- we've got one bit of one X-ray where there may be evidence of NEC.

But sadly, we've got more evidence to show that she had did not have NEC, which is that there was no evidence of NEC on post-mortem. Therefore, necrotising enterocolitis was not a significant factor in [Baby I]'s illnesses and I make no criticism of the clinical staff for considering NEC in their diagnosis. That's good practice. But given that the poor baby died and there was no evidence of necrotising enterocolitis on the pathology report, then we've got pretty compelling retrospective evidence showing that necrotising enterocolitis was not a significant feature in one or more of [Baby I]'s deteriorations.

MYERS: I make it plain, Dr Evans, I'm suggesting to you that when you look at that event, you are taking different bits of evidence and putting it together with a prosecution bias to support this allegation.

EVANS: Well, I keep getting told of my prosecution evidence, which is obviously untrue, because when I was investigating this case and all of the other cases, nobody was being prosecuted, nobody was being arrested, nobody had a finger pointed at them. All I had to go on were the clinical notes and I was -- I never visited the hospital, I never spoke to any of the medical staff, I never mentioned -- I never -- no one in Cheshire Police said anything to me about any particular nurse.

I looked at the events, as I said, some months ago, with a blank sheet of paper and I wasn't looking to point the finger at anyone, I was looking to find out what on earth was causing this collapse and the other collapses that we saw, that we've seen.

So therefore, there is no prosecution bias at all in my evidence here and I think to add something to that, which I have not mentioned before, I'm familiar with giving evidence to lawyers acting for the defence in criminal cases, more of them actually than for the police, so I don't think that lawyers acting for the defence will turn to doctors who are prosecution-minded, if I could put it that way.

So therefore this persistent fiction that I am a prosecution person is a pure fantasy, it is incorrect, and it's incorrect in this case and it's incorrect in all of the other cases.

I was the first to identify the issues in this case and in other cases and I did so in 2017 and I relied and -- sorry, I depended entirely on the clinical notes.

Since then, I've heard lots of additional information and as far as I can tell, as a consultant paediatrician, from the information we've had from Dr Gibbs today, the clinical team last week, all of them reinforce the conclusions that I came to over 5 years ago. Okay?

MR MYERS: My Lord, I'm going to turn to event 2, but I just notice that it's 12.58 and I wonder whether this would be an appropriate point to stop.

MR JUSTICE GOSS: Certainly. There's no point in starting on event 2. Thank you very much.

We'll break off then, members of the jury.

Could you be ready, please, to come back into court at 2 o'clock? Thank you very much.

(1.00 pm)

(The short adjournment)

(2.00 pm)

MR JUSTICE GOSS: Yes, Mr Myers.

MR MYERS: Dr Evans, I am going to ask you some questions now about what's described as event 2, which is the early hours of the morning of 13 October 2015. In your evidence you said that something had occurred that had splinted [Baby I]'s diaphragm and, given the events, probably a similar pattern to event 1.

EVANS: Yes.

MYERS: Just to keep track, in your first report on 8 November 2017, and in your second report on 31 May 2018, you made it clear that your concerns were that a large bolus of air had been introduced via the nasogastric tube, didn't you?

EVANS: Yes.

MYERS: That's what you were saying at that point. In fact, do you agree there is no evidence that an NGT was in situ before that collapse? Do you agree with that?

EVANS: I need to check that.

MYERS: If we look in the paper charts that we've got behind divider 12 at the events. Page 14789. So it's after the observation charts for event 2. Can you see, Dr Evans?

EVANS: Yes.

MYERS: The feeding is all by bottle, isn't it, at this point?

EVANS: Yes, it is.

MYERS: If we go over the page again, feeding for the one entry that we have is by bottle, isn't it?

EVANS: Yes, yes.

MYERS: Therefore, if that's right, there would be no nasogastric tube for air to be put down, wouldn't it?

EVANS: I would need to check that to get it right. It's quite common for nurses to leave nasogastric tubes even when babies are getting used to bottle feeds, so I'd need to check that, okay?

MYERS: It's not a surprise point for you, this, is it because it's something which you considered when you came to write your report on 19 October 2021, isn't it?

EVANS: Wait a minute... What did I say then?

MYERS: I'm looking at page 7 of that report. My Lord, it's the statements page 4498.

EVANS: Which paragraph is this?

MYERS: It's the top paragraph on page 7. So we've had the report in 2017 saying air down the NGT. We've had the report in 2018 on 13 October saying large bolus of air down the NGT. Then what you say in your fourth report, which is 19 October 2021, is this:

"In relation to the specific question and assuming that she did not have an NG tube in place at the time of her collapse, the explanation for her being found cyanosed and not breathing is that this was the result of airway obstruction: [Baby I] was smothered. If she'd stopped breathing as a result of some natural event one would have expected alarms to go off quickly following her respiratory arrest. She would have been discovered before her heart stopped and her response to resuscitation was satisfactory. From then onwards [Baby I] had an NG tube in place."

All right? So first of all, do you see what I'm referring to?

EVANS: Yes, I do.

MYERS: Secondly, it had been drawn to your attention in the course of the writing of the reports that there may not have been an NGT in place; that's right, isn't it?

EVANS: That's why I said some event had taken place, so if an NG tube was in place, we're talking air. The other option I came up with was smothering. The other option I came up with was that she was smothered, in other words there was an airway obstruction of some description which had caused this collapse.

MYERS: So once you discover there was not an NGT in place, you simply switch to an allegation of smothering, don't you?

EVANS: It's another explanation, it's another explanation for why a baby who is stable would suddenly collapse and require such extraordinary degree of resuscitation. So yes.

MYERS: It's another example, Dr Evans, of you looking around to work out some sort of explanation that can support the allegation, isn't it?

EVANS: No, it is my looking to see what -- looking for an explanation as to what caused this baby to collapse on 13 October when there was no evidence of infection or collapsed lung or any of those other things we've discussed over the last few weeks that could explain it.

Therefore that is what led to my exploring these options. Whatever it is, one cannot explain her collapse of 13 October as a result of some -- one of the common causes that causes babies to collapse.

MYERS: And gaseous distension of the bowel on the X-ray after 4 o'clock that morning isn't going to be caused by smothering, is it?

EVANS: No.

MYERS: So that doesn't even fit with that piece of evidence, does it, smothering?

EVANS: What I believe and what I consider is that she was put in harm's way as a result of some event on the 13th. If she has an NG tube in place, that's the best -- that's the most likely explanation. If you ask me could she have suffered a smothering event, that is an option I considered in my later report.

MYERS: If we move forwards in time, we've got the joint report that we've referred to that you signed in August of last year, didn't you?

EVANS: Yes, I did.

MYERS: And of course, as part of that you considered the case of [Baby I].

EVANS: Yes.

MYERS: I'm looking at the statements -- sorry, it's on the DCS at M1265, my Lord. But Dr Evans, you deal with 13 October in your joint report at paragraph 9 of that joint report, page 9. Have you got that?

EVANS: I do.

MYERS: Now, we've had the first two reports of air down the NGT. We've had the fourth report with smothering. Now when we get to August 2022 we have this at point 9, page 9:

"The collapse on 13 October was secondary to excessive amounts of air introduced into the gastrointestinal tract via the NGT and to air embolus."

EVANS: Yes.

MYERS: So in August this year, you were having a run with air embolus on this, weren't you?

EVANS: Three possible options, all of which represent inflicted injury, inflicted cause, none of which can be explained on the basis of a natural history of what happens to premature babies. So, yes, those -- all three options were matters that I think one should consider. The air embolus thing -- we'll go on to item 4, I'm sure, where the evidence for air embolus is more striking. But yes, we've got three possibilities. Which one it is, all of them represent inflicted injury of some description.

MYERS: Did the reports -- in the four reports where you dealt with causation before the joint report, no reference to air embolus at all, was there?

EVANS: That's correct.

MYERS: And air embolus comes up 5 years later, doesn't it?

EVANS: Yes, it does.

MYERS: And that's because you are chopping and changing as you go along to try to find a mechanism to support the allegation, aren't you?

EVANS: No, I am not. I am not. What I think we need reminding of is that I -- when I prepared my reports in 2017 and 2018, I was relying wholly on the clinical notes. I was unable to speak to any of the nursing staff, I was unable to speak to any of the medical staff, I did not have the benefit of discussing things with fellow paediatricians, I did not have the benefit of discussing with Dr Owen Arthurs or anyone else.

So therefore my opinion is based on less evidence than at the time than what we have now. And of course, I did not have the benefit of listening to the Chester nurses and Chester medics when I was preparing this report. Therefore, to suggest that my report 5 years ago could give you all of the answers, you know, 10 out of 10, is unrealistic.

I'm used to giving evidence where one accumulates additional evidence, as one goes along, and so that's what's happened in this particular case. We've got four events we've discussed here and all of this is extremely challenging, obviously, and some of the evidence I have heard I only heard last week, you know, the effect of the crying, for instance, it was relentless, loud and so on.

Now, I knew -- you know, the medical notes note she was crying but not that... So therefore my reports are more likely to be picked up by showing bits missing than any other report because my report was relying on less information than anyone else. I'm not going to apologise for that. That's the way it is. Mr Johnson has described my reports as sift reports, in other words: let's look at what's going on here. But what I have said all the time is that event 2 and events 3 and 4 was the result of inflicted harm. Okay? And so I've raised the issue of smothering, I've raised the issue of air embolus. The evidence in favour of air embolus is more compelling in relation to event 4, which is what led to her death. But that is why clinicians

don't apologise for forming an opinion and then amending their opinion as new information comes into being.

MYERS: Crying doesn't feature on the 13th, doesn't it?

EVANS: No, I know it doesn't.

MYERS: There is nothing in the clinical notes you have to support a diagnosis of air embolus, is there? Because if there was, you would have made it earlier, wouldn't you?

EVANS: Well, nobody raised the issue of air embolus from -- sorry, none of the local team raised the issue of air embolus and having -- so I was more comfortable in forming a view that it was... that her collapse was the result of air in the stomach rather than air in the bloodstream given what -- partly because of what had happened on 30 September. So yes.

MYERS: By your fourth report in October 2021, you had statements available because, for example, you make reference to crying, don't you?

EVANS: Well, that's why we've raised the issue in 2022 about air embolus, so yes.

MYERS: And in 2021, the fourth report, you still don't mention air embolus, even though you had all possible material then, do you?

EVANS: I didn't have -- I hadn't heard the evidence that we've heard in this trial in 2021. We've only heard that last week.

MYERS: Well, it can't be because of the evidence in the trial because you mention air embolus in your joint statement in 2022. You haven't even mentioned it today when dealing with 13 October, have you?

EVANS: No.

MYERS: So mentioning it in the joint statement in 2022 has nothing to do with the trial, does it?

EVANS: I don't follow what you're getting at.

MYERS: You just told the jury that you have heard evidence in the trial and that helped you form your opinion.

EVANS: It adds to all the other evidence I've heard over the last 5 years. So everything -- we're clinicians, we accumulate information from all sources of -- from all sorts of sources.

The greater the amount of information we get, the more accurate the diagnosis.

MYERS: You mention air embolus in 2022, don't you?

EVANS: I did.

MYERS: Yes, and you have dropped it on this event in your evidence today, haven't you?

EVANS: No, I haven't dropped it at all. I've kept it for evidence -- for event 4 because I am -- because the evidence in favour of air embolus in event 4 is more compelling, so I've kept it for event 4. After all, it's what happened in event 4 that led to the death of the little baby.

MYERS: And today you haven't made any reference to it in event 2, although you did in your joint statement, didn't you?

EVANS: Yes, that's correct.

MYERS: Let's look at event 3, please. I think we've got to grips to the fact that there's two parts allegedly, round about 05.00 and 07.30.

EVANS: Yes. Event 3, I included it in my report of 31 May 2018, but I left it out of the summary in that report, which is what led to my needing to do another report on 25 March. That's because I simply overlooked it in the summary. I didn't overlook it in preparing my report.

MYERS: Let's break that down. Event 3, Dr Evans, when you dealt with this case, [Baby I]'s case, in your first report in 2017, you had available to you the necessary clinical notes, didn't you?

EVANS: I did.

MYERS: And you made no reference to any event in what we call event 3, did you?

EVANS: I did, actually.

MYERS: No, not as a suspicious event.

EVANS: Just a minute, bear with me, bear with me.

(Pause)

I have, actually, paragraph 45 of my report of November 2017 says:

"The next entry's at 05.55 hours on 14 October. Just before 6, [Baby I] had deteriorated. Heart rate is 180. Abdomen is distended and mottled and is tender with guarding on palpation."

So I did mention that in my original report and I also added for good measure that I'd seen the X-rays at 06.05 hours and 08.03 hours on 14 October and note at paragraph 46 in my original report:

"Both note significant dilatation and air in the intestine, and a chest X-ray timed at 11.18 on 15 October shows little change to the chest X-ray carried out 2 days later."

So yes, I had picked up the event 3 in my original report --

MYERS: Right.

EVANS: -- but apologies for not including it in the summary.

MYERS: Now I'd like you to answer the questions I'm going to ask as accurately and concisely as possible to assist us all. I have just put it to you that you didn't mention event 3 as a suspicious event in your first report; yes?

That's what I asked you. Do you recall that?

EVANS: Yes.

MYERS: You've told the jury that you have referred to event 3 in the first report.

EVANS: It is in the first report.

MYERS: Right.

EVANS: It is in my first report, yes.

MYERS: You go through what happened on 14 October in your general chronology in the first report, don't you, at paragraph 45?

EVANS: I do, yes.

MYERS: Yes. When we come to your opinion, let's turn to paragraph 22, where you identify suspicious events.

Let's go to paragraph 22.

EVANS: Yes.

MYERS: Are you there? Page 22, sorry, of 23.

EVANS: Which paragraph is this? Because my copies are different to...

MYERS: Starting at paragraph 69 in your first report.

EVANS: Yes.

MYERS: Right. At this point you set out what you consider to be suspicious events, don't you?

EVANS: Yes, I do.

MYERS: Right. You set out that in your opinion, paragraph 69:

"[Baby I] received inappropriate care on 23 August."

EVANS: I did.

MYERS: You say she received inappropriate care on 30 September?

EVANS: I did.

MYERS: And, you say, 13 October?

EVANS: I did.

MYERS: You say the 22nd into 23 October?

EVANS: I did.

MYERS: You don't mention 14 October as a suspicious event anywhere there, do you?

EVANS: No, I left it out.

MYERS: And you've just deliberately tried to confuse the issue in answer to my question by taking us back into the body of your report where you talk about the chronology, haven't you?

EVANS: No, I have not, actually. I should remind everyone that I prepared over 30 reports in a very short period of time for Cheshire Police at a time when nobody was pointing fingers at anybody and where there were no suspects. On this particular occasion I overlooked 14 October. It's as simple as that.

When I was asked what about 14 October, because it's very clear that there was a suspicious event on 14 October, I am sorry that I left it out, so when I was reminded of that I put it in, in my report of 25 March 2019. So yes, I overlooked it, and I'm sorry

about that, but it was an oversight and not because I did not consider it suspicious.

MYERS: If you considered it suspicious you'd have put it in, wouldn't you?

EVANS: No, if I had had a bit more time, instead of preparing 30 reports in a month, over 30 reports in a month, if I'd been preparing this report and only this report, I suspect I'd have put it in actually.

MYERS: If we move forwards then to when you've had about another year of time, 31 May 2018, rather 6 months, we have your opinion on the second report at page 30, don't we?

EVANS: We do and I left it out again.

MYERS: And you mention 23 August, 30 September, 13 October and the 22nd and 23 October; yes?

EVANS: I did, I left 14 October out.

MYERS: That's because actually you understood at that point that what happened on 14 October is sadly a natural consequence of whatever happened on the 13th. That's what happened?

EVANS: The two events were fairly close together. They were within 24 hours. I just wonder in my mindset whether I -- you know, whether I put 13 and 14 together instead of separating them, but I'm not going to apologise for that. If I get asked to clarify the events of 14 October, which is what happened, then I will clarify it. That's what I have done. That's fine.

MYERS: In fact, Dr Evans, what happened on the 14th and in fact on 15 October, sadly, is a consequence of [Baby I]'s deterioration on the 13th, the one event then, and could be seen in that way, couldn't it?

EVANS: I'm not sure. No, I disagree with you there. She recovered on the 13th and then crashed again on the 14th. Babies don't do that -- if for instance the 13th event was due to infection or one of the common causes then I would not have expected her to recover so quickly. I'd have expected her to show signs of being unwell before that anyway. I would not have expected her to recover so quickly. And I would not have expected her to crash so precipitously on the 14th.

So I'm here giving evidence. In my opinion, the event of 14 October is a suspicious event.

MYERS: On the 14th, having stabilised on the 14th, she then crashed, sadly, even more dramatically going into the 15th, didn't she?

EVANS: She did.

MYERS: And that is, sadly, the course of [Baby I]'s condition isn't it?

EVANS: No, it isn't. No, it is not. You see, that is where you're wrong.

MYERS: You agree on the 14th into the 15th we started with Dr Neame with her on the ventilator at 21.30 being stable and with good blood gas, didn't we?

EVANS: Yes.

MYERS: And then it's going into the early hours of the following morning, on the 15th, that [Baby I] deteriorates dramatically, doesn't she?

EVANS: She deteriorates, yes.

MYERS: She deteriorates enough to have to be transferred out of the hospital, doesn't she?

EVANS: Yes, she does.

MYERS: And taken to the tertiary unit, doesn't she?

EVANS: She was.

MYERS: That event on the 15th followed from her medical condition, didn't it?

EVANS: It did.

MYERS: And working back in the same way, so did the 14th follow from the events of the 13th, didn't it?

EVANS: No, no, no. When she arrived at Arrowe Park on the 15th -- let's have a look. There was an explanation for the fact she deteriorated: she had a blocked ET tube.

Therefore it was not a suspicious event. They unplugged -- they removed the tube in Arrowe Park and she picked up and she returned to Chester at 10.30 on the 17th. So she was in Arrowe Park actually for quite a short time.

In this case and in all other cases, what I have done and what we've all done, we've looked at all events where the little girl has deteriorated and we've looked for a cause. Now, a blocked tube is a cause of a deterioration, so it's not suspicious. And once it was treated, yes, she recovered. But these events that were introduced by the prosecution today were suspicious and out of the ordinary. And where the explanation relates to excessive air in the abdomen and in the end excessive air -- well, air, not excessive air in the circulation.

So therefore, separating -- I think I've said in my first report that this is the most complicated case to date. I've mentioned that. So I'm not going to try and duck that one. This is a -- we've got four events, four suspicious events here, so these -- you know, this is a very, very complicated case. And if I could quote something -- just a minute. I'm not going to apologise for taking my time over this. If I could find it.

Never mind. Anyway, I've said somewhere that this is the most complicated case. This is a highly complicated case. Paragraph 74, yes. So there we are.

MYERS: Event 4 I'm turning to next, Dr Evans.

EVANS: Yes.

MYERS: By the way, do you accept that on the 13th into 14 October, event 3, 14 October, abdominal distension, first of all, was consistent with [Baby I]'s ongoing condition, wasn't it? She had a tendency to abdominal distension?

EVANS: No, she had a tendency to abdominal distension, but her abdominal distension, which was recorded on a number of occasions, did not lead to her deteriorating, despite her abdomen being bigger than, you know, than the average, she was a stable baby. Okay? Now, premature babies don't have a lot of muscles in their abdomen and therefore if you're not used to -- the abdomen of a little prem baby quite often looks quite big. But if the abdomen looks quite big but they are stable from a breathing point of view, it's not a cause for concern and if they're stable from a feeding point of view, in other words there's milk going in one end and poo going out the other, again that is no cause for concern.

So that is what we're looking for rather than the shape of the abdomen itself.

MYERS: And so far as the 14th is concerned, [Baby I] was on a ventilator and she also received assistance from the Neopuff. Neopuff in particular is quite capable of causing distension, isn't it?

EVANS: It will add to any distension that is there, yes.

MYERS: You can't distinguish between what it adds or what could have been there by any other means, can you?

EVANS: If there's some abdominal distension at the beginning and then you give them Neopuff and it gets more, gets worse, then I think it's reasonable to suggest that it's the Neopuff that is adding to the distension.

MYERS: And if that happens, it becomes very difficult, if not impossible, to work out what is due to the Neopuff and how much was there in the first place?

EVANS: That is correct.

MYERS: Event 4. We move to the evening, very late night of the 22nd into 23 October. In your evidence you explained to the jury that you regard this, the cause of this, as in effect an air embolus intravenously, don't you?

EVANS: I do.

MYERS: And you've said that's because of crying and distress and the failure of the medical team to save life.

EVANS: Yes. There are other things which I've mentioned, but which I have not mentioned in detail in my reports, which is to do with mottling. I'll explain why I have not explained that.

There are lots of discolouration changes recorded by the doctors, but I think the significance of them has become apparent as I was listening to their evidence.

If the examination notes comment on mottling of the skin, then you cannot use that indicator as a marker of air embolus because mottling simply means discolouration, poor circulation of the abdomen.

Dr Gibbs this morning was going on about mottling of the abdomen but not of the face, her face was pink, and then she was pink all over within 5 minutes. That type of discolouration cannot be explained on the basis of -- it's more difficult to explain that discolouration on the basis of poor perfusion.

So therefore, the main reason why I've reached the conclusion of air embolus is that the little baby died -- sorry, the little baby collapsed and the resuscitation was unsuccessful.

In terms of crying, the description of Ashleigh Hudson was very, very striking, you know, relentless crying, loud crying. Nurses are familiar with nurses' (sic) crying. So she was in pain, okay?

She was in pain, she was in distress. That is Ashleigh Hudson's description --

MYERS: Dr Evans, I'm going to come to crying shortly. I wonder if I could just deal with the features you've given us just to move this on a little bit, please.

EVANS: Okay.

MYERS: Mottling. Talking about mottling and skin colour, that is you're adding to this now, isn't it?

EVANS: No, no, no, no. Mottling was something that was described by the medics. It's a non-specific feature in an unwell baby and there is more than one cause for it.

And, as in every case I've prepared a report for, if I cannot rule out another cause, I don't include it as a factor in inflicted injury.

MYERS: You're including mottling --

EVANS: Sorry, I only -- I limit my opinion regarding inflicted injury to events where there is no indicator at all of a natural cause. Okay? So I think that's important.

In other words, the threshold, the bar I set myself for coming down on the side of this collapse or this death being due to inflicted injury means that I've ruled out the usual causes. So therefore, with mottling I have not included it because there's more than one cause for mottling.

MYERS: Right, so mottling does not go to demonstrate air embolus, does it?

EVANS: Not on its own, no.

MYERS: And Dr Gibbs is quite clear the mottling was on the trunk and the peripheries, do you remember that --

EVANS: Yes.

MYERS: -- not just the trunk? And he also generally described the colour being consistent with poor perfusion.

EVANS: Yes.

MYERS: Right. So colour doesn't really make this air embolus, does it?

EVANS: Oh, mottling doesn't, no.

MYERS: No. And the factors -- to get back to your evidence earlier, the factors which you say raise air embolus are the crying, the distress and the failure of the medical team to save life?

EVANS: The fact that she crashed in the first place, I think, is the more significant factor actually, yes.

MYERS: And as for the very sad events that form the later part of what happened that morning, they took place after [Baby I] had just had one crash, didn't they? There's two parts to this, isn't there?

EVANS: Yes, there's the one around midnight and then the one about an hour and a half later, yes.

MYERS: And the one actually about 1 hour and 10 minutes later followed a crash, didn't it?

EVANS: Yes.

MYERS: And in fact, Dr Gibbs has given evidence that in that situation, there probably does lead to a weakening of her ability, cardiac ability to withstand what was happening.

EVANS: Right. She was well enough following her first crash to be noted to be fighting the ventilator, which is a good sign, and well enough for Dr Gibbs to take the tube out and she was well enough to carry on breathing on her own, right, after crash number 1, the one around midnight. She had made that level of recovery.

So if she was unwell enough or, for what it's worth, well enough for Dr Gibbs to go home -- now, I've been in this situation loads of times at midnight where you resuscitate a baby and, if you're not too happy, you definitely do not go home. So therefore, she was stable following the first crash and whatever the effect of the first crash would be insufficient for her to crash once more an hour later unless something else had happened.

The second crash was not spontaneous, in my opinion, and the second crash was not a side effect of the first crash if I can put it that way. Okay?

MYERS: And she, it seems, made a striking and very good recovery after the first crash, didn't she?

EVANS: She did, yes.

MYERS: Which is utterly inconsistent with a suggestion there's a failure of the medical team to save life?

EVANS: No, they saved her on that occasion. I mean, there have been several cases in this trial consistent with air embolus, where they had actually saved a life.

[Baby B] being the first one. So I cannot compliment the team enough for the efforts they made to save a number of these babies. They really threw everything at them.

MYERS: You just chop and change your theory on air embolus to suite the facts, don't you, to fit in with the facts?

EVANS: No, no, no, clinical medicine -- that's the way of clinical medicine: you apply the same principles to each condition and hopefully your treatment works. If your treatment does not work then you lose your patient.

That sadly is the case. That applies to all conditions.

People get heart attacks, most survive, some don't, you know. It's the way it is, sadly.

MYERS: So --

EVANS: It's not chopping and changing, okay?

MYERS: If we look at the first event that night, where you are saying it's air embolus because you rely upon crying, distress and the failure of the medical team to save life. That appears to be an air embolus in which it wasn't necessary for the medical team to save life.

EVANS: Sorry, I don't follow that. Say it again?

MYERS: It wasn't fatal, was it?

EVANS: The first one, no, it wasn't, actually.

MYERS: Right. So if your criteria for what is an air embolus -- and I apologise if this is not clear, I'll set it out clearly -- is crying and the failure of the medical team to save life, that cannot apply to the first part of what happened that night, can it?

EVANS: It does because air embolus is fatal, but it is not fatal in 100% of cases. It was not fatal in the case of [Baby B] [Surname of Babies L & M] and it was not fatal -- sorry, not [Baby B] [Surname of Babies L & M], [Baby B]. And it was not fatal in one of the cases we're going to be discussing later.

They nearly gave up on that particular case. We'll discuss that in a couple of weeks.

So it's not always fatal. And in the research I did, appreciating that there is not a great deal of research about air embolus in babies, I have picked up one or two cases where the evidence for air embolus was clear but where the babies survived. So you do get survival with air embolus but it is unusual, sadly.

In [Baby I]'s case she survived the event of midnight thanks to the resuscitation she had. But sadly, she didn't survive her second event. And in my opinion, the second event was the result of a second injection of air into her circulation. It was not a complication of the first crash of 23 October.

MYERS: Dealing with the first event therefore, the only matter that leaves then on which you base this as an incidence of air embolus is crying or distress?

EVANS: Right. Let's talk about the crying then, shall we?

MYERS: Perhaps you could answer the question to assist us all, Dr Evans. The only matter that you rely upon for air embolus is crying or distress. That's what we're down to, isn't it?

EVANS: No, it is not. It is not. It is a sudden onset of deterioration that is life-threatening in a baby who was otherwise -- who had been stable, okay, who had been stable. We've gone through this in these notes here: right up to just before she crashed she had a normal heart rate, a normal respiratory rate, saturations ranging from 96 to 100% in air. Right? That was the -- that was her condition right up to late on the 22nd.

That is this chart here (indicating). That is this chart here.

So she was an extremely well little baby, you know, she was stable and in satisfactory condition.

MYERS: I want to make it plain, we don't accept she was an extremely well little baby, but I'm not going to rehearse that (overspeaking) I was asking --

EVANS: She was a well, stable baby where you'd be telling the parents, look, she's doing very nicely, she needs to put a bit of weight on, but you need to go and paint the nursery. Okay? So therefore she was stable and there was no indication that she would suddenly deteriorate for none of the reasons, as I keep saying, that one associates with the complications you get in premature babies.

MYERS: As to crying and distress, a baby may cry or become very upset for any number of reasons; do you agree?

EVANS: Of course.

MYERS: And it can be very subjective the impression that someone forms and what they describe after a baby has been crying. It's a matter of their description, isn't it?

EVANS: Oh... I... I trust nurses to know the difference between the cry they are used to hearing and a cry that they've never heard before or is very unusual.

I respect the -- I think the evidence of Ashleigh Hudson was incredibly clear, objective, clinical. She was very composed in discussing something that was very, very challenging.

It was clear, when I heard her, that this cry was quite different to what any neonatal nurse would normally be used to hearing.

MYERS: We're not taking issue with Ashleigh Hudson as to how she described what she heard about that cry. I make that clear. It's what you interpret from it that I'm exploring, Dr Evans.

EVANS: No, no, there's a difference, you see. There's a difference as well, which is not only was she crying, but her heart rate had dropped, her oxygen saturations was in her boots --

MYERS: You don't know what caused that. You've no idea what caused that, Dr Evans.

EVANS: I've just told you: she had suffered -- this is entirely consistent with an air embolus.

MYERS: It's utter guesswork.

EVANS: It's simply not guesswork. I'm quite happy to elaborate on the issue of the crying and what it likely to have caused the crying. It is not guesswork at all, it's consistent with what has happened in previous cases here and it's certainly consistent with what led -- and it certainly is an explanation

for what caused this baby to deteriorate and where resuscitation was not successful and she died. She died from the complications of an air embolus. That is my opinion.

MYERS: Do you agree that you're coming up with things just to try to find ways of supporting the allegation that's being made? Do you agree?

EVANS: You keep saying that, on the basis presumably that if you repeat a fiction often enough, it ends up as a fact.

MR JUSTICE GOSS: There's no need to comment on it.

You have been asked that question a number of times.

There we are. I'm not being critical of either of you.

It's not a helpful dialogue.

MR MYERS: Let me go to what I'd like to ask next, my Lord.

If we go to page 9, point 11.

EVANS: Which report is this?

MYERS: The joint report, please.

EVANS: Right, okay.

MYERS: There's a reason why I asked the question, my Lord.

I understand your Lordship's words, but I just want to go to this with the question I've just asked in mind.

This is the report you made in August last year.

You say this about 22 October:

"The collapse on 22 October was secondary to excessive amounts of air introduced into the gastrointestinal tract via the NGT and to air embolus secondary to blood in the vessel."

EVANS: Yes.

MYERS: So back in August you were having a go at the air down the NGT theory, weren't you?

EVANS: Yes.

MYERS: That's because you will go for whatever mechanism you think you can work with, Dr Evans, to support this particular allegation.

EVANS: [Baby I] was a victim of inflicted injury; okay?

MYERS: So you --

EVANS: [Baby I] was the victim of inflicted injury. The evidence in favour of air down the stomach on 30 September, event 1, is compelling. The evidence in favour of air into the calculation on 22/23 October is compelling. In terms of the contribution of air down the stomach on the last event or air embolus on event 2 or 3, that is more debatable. But in terms of event 4, she died as the result of an air embolus -- of air injected into her circulation. If she had air injected into her stomach as well, that is something I cannot rule out.

MYERS: You understand, don't you, it's not for you to invent an explanation just because you may believe there was some form of blame? You understand that, don't you?

EVANS: I have never invented a diagnosis in the whole of my career.

MYERS: And you agree that in the first four reports we have, up to 2021, you never make reference to air down the nasogastric tube with regard to the event of 22 October, do you?

EVANS: In my original reports, my opinion was that her terminal event was the result of air into her circulation and that is what, in my opinion, led to her death.

MYERS: And you maintained that over four reports, didn't you?

EVANS: Yes.

MYERS: Then last year, 2022, you added air embolus; yes?

EVANS: Hang on. I had air embolus all the time.

MYERS: Sorry, you added air down the NGT, didn't you?

EVANS: We did, actually, we did, yes.

MYERS: Then giving evidence to the jury today, you've dropped that, haven't you?

EVANS: I think air into the circulation is the more significant phenomenon in relation to event 4, which was her terminal event.

MYERS: I want to ask you something else bearing in mind the criticisms I've put in the questions I have asked you.

My Lord, we have some material I would like to hand to the jury with the assistance of the clerk. Some agreed facts.

MR JUSTICE GOSS: Yes, certainly.

(Handed)

MR MYERS: There's a copy for your Lordship. It's some additional material to the bundle handed to your Lordship if reference needs to be made to it.

The first pages, ladies and gentlemen, could you put these behind divider 3 in bundle 1? Go to jury bundle 1. If you go to divider 3, you'll see the agreed facts. We haven't looked at these for some time. If you go to the back of those agreed facts, ladies and gentlemen, you should come to fact number 14 that dealt with videos. I just want to check we're all there.

If you open the files up, these agreed facts follow on. This is agreed fact 15, you'll see. So if you slot this in behind the page with 14, we can carry on.

You've got a copy of those that you can see, Dr Evans.

I will just read through these and then there are some questions, Dr Evans. I should say, just so there's no confusion, ladies and gentlemen, we have put the agreed facts in. What we are going to look at in these facts relates to a different case, it's not this case, it relates to something in the family courts, but it'll become clear when we look at it.

I'll read them into the record. You follow it, please, Dr Evans:

"On 5 December 2022, Lord Justice Jackson gave a decision in writing on an application for permission to appeal in the Civil Division of the Court of Appeal.

"16. This application for permission to appeal related to a care order made in June 2021. The care order had been made in the Family Court. This care order is made in respect of two children who are unconnected with the children in the trial of Lucy Letby. The care order was unrelated to the care of Lucy Letby.

"The application for permission to appeal the care order was accompanied by a report from Dr Dewi Evans, dated 14 April 2022. This report supported the position of the applicants, who were the parents of the children for whom the care order had been made. Lord Justice Jackson refused the application for

permission to appeal against the care order. Included in his reasons for this refusal were the following matters, which he set down in writing:

"'1. This application challenges the findings of fact that led to the making of a care order in June 2021 in respect of L and S following the discovery in February 2020 that newborn S had sustained nine fractures caused on at least two separate occasions.

"'2. The applicants now argue that this court should hear an appeal and direct a retrial on the basis that the judge's findings were wrong, relying on a report from Dr Dewi Evans, a consultant paediatrician with no previous involvement in the proceedings, accompanied by certain research papers, as showing that the injuries may have occurred accidentally due to S's exceptionally low vitamin D levels.

"'It is of great concern that the parents and the wider family might have been encouraged by this opinion to believe that the judge's findings might be revisited. The report is, I regret to say, worthless and offers no support whatever for this application for permission to appeal or indeed for any other application to re-open the findings.'"

At 19:

"Lord Justice Jackson concluded his reasons as follows:

"'Finally, and of greatest concern, Dr Evans makes no effort to provide a balanced opinion. He either knows what his professional colleagues have concluded and disregards it or he has not taken steps to inform himself of their views. Either approach amounts to a breach of proper professional conduct. No attempt has been made to engage with the full range of medical information or the powerful contradictory indicators. Instead, the report has the hallmarks of an exercise in working out an explanation that exculpates the applicants. It ends with tendentious and partisan expressions of opinion that are outside Dr Evans' professional competence and have no place in a reputable expert report. For all these reasons no court would have accepted a report of this quality even if it had been produced at the time of the trial.'"

I'm going to ask you some questions about what we have there, Dr Evans.

EVANS: Yes, certainly.

MYERS: Lord Justice Jackson is a Lord Justice of Appeal; you're aware of that, aren't you?

EVANS: I am now, yes.

MYERS: That makes him one of the most senior judges in the country; you're aware of that?

EVANS: I assume that.

MYERS: Pardon?

EVANS: I assume he was. I didn't know. I don't know the gentleman. I didn't know of the gentleman.

MYERS: Included amongst his comments and reasons -- and I'm looking in particular at 18(iii) to remind us all of a couple of points. First of all he says that the report is worthless. Do you agree he was right about that?

EVANS: I don't agree with that. I'm not going to comment on his judgment. His judgment is his judgment, which I respect. In terms of my medical report, has the jury received a copy of my report?

MYERS: We have copies of the report here. You have that.

EVANS: Right. As far as my report is concerned, I am more than happy to stand up for it. In other words, to stick with it.

A bit of background to my report: it's a report I did pro bono, in the public interest. Basically, what it means is you do a report when there's no fee involved. You do a report for free. I have done a number of pro bono reports and there are occasions when families are unable to get Legal Aid --

MYERS: Dr Evans, I'm going to stop you there.

EVANS: I'm sorry, you've raised this issue.

MYERS: I asked you --

EVANS: My Lord, I'm sorry, I need to explain all of this because I think the jury will not understand the background to this report.

MYERS: I asked a simple question, my Lord, as to whether Dr Evans -- Lord Justice Jackson was right to describe the report as worthless. That's what I asked. The questions I'd like to ask are focused. If there's further explanation, of course Dr Evans can give it and I'm going to turn to what he says about the nature of the report. But it really would assist if I can proceed by asking questions rather than getting involved in an

explanation that, frankly, we haven't asked for at this point but we will come to it.

MR JUSTICE GOSS: No. You have asked him whether it is worthless. Dr Evans has said it's not worthless and he says that he was -- he provided -- he was just explaining the circumstances in which he was asked to provide a report, there was no fee involved, he was doing it, as is said, pro bono publico, for the public good, and that is background. You were going to ask a series of questions about the report. He will have the opportunity to answer those questions and then he can also be asked further questions in re-examination in relation to it.

Do you understand?

EVANS: Yes, my Lord. I'm not going to give a speech, I'm simply going to give a very brief summary of the background, which I think is important for the jury.

MR MYERS: Perhaps I can proceed with this, my Lord, and we will deal with the background as I go along, but I would be grateful if I could continue with the question I'm asking.

MR JUSTICE GOSS: You ask the question, Mr Myers, and we will see where we go from there.

MR MYERS: Thank you, my Lord.

Can we turn to agreed fact 19, please, Dr Evans?

I want to deal with these. The first line makes reference:

"Dr Evans makes no effort to provide a balanced opinion."

Can you see that?

EVANS: Yes.

MYERS: Do you agree with that?

EVANS: No.

MYERS: Has Lord Justice Jackson got that wrong in your opinion?

EVANS: Right --

MYERS: Has he got it wrong in your opinion?

EVANS: Lord Jackson's judgment is Lord Jackson's judgment.

I don't agree with it because if I agreed with it, I would be -- I wouldn't have written the report in the way that I've done. What I think we need to know is this: I sent this report to the solicitors. I had no idea it had been sent to the court. My report -- I stand by my report. My report does not contain the usual statement of truth, which accommodates all the reports that I've sent in relation to the Family Court.

I had no idea about this judgment until I heard about it 2 weeks ago. And even more concerning from my point of view, this is a unique example, a unique case for me and I'm not very happy about it because having sent the report to the solicitor, nobody got in touch with me.

And normally what happens is when you send a report to the solicitor, they get back in touch with you -- I mean, this was in South Wales, I sent an email, I'll call round in Swansea, all that sort of stuff, the solicitor happened to come from my home town. I said, "I'll come and talk to you, we'll discuss this, we'll go through everything. If you think there are bits in it that you're not comfortable with, we need to review it or amend it or whatever". I knew none of that.

What concerns me particularly is that I have prepared dozens and dozens and dozens of reports for the Family Court. To my knowledge, my Lord, there's only one report where the judgment went against me in 30 years of doing this work, and that judgment was reversed on appeal. Okay? That's the only -- this is the only judgment that's gone against me in a Family Court that I know of in over 30 years.

Obviously, it saddens me because I've got a -- I wouldn't say it's a 100% record, but I'm in huge demand for my opinion in the Family Court because of my track record over 30 years or more as a witness in my own practice and as an independent witness.

So this is a one-off for me, right? It's a one-off for me. I had no opportunity, right? I had no opportunity to discuss it with anybody because nobody got in touch with me. I had no opportunity to review it. There were two mitigating factors with this particular family. One was the vitamin D value, which was very, very low, and if your vitamin D value is low, your bones are weaker. That's the first point.

The second point is this family were not on the radar of Social Services. They were a stable family and they were in a no man's land because they didn't have their kids with them, they didn't have much access to them. If you look at it carefully, I did not challenge the fact that these were suspicious injuries. I looked at them very, very carefully and said, look, this family needs a

second chance. That was my main report in preparing this report -- that was my main emphasis for preparing this report.

I've done a number of pro bono cases, in other words cases where I don't charge a fee, over the years, and several of them have led to a successful outcome where people have given families a second thought. I was unable to do it in this case because there was a breakdown in communication between me and the solicitor. Okay?

The second thing, and this was the mistake I made, when I did my report I should have put a caveat in saying "for your eyes only and not for disclosure other than to the family without my agreement". I didn't put that in. That was a mistake on my part. I'll know better next time.

So therefore, this judgment is based on an experience I have never, ever had in 35 years of working as a medical witness and in 50 years as a doctor working with paediatrics. So it's a complete one-off. It's a complete one-off. It's an interesting diversion from what we've been discussing over the past 3 months. It's got nothing to do with this trial we're talking about at all and as I say I am unhappy with it and -- and, you know, that's the way of the world.

I thought these parents needed a second chance.

I was quite prepared to go the extra mile when I did this report in whenever it was, April last year, and that remains my opinion. So therefore that is my clinical opinion as a consultant paediatrician. I was not working as a medical expert and, as anybody who's seen my report can say, this was a letter to solicitors, it was not a letter addressed to the court. Righto?

So that's the way it is. I'm not going to comment on the judgment, I respect judgments, and just to repeat myself, this is the first judgment that's gone against me in over 30 years, apart from the one that was reversed. Quite pleased with that. The judgment that was reversed is in the public domain, anybody's welcome to see the original judgment and the reversed one. And the Appeal Court was very critical of the first judge, actually, in that particular case, and you're welcome to see that. It's on my laptop and I'm quite happy to provide it for you.

Every other case I have done -- and there are dozens and dozens and dozens of them -- where I have acted for the benefit of the court --

MR JUSTICE GOSS: You've said this.

EVANS: I'm sorry. This is obviously something I find quite upsetting. Every other judgment has come in favour of the opinion that I have expressed. This is the isolated one.

MR MYERS: Continuing with my questions, Dr Hall (sic), still on agreed fact 19, you can see four lines up, it refers to:

"The report has the hallmarks of an exercise in working out an explanation which exculpates the applicant."

Just so we understand, are you saying Lord Justice Jackson is wrong in saying that's what the report is doing?

EVANS: I think we're talking at cross-purposes, actually. My report was based on my clinical background and my clinical experience.

MYERS: Next, it says:

"It ends with tendentious and partisan expressions of opinion."

I had to look "tendentious" up. It means:

"Having or showing an intentional tendency or bias; presenting a biased view."

It ends with:

"... tendentious and partisan expressions of opinion that are outside Dr Evans' professional competence and have no place in a reputable expert report."

First of all, is Lord Justice Jackson wrong when he says it ends with tendentious and partisan expressions of opinion?

EVANS: Well, I don't agree with that, and again I base my opinion and my reputation -- if you prepare reports for the court, Family Court or Crown Court, that are partisan, you tend not to last very long as an expert witness because you will get caught out.

I have been giving reports for over 30 years, therefore someone must believe that my reports are impartial and they're there for the benefit of the court.

If I'd had more opportunity to discuss this report with the people concerned, it wouldn't have worked out -- it would have worked out better. So I'm not happy with a report -- with the way things have turned out and I feel sorry for the family and I feel sorry for everybody else.

MYERS: You say that the document, it's a letter to the solicitors, that's what you said, but Lord Justice Jackson calls it a report throughout. Can I be clear, that's because it is a report, isn't it?

EVANS: Hang on. It says, "Dear Mr Solicitor", and, "Re this little baby", so it's a letter to a solicitor because that's what it says on the tin.

MYERS: It runs to one, two, three, four, five, six, seven, eight pages, doesn't it?

EVANS: Eight page, nine references. I take what I do seriously and I don't take short cuts. I took a fair bit of time over this because part of the problem I had was that the baby was admitted to the hospital where I used to work, so I knew everybody involved with this case, which has added to the conflict, but there we are.

MYERS: And you provided this as, in effect, an expert report to support an application to bring an appeal, didn't you?

EVANS: Well, what I wanted -- obviously, you know, I'm not a lawyer, I'm a doctor. What I wanted was for this family to have increased contact with their parents and -- for these parents to have increased contact with their kids. That is my philosophical position as a children's specialist and, you know, father and grandfather and all that sort of stuff. So that's what I wanted.

What I was hoping, actually, was that my report could have led to the local authority, my previous old authority, saying, hmm, perhaps we should increase contact between the children and their parents, you know, as a future plan. Whatever happened 2 years ago, whenever it was, look, these parents are -- children need to be with their parents and therefore I think, and I still think, that there was an opportunity for increased access, supervised access. These kids, by the way, are in the care of the grandparents, just to let the members of the jury know. I thought the parents needed more access. The older child is missing her mum --

MYERS: Dr Evans, I'm asking you --

EVANS: Just a minute. Let me finish, right? Let me finish because you're making a meal of -- making a big issue out of something of this, so I need to defend myself as to how I did it, talking -- I'm living in the real world.

So that is what I was angling for and this is what I still angle for, actually, that there should be greater access for the

family. The fact that it went to the Appeal Court, I had no idea about any of that. I'd no idea about this judgment until I heard about it a week last Monday.

MYERS: Are you suggesting to the jury that you did not believe this was going to be used to try to support an appeal?

Are you saying that?

EVANS: No, what I'm saying is that I -- no, no, what I'm saying is that was a letter to the solicitor. I was hoping that he would discuss it with a barrister. I was hoping that the barrister and solicitor between them would get in touch with me saying, these are the pros and cons, no, you can't do this, yes, you can do this. I'm not a lawyer, but I know the procedure obviously. This is what I thought would happen. Therefore this came as a bolt out of blue and I thought, oh dear, it hasn't worked this time, but I am satisfied that there are several pro bono cases I have done that have led to a good outcome. So there.

MYERS: Let's look at some of the language you use in this report and the suggestion I'm making that this is a report. Paragraph 1:

"Mr and Mrs [the names are out] are the parents of... They have asked me to review injuries."

Do you see that?

EVANS: Yes.

MYERS: When you do that, you know that is with a view to re-opening this before the Court of Appeal if you can, don't you?

EVANS: No, it wasn't --

MYERS: You said no, let me press on.

EVANS: No, no, it wasn't. It was -- my view was: oh, let's see if the local authority, whom I know in South Wales, let's see if we can do something to improve contact, increase the contact, between the parent and their kids.

That was my goal. The idea that it would go to the Court of Appeal did not cross my mind.

MYERS: You're trying to bluff your way through appalling criticism from a senior judge, aren't you, Dr Evans?

EVANS: No, I'm not. I appreciate this is a diversion, yet another one of Mr Myers' diversions, but there we go, but I am more than happy to defend myself and I regard in this particular case -- for those of us in the medical field, the issue of vitamin D values and their significance, if any, in the cause of fractures remains a debatable point. Okay? I led the metabolic side of paediatrics when I was in Swansea.

So vitamin D values of 12, you're talking an incredibly low value. The consensus view from 2012 is that it's not -- they do not get more fractures.

Sorry, they... It's whether a lesser force can cause a fracture is a point for debate. All right? So that's a point of debate. And these parents, when they discovered the fractures (inaudible: coughing) --

MYERS: Could you just wait, Dr Evans, for the lady to please recover?

(Pause)

MR JUSTICE GOSS: Do you want a break now? Because we're due a break. How much longer are you due to be?

MR MYERS: I'll probably be a matter of minutes, my Lord, but how long we're going to be I really don't know, but I will be minutes with my questions. I'll be quick.

MR JUSTICE GOSS: Shall we have the break now? It might be better and then you can compose yourself. Thank you very much.

(In the absence of the jury)

MR JUSTICE GOSS: We'll resume in 10 minutes, Dr Evans.

Thank you.

(3.10 pm)

(A short break)

(3.18 pm)

(In the presence of the jury)

MR MYERS: Dr Evans, can we go to paragraph 6 of the document, please?

EVANS: Which document?

MYERS: Second page, paragraph 6. We're looking at the -- it's the one that says "Report of Dr Evans" at the top of it, the one we've been looking at. Can you see page 2, paragraph 6?

MR JUSTICE GOSS: You're there.

EVANS: Are we still with this...?

MR JUSTICE GOSS: Yes, page 2, paragraph 6. Your report of 14 April.

EVANS: I don't have a paragraph 6. I've got 15...

MR MYERS: You're looking at the agreed facts there, Dr Evans. We're going to the report. You were given a copy of the report behind those agreed facts and we're looking at it. If you keep going forwards. There we are.

EVANS: You're talking about my own report?

MR JUSTICE GOSS: Yes. Paragraph 6.

MR MYERS: Top of the page, "Report of Dr DR Evans".

EVANS: Yes.

MYERS: That's what it says?

EVANS: Yes.

MYERS: Paragraph 6 says:

"In preparing this report, I declare a number of interests."

Then it sets out your professional qualifications and concludes by saying:

"... and also in relation to the numerous reports I have prepared as expert witness for courts England, Wales, Scotland and Northern Ireland."

It says "report" at the top of the page, it says "In preparing this report" at paragraph 6. This is a report, it is not a letter.

EVANS: Well, we're talking semantics, okay? We're talking semantics. I can only repeat what I said before the break, where my interest as a consultant paediatrician is the welfare of the child, or the children, and if I could quote two sentences in paragraph 4 in relation to this particular case, which I stand by, and I quote:

"Currently, there appears to be some kind of life sentence in relation to both the placement of the two children and also the level of contact between them and their parents. This is completely unreasonable and has the potential to cause far greater long-term harm to the children than anything that occurred during the child's infancy."

I go on:

"I am not familiar with any kind of published work that endorses the current arrangement as one that is in the interests of the child and his sister."

So that was my position then. It is my position now. And that's it. Whether you call this a report or a letter or whatever is pure semantics.

MYERS: You tried to tell the jury it was a letter, didn't you, to the solicitor?

EVANS: It is a letter.

MYERS: If we go to page 3, same document, top of page 3, again it says "Report of Dr DR Evans", doesn't it?

EVANS: It's how I do all of my letters to solicitors, Mr Myers, okay?

MYERS: The bottom of that page sets out on that page and over on to the next page your professional background, doesn't it?

EVANS: Yes, it does.

MYERS: That's because this is being presented as an expert report, it's not a letter.

EVANS: Does it matter?

MYERS: Dr Evans, you knew that this would be relied upon to bring an appeal or to try to challenge a decision before the Court of Appeal. You knew that, didn't you?

EVANS: I did not know that, actually, because nobody ever got in touch with me having sent this letter to these solicitors.

MYERS: Look at paragraph --

EVANS: Nobody. I could not get -- they wouldn't get in touch with me, so there you go, you know.

MYERS: Can we go to paragraph 47, please? The final paragraph.

We've gone through the various pages. It says:

"I would be pleased to support Mr and Mrs [name redacted]'s application to seek a new hearing where the court can benefit from access to crucial additional information contained in this report."

EVANS: Yes.

MYERS: "I believe that there are compelling grounds for supporting their request for increased contact with their children with the aim of allowing both to return to their parents full time."

You know, and you knew very well, this was to be used as a report to get a new hearing because that's what it says in that paragraph, doesn't it?

EVANS: That would have been three or four steps down the line.

All right? That would have been three or four steps down the line. I was hoping we would have sorted things out before that was necessary. That was not to be, so there we are, and I think that if you -- and I am very sorry that the solicitors never got in touch with me.

There you are.

MYERS: You're aware, amongst your duties as an expert, there is a duty to notify the court in a case if there is anything against you that is capable of being considered as undermining your reliability, credibility or impartiality? You're aware of that duty, aren't you --

EVANS: Yes.

MYERS: -- on an expert? And that includes a duty to disclose any adverse judicial comment, doesn't it?

EVANS: Yes.

MYERS: You were made acquainted with this report 2 weeks into January at the start of this term, weren't you?

EVANS: Yes.

MYERS: And you were asked:

"Would you have informed the parties in this case of what Lord Justice Jackson said"; yes?

EVANS: Where is this?

MYERS: In fact, do you have the document attached that says, "Plan of meeting: Dr Evans". It should be attached to the back of the bundle you've got.

EVANS: Yes, I know that, it's...

MYERS: Can you look down to the second page, point 11? Can you see point 11?

EVANS: Yes.

MYERS: You were asked this question -- and this is now by the parties in this case, an inquiry into this. In fact, you were asked by the prosecution and this was provided to you:

"Have you been informed of the judge's finding?"

And you said -- this is 16 January:

"I saw a very brief report from the Local Authority saying they didn't agree with me. I didn't respond to or from the local authority disagreeing with my opinion. I don't think there was anything I could do about that and didn't follow it up. Upon reading email from judge, Dr Evans states he knew nothing about it, has never seen it or been aware of this document [as read]."

And you said this:

"If Jackson LJ thinks my report is worthless, that's his opinion. I can't argue that. I wasn't aware the solicitor had sent it, the email or the report, to the court. If I had received it I am not sure I would have told you about it because I didn't think it was an adverse judgment."

Yes?

EVANS: You saw this judgment before I did. Right? Everybody in this court saw this judgment before I did. So I think I can claim to be a bit miffed about that.

I saw the judgment for the first time a week last Monday or 2 weeks last Monday when we restarted after Christmas. So I knew nothing about it before then and I can't... I can't comment on things I know nothing about. I'm not particularly happy with the solicitors for the way they've dealt with it, but that's nothing to do -- that's outside of my control.

MYERS: Let's be clear about the point I am raising, Dr Evans, the question I'm asking. I asked about the duty of:

"... an expert to notify the court and the parties of anything that may undermine reliability, credibility or impartiality."

That's what I asked you, wasn't it?

EVANS: Yes.

MYERS: And you're aware that includes a duty to let us know if there's any adverse judicial comment, isn't there?

EVANS: Yes.

MYERS: Yes. And what you're saying, in answer to the question, was if you knew about that ruling you're not sure you would have told us about it because:

"I don't think it's an adverse judgment."

That's the point I'm making.

EVANS: I don't think this is getting us anywhere. This is a very brief -- this was a very quick report that was -- where I was presented with this judgment on the Monday morning and I think this was done very quickly, didn't have time to think much about it, you know. So if I'd had a bit for time to think about it, I would have -- perhaps I would have written it a bit more constructively. But I think it's very unfair on anyone to criticise me for the report I have prepared given that they had the judgment before I did. And if that's the way the system works, I don't think it's a very good one.

MYERS: This report, so we all know, was brought to our, the defence's, attention, but obviously not by you but by a different route --

EVANS: Sorry? I didn't hear that.

MYERS: This report was brought to the defence's attention but not by you.

EVANS: I don't know who brought it to your attention.

MYERS: If we hadn't known about it and if no one had known about it but you did, would you have kept it to yourself?

EVANS: I didn't know about it.

MYERS: If you knew about it?

EVANS: I did not know about it. If I had known about it, I would have informed the court obviously. That's what you do. But I didn't know anything about it. As I said, I didn't even know the judgment -- I didn't see the judgment, I didn't know my report had gone (inaudible).

MYERS: Now --

EVANS: I knew nothing about it and it's a one-off and there we are, but I'm not going to apologise for going the extra mile in support of parents. So there we are.

MYERS: The criticism at point 19 of the agreed facts, I want to look at that:

"Dr Evans makes no effort to provide a balanced opinion."

Remember that one? Do you want to go back to the agreed facts, Dr Evans.

EVANS: Well, I think it is a balanced opinion, actually, because I've never -- because if you read my first letter -- sorry, my first paragraph:

"Mr and Mrs... are the parents of... They've asked me to review injuries sustained by their baby when he was 8 weeks of age."

I haven't ducked the issue that this baby had received injuries. Okay? You know, I'm no softy.

I know my way around inflicted injury and I do object to being accused of being partisan because, as I've said earlier, if your reports are partisan, you don't survive very long in court. I've been giving evidence in Family Courts in England, Wales, Scotland, England (sic), everywhere, for the last 30 years, and my reports are impartial and, as a result of my reports, some people have -- some babies who were removed from their parents have returned and none of them, as far as I know, have suffered other injuries.

MYERS: I haven't asked a question that question --

EVANS: This is cherry-picking of the worst kind, which is fine.

I can understand all of this.

MYERS: Right, can I ask the question --

EVANS: I know what this is about. Okay? Fine.

MYERS: Do you mind if I ask a question?

EVANS: Carry on.

MYERS: Paragraph 19, taking you to where it was. Look down, please. The reference to "working out an explanation".

You see that criticism?

"The report has the hallmarks of an exercise in working out an explanation..."

EVANS: Well, I --

MYERS: No. First of all, do you see that?

EVANS: Yes, of course I do, yes.

MYERS: That is precisely what you were doing in this case at various points, isn't it?

EVANS: It is not. It is not. As far as -- which case are you talking about now, this trial?

MYERS: Let's stay with [Baby I]. That's why we have you jumping between NGTs, air emboli and smothering, isn't it?

EVANS: I do not jump around. What I do as a clinician, as all clinicians do, you form an opinion regarding the cause of a particular event and if there's more than one potential cause, then I will mention more than one cause.

In the [Baby I] case, whether it's air down the stomach on event 1, air into the circulation on event 4, and then a debate as to whether there was air in both the stomach and circulation in the other events, what is relevant to me is that I have excluded all the usual causes and that all of these events are consistent with inflicted injury. I have been consistent with that throughout. I've been consistent with that throughout.

As you can see in my report of November 2017 and I have not heard anything -- sorry, and everything that I have heard from the local doctors, the local nurses and other experts' opinions adds to the opinion that I formed 5 years ago. That is the reality of the [Baby I] case and that is the reality of all the evidence I have given in this trial to date.

MYERS: Well, Dr Evans, Lord Justice Jackson's decision, as set out in that paragraph, in that agreed fact, accurately describes aspects of your approach to this case generally, doesn't it?

EVANS: I disagree. That is just making things up and, as usual, being rather insulting. Not for the first time.

MR JOHNSON: Does your Lordship have any questions?

MR JUSTICE GOSS: No, I don't, thank you.

That completes your evidence at this stage then, Dr Evans. But of course, you'll be coming back --

EVANS: Yes, thank you, my Lord.

MR JUSTICE GOSS: -- to give further evidence in relation to other cases. Please don't talk to anyone about anything to do with this case. Thank you.

(The witness withdrew)

MR JOHNSON: Sandie Bohin, please.

DR SANDIE BOHIN (recalled)

Examination-in-chief by MR JOHNSON

MR JOHNSON: Welcome back, Dr Bohin. For the recording, would you please identify yourself?

BOHIN: Yes, I'm Dr Sandie Bohin.

JOHNSON: Thank you, doctor. Have you written a report about the case of [Baby I]?

BOHIN: Yes, I have.

JOHNSON: Thank you. Is your principal report dated 2 December 2021?

BOHIN: Yes.

JOHNSON: Thank you. As with all the other cases, were you sent quite a volume of material?

BOHIN: Yes.

JOHNSON: Did they include the medical records from the Countess of Chester, Alder Hey, Arrowe Park and Liverpool Women's Hospital?

BOHIN: Yes.

JOHNSON: And statements of many other experts, including Dr Evans?

BOHIN: That's correct.

JOHNSON: And as before, were you asked to bring your professional judgement to bear on the issues that arose, both from the source material and indeed from the other experts' reports?

BOHIN: That's correct.

JOHNSON: And did you form your own view of events?

BOHIN: I did.

JOHNSON: Thank you. Now, dealing with [Baby I]'s chronology, you set that out at paragraph 4 of your report. We've heard it run through on several occasions, but summarising it, between her birth on 7 August 2015 and [Baby I]'s death on 23 October, she was at the hospitals we have mentioned, save she didn't actually go to Alder Hey; is that right?

BOHIN: That's correct.

JOHNSON: The Alder Hey records, I think, that you reviewed were records of her autopsy?

BOHIN: Yes, that's correct.

JOHNSON: Thank you. Did you look in detail at [Baby I]'s treatment over the weeks of her life?

BOHIN: I did look at all the notes that were available to me, but concentrated mainly on the events at the Countess of Chester Hospital, but I did review all of the notes sent to me.

JOHNSON: Yes. Have you had the opportunity of listening to the evidence that has been given by those who had the responsibility of treating [Baby I] during the course of the evidence of this trial?

BOHIN: Yes, I have.

JOHNSON: I'd like to deal with the incidents one by one, the incidents which the jury have heard about.

The first concerns events on 30 September 2015.

I think, just looking at paragraph 4.27 of your report, you recorded or referred to the fact that when [Baby I] was returned

from Liverpool Women's Hospital to the Countess of Chester, she was well but it was noted that she had some sort of bacterial infection; is that right?

BOHIN: She was known to be colonised with two pathogens, and as far as I could ascertain, these were found not from her blood but on routine swabs taken when she was at the Liverpool Women's Hospital. Babies who move hospitals routinely get skin swabs taken from a number of sites, from their nose, groin, umbilicus, to make sure they haven't got a resistant organism that they're talking to the next hospital they go to.

JOHNSON: So in language that those non-medics among us understand, they're not taking a superbug from one hospital to another (inaudible: off microphone) --

BOHIN: That's correct. Quite often you'll find bugs on the skin, but they don't necessarily cause any illness.

JOHNSON: No. Is there any suggestion that the bugs that were identified on 13 September contributed in any way to any untoward events relating to [Baby I]?

BOHIN: To be honest, I've never heard of the first organism that is listed there. Enterobacter cloacae can cause an illness in neonates, but [Baby I] didn't have evidence of that.

JOHNSON: Right. But does it come to this: those organisms were identified at the time and don't seem to have provoked any particular treatment or concern?

BOHIN: Yes, you wouldn't normally treat bugs like this if they're just isolated from the skin. If she was harbouring a superbug on her skin then we would treat that, but these don't fall into that category.

JOHNSON: All right. Do you refer next in the chronology to the fact that by 29 September, in other words the day prior to the first event that the jury have primarily been concerned with, [Baby I] was breathing in air and she was fully bottle fed?

BOHIN: Yes, that's correct.

JOHNSON: Her abdomen was described as full but soft and there were no ongoing clinical concerns?

BOHIN: That's correct.

JOHNSON: Is the next matter you refer to the crash at about 4 pm or 4.30 pm on the ward on 30 September?

BOHIN: Yes.

JOHNSON: This is the occasion on which [Baby I] vomited, desaturated and became apnoeic?

BOHIN: That's correct.

JOHNSON: This was, of course, we know from tile 72 of the first [Baby I] sequence, was at a time when [Baby I] was being cared for by Lucy Letby?

BOHIN: At the time -- I know that now. I didn't know that at the time.

JOHNSON: No. Well, if Mr Murphy would just help us, please, with tile 72. This, I think, is Lucy Letby's notes, just to put us back in mind of what was going on at this time.

We see at 16.30:

"[Baby I] had a large vomit from mouth and nose ++. Suction given. Became apnoeic with bradycardia and desaturations (30s). Help summoned."

And the doctors were crash called.

Bradycardia into the 30s, is that a cause for concern?

BOHIN: Yes.

JOHNSON: Is it right that your review of the relevant records revealed that other than abdominal distension, nothing else was found on examination that was a matter of concern?

BOHIN: Yes, by the time the doctor arrived, the nursing staff had given her resuscitation and other than abdominal distension, which had been present before, nothing else was significant or found to be a cause for concern.

JOHNSON: Yes. I think there was an X-ray at tile 78, which was undertaken about an hour later or 70 minutes later --

BOHIN: Yes.

JOHNSON: -- which refers to the fact that [Baby I]'s diaphragm was splinted; is that right?

BOHIN: Yes. The lungs appeared squashed because of the abdominal distension pushing up on to the diaphragm and in turn squashing the lungs.

JOHNSON: As you have set out in paragraph 431 of your report?

BOHIN: Yes.

JOHNSON: And there was a record of [Baby I]'s abdomen being distended with prominent veins and the fact that her belly, if I can use that phrase, abdomen, was mottled?

BOHIN: Yes, that's correct.

JOHNSON: There was a later respiratory arrest at 10 pm that night?

BOHIN: That's correct.

JOHNSON: And following that, on examination her abdomen was described as distended and hard; is that right?

BOHIN: Yes.

JOHNSON: She was resuscitated with the Neopuff. It had been difficult to get good chest movement with the Neopuff, the NGT was aspirated and produced air +++ and 2ml of (inaudible: no microphone) --

BOHIN: That's correct.

JOHNSON: Thank you. Moving on to incident 2, please, you deal with this at your paragraph 4.37; is that correct?

BOHIN: Yes.

JOHNSON: On this occasion, at 03.23 -- this is the incident that the jury will remember happened in nursery 2 when the lights were off, you record the fact first that prior to that incident, [Baby I] had been well and bottle feeding every 3 hours?

BOHIN: Yes.

JOHNSON: You summarise the position as saying that she was found blue and motionless in her cot?

BOHIN: Yes.

JOHNSON: You then refer to the fact that her heart rate had dropped to 50?

BOHIN: That's correct.

JOHNSON: Her saturations to 53%?

BOHIN: Yes.

JOHNSON: That resuscitation with a Neopuff was commenced and that the nurses recorded no heart rate 2 minutes later?

BOHIN: That's correct.

JOHNSON: As a result, the medical staff were urgently called.

[Baby I] was being bagged in 100% oxygen and receiving full CPR?

BOHIN: That's correct.

JOHNSON: Her heart rate at that stage was about 60 beats a minute?

BOHIN: Yes.

JOHNSON: She had to be intubated and ventilated and given three doses of adrenaline together with other associated medication?

BOHIN: Yes.

JOHNSON: An X-ray taken about an hour later, just under an hour later, showed what you describe as "gross gaseous distension of the bowel"?

BOHIN: Yes.

JOHNSON: Is that right?

BOHIN: Yes.

JOHNSON: For anyone's notes, that material appears in the second [Baby I] sequence at tile 80.

I think you noted the fact that the ET tube was not in the optimum position; is that right?

BOHIN: The nasogastric tube.

JOHNSON: I beg your pardon, yes. And was curled back on itself in the oesophagus?

BOHIN: Yes.

JOHNSON: Can you tell us how that happens as a matter of fact?

BOHIN: When, and it's usually nurses, place a nasogastric tube it obviously goes through the nostril, you push it down to what you think is the required length and the nurses have a way of

measuring what they think will be the optimum length to get it into the stomach, but once you push it down the nose and to the back of the throat you have no control over where it goes and so sometimes it will loop round on itself and come back up in the oesophagus. You don't necessarily know that that's happened until you try to test it, to test to see if you can get some aspirate out to check it's in the right place. And if anyone had checked that nasogastric tube they wouldn't have got any aspirate out because it wasn't in the stomach. The other way to find out, of course, is on X-ray but you don't X-ray every time you put a nasogastric tube into a baby.

JOHNSON: So far as the position of the ET tube, which had been put in approximately an hour earlier, was that in the optimum position or not?

BOHIN: It was just at the carina, which is the medical term for where the trachea splits in two. So you don't really want it to be sitting there, you'd like it ideally to be sitting a little higher because when nurses nurse babies that are on a ventilator, they usually nurse them with their head to one side or the other and if you move the head it can sometimes push the tube down further. If that were to happen the tube is likely to go preferentially into the right lung, so you wouldn't have equal ventilation. So it was a little bit on the low side.

JOHNSON: So just putting those two pieces of information together, the ET tube was a bit too far in and the NG tube wasn't far enough in?

BOHIN: Yes. The NG tube wasn't in the right place at all.

JOHNSON: So both those issues were rectified, is that right?

BOHIN: Yes. The nasogastric tube was replaced. Once it's curled up, there's nothing much you can do other than to take it out and put another one in. And the endotracheal tube, according to the medical notes, was withdrawn by a centimetre and presumably re-taped or re-sutured, however they fix their tubes.

JOHNSON: Those were the general circumstances that you noted pertaining to the second incident. So far as the third incident was concerned -- and just to remind the jury, this was on the next night shift, so the 13th into 14 October. Did you note, first, that an issue had been identified in the nursing notes at 05.00 hours that morning? I'm looking at your --

BOHIN: Yes. The nursing notes said -- there was an addendum in the nursing notes which stated that [Baby I] had abdominal distension, prominent abdominal veins, and skin discolouration that was spreading over the right-hand side.

JOHNSON: That was a note made by, as we now know, Lucy Letby, and if Mr Murphy could help us, that's tile 74. Sorry, this is in [Baby I] 3. My fault.

Let's have a quick look at that. So this is the analyst's transcription of what appears in the notes itself. This is what you referred to, doctor, isn't it?

BOHIN: Yes.

JOHNSON: "Abdomen noted to be more distended and firmer in appearance with area of discolouration spreading on right side."

Is that right?

BOHIN: Yes.

JOHNSON: "Veins more prominent. Oxygen requirement began to increase. Colour became pale."

BOHIN: Yes.

JOHNSON: So that's a note made at 8.43 but referring to events at 05.00 hours.

BOHIN: Yes.

JOHNSON: Was there any coincident medical note from that time, in other words from 5 o'clock?

BOHIN: No.

JOHNSON: Was the next medical note the medical note at 05.55, which is tile 79? Let's look at tile 79, please. This is Dr Neame's note; is that right?

BOHIN: Yes, that's right, that's correct.

JOHNSON: So this is almost an hour later.

BOHIN: Yes.

JOHNSON: What did you take from this note as set out in your report at paragraph 4.45 onwards?

BOHIN: When Dr Neame arrived, he noted that the oxygen requirements had increased and that [Baby I]'s saturations had fallen. [Baby I] then was bagged with Neopuff in 100% oxygen. Her saturations had fallen to 77%. Her heart rate was 180, so that was increased. And her capillary refill time was prolonged

at 2 to 3 seconds, which is slightly prolonged, normal being less than 2.

He increased the pressure on the Neopuff to 30/5 and he needed to do this in order to get chest movement and also gave some morphine, and he noted at the time that the abdomen was distended, mottled and tender.

JOHNSON: Is this the occasion when Dr Neame told us in evidence that when he touched [Baby I]'s abdomen, she reacted as if to give him the impression that it was painful?

BOHIN: Yes.

JOHNSON: Again, was the view taken that abdominal distension had affected [Baby I]'s ability to breathe essentially?

BOHIN: Yes. His opinion was that the abdomen had become so distended and of course was tender, so babies in pain tend not to breathe that well, but the mechanics of it was that the abdomen had become so distended that it had reduced her ability to expand her chest, so to take a big breath in because her lungs were essentially squashed, and that in turn meant that there was not good gas exchange and that led to her desaturation and decompensation.

JOHNSON: Again, was an X-ray taken shortly afterwards at tile 85, please, Mr Murphy?

If you summarise what you could see so far as the evidence shown by that radiograph was concerned.

BOHIN: Yes. I had said that the X-ray taken showed marked gaseous distension of the bowel and stomach, but I think this might be the one that Dr Arthurs said actually the very large loop is bowel and not the stomach.

JOHNSON: Yes.

BOHIN: I also felt that the endotracheal tube was a little bit high, but there was a nasogastric tube present.

JOHNSON: We will remember, I'm sure, that shortly afterwards, at about 7 am, there was a further desaturation and lowering of the heart rate.

BOHIN: Yes.

JOHNSON: Did the X-ray taken at 08.03 hours show a fairly similar position so far as the distension of [Baby I]'s abdomen was concerned?

BOHIN: Yes, it did. There was no gas in the stomach on that film. [Baby I] had a nasogastric tube in place and so I assumed that this had decompressed the stomach, but the rest of the bowel remained distended.

JOHNSON: Just for the sake of the record, that particular radiograph is at tile 129, I think, of the sequence, if Mr Murphy would just oblige very quickly, please.

So following the events of that particular night shift, did you record the fact that in the early hours of the following morning, 15 October, [Baby I] desaturated further and required re-intubation?

BOHIN: Yes.

JOHNSON: Of course later that morning of 15 October, that is, she was transferred from the Countess of Chester to Arrowe Park on the Wirral?

BOHIN: That's correct, yes.

JOHNSON: There you record the fact that she settled very quickly?

BOHIN: She did.

JOHNSON: That the ET tube was removed?

BOHIN: Yes.

JOHNSON: And that she returned to Chester on 17 October?

BOHIN: Yes.

JOHNSON: You then record the fact that on return to Chester, she was on something called high flow?

BOHIN: Yes, that's correct.

JOHNSON: Just in case any of us have forgotten what that means, can you remind us, please?

BOHIN: High flow and Optiflow are terms used interchangeably.

They just represent a flow of oxygen or air gas into the nostrils via tiny little cannulae and they're given at quite a high flow rate to help keep the airways open.

It's the least invasive form of respiratory support.

JOHNSON: You record the fact that by her return on the 17th, [Baby I] was stable?

BOHIN: She was.

JOHNSON: On the 18th she had a mildly dilated bowel but no NEC or free gas?

BOHIN: Yes, she had an X-ray on the 18th, which showed some mildly dilated bowel but really nothing else.

JOHNSON: Is that, broadly speaking, the picture 2 days later on the 20th?

BOHIN: Yes.

JOHNSON: And did [Baby I] remain well from her return to Chester until about midnight on the 22nd into 23 October?

BOHIN: Yes.

JOHNSON: Was that date and time potentially the beginning of a course of events that led to her death later that morning?

BOHIN: Yes, it was.

JOHNSON: Were there in effect two separate collapses in the early hours of the 23rd?

BOHIN: Yes.

JOHNSON: Are they the two collapses that Dr Gibbs told us about this morning?

BOHIN: Yes.

JOHNSON: The first occurring probably a couple of minutes before midnight, so very late on 22 October?

BOHIN: Yes.

JOHNSON: You refer in your report to the fact that Dr Gibbs noted on his arrival that [Baby I] was receiving CPR?

BOHIN: Yes, that's correct.

JOHNSON: That her face was pink but pale?

BOHIN: Yes.

JOHNSON: That her trunk and peripheries, in other words her limbs, were mottled and blue?

BOHIN: Yes.

JOHNSON: You referred to her, that is [Baby I], fighting the ventilator, as Dr Gibbs told us earlier today?

BOHIN: Yes.

JOHNSON: And to the removal of the ET tube?

BOHIN: Yes.

JOHNSON: And to the fact that the X-ray taken at 00.23 showed what you have described as "a massive dilation" of the stomach and the bowel?

BOHIN: Yes. This X-ray was only a chest X-ray, so it wasn't taken specifically to look at the bowel, but you can definitely see part of the bowel below the diaphragm and it's very obvious that there are very large dilated loops.

JOHNSON: Yes. Again if Mr Murphy can just remind us, it's [Baby I] sequence 4, tile 116.

Is that the image that you're talking about?

BOHIN: Yes. This was taken primarily to look at the chest, but it's very obvious that she's still got big dilated loops.

JOHNSON: Yes. We've heard that [Baby I] recovered as quickly as she had collapsed, but that at some time after 01.00 hours she collapsed for a second and final time.

BOHIN: Yes, that's correct.

JOHNSON: On this occasion -- you have heard the evidence of Dr Gibbs this morning about her colour?

BOHIN: Yes.

JOHNSON: You have heard evidence of her re-intubation and I think it was eight separate doses of adrenaline and other associated medicines that were administered to her?

BOHIN: Yes.

JOHNSON: You have also heard that when an NGT that was already in place was put on to free drainage, air ++ was removed?

BOHIN: Yes.

JOHNSON: And we have heard that tragically, despite prolonged and persistent efforts, the resuscitation was not successful?

BOHIN: That's correct.

JOHNSON: Turning to your opinion, please, Dr Bohin, and dealing with the ones that we have investigated or set out before the jury, can we start with 30 September, please.

If Mr Myers wants to ask about the others, then of course he will, but it's your paragraph 5.12.

Dealing with that one first, that was the one in the afternoon and at the change of shift on 30 September.

First of all, what conclusions did you reach as to [Baby I]'s state of health prior, immediately prior to those collapses?

BOHIN: Prior to the collapse on that day, on 30 September, [Baby I] was a well baby, giving no cause for concern. In particular, she had no respiratory symptoms and was self-ventilating in air. She was gaining weight and her collapse was sudden and unexpected.

JOHNSON: Did you draw any conclusions as to why she had collapsed?

BOHIN: The usual things that one would consider in a baby that collapses suddenly, I did consider. [Baby I] did not have any of those things. She wasn't obviously suffering from an infection because it doesn't present in that way with an unexpected sudden complete collapse. So I didn't think that she was infected. I didn't think that she had a malrotation or an obstruction in her bowel to have caused her abdominal distension because that tends not to come and go. And I didn't think that she'd had signs of an intraventricular haemorrhage because again that doesn't -- symptoms of that don't come and go.

So what we were left with was a baby with abdominal distension and collapse and I felt that the X-ray showed huge gaseous distension, so much so that the lungs were squashed, and that was easily seen on the X-ray. So I felt the abdominal distension had splinted her diaphragm, which in turn had squashed her lungs, which, as we know, were not normal lungs, they were lungs of a premature baby who had mild chronic lung disease. So it wouldn't actually take much to tip the balance to squash those lungs because they were abnormal lungs and that in turn facilitated her collapse.

JOHNSON: Just dealing with bowel issues, I'm not sure that's quite the phrase you used, but you said you were in effect looking for other explicable causes for what happened.

(Pause)

There's just a point I'd like to raise.

MR JUSTICE GOSS: Yes, certainly. In the absence of the jury?

MR JOHNSON: I think so.

MR JUSTICE GOSS: All right. Will you just pop out for a few minutes, please, members of the jury?

(In the absence of the jury)

MR JOHNSON: I'd told by those in a position to see that the recently bereaved juror is showing signs of extreme fatigue.

MR JUSTICE GOSS: Ah, I think it's a juror. It was brought to my attention that a juror may have been having some slight difficulty in concentrating. From that point onward, I have been watching that particular juror and had I thought that the juror was not actually paying sufficient attention, I would have interrupted proceedings.

MR JOHNSON: Of course.

MR JUSTICE GOSS: I didn't, therefore I didn't. However, I think that we will break off at this point in any event because Dr Bohin is not going to complete her evidence this afternoon, probably not even her evidence-in-chief.

MR JOHNSON: No.

MR JUSTICE GOSS: You'll be here tomorrow in any event, so nothing is going to be lost by finishing a bit earlier today or no difficulty will be caused. We'll do that in any event. It will give me the opportunity to address some issues. I was made aware that there were future difficulties from individual jurors relating to days quite a long way away, not next week, beyond next week.

What I'm proposing to do is to say to the jury as a whole that I will consider these matters that are raised in the note and I'll address them tomorrow morning. I will accommodate them. I have seen what the nature of the requests are. I'll accommodate them and therefore I'll inform everyone as to a day and a part of a day that we will not be sitting, separate days. All right? I'll do that. I just take this opportunity to mention that.

MR JOHNSON: Yes. There's no reason why we need this information before tomorrow, but we're thinking ahead in terms of an anniversary issue in the case of [Baby K]. If it impacts on that, then the sooner we find out, the easier we can accommodate it.

MR JUSTICE GOSS: Right. What I'll do is, through the clerk of the court, I will acquaint you with the dates, but I'm not going to announce them publicly yet.

MR JOHNSON: Just so your Lordship knows, the position we're in at the moment is given that almost inevitable coincidence of the dates, we're opting to, after [Baby J] who's next, we'll deal with [Babies L & M] and then deal with [Baby K] (inaudible: no microphone) it shouldn't make a difference given the issues.

MR JUSTICE GOSS: You'll be provided with the dates for you to consider in relation to timetabling.

MR JOHNSON: Thank you.

MR JUSTICE GOSS: Thank you very much. We'll have the jury back in then, please.

(In the presence of the jury)

MR JUSTICE GOSS: As you'll have appreciated, we are not going to complete Dr Bohin's evidence this afternoon and I've decided that it has been quite a long day and that's going to be enough for today, so we're going to break off at this stage and continue with Dr Bohin's evidence tomorrow morning at 10.30.

I've received notes from two of you about future dates and difficulties with particular events. I'll deal with those specifically tomorrow, but in respect of both of the jurors concerned, they should rest assured they will be accommodated. All right? But I'll deal with it formally tomorrow rather than dealing with it now. So that's it for today.

Please remember your obligations as jurors. Don't conduct any research about anyone or anything to do with this case and do not discuss the case with anyone by any means and only discuss it between yourselves when you are all together, so that each one of you, each of the other 11 can hear what the person who is speaking is saying, so you don't get separate views forming about matters. All right? I know I've said that before, but I'm obliged to keep reminding you of it. Thank you.

(In the absence of the jury)

Housekeeping

MR JOHNSON: Just so your Lordship knows, we are planning to go straight into the [Baby J] case tomorrow, so [Baby J]'s mother will be here to give evidence.

MR JUSTICE GOSS: Good. Thank you very much.

(Pause)

10.30 tomorrow morning then, please, Dr Bohin.

Thank you very much.

(The witness withdrew)

MR MYERS: We'd be grateful if we could speak to Ms Letby at the conclusion of the hearing, my Lord.

MR JUSTICE GOSS: Yes, certainly. Someone will be coming down or some people will be coming down to see Ms Letby as soon as the court rises. Thank you very much.

(4.14 pm)

(The court adjourned until 10.30 am on Friday, 10 February 2023)