

13 June 2024

Mother of Baby K (statement), Dr John Gibbs, Kate Tyndall
(Sequence of Events)

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Housekeeping

Thursday, 13 June 2024
(10.30 am)

(Delay in proceedings)

(10.35 am)

(In the absence of the jury)

Housekeeping

MR JUSTICE GOSS: I have produced a list of the non-sitting days, which I talked to you about yesterday. I'm going to ask, when the jury come in, for them to be given that so they can then put it to one side and then we'll continue. Thank you very much.

MR DRIVER: My Lord, before the jury come in, I have just realised an oversight. The bundles for jurors 13 and 14 remain on their desks and there are no bundles on the witness box. So if I could ask a member of the court staff to transfer a set over, I'd be very grateful.

MR JUSTICE GOSS: I didn't see, but then I wasn't watching, those jurors continuously. I didn't see either of them make any notes in any of the bundles but I think that actually should be checked.

MR DRIVER: Quite so. Anticipating this, I did keep an eye on those jurors and I didn't see --

MR JUSTICE GOSS: You didn't either? I have to keep an eye on a lot of people and a lot of things. I can't do all of it.

(Pause)

(In the presence of the jury)

MR JUSTICE GOSS: Good morning, members of the jury. I'm sorry we're a few minutes late. I'm going to ask the usher now to hand out to you what I promised you yesterday, namely a list of the non-sitting days. Just put that to one side, put it in any bag you may have or somewhere safe and take it away with you.

(Pause)

Have you each got one? Good. Thank you very much.

As you know, in the near future, tomorrow is a non-sitting day, Monday not before 12 midday, 12 noon, and then the next days are Wednesday the 26th to Friday the 28th June, 3 days at that point, and then July, not until 12 July. Things may change. As I say, none of us knows the future. Thank you very much.

Yes, Mr Driver.

Witness statement of [MOTHER OF BABY K] (read)

MR DRIVER: May it please your Lordship we would now like to embark on adducing the evidence in the case and we'll begin with the reading of a statement made by [Mother of Baby K], the mother of [Baby K].

This statement, members of the jury, is dated 2 April 2019 --

MR JUSTICE GOSS: I'm really sorry about this, I apologise.

I thought my clerk had brought my notebook in. He hasn't. I just wanted to get the message through, you carry on, Mr Driver.

MR DRIVER: Of course, my Lord. A copy of this statement in its edited form has been uploaded on to the Digital Case System and my learned friend Mr Johnson will send your Lordship -- has sent your Lordship a computerised marker to identify where it is if you so wish.

Members of the jury, this witness statement, and indeed all witness statements that will be read to you during the course of this trial, begin with this declaration:

"This statement is true to the best of my knowledge and belief and I make it knowing that, if it is tendered in evidence, I shall be liable to prosecution if I have wilfully stated in it anything which I know to be false or do not believe to be true."

I have read that to you in relation to this statement, members of the jury. We won't repeat the process each and every time we read a statement to you, but you can take it that all statements begin with such a declaration.

MR JUSTICE GOSS: As I indicated to you yesterday, this is evidence of which the defence are well aware, this witness statement, because they get all the witness statements upon which the prosecution rely long before the trial, and they agree or they do not challenge any of the evidence in that witness' statement, so it is agreed evidence. So any facts of which the witness speaks are essentially agreed facts.

The use to which you put it, the significance of it, is entirely for you. All right? So listen carefully, this is evidence just as if the witness had come into the courtroom and given evidence to you but it's subject to this: it's not disputed or challenged, it's agreed.

Thank you, Mr Driver.

MR DRIVER: The statement reads as follows:

"I am [Mother of Baby K], mother of [Baby K], and wife to [Father of Baby K], but everybody knows him as [redacted].

"In the beginning of August 2015 I discovered I was 5, maybe 6, weeks pregnant. It was a planned, natural pregnancy and we were both thrilled with the news. The pregnancy progressed as normal. [Father of Baby K] and I attended all the scans and appointments together.

"When we attended the twelve-week scan at the Countess of Chester Hospital an issue was identified with the baby.

"During the twelve-week scan it was identified that [Baby K] had a build-up of fluid at the back of her neck. At 15 weeks I had the amniocentesis and was reassured that everything was fine and there were no problems and the test came back negative to Down's syndrome.

"I was now having regular checkups and scans every 2 to 3 weeks at the Countess of Chester Hospital. I was under the consultant Mr McCormack at the time and from the regular scans I was having, the fluid at the base of [Baby K]'s neck had begun to reduce.

"The only other problem that occurred during my pregnancy was when we attended a scan at 18 to 20 weeks when it was discovered [Baby K] had a little pocket of fluid on her lungs, but during the next scan it had all cleared and the fluid at the back of

her neck was continually reducing. Everything was developing fine and Mr McCormack had no concerns with either me or [Baby K].

"It was a normal Monday morning, 15 February 2016, which was the day before I reached the 25 week point of my pregnancy. I woke up with what I can only describe as a few niggles and pains. I didn't think much about it and got into the shower in preparation for work as I was still working full-time.

"[Father of Baby K] suggested calling the local midwife before he left for work, so I called the midwife and explained how I was feeling. I explained that I was 25 weeks tomorrow [that's Tuesday 16 February 2016]. She told me to call the labour ward at the hospital so I called the Countess of Chester Hospital and was advised to call in to be checked over.

"I arrived at the Countess of Chester Hospital and on to the maternity/labour ward. I was taken into one of the side rooms where a midwife checked me over and informed me I was 2 centimetres dilated and she informed [Father of Baby K] and I that something was happening and I had gone into labour. We couldn't believe it.

"I was then admitted on to the labour ward and was closely monitored over the next couple of days. The medical staff talked about giving me steroid injections just in case the labour progressed further. The steroids were to assist [Baby K] and to develop her lungs following delivery.

"I received two steroid injections 12 hours apart. Once I was admitted, the medical team at the Countess of Chester started looking at the options of transferring me to another hospital, one that was equipped to deal with 25-week-old babies and the delivery. The nearest hospital to Chester was Arrowe Park Hospital on the Wirral, but they were full and did not have a vacant bed in their neonatal unit.

"I remained at the Countess of Chester Hospital. By 2 pm in the afternoon I was placed into one of the labour rooms on the maternity ward. This is where I remained. The following day, Tuesday 16 February 2016, I was given the second injection of steroids. On the Tuesday evening a consultant spoke to us about the possibility of having a C-section [a caesarean] as it was getting to that stage.

"There was no indication from the medical team that they had any concerns regarding [Baby K]. She wasn't showing any signs of being distressed. They had me on two-hourly checks. Her heart rate was good throughout all the checks, so we both made the

decision to leave her and see how things developed. I had now gone nil by mouth just in case I had to go into theatre.

"On Tuesday evening, 16 February 2016, around midnight, I woke up in pain. [Father of Baby K] pressed the red emergency alarm on the wall and within a minute the room was full of staff, the midwife checked me over and got me ready for the delivery.

"[Baby K] was born at 02.12 hours on Wednesday, 17 February 2016. She was placed directly into an incubator but on the other side of the labour room. The staff worked on [Baby K] for 30 to 45 minutes. When I say working on her, they were getting her breathing, placing the tubes, clearing her airway, putting a hat on her and keeping her warm. As far as we were aware, there was nothing to be concerned about. We later found out she weighed 692 grams or 1 pound and 8 ounces.

"A member of staff asked [Father of Baby K] if he wanted to go over and see her. There seemed to be so many people around the incubator, all trying to help [Baby K]. [Father of Baby K] very briefly went over to see her but came back to me within seconds as he didn't want to get in their way.

"The consultant explained to us before [Baby K] was born that because of her age, 25 weeks, following the delivery there would be a medical team in the room who would be there to solely look after the baby. The midwife and the consultant were there to take care of me and the baby during the birth. The specialist neonatal doctor and nurses would be there to care for [Baby K]. Once she is out she would be placed into an incubator and when the team think she is stable enough to move she would be transferred to the special care on the neonatal unit.

"Both of us visited at around 04.30 am. The next thing I remember, a female nurse with blondish hair tied in a ponytail - - she was a little round, not very tall in her 30s, wearing a blue uniform -- came into the room. She told us that [Baby K] was fine, she was stable and doing really well. She asked if we would like to go and see her. We both immediately said yes.

"The female nurse helped me into a wheelchair and she pushed me down on to the neonatal unit and into nursery room 1. [Father of Baby K] was with me the whole time. The nurse offered to take a couple of photographs of the three of us on [Father of Baby K]'s phone. She took several pictures of the three of us. After about 15 minutes we decided to go back. [Father of Baby K] wheeled me back into the labour ward and I think I fell asleep. The pictures have been timestamped on [Father of Baby K]'s phone at 04.31 am on 17 February 2016, making [Baby K] only a few hours old.

"While I was sleeping, somebody came into the room to inform us that a bed had become available at Arrowe Park Hospital and arrangements were being made to transfer [Baby K] as soon as possible. We always knew that [Baby K] would have to be transferred to another hospital with the equipment and facilities available to cope with her needs.

"About 9 am on Wednesday, 17 February, the transfer team had arrived at the Countess of Chester Hospital. They came into the labour room and introduced themselves to us and explained what was going to happen. It was explained that they had to get [Baby K] out of the incubator on the neonatal unit and into the transport incubator. This process took some time as the medical team were having difficulty stabilising [Baby K].

"It was at this point that [Father of Baby K] and I had the discussion about giving her a name. It got to midday and the transfer team said to us, 'Right, it's now or never, we've done as much as we possibly can here at Chester with the equipment available to us, we now need to get her to Arrowe Park Hospital'. I was wheeled down to the neonatal unit with [Father of Baby K] to see [Baby K] before she left and followed her to the waiting ambulance.

"[Baby K] was conveyed by the transfer team from the neonatal unit at Chester to the waiting ambulance. I had not been discharged from the Countess at this point and the hospital staff on the labour ward were desperately trying to get things organised so we could make our way to Arrowe Park to be with her.

"We always knew that the Countess of Chester Hospital would only take babies from 27 weeks' gestation, so we were always aware that at some point [Baby K] was going to be transferred to a different hospital.

"At 2 pm on Wednesday afternoon, 17 February, I was discharged from the Countess of Chester Hospital. We headed straight over to Arrowe Park in the car, arriving about 2.30 to 2.45 pm. We went straight in to see [Baby K].

"Later that afternoon, arrangements had been made for us to stay at Ronald McDonald House. This is a purpose-built accommodation block that provides accommodation to parents and families with a child in hospital.

"I remember the night that [Baby K] passed away. [Father of Baby K] and I were both in the accommodation, Ronald McDonald House. I was lying awake in bed when I had the strangest feeling, which I cannot begin to describe. It was about 4 am, Saturday morning, 20 February 2016. I quietly asked [Father of Baby K] if he was

awake, which he was, as neither of us had slept much. I said to [Father of Baby K], 'Shall we go and see her?'.

"On the neonatal special care unit at Arrowe Park Hospital, the parents have no restrictions when it comes to visiting their children. They can go into the unit any time they like. We both got up and went to see [Baby K]. As soon as I walked into the room I could see the monitors and the saturation readings for [Baby K] were low. Previously, one of the nursing staff had shown us what the levels and readings should be on the monitors, so I knew straightaway things weren't great.

"I cannot say what the readings were, but they were low. There was a slim, dark-haired female doctor in the room with [Baby K] at the time and I looked at her and said, 'She's not good, is she?' The doctor confirmed the worst. She told us that [Baby K] had been fighting all night and she had been debating to call us. She explained that they had been trying to get her stats readings up throughout the night, but we could both see from the readings that things were not good.

"I asked the doctor, 'Is it just a waiting game now or is she going to get better?' We had a long conversation with the doctor, who explained that [Baby K] wasn't good and what happens next is entirely our decision. I remember saying to the doctor that [Baby K] had been poked and prodded from the moment she was born, her tiny little delicate body had swollen up so much and we didn't want her to be suffering anymore. We certainly didn't want to be informed that we'd lost our little girl by the alarms on the machines going off and we didn't want to prolong things for her anymore. The doctors explained that we can do this any way you and [Father of Baby K] want to. We both knew what this meant without it actually being said.

"We made the decision together to switch off the machines and to let her go. This was by far the hardest decision of my life. One of the staff showed us to the family room, away from the ward and all the machinery, where it was peaceful and quiet. [Baby K] was wrapped in a blanket and was wearing a little hat. She was brought into us with the use of a handheld pump for her breathing. [Baby K] was placed into [Father of Baby K]'s arms and the doctor said to both of us, 'We can do this whenever you are ready'.

"The doctor removed the breathing pump, stepped out of the room, and said she'd return in 20 minutes. [Baby K] was in [Father of Baby K]'s arms when she took her last breath and silently passed away. We don't know exactly when that was during the 20 minutes we had with her. When the doctor returned, she checked [Baby K] and confirmed she had gone. She was pronounced dead at 05.28 hours on Saturday, 20 February 2016. Somebody then brought a cot

into the room for us to place [Baby K] in and allowed us some private time alone with her."

My Lord, that concludes the relevant parts of [Mother of Baby K]'s statement.

MR JUSTICE GOSS: Thank you very much.

MR DRIVER: May I call Dr John Gibbs to give evidence, please?

MR JUSTICE GOSS: Yes, certainly.

DR JOHN GIBBS (sworn)

Examination-in-chief by MR DRIVER

MR DRIVER: Dr Gibbs, in a sentence, could you inform the jury of your professional status and most recent professional experience, please?

GIBBS: I'm John Gibbs. I was a consultant general paediatrician at the Countess of Chester Hospital.

I was there for 25 years, but retired in 2019.

DRIVER: I'm grateful. Dr Gibbs, we've invited you here today to give evidence to better enable the jury to understand the paediatric structure and staffing levels and some procedures at the neonatal unit at the Countess of Chester Hospital. You understand that?

GIBBS: Yes.

DRIVER: Is it right that although you were consultant of the week in February 2016, you never had any clinical engagement with the baby [Baby K] or her parents?

GIBBS: That is correct, because my consultant colleague, Dr Jayaram, was dealing with [Baby K] from her birth and continued to deal -- and I think when I took over after 9 o'clock in the morning, the transport team were already there and they continued to care for [Baby K].

DRIVER: Thank you. You're going to help us, as best you can, with general matters, matters of principle rather than specific matters relating to [Baby K].

GIBBS: Yes, I had no direct contact with [Baby K].

DRIVER: Thank you.

My Lord, so as to avoid unnecessary repetition, during Dr Gibbs' evidence, I'm going to introduce some relevant agreed facts and play some video presentations.

MR JUSTICE GOSS: Certainly.

You know about agreed facts. This is agreed evidence. What Mr Driver is doing, helpfully and sensibly, with the agreement of the defence, is for purposes of presentation and to avoid duplication, introducing where appropriate these agreed facts and playing a video with Dr Gibbs seeing and hearing what takes place.

MR DRIVER: Thank you.

Members of the jury, the jury bundle, the white file, and you may recall from yesterday behind divider 3 -- and Dr Gibbs there's a copy for your reference there. Thank you. So behind divider 3 are the agreed facts, the following facts that are agreed between the parties having been derived from witness statements and exhibits served as part of these proceedings.

You will see there that section 1 is entitled "The Cheshire and Mersey Neonatal Network". This really, members of the jury, is an introduction into the network Dr Gibbs worked in and [Baby K] was born into. I'll read them out because we need to record these matters, members of the jury, and present them formally in evidence. So forgive me, Dr Gibbs, but I'll turn to this now.

MR JUSTICE GOSS: You've got a copy in front of you?

GIBBS: I have, thank you.

MR DRIVER: Agreed fact number 1:

"Cheshire and Mersey Neonatal Network, sometimes referred to as the Mersey and Cheshire Deanery, is a tiered network of hospitals. There are three tiers of hospitals designated to reflect how sick and/or premature a baby may be and the level of patient care required. On a scale of 1 to 3, a level 3 unit is the most specialised and deals with the most difficult cases.

"(i) During the period June 2015 to June 2016, the Liverpool Women's Hospital (which is in Liverpool 8 close to the city centre) and Arrowe Park Hospital (which is in Upton, Birkenhead, Wirral) were designated as level 3 tertiary neonatal intensive care units and routinely provided neonatal intensive care to babies with complex medical needs and babies of less than 27 weeks' gestation.

"(ii) During the period June 2015 to June 2016, the Countess of Chester Hospital was designated as a level 2 unit and routinely provided care for babies of 27 weeks' gestation and above and babies that required intensive care for up to 48 hours. Babies that required intensive care after 48 hours would normally be transferred to an intensive care unit as described above. Babies of less than 27 weeks' gestation born at or brought to the Countess of Chester Hospital would be stabilised and then transferred to NICU on the same day.

"(iii) During the period June 2015 to June 2016, Leighton Hospital, Macclesfield Hospital, Ormskirk and District General Hospital, Warrington Hospital and Whiston Hospital were designated as level 1 units, sometimes referred to as local neonatal units.

"(iv) Alder Hey Children's Hospital was the designated neonatal surgical unit for the network."

If we just put that aside for the moment, please.

Dr Gibbs, could I invite you to expand, please, upon the type of support typically provided to babies in a level 2 hospital and more particularly the Countess of Chester Hospital at this time? The agreed fact establishes a notional threshold of a gestational age of 27 weeks. Could you expand upon the significance of that, please?

GIBBS: Well, the more premature a baby, the higher the risk to a baby and, sadly, the higher the chance of the baby not surviving, which is why the most premature babies, by 2015/16, were sent to a level 3 unit that more regularly cared for the most premature babies. So at the Countess of Chester Hospital, we were a level 2 unit, so we kept babies from about 27 or 28 weeks' gestation upwards, but if they were very ill and needed intensive care support for more than about 48 hours, rather than we would send them to another unit, a level 3 unit, we would consider sending them to a level 3 unit. It wasn't just our decision as clinicians at the Countess of Chester Hospital, we would talk to a consultant at a level 3 unit when a baby was needing 48 hours or more of intensive care treatment and there would be a joint decision whether that baby needed to be moved.

Typically, if a baby was improving and may have been ventilated but the ventilation requirements were lessening at 48 hours then it might be agreed that baby would stay with us in our level 2 unit. If the baby wasn't making progress or was actually deteriorating, they would likely be moved at about 48 hours to a level 3 unit.

DRIVER: Thank you. For reasons that I'm sure are obvious to everybody, the gestational age of the baby is considered an important indicator --

GIBBS: Yes.

DRIVER: -- of the risks that may attach to that baby, but would it be right to suggest that the baby's birth weight is another significant indicator?

GIBBS: Yes. Usually, if a baby has been developing normally inside their mum, their weight and their gestational age run in parallel. But some babies, though, at a given gestation may be much smaller than expected if there were problems with the pregnancy and so sometimes birth weight is looked at independently from gestation. There was a general understanding, general guidance that babies of under 800 grams, even if they happened to be over 27/28 weeks, so if they were a very small baby of, say, 30 weeks but weighed less than 800 grams, they should normally be sent to a level 3 unit.

What I ought to add though this is dividing line of 27/28 weeks upwards should stay at a level 2 unit, below that should go to on a level 3 unit, sometimes a mum with a much more premature baby -- and this is very relevant to [Baby K] -- sometimes a mum with a much more premature baby that should be cared for in a level 3 unit, would actually go into labour and deliver in a level 2 unit, so in this case at our Countess of Chester Hospital. And if it was felt by the obstetricians, because until the baby's born the baby and mum are under the care of the obstetricians, it was unsafe to move a mother in labour, then that baby would need to be delivered at another unit, even if it wasn't a level 3 unit, stabilised, and then after that sent to a level 3 unit.

DRIVER: Thank you. Just to remind the jury, having just heard the evidence of [Mother of Baby K], I'm sure you have this, members of the jury, but [Baby K]'s birth weight was 692 grams, 1 pound and 8 ounces, and she was born after 25 weeks of gestation. So that's the context against those notional thresholds that Dr Gibbs has just described to us.

You have told the jury in terms that a level 2 unit would be ready and equipped to provide intensive care support for up to at least 48 hours. In this context what does intensive care support mean?

GIBBS: Typical intensive care would be full ventilation, so for a baby that could not breathe adequately by themselves would need to be attached to a ventilator. I think we're going to go through that process in a moment to describe how a baby gets

attached to a ventilator and what happens then. That's typical intensive care.

There are other categories of care needs that do count as intensive care and that is, say, if a baby is needing some respiratory support but not full mechanical ventilation but plus other problems, like needing intravenous feeding, those two together would count as intensive care.

So a typical intensive care baby is a ventilated baby, but another baby that needs a significant amount of respiratory support, but not full mechanical ventilation, and other certain interventions would count as intensive care. These have been agreed nationally which levels of care count as intensive care and the next level down is high dependency care and the lowest level of care is special care and those are agreed nationally.

DRIVER: Thank you. Why is it that the guidelines suggest that a hospital like the Countess of Chester Hospital, providing intensive care treatment for the first day or two of life, should, all things being equal, refer to that baby to a level 3 or tertiary unit after 48 hours or so?

GIBBS: Because usually it's an indication the baby has more problems than you would expect at that gestation if they were needing to continue with ventilation for more than 48 hours. Of course, if you're a baby born at 22 or 24 weeks, you're likely to need ventilation for weeks on end. But when we talk about a level 2 unit, which should take babies of 27/28 weeks upwards, if a baby needs intensive care support, hopefully, in the typical baby who's making good progress they would only need that intensive care support for a couple of days and then move down to high dependency care.

DRIVER: And how does a level 3 hospital, Arrowe Park Maternity Hospital, does that differ from a level 2 hospital in terms of the provision of neonatal care for infants?

GIBBS: Probably the main difference is level of experience. If you're a level 3 unit then you're taking babies from all over the region who are particularly ill or the most premature babies. So all the staff, nurses and doctors, most of the time, are regularly used to managing very sick, very premature babies, so they have better experience.

At a medical level the doctors working in a level 3 unit, they are not called paediatricians or rather they're a special type of paediatrician, they're known as neonatologists, and they spend all their time caring for newborn babies. Whereas in district hospitals, like the Countess of Chester Hospital, those of us -- the doctors who look after the babies, we are general

paediatricians who cover a paediatric ward as well as a neonatal ward.

From a nursing point of view the staffing ought not to vary because if the unit has the recommended national level of staffing then the number of nurses you need for each intensive care baby -- and you need less nurses to manage a high dependency baby and then you need fewer nurses to manage a given number of special care babies as those are lower levels of need -- that applies to both the level 3, level 2 or level 1 unit. So the nursing care ought not to differ, the number of nurses, but the experience of the nurses in a level 3 unit, they are much more experienced, because they're dealing with it all the time, with the most premature, the sickest babies.

DRIVER: What about facilities, equipment?

GIBBS: Well, yes, a level 3 unit has more cots, more ventilator spaces to manage more ventilated babies because they need to because that's their role. There are certain types of treatment, more specialised treatment, newer treatments that may only be available on a level 3 unit.

And there are certain types of ventilation, there's one called high frequency oscillation, which I won't go into, but it's a strange form of ventilation, very, very, very rapid breathing, which only level 3 units offer. And why do they offer that? Because some babies who are not making good progress with conventional mechanical ventilation may do much better with these unusual forms of ventilation.

And certain treatments, certain drugs -- like there's one called nitric oxide which helps to improve oxygenation in the lungs -- most babies do not need that. The very sickest of babies may need that treatment. So certain treatments are available only at a level 3 unit.

Why don't all babies get born in a level 3 unit?

Fortunately, most babies never need those treatments and they have more cots and more space.

DRIVER: Thank you. You began by telling us about your long service at the Countess of Chester Hospital. During that time was this tier system always in place?

GIBBS: No, I started in 1994 and at that stage we would take babies down to any gestation, so right down to the limits of viability, around about 22 to 24 weeks' gestation. I think it was about 2004 when in England and Wales there was a review of neonatal services and the decision that babies ought to be cared

for in the most appropriate unit, so the very sickest, most premature babies ought to all be collected together in certain units so there would be one or two of those units in each region, hence, as you've heard, the Liverpool Women's Hospital and Arrowe Park Hospital were designated level 3 units.

So some of the nurses and myself, some of the doctors who had been at the Countess of Chester quite a long time, would have been used to managing the most extremely premature babies, but although the national guidance started in 2004, it had to be implemented around the country. Every region already had one regional unit, which in Cheshire and Merseyside has always been the Liverpool Women's Hospital, but they had to set up a new second level 3 unit at Arrowe Park Hospital. So it takes time to recruit people and to decide even which unit is going to be the second regional unit.

I think it was around about 2010, certainly some years before [Baby K] was born, that the tier system was set up in Cheshire and Merseyside. And one reason not to keep on managing the very premature babies that some of us were used to managing is that we would only manage a few, maybe one or two babies, of extreme prematurity, 24 to 26 weeks, and the other units round Cheshire and Merseyside similarly would have just one or two babies like that a year, lots of other babies more mature. Liverpool Women's Hospital would maybe have half a dozen to a dozen babies like that, but in the end you have to accept in any complex high-risk medicine the more you do that, the better you tend to get at doing that, and so it's better to put the highest risk babies all together in certain units, which is why we gave up at the Countess of Chester managing the most premature babies and accepted they were better managed in a unit that's doing it all the time.

DRIVER: Thank you for that. So prior to 2010, these thresholds weren't applied?

GIBBS: Correct, yes.

DRIVER: But you only infrequently encountered babies of extreme prematurity at Chester; is that a fair summary of what you have just told us?

GIBBS: Yes.

DRIVER: Can you define extreme prematurity for the jury?

GIBBS: I think extremely premature is less than 28 weeks. But I mentioned the limitless of viability, which is the most premature baby that can survive, and it's around about 22 to 23 weeks' gestation.

DRIVER: Thank you. I would like to draw your attention for you to assist us, and the jury's attention, please, to the plans behind -- back to the jury bundle, the white file, behind dividers 4 and 5, Dr Gibbs. Divider 4 to begin with. That is a plan of a building that you will be very, very well familiar with. If we go overleaf, Dr Gibbs, we'll see part of that plan reproduced.

So I would like you to help us, if you could, gain some understanding as to the location.

GIBBS: Right. The first page behind divider 4, page number 1, that is showing the ground floor of what is called the women and children's building at the Countess of Chester Hospital.

DRIVER: Thank you.

GIBBS: So on the right-hand side that is the whole of the ground floor. The green shaded area is the neonatal unit. If you look at the diagram on the left-hand side of page 1 you can see there the green shaded neonatal unit, but also to the right-hand side of the green shading there's other rooms and one is called CLS theatre. That's the maternity theatre for caesarean sections. Then you can see some rooms saying "Delivery". There's four of them there. So that's the labour ward.

So the neonatal unit is correctly set up, it's hopefully like this in most hospitals, but it isn't in some hospitals the neonatal unit is in a separate building from the maternity department. But here at the Countess of Chester -- in most hospitals, and it was certainly true at the Countess of Chester Hospital, it was properly designed with where the babies are born and where some of the babies would need to be admitted to the neonatal unit being adjacent to each other.

DRIVER: And that forms part, you have told us, of a single floor which is called the women and children's building?

GIBBS: Yes.

DRIVER: Did that include a paediatric facility as well as delivery and the neonatal unit?

GIBBS: Yes, it did, it was all in the same building. It's difficult to see -- and I've worked in this building for 25 years -- it's difficult to see -- on page 1, right-hand side, showing the whole of the ground floor, the paediatric ward should be there next to the maternity ward. I think the way we're looking at it now, I think if... The bottom left-hand side, I think, is the paediatric ward.

DRIVER: Mr Johnson is offering you a magnifying glass, Dr Gibbs.
I'll hand it to you.

(Handed)

GIBBS: Thanks.

DRIVER: We don't challenge your description of the layout, Dr Gibbs.

MR JUSTICE GOSS: This isn't on a slide, is it, so we can't put it on a slide and enlarge it to make it easier?

GIBBS: Thank you very much for the magnifying glass. It doesn't help too much because it's just magnified the slightly out-of-focus words.

MR DRIVER: I think we all accept and agree that paediatric ward and the neonatal wards are neighbours.

GIBBS: Yes. I'm sorry, I can't absolutely confirm that.

DRIVER: Those with better eyesight than me to my left and right (overspeaking) paediatric here in the --

MR MYERS: It says "Ward 29 paediatrics", if it helps, in the centre of the bottom left. I only know that because I'm using a magnifying glass and spectacles.

MR JUSTICE GOSS: All right. If it assumes any significance --

GIBBS: I can confirm defence counsel is absolutely correct.

I was slightly confused -- where you see the context(?) layout and women and children's building at the bottom, I thought that was the main entrance there. The main entrance to the building is halfway down the right-hand side of that diagram and now I absolutely recognise it. You go down the main corridor, at the end on the right is the neonatal unit, at the end on the left was the paediatric ward. So the way we are looking at this diagram, the bottom left quarter is the paediatric ward, the top right, not quite quarter but one eighth of the top right, half of the top right quarter is the neonatal unit.

MR DRIVER: Thank you. Without wishing to insult anybody's intelligence, could you just, in a sentence, inform us, with reference to the patients, the difference between the paediatric ward and the neonatal unit?

GIBBS: So a neonatal unit is for newborn babies. The paediatric ward is for -- it can have babies on it as well but they would have been home after delivery and then become unwell or for whatever reason need to be admitted. So the paediatric ward takes babies from the age of 0 up to 16 years of age.

DRIVER: In terms of medical staff, yourself, your consultant colleagues, your junior doctor paediatricians, would those medical staff work exclusively either at the neonatal unit or the paediatric ward or would your work take you to both?

GIBBS: Our work took us to both, as doctors. The junior doctors, not consultant doctors, they would tend to work a week or two at a time on either the neonatal unit or the ward, but depending on staffing levels due to annual leave, study leave and so on, sometimes they would have to rotate between the neonatal unit and the paediatric ward every few days. But they spent the entire day always on either one or the other. The registrars during the daytime, the middle grade doctors, moderately experienced doctors but not as experienced as consultants, called middle grades or registrars, they would -- again, one or two of them would be on the paediatric ward in the daytime, one or two on the neonatal ward, but sometimes, particularly in the afternoon, a registrar might cover both sides because some of the registrars helped in the clinics in the afternoon.

Us consultants, we had a system where there was one consultant of the week who saw all the patients on the wards, but the consultant of the week covered both sides, the paediatric ward and the neonatal unit.

Out of hours, after late afternoon, throughout the evening and night, and at weekends, there would be one consultant covering both the paediatric ward and the neonatal unit, and similarly for the registrar, but there would be more junior doctors either on the ward or the neonatal unit at night or weekends.

DRIVER: Thank you. That's the medical staff, the doctors. What about the nurses, did they share their time between --

GIBBS: No, the nurses were either neonatal nurses who worked all the time on the neonatal unit or they were paediatric ward nurses, children's nurses, who spent all their time working on the children's ward. So the nurses were separated: they either worked on one side or the other, they didn't work on both.

DRIVER: Thank you. We're now going to turn our attention to the neonatal unit and perhaps the best way of doing so in the first instance is to return to the agreed facts so we're going now behind divider 3 again. Divider 3, page 2, section 2.

Agreed fact number 2, which I'll read into the record:

"During the period June 2015 to June 2016, the neonatal unit..."

And this abbreviation is quite commonly used, the NNU?

GIBBS: Yes.

DRIVER: "... of the Countess of Chester Hospital had four rooms, sometimes called nurseries. Room 1 was the intensive care unit or the ICU. Room 2 was the high dependency unit, HDU. Rooms 3 and 4 were special care rooms, SC rooms."

Agreed fact number 3:

"Premature births or very ill babies were initially placed into room 1, the intensive care unit, and transferred to room 2, high dependency, after a period of stability, and then to rooms 3 and 4, special care, to establish their feeds and spend more time with their parents, with the intention of going home."

Agreed fact number 4:

"There were 16 designated cots in the unit:

"(i) Two intensive care unit beds;

"(ii) One stabilisation and transfer bed;

"(iii) Three high dependency beds;

"(iv) Ten neonatal special care beds."

Agreed fact number 5:

"Additionally, there were four transitional care cots located on the post-natal ward where the baby would receive some neonatal nursing care and the mother would receive midwifery care in the same area."

So having set out those agreed facts, Dr Gibbs, do you acknowledge the accuracy of that which I have just read out? Does that reflect your recollection of the unit?

GIBBS: Yes.

DRIVER: Thank you. So having established the facilities, could you assist in informing the jury of babies in what condition would go where and receive what sort of treatment? Is it right that all newborn babies would go either to a post-natal ward with their mother or, if needs be, to the neonatal unit?

GIBBS: Yes.

DRIVER: What considerations would determine to which unit or ward any baby would be taken to?

GIBBS: The medical condition of the baby. Most term babies -- and term being 40 weeks' gestation, the normal duration of a human pregnancy -- although strictly the definition isn't 40 weeks for being a term baby, it's 37 weeks onwards. So most babies born at term would go with their mother to the post-natal ward, but even a baby born at term, if they were born in poor condition, they were struggling to breathe or causing any other concern or there had been risk factors during the delivery particularly, or sometimes the pregnancy, that meant that baby was particularly at risk of possibly having an infection, even though they were a term baby -- so if they were ill or had risk factors for infection they wouldn't go to the post-natal ward with their mum, initially they'd go to the neonatal unit first.

Premature babies -- now although I said 37 weeks up upwards is a term baby, we did at the Countess of Chester allow babies from about 36 weeks upwards, if they were well, to go to the post-natal ward with their mother. Below 36 weeks, even if they seemed well and in good condition, they would need to go to the neonatal unit for at least monitoring for a while.

Now, the more premature a baby, if they were heading down to 30 weeks' gestation or below, they would need extra support and help with various problems that premature babies suffer from, so they would always go to the neonatal unit.

DRIVER: Thank you.

GIBBS: I should just say, just to be absolutely correct, when we said the babies could only go one of two places, they go to the post-natal ward or the neonatal unit, a few babies -- and some members of the jury might have had experience of this in their own families -- a few term babies would be born on the labour ward and, if the mum was kept on the labour ward for a few hours, particularly if the post-natal ward was busy and the baby was entirely well, if at all possible many mums ask for a six-hour discharge, the baby to go home within 6 hours. So a few babies may go home direct from the labour ward.

So they could either go to post-natal ward, neonatal unit, and a few, who were very well term babies, might get home straight from the labour ward.

DRIVER: Thank you for that. I'd now like you to focus upon the risks and issues associated with prematurity.

GIBBS: The most common problem and the highest risk for a premature baby is breathing difficulties. The more premature a baby -- all of their organs are relatively premature, appropriate for their gestation, but if you are well below 37 weeks the normal place you're meant to be is inside your mother's womb, receiving all your oxygen and nutrition through your umbilicus, from the mum's placenta. So you don't need lungs when you're inside the womb.

If you're born prematurely -- and the more prematurely you're born, the higher the risk -- your lungs are immature and particularly very stiff when they're small lungs. You could almost think of a balloon. If you're trying to blow up a balloon, when it's tiny it's really hard to blow up a small balloon.

If you get a bigger balloon or you manage to blow up the balloon a bit, when it gets bigger it's much easier to inflate. That is true, roughly, of human lungs. The smaller, the stiffer they are, the harder it is for the little baby -- it's a bit unfair, the baby is very small, small muscles, and so on, and yet they have stiffer lungs than you and I have. So breathing problems are a very common problem and the breathing problems become more severe the more premature you are because of your immature, stiff lungs. That's a common reason a baby would need -- it's a common help we have to give to the babies who are premature.

The younger a baby is, the more premature the baby is, the less likely the baby is to be able to suck and swallow properly and to feed and so a premature baby, particularly below about 32 to 34 weeks, isn't able to suck and swallow the milk from their mum or from a bottle and so they would need feeding either intravenously or, if they were very stable, they could have the food trickled down a tube into their tummy, the milk into their tummy. So feeding is the other big issue that a premature baby needs help with --

DRIVER: Could I ask you to pause there for one moment? We'll focus in greater detail on nutrition, on feeding.

You have just informed the jury that, for good reason, some very premature babies need -- receive milk trickled down a tube. That's a tube down the mouth into the gastric system?

GIBBS: Yes, a thin tube.

DRIVER: And others, is this right, are simply not mature enough to receive nutrition through that route?

GIBBS: It's more they're not well enough because if a baby is particularly unwell, and say a premature baby that starts off needing ventilation, their stomach probably won't absorb the milk and there's a danger the milk will accumulate in the stomach and then could be regurgitated and may end up going down the lungs. So if a baby is particularly unwell then we would start off with intravenous feeding and as the baby became more stable and as their breathing difficulties lessened then they start getting milk feeds into their tummy.

DRIVER: Could you please expand upon intravenous feeding, explain that to the jury?

GIBBS: If we're needing to give nutrition --if we can't give nutrition into the stomach then we need to give it into the blood system directly, and so a baby would have a little cannula, that's a tiny little tube, inserted via a needle into a vein and all sorts of fluids, including nutrition and other fluids, being drugs, can be given intravenously into the blood system.

The advantages of a newborn baby, just with respect to vascular access, having access to the circulation, is that every baby's born with an umbilical cord hanging out of the tummy button. That is clamped off and then cut to separate it from the placenta, and that's the same whether you're a premature baby or a term baby.

But in the first few days the baby's cord can be used to insert the catheters in, long thin tubes, and there's two arteries and one vein laying inside the cord.

We can use that cord stump of a newborn baby to insert catheters, so drugs and nutrition can be given through umbilical catheters in newborn babies.

DRIVER: Thank you. We know that you had no clinical interaction with [Baby K], but I want to take you to one chart -- Mr Murphy, tile 63, please -- and the neonatal infusion chart behind that. So that is a record made by the nursing staff, is that right, Dr Gibbs?

GIBBS: Yes. Well, some of the writing has been done by doctors. The doctors have prescribed and written up the fluids that will [Baby K], this baby girl -- often babies don't have a name as soon as their born, so even if mum and dad know the name, we on the neonatal unit don't, so she was Baby Girl [Surname of Baby K] at the top right-hand side of the chart.

Down the left-hand columns -- in the first left-hand column there is the date and then those fluids that are written up have been written up by a doctor.

On the right-hand side where it says "given by" and "time and date started", those are nurses signing for having started those fluids that have been requested by or ordered by a doctor.

DRIVER: So this records the fluids provided to the baby?

GIBBS: Yes.

DRIVER: We can see the ward, "Neonatal unit", we see your name there, but as we've said more than once, you didn't actually care or treat [Baby K], but you were the consultant of the week.

GIBBS: Yes. An individual consultant cannot be on call and on duty 24 hours a day every day of the year. So particularly evenings and nights we took it in turns to be on call and it was -- my colleague Dr Jayaram was consultant on call overnight when [Baby K] was born. So I wasn't on duty, even though I was consultant of the week during the daytime. So my name appears on the chart because [Baby K] was born when I was consultant of the week, but Dr Jayaram was the consultant that dealt with [Baby K] in the relatively short time she spent at the Countess of Chester Hospital.

DRIVER: Thank you. If we look to the right of the chart, patient name, [Baby K]'s date of birth, and then below that we can see time and date something was started.

We'll go to what it was in a moment. That's 03.00 hours on 17 February 2016. If we stay on that line, if we go to the left, we can see on that date, now looking from left to right, 17 February, 10% dextrose at a certain rate.

If we keep going along we can see the route is described as IV. Can you decode all of that for the jury, please?

GIBBS: That first line on the 17 February, 10% dextrose, which is a sugar solution really, it's glucose -- dextrose is an old name for glucose. 10% just means -- it's the strength of solution. It's a typical amount of glucose that a baby would need to give them nutrition. It's not quite full nutrition because if you need full nutrition long-term you need a bit of sugar and protein and even fats as well. But that would normally be started later on after the first day or two of life.

In the first day of life the nutrition given to a newborn baby would be 10% dextrose sugar solution, and that's fine for a day

or two. Long term you need a bit of protein and fat added in as well if you need to continue with intravenous nutrition.

It says 1 litre. That's just the size of the bag that's set up. But the rate of fluid is worked out on the baby's weight and [Baby K] was 690-something grams.

So from her weight they worked out that the normal amount of fluid you need in 24 hours could be provided by giving 1.7ml of hour of the dextrose solution.

DRIVER: Thank you. Take a step back. You were helping us understand the issues and risks that are associated with prematurity. You explained respiratory breathing issues.

GIBBS: Yes.

DRIVER: You were helping us understand the nutritional or feeding issues. I took you to this. So having considered that, what can you tell the jury as to the nature of the support feeding that was being provided to [Baby K] in the first day of life?

GIBBS: Well, I can't tell you everything about [Baby K] from in fluid chart but it meant that [Baby K] -- she was having her full requirement for fluid given intravenously, so she would not be receiving any feeds or fluids into her stomach at this stage.

DRIVER: Thank you. We can take that document off the screen, thank you, Mr Murphy.

So nutrition, breathing. What about infection?

GIBBS: Any baby can be at risk of infection and there are certain signs that we look out for, not only in how that baby is behaving, but also in what might have happened during the labour and delivery that can put babies at risk. And one thing that does apply to [Baby K], if the membranes around the baby, the water that's surrounding the baby in the womb, if the membranes have ruptured more than -- and it's said -- for a premature baby the limit is set at 18 hours, for a term baby if the membranes had gone more than 24 hours before a baby is delivered, that puts a baby at increased risk of infection simply because the baby is surrounded by fluid in which bacteria can easily multiply in. That doesn't happen in a normal pregnancy because the membranes within which the fluid is contained, and in the middle of all that sac is the little baby, the membranes are a barrier to protect against infection. Once that barrier has broken, infections can spread up from the skin and through the birth canal, through the mum's vagina, up into the baby.

So we know if a baby's born with the membranes having -- we call them prolonged rupture of membranes, and for a baby of [Baby K]'s gestation that would be more than 18 hours -- that means -- it doesn't mean the baby is infected, it means an increased chance the baby will have an infection, so we would normally start treatment for a baby soon after birth to cover for the possibility of infection.

DRIVER: You told the jury a short while ago when you were helping us understand the criteria which dictates whether a baby goes on to the neonatal unit or to the post-natal ward, that it's not just if a baby is sick, but also if a baby has heightened risks --

GIBBS: Yes.

DRIVER: -- identifiable risks?

GIBBS: Yes.

DRIVER: We know of [Baby K]'s extreme prematurity, 25 weeks. We know something of the circumstances, and the jury will hear more in due course of the labour and the like.

Would that have exposed [Baby K] to a significantly heightened risk of infection?

GIBBS: Yes. And again this is national guidance, it's been agreed nationally and most -- well, all neonatal units ought to be following the guidance. If a baby has two or more risk factors they need to be given antibiotics -- well, you need to take test to look for infection, but some of those tests can take several days to come back. Trying to grow bacteria from different body solutions, blood or whatever can take up to 2 days to grow the bacteria, so we don't just wait for 2 days later to find out that the baby had a nasty infection, we would start the antibiotics -- take the blood samples or other samples, start the antibiotics, and then wait to see what the results showed and how the baby behaved to give an indication whether the baby was infected.

[Baby K]'s mum had prolonged ruptured membranes before the delivery, I believe. [Baby K] was premature. Both of those count as risk factors for infection. If a baby has two or more risk factors, they should be treated for infection and [Baby K] did have two or more risk factors.

DRIVER: Thank you. So typical issues, breathing, infection, nutrition. What about bodily temperature and the management of that?

GIBBS: Yes. The smaller a baby, the quicker they lose heat.

All babies -- a term baby needs to be kept wrapped up and kept warm. A premature baby losses heat much more quickly than a term baby, smaller objects lose heat quicker than bigger objects, so little premature babies lose heat quickly. If you become quite cold your circulation goes into failure, your blood pressure drops, if you get very cold, so that is hypothermia, getting very cold, and so it's important to keep premature babies warm even more so than term babies.

MR DRIVER: My Lord, I'm about to move on to a slightly different topic with Dr Gibbs. If the court is intending to have a mid-morning break, this might be the moment, or we can just continue.

MR JUSTICE GOSS: I think we will have a break, actually.

It's fairly intense. No criticism of you, Dr Gibbs, but you do speak quickly. You've probably been told that many times during the course of your life.

We'll just have a fifteen-minute break just so that people can -- you can stretch your legs, we can stretch our legs. Then we'll continue for about an hour until lunchtime. Thank you very much.

(11.48 am)

(A short break)

(12.07 pm)

MR DRIVER: Members of the jury, Dr Gibbs, could we please go once again behind divider 3 in the jury bundle, the white file, and return briefly to an agreed fact we've already considered, which is agreed fact number 2 at page 2.

So divider 3, page 2, section 2, agreed fact number 2. I'm going to invite you, Dr Gibbs, to give us further evidence about the nature of intensive care provided to babies who were placed in the intensive care unit in room 1, because as the jury will appreciate, that is the room that we are primarily interested in because that is the room in which [Baby K] was cared for during her short stay at the Countess of Chester Hospital.

So you have told us a little, Dr Gibbs, about the special need to provide assistance with breathing for very premature babies. Would that almost inevitably, for a baby of [Baby K]'s extreme prematurity, include ventilatory support?

GIBBS: Yes.

DRIVER: Could you, in a sentence or two, explain why that is almost inevitable for a baby of this gestational age?

GIBBS: Because around about 25 week's gestation, and 600 to 700 grams in weight, a baby's lungs will be small but they'd also be very stiff. A baby of that size and that gestation would find it very difficult to breathe. They can breathe, they can take some breaths, but they would be struggling. You'd see the little baby sucking their ribs in, working really hard to breathe, would get exhausted very easily. And because we're monitoring the babies -- and I think we're going to come to monitoring systems in a moment -- a baby would struggle to maintain normal oxygen levels in their bloodstream, even if you gave them supplemental oxygen, unless you took over the breathing for them. Typically a baby of [Baby K]'s size and gestation would need to be fully -- to receive full mechanical ventilation.

DRIVER: Yesterday, Dr Gibbs, in your absence the jury watched a visual presentation, which demonstrated how a baby would be intubated.

GIBBS: Right.

DRIVER: Could you remind the jury, please, the primary purpose of intubation for a very premature baby?

GIBBS: Premature babies like [Baby K] would be need to be intubated to provide them with mechanical ventilation.

There are different methods -- and some of them were used temporarily, I believe, in [Baby K] -- where you can support the breathing using a mask over the nose and mouth and then forcing oxygen and air under pressure into that mask. But that is just forcing oxygen and air down into the back of the throat. Some that will go down into the lungs, most of it will go down into the stomach, so it's not an efficient way of providing breathing for a baby that's going to struggle a lot, because of their small, stiff lungs, to breathe by themselves.

So the most efficient way to provide breathing for a baby, and indeed an adult, any size of person, if you need to have mechanical ventilation, is to direct the oxygen and the pressure you need to inflate the lungs directly down into the windpipe, the trachea, and that is why, for mechanical ventilation, you need to insert a tube called the endotracheal tube, which you saw yesterday -- endo, inside; tracheal, inside the windpipe -- the endotracheal tube is inserted into a baby's windpipe, so through their voice box, between their vocal cords, down into the windpipe, and then the outer end of that tube is attached to tubing that leads to the ventilator.

DRIVER: Thank you. With Mr Murphy's assistance, we'll play a visual presentation of mechanical ventilation. This is a long piece, my Lord, 26 minutes long.

MR JUSTICE GOSS: Thank you very much.

MR DRIVER: May I be seated?

MR JUSTICE GOSS: Yes, certainly.

(Video played to the court)

MR DRIVER: My Lord, before I ask further questions of Dr Gibbs, can I offer some reassurance to the jury, who have just been shown a presentation that contained a great amount of detail. Could I ask Mr Murphy to put the iPad screen on our big screens and focus on the objects list?

Mr Murphy's just clicked on the object list there and you can see there is on the list at the moment a single video presentation, the walk-through that you watched yesterday.

Over lunchtime Mr Murphy will add that ventilator display on to that list and so at any point when you're together in retirement, if you want to watch that again, you can do so via your own iPads. So it's not a case where you get one chance to digest all this information.

Secondly, if you go behind divider 2 in the jury bundle -- remember, Mr Johnson told you yesterday that there is a glossary of terms, a list of definitions.

We're learning and we're all being introduced to new language here and that's the purpose of this. If you look on page 1 there, between the two hole punches, the doctor who took us through the ventilator display made reference to apnoea, and you can see there will there's a definition of apnoea there:

"Suspension of breathing or an absence of respiration."

So if you hear a term that you're unfamiliar with, if you look in this glossary, I hope you'll find it.

Dr Gibbs, can you expand upon what your colleague was referring to as apnoea in the context of the display he has just provided to us?

GIBBS: Yes. An apnoea, as you've seen from the definition, means a cessation of breathing, no breathing movement, no chest moving. Premature babies frequently display apnoeic episodes. A

baby who's not been ventilated who is premature usually has monitors on them -- I think we'll talk later about the monitors -- and obviously a ventilated baby has monitors on not just the ventilator, with lots of alarms, but they have monitors measuring the baby's parameters that will also alarm if a reading falls outside safe parameters.

But there are monitors to measure babies' breathing rates. If a baby holds their breath for more than about 20 seconds, which is common in premature babies intermittently, and we call those apnoeas of prematurity -- it doesn't mean the baby is ill, it's a sign of an immature respiratory drive that premature babies have -- then if they don't breathe for 20 seconds the monitor will alarm that's monitoring their breathing rate.

DRIVER: Thank you.

GIBBS: I should say, though, that you'll be worried about an apnoea in a ventilated baby because the ventilated baby shouldn't have a prolonged period of 20 seconds where they don't breathe because the ventilator is breathing regularly for them.

The person demonstrating the ventilator on the video did say there are different modes you can set the ventilator up for and there is a mode where you allow a baby to take some breaths by themselves and then the ventilator comes in intermittently to give extra breaths. Typically, the ventilator will be set at a low rate, maybe just 20 breaths a minute, rather than the 50 or 60 that you saw in the video. That is for a baby who's improving, who is beginning to breathe by themselves, and the ventilator was only coming in occasionally to give them breaths. That's when the apnoea alarm is useful in a ventilated baby.

But for a baby who's just started ventilation in the first few hours of life, the apnoea alarm should never occur because the ventilator is giving regular breaths and the ventilator doesn't stop. A premature baby might hold their breath for 20 seconds, not the ventilator.

DRIVER: Thank you. We will focus on the other monitoring now, my Lord, and there is a video presentation for that, which is just short of 13 minutes long. So perhaps this is the appropriate time to play that.

MR JUSTICE GOSS: Yes.

MR DRIVER: If Mr Murphy would play the IntelliVue monitoring.

GIBBS: Could I just add a comment? I'm not going to say much about the ventilator video, there's enough for you to take in there. But quite rightly towards the end, the person

demonstrating the ventilator on the video said that normally the ventilator settings are set by a doctor, the doctor decides what pressure each breath is going to be to expand the chest, what rate the baby is going to get breaths, and for a premature baby that's often about 60 breaths a minute, much faster than you and I would breathe, and sets the oxygen level, like 40% oxygen. But the person demonstrating the video did say that nurses can change those, but usually when the doctor asks them to. But a common thing that a nurse looking after a baby, a neonatal nurse, will change without having to ask a doctor, although they should inform a doctor once they've done it, is just changing the oxygen level.

If a baby's being ventilated and the other monitors show the oxygen level drops in the baby's circulation, then rather than just call for a doctor and wait for something to happen, the quickest thing a nurse can do is to just turn up the amount of oxygen on the ventilator. If a baby's not being ventilated and the monitor shows their oxygen level is dropping in their bloodstream, the nurse would start oxygen through a mask. So giving oxygen is one of the first things you do in hospital if you notice someone having breathing difficulties. That is often why when the paramedics arrive to whoever has collapsed, the first thing they tend to do is put an oxygen mask on.

DRIVER: With that intervention that you have just described, that is a case of fine-tuning the amount or the proportion of oxygen in the gas that's being fed through --

GIBBS: Yes.

DRIVER: -- the ventilator --

GIBBS: Yes.

DRIVER: -- into the baby?

GIBBS: Yes. Because if a baby is receiving, say, 40% oxygen and yet a monitor on their skin shows their oxygen level in their blood is dropping, then the usual thing that anyone -- if a doctor was there they would do it, but the nurse who's with the baby all the time would turn that 40% up to 50 or 60% as a first initial move and then decide, looking at the baby and asking for help, what had caused that drop in oxygen. But a quick reaction to a lower oxygen level in a baby is to turn up the amount of oxygen they are receiving or to start oxygen if they weren't receiving it at all at the time.

DRIVER: Thank you. So if we could play the monitor video, that might give this context. Thank you.

(Video played to the court)

MR DRIVER: Dr Gibbs, on that last note could we please go behind divider 6D?

Are you familiar with documents of this type?

GIBBS: Yes.

DRIVER: Is this an example, and an example of course which applies to the baby [Baby K], of the observation chart that the person providing us with the demonstration has just referred to?

GIBBS: Yes, and they've been recorded each hour on this chart.

MR JUSTICE GOSS: 6D?

MR DRIVER: 6D. So white file, divider 6D.

MR JUSTICE GOSS: D, yes. 6 is divided into A, B, C, D.

MR DRIVER: So is this the process, the nurse looking after the baby, at an hourly interval, would examine that monitor that we've just been looking at, note the particular readings, and then document them hour by hour on this chart or charts of this nature?

GIBBS: Yes.

DRIVER: Thank you. If we can just put a still of the monitor on the screen, please, Mr Murphy, from the first minute or so of the presentation so we can see it while Dr Gibbs helps us understand it yet better. Thank you.

I'm primarily inviting you to focus upon the blue waves and the number 95. Can you remind the jury what that records?

GIBBS: That's the oxygen saturation level in the baby's blood.

DRIVER: What are the levels that you would hope to see in a healthy baby?

GIBBS: More than 90%. And anything up to 100%. But typically, 90 to 96 or 98%.

DRIVER: What is the term for a diminishing level that falls below, say, 80%?

GIBBS: Well, hypoxia. That's lack of oxygen or low oxygen.

DRIVER: And what would that demonstrate was happening in the baby?

GIBBS: It could be indicative of several things, but the worry is the baby is not getting enough oxygen into their blood. It may well mean they are not breathing enough or the ventilator is not giving them enough help. It sometimes could mean the circulation is failing and the heart is slowing down, or the blood pressure is dropping, but it's a serious sign when the oxygen saturation level drops in the blood.

MR DRIVER: My Lord, we are not going to finish Dr Gibbs' evidence in the next 5 minutes, I'm afraid.

MR JUSTICE GOSS: I think whilst we've got the image up, it was a little confusing when the demonstrator was saying the orange line and it appears to be white to me. We all followed it, it's just to do with the camera.

GIBBS: Yes, I think, my Lord, the colour is not good. It is indeed an orange line, that middle line. They're deliberately designed -- it is difficult if you have forms of colour blindness, but they are designed to be different colours so you can easily spot the lines. But that midline is meant to be orange.

There was one time where she said if you turned an alarm off you can see a red triangle and it didn't look red, but it's just the colour is not showing. In real life you do see those colours as was described on the video.

Could I just add one thing about the video as well, it just might be helpful. When the person demonstrating this Philips monitor was showing how the alarms will work if you have set the upper level, say, of a heart rate to be 160 and the baby's heart rate goes above it, the alarm comes on. But we are concerned when levels go higher than we expect; we are much more concerned usually when levels drop much lower than expected, if the heart rate becomes much slower than it should be, if the breathing rate or the oxygen saturation level become much lower than they should be, that's more serious and needs more rapid intervention. But just as she showed the upper alarm limits, when a vital sign goes above the alarm limit, it will alarm. There's a lower alarm limit, she did mention it but she didn't demonstrate it.

If a reading for the heart rate or the breathing rate or the oxygen saturation falls below a safe level that's set on the alarm then the alarm goes off.

MR DRIVER: Thank you. Is that an appropriate moment for lunch?

MR JUSTICE GOSS: Yes, certainly. Thank you very much.

Dr Gibbs, you haven't finished your evidence yet so you'll have to come back. We'll start again at 2.10 if that's possible. Just slightly short of an hour and 5 minutes or thereabouts.

All right, members of the jury? Be ready, please, to come back into court for 2.10. And remember your responsibilities if you're going out or going to be seeing other people: no discussion, no research by any means. The usual. Thank you.

(1.05 pm)

(The short adjournment)

(2.10 pm)

MR DRIVER: Dr Gibbs, the final theme I'd like to explore with you is relating to apnoeas, deteriorations and collapses, and the differences between those concepts and the appropriate responses to them.

We've dealt briefly with apnoeas already and you told the jury that some neonates, some very tiny babies, are at times inclined to just pausing their breath for whatever reason. How would you expect a nurse overseeing such a baby to respond to that in the first instance?

GIBBS: It's possible, initially, that no one with the baby would notice that they'd paused their breathing for 10 seconds or longer. But that is why all the babies on the unit, even ones having special care, so the least level of care, have apnoea alarms, a little probe, a little -- like a tiny flat balloon attached to the lower chest upper abdomen that just records chest movement. If there's been no chest movement for a given length of time, typically the alarms are set at 20 seconds, we've heard a lot about alarms today, but for pause of breathing in a baby after 20 seconds the alarm will sound.

Sometimes there is nothing for the nurse to do, or if a doctor was nearby, but the nurse who is with the baby, there's nothing for them to do. If they look at the baby and the baby is a good clear and actually the baby is breathing again, because a baby -- the noise of the alarm going off may stimulate a premature baby who's having one of these apnoeas of prematurity just to start breathing again.

If the baby doesn't appear to be breathing the first intervention that a nurse should do is simply tactile stimulation, touch the baby flick the foot or flick the hand.

That's sometimes all that's needed to set the baby breathing again.

If that doesn't work then the baby's colour may be deteriorating. If they have a saturation monitor on them as well, which many of the babies, but not all the babies, in the outside rooms would have a saturation monitor, if that records that the baby's level of oxygen has dropped well below 90% then the appropriate intervention is to offer oxygen and, if the baby's oxygen levels don't pick up quite quickly, to then give some respiratory support -- not full-blown mechanical ventilation, it takes time to put the tube down, it takes skill to know how to put a tube into the windpipe, but there are different measures that are available at the bedside of every baby or the cotside of every baby to give oxygen under pressure and with a mask over the nose and mouth to just direct oxygen at a regular rate, a bit like a ventilator, just giving a moderately high pressure once every second or two to actually help the baby breathe.

Even if a baby doesn't have a saturation monitor on them to tell you that the oxygen level's dropped below 90, if a baby stops breathing long enough they will start looking dusky and then turn blue, which is a sign that the baby has got a seriously low oxygen level. So again the intervention would be to give the baby oxygen and, if the baby is not making any breathing effort, if their chest isn't moving, to give them oxygen under pressure with one of these devices, with a bag over the nose and throat, to direct oxygen intermittently under pressure into the back of the mouth to encourage the baby to breathe.

DRIVER: Thank you, Dr Gibbs. As you may know, somebody in a remote location is seeking to record and transcribe the evidence and so you picked quite a pace there, if I may say so. Do you mind if we re-cover some of the important parts of that ground again?

GIBBS: I'm sorry.

DRIVER: It's my responsibility, not yours. So a temporary cessation in breathing, an apnoea, can be addressed quite simply by touching the baby, by rocking, tickling the baby --

GIBBS: Yes.

DRIVER: -- and jolting them back into their breathing process?

GIBBS: Yes.

DRIVER: You mentioned how with babies who are not connected to a ventilator, there are other facilities available to introduce a greater proportion of oxygen into their system.

GIBBS: Yes.

DRIVER: And you told us before lunch, where a baby is connected to a ventilator, that objective can be achieved by altering the proportion of oxygen in the gas that is also being fed through to the baby's lungs?

GIBBS: Yes.

DRIVER: The numbers, the oxygen saturation levels of the blood, are a good indicator, but you also said that gauging the baby's pallor, gauging the colour is a reliable indicator?

GIBBS: An indicator of severely low oxygen levels, yes.

DRIVER: So let's develop that then and consider the concept of a collapse. It might be a bit difficult for a layman to consider a baby lying in an incubator collapsing, because of course they can't fall, they're not going to slip into unconsciousness. So what is a collapse in this context?

GIBBS: Just as you say, the normal understanding and definition of a collapse is to slump to the ground, loss of muscle tone, and often temporary loss of consciousness. That's when someone collapses. Babies are lying all the time, particularly little babies on the neonatal unit are in a lying position all the time, they can't fall. So what a collapse means, and there isn't a really good definition, I couldn't find a good definition for a neonatal collapse. It is a deterioration, but there's all grades of deterioration. A baby with an apnoea of prematurity has deteriorated but often recovers spontaneously or with minimal help.

So to be a collapse, it's a fairly severe deterioration that needs intervention and, furthermore, it's usually sudden because patients, babies or any other patient, can deteriorate over a period of time and slowly get worse. You wouldn't call that a collapse.

A collapse has the implication of a sudden event and a fairly serious deterioration, which means some intervention is urgently needed.

DRIVER: In terms of the numbers, in terms of monitoring the oxygen saturation levels, what level of saturation is the threshold below which you would deem it so serious as to label it a collapse?

GIBBS: I can't give an exact level. The normal level that the alarms are set, that we want babies to keep their oxygen level above, is more than 90%. A reduction to the high 80s or mid-80s is probably not associated with a collapse. With a collapse, it'll drop much lower, there's no definite figure, but 70% or less. But usually, if that has happened to a baby, they look unwell in other ways apart from just the low oxygen level. Their colour would have deteriorated. If they were active before, and some babies are, they won't usually be active then. If you are measuring the heart rate, which would be the case for a baby on monitoring, the heart rate would slow. Sometimes it's after many seconds of a low oxygen level that the heart rate then slows and that would be part of a serious collapse.

A significant drop in saturations, so well below 90%, plus a slowing of the heart rate, and we get worried about any baby -- we like the heart rate to be above 100 and we worry when it gets to about 60 or below because for a baby, a newborn baby, that is a low heart rate. It's not for an adult, it is a very abnormally low heart rate for a baby.

DRIVER: What is the range of appropriate interventions for a nurse or a doctor at the side of an incubator observing a collapse or a baby heading towards a collapse?

GIBBS: Well, some intervention is required. It depends what help the baby was receiving at the time they collapsed.

As I mentioned a little earlier this morning, if a baby's actually having mechanical ventilation and their oxygen levels drop and their heart rate drops, that's serious because the ventilator should prevent that happening. But the initial first response for an intervention is to turn the oxygen level up on the ventilator, so the baby is getting more oxygen.

At some stage if the baby is not improving, the nurse, or whoever else is with the baby, needs to call for help. Exactly what stage, it's variable. There would be nothing wrong -- no criticism of a nurse that called for help as soon as he or she noticed the baby had collapsed or deteriorated. On the other hand, when a baby collapses, it depends how badly they had collapsed. It would also be appropriate to do an initial standard intervention like turn the oxygen up.

And if that doesn't help the baby, to then call for help. But you need to do something.

DRIVER: When you use the phrase "call for help", what were the methods available to communicate a desire for help?

GIBBS: Usually, the simplest way on the neonatal unit is to call to your colleagues for help. Now, if the nurses decide they need the doctors there urgently and there isn't a doctor on the unit at the time, so you can't call to them orally, then an urgent bleep message will be sent out to a doctor to come to the neonatal unit.

MR DRIVER: Thank you, Dr Gibbs. I have no further questions for you. If you could remain there and answer any my learned friend has for you.

MR MYERS: I'm grateful, my Lord, we have no questions.

MR JUSTICE GOSS: Thank you, Mr Myers.

MR DRIVER: That concludes Dr Gibbs' evidence in this trial.

MR JUSTICE GOSS: Thank you very much, Dr Gibbs, for coming and giving evidence. It is complete. You will not be required again. Thank you very much.

GIBBS: Thank you.

(The witness withdrew)

MR JOHNSON: Kate Tyndall, please.

(Pause)

Perhaps I could fill a bit of the time, my Lord, by just explaining that what we're about to do is to go through the sequence of events, which is on the iPads.

It's also in paper form in this document here. There's no reason for any of you to have to do anything in the sense that it'll all be displayed on the screen by Mr Murphy in any event. But equally, you may want to practise the iPads as it goes along. It's up to you, I'm not telling you to do anything. There's a number of ways that you can receive this information.

(Pause)

MRS KATE TYNDALL (affirmed)

Examination-in-chief by MR JOHNSON

MR JOHNSON: Mrs Tyndall, would you start please by giving the court your full name?

TYNDALL: It's Kate Tyndall.

JOHNSON: Thank you. And your occupation, please?

TYNDALL: Intelligence analyst.

JOHNSON: In terms of this case would you explain clearly, please, to the jury what your contribution has been in terms of producing documentation, first of all?

TYNDALL: I've been tasked with producing two documents. The first is the sequence of events document and the second is what's called the NNU review schedule.

JOHNSON: Right. In terms of those documents, the sequence of events is the one that's spiral-bound on the desk there in front of you; is that right?

TYNDALL: Yes.

JOHNSON: We'll come to the other document in due course, probably not today. Can we deal with this document first then?

On the front sheet we can see a logo for Cheshire Constabulary, the name of the case, the operational name, Operation Hummingbird, the fact that it is a sequence of events relating to the child [Baby K]. Then an exhibit reference in red, which is your initials and a number. Is that right?

TYNDALL: Yes.

JOHNSON: Just to explain the number, in case anyone is curious, as you prepare documents during the case, each one is given sequential numbering?

TYNDALL: Yes.

JOHNSON: Simple as that. So this is in effect the 40th document that you prepared in this case overall. It was finalised, this version, on 5 June?

TYNDALL: Yes.

JOHNSON: It was compiled by you, we can see?

TYNDALL: Yes.

JOHNSON: And then underneath that, we have a key, don't we?

TYNDALL: Yes.

JOHNSON: This is a guide to the colour coding, which is an easy way of identifying the source material for the information that appears in the document?

TYNDALL: Yes.

JOHNSON: Okay. So running from the top then in that sort of orangey-salmon type colour, clinical notes; that's doctors' notes?

TYNDALL: Yes, notes written by the doctors.

JOHNSON: Yes, in that sort of bluish-purple colour, nursing notes?

TYNDALL: Yes.

JOHNSON: Observations in green. Then in black, an event. That's something that you have in effect superimposed in the timeline; is that right?

TYNDALL: Yes.

JOHNSON: So that's what you have -- you have put everything in order, but you have actually imposed the event in the context of the document; is that right?

TYNDALL: Yes, just to highlight that entry.

JOHNSON: Exactly, thank you. Then in a sort of pinky colour it says "sequence description term"; what does that mean?

TYNDALL: So these are just boxes to show that there's something, a break in the sequence or to provide a continuing narrative of care rather than the full detailed transcription of the medical records. They're just to highlight that there's a brief break in the chronological entries.

JOHNSON: So what you have done, therefore, is not simply produce every single record relating to every single event chronologically, at various points in the chronology nothing that's deemed to be of significance actually happens, so you have put a break line in?

TYNDALL: Yes.

JOHNSON: Is that what it means?

TYNDALL: Yes.

JOHNSON: For example, if we go to page 8 on the document, after line 35, we can see one of those lines. If we turn over, so we go from 19.08 at line 35 to 19.30 to 20.00 hours on line 36. So is that the sort of thing that we're talking about?

TYNDALL: Yes. In that instance it's just to show that that's to differentiate between the medical notes and the text messages or, for example, on page 6 there's a gap just to show that the medical notes are carrying on but they're not of relevance in this sequence.

JOHNSON: Yes, so taking that example then at page 6, the jury will already understand that this is at a point in time significantly, in the context of the time frame we're dealing with in this case, before the birth of [Baby K] --

TYNDALL: Yes.

JOHNSON: -- in the early hours of the 17th.

So if we look at line 14, we will come to it, of course, in the sequence, that's a box that covers the 15th and the 16th and you simply summarise what the clinical notes show, namely that [Mother of Baby K] continued to be cared for at the hospital between the times put there and then there's that coloured line?

TYNDALL: Yes, correct.

JOHNSON: Thank you. So going back to the front sheet then, please, to the key, in blue, medication.

TYNDALL: Yes.

JOHNSON: Then in yellow:

"Medical notes made regarding event outside of the neonatal unit or by specialist staff."

TYNDALL: Yes.

JOHNSON: We saw examples of that in the opening, didn't we, where the transport team, for example, who were at another location and making notes that are relevant to [Baby K], and they, to denote them or differentiate them, are in yellow?

TYNDALL: Yes.

JOHNSON: Fluids speaks for itself, really, in that darker red.

Material relating to Lucy Letby in blue?

TYNDALL: Yes.

JOHNSON: Swipe data in grey?

TYNDALL: Yes.

JOHNSON: Where you've put double question mark is where you can't read somebody's handwriting?

TYNDALL: Yes.

JOHNSON: In blue with a grey background, more material relating to Lucy Letby?

TYNDALL: Yes.

JOHNSON: Okay. This will become in due course self-evident as we go through.

If we can turn to slide 1 then, first of all, please, and/or page 2 of the document. If Mr Murphy would click on the slide, please or the tile.

Do we see there a number of events that happened with other children in respect of whom Lucy Letby was convicted of offences of which the jury will hear in due course?

TYNDALL: Yes.

JOHNSON: And so the time of [Baby A]'s death, followed the next day by Lucy Letby searching on Facebook for [Mother of Babies A & B], who was the mother of both [Baby A] and his twin [Baby B]?

TYNDALL: Yes.

JOHNSON: And the time of the collapse of [Baby B] at 00.30 on the morning of Wednesday, 10 June, followed later that day by a Facebook search again for [Mother of Babies A & B]?

TYNDALL: Yes.

JOHNSON: Sunday, 14 June at 05.58, the time of death of [Baby C]?

TYNDALL: Yes.

JOHNSON: Followed by a Facebook search for a misspelt [Father of Baby C] and [Mother of Baby C]?

TYNDALL: Yes.

JOHNSON: Monday, 22 June at 04.25, the time of death of [Baby D]?

TYNDALL: Yes.

JOHNSON: Followed 3 days later by a Facebook search history again for [Mother of Babies A & B], the mother of [Baby A] and [Baby B]?

TYNDALL: Yes.

JOHNSON: And then, 1 minute later, a Facebook search history that shows that Lucy Letby searched for [Parents of Baby D], the parents of [Baby D]?

TYNDALL: Yes.

JOHNSON: All that material originates from a download of Lucy Letby's phone; is that right?

TYNDALL: Yes, her Facebook account.

JOHNSON: Her Facebook account. Two months later, tile 2, please.

More Facebook material?

TYNDALL: Yes.

JOHNSON: 4 August and 5 August, the death of [Baby E] and subsequent collapse of [Baby F]?

TYNDALL: Yes.

JOHNSON: Followed on 6 August by a search for [Mother of Babies E & F], who was the mother of those twins?

TYNDALL: Yes.

JOHNSON: And a further search on 23 August 2015, again for [Mother of Babies E & F]?

TYNDALL: Yes.

JOHNSON: Tile 3, please. There's quite a lot of information here. Continued searching for [Mother of Babies A & B] first of all on 2 September.

TYNDALL: Yes.

JOHNSON: Followed on 7 September by the first event relating to [Baby G], in respect of which Lucy Letby was convicted of attempted murder?

TYNDALL: Yes.

JOHNSON: A week later, on 14 September, a Facebook search history again for [Mother of Babies E & F]?

TYNDALL: Yes.

JOHNSON: Followed by the second event relating to [Baby G] in respect of which Lucy Letby was convicted of attempted murder on 21 June?

TYNDALL: Yes.

JOHNSON: Sorry, 21 September, I beg your pardon.

TYNDALL: September, yes.

JOHNSON: Followed by a search for [Baby G]'s mum at 22.33 that same evening?

TYNDALL: Yes.

JOHNSON: On 30 September, the first in a series of four events relating to [Baby I]?

TYNDALL: Yes.

JOHNSON: Is that right?

TYNDALL: That's right.

JOHNSON: Ultimately, [Baby I] -- well, Lucy Letby was convicted of the murder of [Baby I] and [Baby I]'s death was at 02.30 on 23 October; is that right?

TYNDALL: Yes.

JOHNSON: But between the first and the second of the [Baby I] events, do we have Facebook searches, first for [Father of Baby D] on 3 October?

TYNDALL: Yes.

JOHNSON: Secondly, for [Mother of Baby I], the mother of [Baby I], on 5 October?

TYNDALL: Yes.

JOHNSON: Then a minute later, after [Mother of Baby I], a search for [Father of Babies E & F], who was the father of the murdered [Baby E] and attempted murdered [Baby F]?

TYNDALL: Yes.

JOHNSON: Following the murder of [Baby I], on 5 November a search for [Mother of Babies E & F]?

TYNDALL: Yes.

JOHNSON: A minute later, for [Mother of Baby G], the mother of [Baby G]?

TYNDALL: Yes.

JOHNSON: Three minutes later, [Mother of Baby I], the mother of [Baby I], who had been murdered on 23 October?

TYNDALL: Yes.

JOHNSON: 14 November, another search for [Mother of Baby G], the mother of [Baby G]?

TYNDALL: Yes.

JOHNSON: Followed 3 minutes later by the search for [Mother of Babies E & F], mother of the murdered [Baby E] and also of [Baby F]?

TYNDALL: Yes.

JOHNSON: Tile number 4. Do we have a table of four separate occasions of searches on Facebook? Five, sorry.

TYNDALL: Five, yes.

JOHNSON: The first four relate to [Mother of Babies E & F] on 17 December, Christmas Day then, and 4 January and 10 January?

TYNDALL: Yes.

JOHNSON: The final one at 23.00 hours on 23 January 2016?

TYNDALL: Yes.

JOHNSON: Then at tile 5, please, was there a Facebook search on 12 February 2016 at 23.18 hours for [Mother of Baby G], the mother of [Baby G]?

TYNDALL: Yes.

JOHNSON: Then we have one of your salmon pink or pink-coloured lines to indicate the break, followed by material that relates now to the [Baby K] family?

TYNDALL: Yes.

JOHNSON: So tile 6, if Mr Murphy would click on. Can we go beyond that, please, to the next level? So on the yellow one at the bottom. Right.

We've got a manuscript form there; is that right?

TYNDALL: Yes.

JOHNSON: So is that in effect what you -- is that the raw material that underlies or a type of raw material that underlies the whole of this sequence?

TYNDALL: Yes. So there's handwritten medical notes, there's also electronic medical notes that we'll come to, and they together form the basis of this sequence.

JOHNSON: Thank you. So that's the raw material. Coming back a level, please, Mr Murphy...

MR JUSTICE GOSS: Whilst we are waiting for that, could I ask you to keep your voice up, please? You're close to Mr Johnson and naturally you're facing towards each other, but as you know, there are a lot of people in here who have to hear it all.

MR JOHNSON: If you have a problem hearing, could you let us know?

This second level, so to speak, so the first level behind the tile, is this in effect your work?

TYNDALL: Yes, so I've taken the information from the raw notes that you've just seen and written it out so that it's easier to read or so that it can be just read without going to the raw material.

JOHNSON: But if there's any doubt about the accuracy of this transcription, the original material lies behind it and so people can check --

TYNDALL: Yes.

JOHNSON: -- if there's a doubt? All right. So what do we have here?

TYNDALL: The document is described as being a telephone assessment form and on that form it is noted the following information. So reason for the call is noted as:

"Rang this morning: abs [which I presume is abdominal] cramping 10 minutes, lasting 1 minute. PV bleed. Bloody show. Not had analgesia. Advice given: pad on. Take paracetamol TCI. Advice given re FMs [I think might be foetal movements]. None this morning but normal for baby."

MR JUSTICE GOSS: It's a small point but if you look at the manuscript on the document behind, it could be "abs cramping" or it could be "abdo cramping".

TYNDALL: Yes.

MR JUSTICE GOSS: As you say, it was abdominal cramping so it is more likely to be "abdo cramp". That's just the point, you click on it and you can see the actual handwritten -- it's up to you, you decide what it says.

MR JOHNSON: As your Lordship knows, but the jury don't know, when we get to the more directly relevant information, we will call the witnesses to tell the jury what they have actually written.

MR JUSTICE GOSS: Exactly, yes.

MR JOHNSON: You won't be hearing from this particular witness, I don't think, that's because it's of relatively peripheral relevance. All right.

So tile 7 next, please, Mrs Tyndall.

TYNDALL: Tile 7 is another document that was completed when [Mother of Baby K] has arrived into the hospital and this details an initial triage assessment which reads:

"FHH placenta. Not low lying. Normal FMF."

Temperature was taken at 36.8, pulse of 95. Blood pressure of 132/80. "Contractions" are described as "irritable uterus palpable". And "PV loss" is noted as "Having PV blood".

JOHNSON: I won't go at this stage to the documents underlying it unless there's a specific request to do so or there's a lack of clarity.

So if we move on to tile number 8, please.

Here we see that Dawn Picken, a registered midwife, made a note relating to [Mother of Baby K] at 11.30 on Monday 15 February; is that right?

TYNDALL: Yes, that's correct.

JOHNSON: What does it say please?

TYNDALL: "Assessment as per telephone sheet. Palpable abdominal tightenings. PV speculum with consent. CxOS not visualised. Fresh mucousy blood seen. HVS."

And that's a tick:

"For analgesia and review findings explained."

JOHNSON: Half an hour later, tile 9, please. The medical staff.

We have a Dr George, who's a senior house officer, and Dr Sara Brigham, who's the obstetric consultant. Could you take us through the records there, please?

TYNDALL: I'll read it out. I'm not 100% certain on what some of the abbreviations mean.

It is written by Dr H George, it says:

"RH positive. BMI 22. FMU scans: resolving cystic hygroma and resolving effusions. PRIMIP [which I think is premature rupture] 25/40. PV bleed plus mucus. Abdominal pain feels tightening. Started this evening every 10 minutes, now worse. PV bleed plus mucus."

Then there's a little zero symbol that you can see on the raw notes:

"LUTS BO okay. FM good. No fever. No nausea. No vomiting."

JOHNSON: I think we've heard before, haven't we, that that circle in medical notes tends to mean "no"?

TYNDALL: No. Yes. So:

"No PMH. No DH. No allergies. Smears up to date."

And in brackets there's an N which usually stands for normal:

"Nil gynae/surgical Hx".

JOHNSON: Hx, history; is that right?

TYNDALL: Yes.

"O/E [which normally stands for on examination]; BP, heart rate, temperature, urine. FHR auscultated."

Then I have put in brackets theres:

"Drawing on notes."

If you were to go behind it, you'll see there's a drawing on the notes, which is impossible for me to replicate in a typed format:

"Soft. Feels tense palpable tightening x1. Felt FM [foetal movements] [tick]. Speculum, consent [tick] repeated by myself. Chaperone Alex SHO. Difficulty visualising OS. Appears dilated. PV clots. No active bleeding seen. VE with consent."

I think that's probably vaginal examination:

"Cervix 2 centimetres dilated. 0.5 centimetres long. Bulging forewaters felt. Actim Partus positive. Impression: preterm labour. D/W [which means 'discussion with'] Dr Brigham and R/V [which normally means 'reviewed'] by Dr Brigham.

"Plan: (1) Analgesia. (2) Steroids x2, dexamethasone. (3) Indomethacin PR as per protocol. (4) For MgSO4 protocol. (5) HVS [tick]. (6) For transfer out. Reg to discuss with cot bureau."

JOHNSON: Yes, right, okay.

MgSO4 is a chemical symbol, isn't it --

TYNDALL: Yes.

JOHNSON: -- magnesium sulphate, I think, or something like that.

10, please. Tile 10.

TYNDALL: This is timed at 12.30, but the actual period of the notes covers a period -- continuous period, detailing observations and the like from 12.30 to 13.45.

JOHNSON: Yes. So if we just look at this printed document and we look at lines 9, 10, 11, 13 and 14 -- and 13, sorry, is that a continuous part of the notes, but during the notes different times are appearing in the left-hand column?

TYNDALL: The entry in line 10 is written by the registered midwife, Kathie Grimes --

JOHNSON: I see, right.

TYNDALL: -- and that's her observations during that period.

Entry 11 is written by Dr Brigham and her observations during a ten-minute period.

JOHNSON: Thank you. Just continuing then with tile 10, could you take us through what is written there?

TYNDALL: Is says:

"Transferred to CLS [which I believe is central labour suite]. Dexamethasone given at 12.40. Indomethacin PR given at 12.47. Codeine plus paracetamol, 60 micrograms(?) plus 1g respectively given at 12.40. IV access with consent. MgSO4 loading dose 4mg equals 8ml given at 13.30. Maintenance dose 1ml/hour given as per infusion. Started 13.45.

"FHHR [I think that might be foetal heart rate] 145PM. Feeling flushed."

JOHNSON: That's 145 per minute, isn't it, not 13.45?

TYNDALL: Yes:

"Feeling flushed. Fan in situ. Obs sats: see HDV chart. Seen by paediatric team. Full debrief given. Explained re need for in utero transfer. Blood sent: FBC [which is full background count], U+Es [which is a different blood test] and CRP [tick]. MRSA swabs sent. Mum, partner and sister present and debriefed. Experiencing some discomfort but less frequent and shorter. NNU aware. Dr Brigham..."

And then there's a down arrow on the notes which means her notes are underneath this set of notes.

JOHNSON: Yes.

TYNDALL: And it just says:

"Brigham (consultant): see previous notes."

JOHNSON: Yes. Then do we come to Dr Brigham's notes at tile 11?

TYNDALL: Yes. So Dr Brigham has written:

"PRIMIP. 24 plus 6/40."

So that's 24 weeks plus 6 days out of 40:

"Admitted..."

That C with a little symbol next to it means "with".

That comes up quite a lot in the medical notes.

JOHNSON: If we look at that it may help because the typescript doesn't really do it justice, does it?

TYNDALL: No.

JOHNSON: Scroll up a bit, thank you. We see a lot of the little circles meaning "no"; is that right?

TYNDALL: Yes, the actual bit is at the top.

JOHNSON: We see:

"PRIMIP [as you said] 25 plus 6 over 40."

TYNDALL: Yes.

JOHNSON: Then:

"Admitted..."

And there's a line over a c and that's medical shorthand for "with"?

TYNDALL: Yes.

JOHNSON: So as we said, that doesn't really translate very well to the typescript that we see but that in effect is the best you can do with the tools that are available.

TYNDALL: Yes.

JOHNSON: Rather than dealing with the handwriting, if we just go back a level, please. Thank you.

TYNDALL: So:

"Admitted [with] colicky lower abdo pain today. Bloody show. No SROM [which I believe is spontaneous rupture of membranes]. Zero diarrhoea, zero vomiting, zero urinary symptoms. FMF [tick]. On examination: well, obs stable."

Then there's a couple of -- a word I can't read:

"SFU [equals] [and again a word I can't read]."

There's a drawing on the notes.

JOHNSON: Which we saw in passing as we scrolled up and down the page. Yes.

TYNDALL: "Contracting 3 in 10. Note VE. 2 centimetres dilated. Positive Actim Partus."

Then there's a little triangle symbol which I'm not 100% sure what it means:

"Preterm labour. Long discussion. Explained in preterm labour. Discussed rights. Will need transfer to level 3 NNU. Plan: tocolytics, steroids, MGS04, IUT, HVS. Note: baby had cystic hygroma and pleural effusion, now resolved on USS..."

Which I think is ultrasound scan --

JOHNSON: Yes.

TYNDALL: "... 12/1/16."

MR JUSTICE GOSS: I think just going back to the "[triangle] preterm labour", if you look at the originals, the triangle with preterm labour against it, and then a new line with "long discussion", does the triangle mean diagnosis?

TYNDALL: I'm not -- something, yes.

MR JOHNSON: We've been down this road.

MR JUSTICE GOSS: We've been down this road. Because we will see --

TYNDALL: Yes.

MR JOHNSON: It's a bit unfair on you, Mrs Tyndall. It's the nature of things that we need to deal with this document before we get to the witnesses. If there are any uncertainties they will be resolved, insofar as we can, with the people that actually wrote this material.

So tile 12, please. Is this a note from the cot bureau?

TYNDALL: Yes, this is a form from the cot bureau detailing the contact that they had with Dr Brigham?

JOHNSON: Yes, and so does it mention the fact that the referring unit is Chester, in other words the Countess of Chester Hospital, Dr Sara Brigham, who we saw was the author of the previous tile's notes, the confirmed hospital, in other words

the destination, were there to be a transfer, was going to be Preston --

TYNDALL: Yes.

JOHNSON: -- in Lancashire. But:

"Non-completion reason: cancelled, patient unstable to transfer."

TYNDALL: Yes.

JOHNSON: And the time at which that decision was taken, clinically, that day was at 14.31, which we can see is the time that has been superimposed in the schedule above and on the previous -- as we come back on this tile out of the documents, that's what we'll see, isn't it?

TYNDALL: Yes.

JOHNSON: Thank you. So tile 13, please. Again back to the clinical notes relating to [Baby K]'s mum [Mother of Baby K]. To give you a break, does this say:

"Vaginal examination table completed."

And there's more detail in the original notes; is that right?

TYNDALL: Yes.

JOHNSON: Which is why you have put in italic script "See notes for details":

"Reg [which is probably registrar] re-examined. To continue. In agreement. Plan discussed with Dr Bringham. Decision made not to transfer. Neonatal unit here aware. Patient debriefed. Room prepared."

TYNDALL: Yes.

JOHNSON: That's all noted up by Kathie Grimes, who was one of the midwives at the hospital?

TYNDALL: Yes.

JOHNSON: Thank you. Moving on to tile 14. Again in [Mother of Baby K]'s notes, this isn't actually in the notes, but have you summarised the contents of the notes for the period between 15.00 hours on the 15th and 09.20 on the morning of 16 February?

TYNDALL: Yes. It's just to show she continues to receive care at the Countess of Chester.

JOHNSON: It may be that you're the most convenient person to ask this question: it's right, isn't it, that all the notes have been disclosed as part of the pre-trial process?

TYNDALL: Yes.

JOHNSON: So if there's anything in there that interests anybody else, it can be dealt with?

TYNDALL: Yes.

JOHNSON: Thank you. Then we have your cut, in effect, between 14 and 15 in the printed version, albeit not in the digital version, and we go next to tile 15.

Is this a text message from Lucy Letby to another one of the nurses on the unit called [Nurse E]?

TYNDALL: Yes.

JOHNSON: Would you read it, please?

TYNDALL: "Unit is a hive of activity in preparation for the big bods lol x."

JOHNSON: Yes. And that was sent at 08.14 as a text message; is that correct?

TYNDALL: Yes.

JOHNSON: At tile 16 did [Nurse E] respond, about 48 minutes later at 9.02, saying:

"God, is it? Is Eirian being a nightmare? Lol. Would be so funny if they bypassed it. Did the 24-weeker come?"

TYNDALL: Yes.

JOHNSON: And have you then put in brackets in italics:

"Rest of the message of a social nature"?

TYNDALL: Yes.

JOHNSON: It's probably completely obvious to everybody but does that mean, for the sake of the record, there is more in this message but it has nothing to do with this case?

TYNDALL: Yes.

JOHNSON: Again, the whole message has been disclosed to the defence, it's just not deemed to be relevant to the issues in the case?

TYNDALL: Yes.

JOHNSON: Thank you. Tile 17, please. Could you deal with the information on tile 17?

TYNDALL: This is a note made in [Mother of Baby K]'s medical notes at 09.20 and this on the 16th and this is -- it says:

"WR [which stands for 'ward round'] with Dr Brigham SPR [which is one of the doctor's designations] Malhasis STL [I can't read the name of that person] SL Sales."

The content of the note reads:

"PRIMIP 25/40 preterm labour. Last examined 23.00 last night. 6 centimetres bulging membranes. MgSO₄ and second steroid administered 01.00 this AM. On nifedipine. Intermittent auscultation currently [then there's an arrow]."

Then it says:

"Parents still happy with this. Talked through decision re delivery. Still think vaginal delivery. They are thinking of future pregnancies and do not want complication from the classical C/S [which is caesarean section]. Happy for hourly auscultation when contractions..."

And there are two arrows which I presume means increase:

"Aware paediatrician will be present at delivery. Aware that with intermittent auscultation baby may not survive the labour. Understand. Do not want C/S if foetal distress, cord prolapse, et cetera. Plan: stop nifedipine. Stop MgSO₄ and await events."

JOHNSON: This is the third and fourth times I think we've come across the word auscultation. If anybody wants to know what it means it's in the glossary behind divider 2 on the second page and it means:

"The action of listening to sounds from the heart, lungs or other organs, typically with a stethoscope, as part of medical diagnosis or examination."

Tile 18, please. We're about to see the second reference to someone called Eirian. Was that a lady called Eirian Powell?

TYNDALL: Yes.

JOHNSON: Who was one of the ward managers?

TYNDALL: Yes.

JOHNSON: So this is a text from Lucy Letby to [Nurse E], sent on Tuesday 16 February at 17.26, and would you read it, please?

TYNDALL: "Eirian was running round locking all the cupboards, putting bags away, tidying surfaces et cetera lol. No, it didn't come but 6 centimetres, so wouldn't transfer out. Imagine it'll have delivered today."

Then the rest of the message is of a social nature.

JOHNSON: If people have the paper version out "didn't come" may be a reference to the incoming message from [Nurse E] that morning at 09.02, which was the question, "Did the 24-weeker come?"

TYNDALL: Yes.

JOHNSON: Tile 19, please. Was there then a series of messages between Lucy Letby, [Nurse E] and another nurse called Jennifer Jones-Key, all of a social nature?

TYNDALL: Yes.

JOHNSON: Tile 20, please.

TYNDALL: So Lucy Letby sends a message to [Nurse E] at 17.45 that reads:

"Oh, Ailsa was handing over to me last night. Full of cold, look dreadful and has gunky eyes for 2 days which she thinks is conjunctivitis but still came into work. I hope I haven't caught anything."

And then an emoji.

JOHNSON: Is Ailsa one of the other nurses on the unit?

TYNDALL: Yes.

JOHNSON: Is that followed, a minute later, by a social message sent by Lucy Letby to [Nurse E]?

TYNDALL: Yes.

JOHNSON: And then a message a minute after that at tile 22 from [Nurse E] to Lucy Letby saying:

"She not got drops for eyes? Silly girl. My sore throat is slightly better today, think gargling with Corsodyl helping [then an emoji]. Jolly good. Lol. X."

TYNDALL: Yes.

JOHNSON: Followed by a response 2 minutes later at tile 23 from Lucy Letby?

TYNDALL: Yes:

"No, she hadn't done anything apart from moan by the sounds of it Lol. Laura told her to go to doctor or stay at home and she swapped a shift, so not in until Thursday when should have been back today. Told her to take some chloramphenicol and saline home. Wonder why throat bad for so long."

JOHNSON: Then a minute later, we find out who Ailsa is because we see that Lucy Letby sends a message to Ailsa Simpson.

TYNDALL: Yes, that reads:

"Hey. Hope you've had a day in bed and are feeling brighter."

JOHNSON: Does [Nurse E] then respond a minute after that at tile 25 saying:

"Think just bit rundown and been bit hectic plus weather keep changing not helped. Couple of babies had gunky eyes last week, wonder if she got off them."

TYNDALL: Yes.

JOHNSON: And then there's an emoji, a masked emoji, and a kiss.

Then 26, at 17.52, Lucy Letby to [Nurse E], please?

TYNDALL: "No, and loads of it going around. Hmm, maybe."

And then the masked face emoji.

JOHNSON: Yes. Was that followed by more social messaging at tile 27?

TYNDALL: Yes.

JOHNSON: At tile 28, an incoming message from Ailsa Simpson, who was the nurse that had been ill, to Lucy Letby saying:

"Aw, bless you for thinking of me. Thank you [and a smiley]. I'm feeling a bit brighter, thank you, and a day in bed is just what I needed. Eyes still sore but the saline and eye drops have def helped. Hope I didn't forget to hand anything over to you last night and hope last night went okay and 24-weeker didn't keep you all too busy. Hope you slept well today."

TYNDALL: Yes.

JOHNSON: Tile 29, please, about 7: minutes later?

TYNDALL: Yes. Lucy Letby replies:

"Oh, that's good. Hopefully no more gunky eyes. No, you hadn't forgotten anything and they both did well overnight [smiley emoji]. 24-weeker wanted NVD so was 6 centimetres when we left this morning. Male C was vented and high BMs so kept us busy. Glad you are feeling better."

In the original message there's the actual name of the baby but it's taken out.

JOHNSON: Yes, male C is a reference to one of the children in the unit and the correct name of that child was in the message -
-

TYNDALL: Yes.

JOHNSON: -- but has been replaced by you for privacy reasons?

TYNDALL: Yes.

JOHNSON: Just dealing with acronyms, NVD, normal vaginal delivery, possibly?

TYNDALL: Yes.

JOHNSON: And high BMs is high blood sugar; is that right?

TYNDALL: Yes.

JOHNSON: So tile 30, from Jennifer Jones-Key to Lucy Letby at 18.34:

"We haven't had chance. Mad day."

Then at the same time, or not literally the same time, but with the same minute, is there a WhatsApp message going the other way from Lucy Letby to Jennifer Jones-Key?

TYNDALL: Yes, saying:

"Oh dear. 24-weeker come?"

JOHNSON: That's then followed by a series of social messages between 18.37 and 18.45 involving Lucy Letby, Penelope Swain and [Nurse E].

TYNDALL: Yes.

JOHNSON: And then at tile 33, 18.52, Jennifer Jones-Key, who had previously been sent the message, "Oh dear, did 24-weeker come", replied saying:

"No, has 3 other admissions and babies screened."

TYNDALL: Yes.

JOHNSON: Did Lucy Letby respond to that a minute later?

TYNDALL: Yes, with, "Great lol".

JOHNSON: Then finally in this sequence at tile 35, 19.08, did Ailsa Simpson send a message -- the following message to Lucy Letby:

"Aw, glad they were both okay for you. It's a shame that mum wasn't stable enough to be transferred out [and then a sad emoji]. Aw, poor little C [which is the same child and you have put the name has been redacted]. He really is having a rough time [tearful emoji]. Hope he sorts himself out soon. Hope the rest of your nights go okay and fingers crossed. I'll see you Thursday morn xx."

TYNDALL: Yes.

JOHNSON: Do we come next to the nursing handover, which is tile 36?

TYNDALL: Yes.

JOHNSON: So the shift changes, certainly so far as this case is concerned, happened at between 7.30 am and 8 am and 7.30 pm and 8 pm?

TYNDALL: Yes.

JOHNSON: So the standard shift being worked by the nursing staff is a twelve-hour shift?

TYNDALL: Yes.

JOHNSON: And that's the time of the handover. Is the system that you have recorded all the staff that were on duty that potentially had responsibilities in the neonatal unit at the time of the events that are shown in the schedule?

TYNDALL: Yes.

JOHNSON: And the paediatrician of the week was Dr Gibbs, from whom we've heard, and we know from his evidence didn't actually have anything directly to do with [Baby K]. But the on-call consultant between the hours of 4.30 pm and 8.30 am was Dr Ravi Jayaram?

TYNDALL: Yes.

JOHNSON: The night SHO was Dr Laura Lo?

TYNDALL: Yes.

JOHNSON: But also in the notes appears the name of Dr James Smith?

TYNDALL: Yes.

JOHNSON: And we know, and we'll hear from him, and know that he was a registrar at the time. Then the nursing staff -- there are two boxes here: one says "registered nursing staff" and the other says "others". Is there a distinction between nurses who have got degrees, passed examinations, who are known as the registered staff, and other nurses, sometimes referred to as auxiliary nurses or, more recently in this context, nursery nurses?

TYNDALL: Yes.

JOHNSON: So far as the registered staff were concerned, the shift leader was Caroline Oakley?

TYNDALL: Yes.

JOHNSON: Then in bold type you've put designated nurse Joanne Williams. When you say designated in this context, is that in respect of [Baby K]?

TYNDALL: Yes, she will become her designated nurse.

JOHNSON: Exactly. So these nurses in this box, indeed including Valerie Thomas, were all designated for a child in the unit --

TYNDALL: Yes.

JOHNSON: -- at the time but the reason you've put Joanne Williams in bold is because she was the designated nurse for the child with whom we are directly concerned?

TYNDALL: Yes.

JOHNSON: The other registered nurses were Lucy Letby and Sophie Ellis?

TYNDALL: Yes.

JOHNSON: Then the nursery nurse was Valerie Thomas?

TYNDALL: Yes.

JOHNSON: We see below the floor plan of the unit, or part of the floor plan of the unit, that shows the locations of the four nurseries?

TYNDALL: Yes.

JOHNSON: In nursery 1, two children, KC and [redacted], both in respect of whom Caroline Oakley was the registered nurse for both?

TYNDALL: Yes.

JOHNSON: Nursery 2, baby RN, and his or her designated nurse was Joanne Williams?

TYNDALL: Yes.

JOHNSON: For babies AR and GT, the designated nurse was Lucy Letby?

TYNDALL: Yes.

JOHNSON: And then in nurseries 3 and 4, six other children divided between Sophie Ellis and Valerie Thomas?

TYNDALL: Yes.

JOHNSON: The bottom right-hand corner, TCU, transitional care unit; is that right?

TYNDALL: I believe so, yes.

JOHNSON: And just to remind the jury, if they want to write on, it is up to them, but if they want to write on this they could write "See agreed fact 5" because we read that to you this

morning, explaining to you that there are four transitional care cots located on the post-natal ward where the baby would receive some neonatal nursing care and the mother would receive midwifery care in the same area. So that child wasn't in the unit at all, but was in the post-natal ward.

TYNDALL: Yes.

JOHNSON: But insofar as there was direct nursing responsibility for the child, that was being discharged by Valerie Thomas?

TYNDALL: Yes.

JOHNSON: Line 37 then covers the dates 15 February to 16 February. If we click on it, is this again in effect a summary?

TYNDALL: Yes, it's just to acknowledge the fact that [Mother of Baby K]'s medical notes show she continued to receive care from the last entry at 09.20 to the one below it, which is at 01.20.

JOHNSON: Thank you. At tile 38, please, the source of this is still the clinical notes of [Mother of Baby K]?

TYNDALL: Yes.

JOHNSON: Then at 01.20, in the early hours of the morning of Wednesday 17 February, do these notes show that [Mother of Baby K] was:

"Now in pain, pressure down below. VE [which may be vaginal examination]: fully dilated, bulging membranes. TAUSS breech, FH [tick]. Discussed with Dr Brigham should we AROM?"

I think that's artificially rupture the membranes, I think, to expedite delivery:

"Suggest conservative management. Allow to actively push. Doesn't need repeat MgSO4 dose."

So that's noted by Dr Ford; is that right?

TYNDALL: Yes.

JOHNSON: Then at tile 39 there is data from the door swipe database at 01.56, which suggests that Lucy Letby was passing from the neonatal unit to the labour ward.

If we just go to the document underlying it, please.

It's towards the bottom of the page, I think, Mr Murphy.

Thank you.

01.56. That's it. We can see that this particular door, it's the fourth column headed "Where", it says:

"Maternity neonatal to labour ward in."

That suggests a passage from the NNU to the labour ward, doesn't it?

TYNDALL: But it's not.

JOHNSON: It's not, yes, absolutely. Now, the jury will hear evidence about this. What you have produced in the schedule is exactly what the data says?

TYNDALL: Yes.

JOHNSON: But there is other evidence that proves that this door had been mislabelled in the database?

TYNDALL: Yes.

JOHNSON: Or the door isn't mislabelled, the direction is mislabelled?

TYNDALL: Yes.

JOHNSON: Yes. So this is in fact the opposite of what it says?

TYNDALL: Yes. It's from the labour ward into the neonatal unit.

JOHNSON: Yes, thank you.

So line 40 next or tile 40. Do we then have a chart which appears by clicking on the yellow rectangle at the bottom?

TYNDALL: Yes.

JOHNSON: We'll run through this. This chart appears again and again through the sequence, doesn't it?

TYNDALL: Yes.

JOHNSON: It appears on different tiles because what you have done on each occasion is isolate the time for the tile; is that right?

TYNDALL: Yes.

JOHNSON: But the underlying data source is the same chart?

TYNDALL: Yes.

JOHNSON: And as a matter of fact, the jury have the charts in paper form behind -- this one in particular is behind, if you'd like to look at it, ladies and gentlemen, divider 6E. If you turn the chart into landscape rather than portrait, you can see that what you have on the screen is in fact half of the A4 page with the other half below it. If we put them side by side it would make it much smaller to read on the screen. But as I say, we will return in effect time and time again to these charts; is that right?

TYNDALL: Yes.

JOHNSON: I think I've actually misled you slightly.

MR JUSTICE GOSS: You've taken to us the wrong chart.

MR JOHNSON: I know, I have just realised what we see on the screen is for the baby AR, one of the anonymised babies.

That's why I've made the mistake, I assumed it was [Baby K]'s chart and I'm wrong. It's the baby AR. So you don't actually have this chart reproduced in the hard copies. You'll see a chart exactly like this for [Baby K]; all right? It's too long looking at these documents, they've sent me cross-eyed.

Let's ignore the hard copy for now, that's my mistake, and concentrate on what's on the screen.

At 02.00 hours do we see that an entry was made by Lucy Letby in the chart for the baby AR?

TYNDALL: Yes.

JOHNSON: We know from the previous page on the printed sequence of events that the child AR was in nursery 2?

TYNDALL: Yes.

JOHNSON: At the same time on the next tile, tile 41, do we have observations for that same child?

TYNDALL: Yes.

JOHNSON: This is rather like the hard copy chart we saw this morning when Dr Gibbs was giving evidence. So again, at 2 am. If you go to the bottom you see Lucy Letby's initials running along the bottom there.

Four minutes later, tile 42, please, is there a record of Lucy Letby having co-signed for medication for the child RN with Sophie Ellis?

TYNDALL: Yes.

JOHNSON: The child RN was Joanne Williams' other baby, other than [Baby K], who was the third occupant of nursery 2?

TYNDALL: Yes.

JOHNSON: Tile 43, please. Do we have swipe data for Dr Laura Lo --

TYNDALL: Yes.

JOHNSON: -- at 02.06? Again, this is the door that's the wrong way round?

TYNDALL: Yes, so she's going into the neonatal unit.

JOHNSON: Thank you.

Tile 44, the arrival of Dr Jayaram into the main entrance of the maternity unit --

TYNDALL: Yes.

JOHNSON: -- at 02.06? Followed, within the same minute, through the maternity labour ward doors by the lift?

TYNDALL: Yes.

JOHNSON: And 3 minutes later, by Dr Lo, again going through that wrongly labelled door between the labour ward and the maternity neonatal unit?

TYNDALL: Yes.

JOHNSON: Whilst that was going on, those events over the preceding dozen or so tiles, do we have tile 47, which summarises the position with regard to [Mother of Baby K]?

TYNDALL: Yes, these are her maternity notes showing the care she's receiving and their recollection of the birth of [Baby K].

JOHNSON: Yes. If we just look at the underlying material, please. Just scroll down, Mr Murphy, give us an idea of what it is. I'm not going to go through this, but we can see there's a lot of handwritten notes made by the obstetric staff --

TYNDALL: Yes.

JOHNSON: -- dealing with [Baby K]'s birth; is that right?

TYNDALL: Yes.

JOHNSON: So these are all in [Mother of Baby K]'s notes rather than in [Baby K]'s notes?

TYNDALL: Yes.

JOHNSON: All right, thank you. They will be dealt with by the witnesses, so I'll leave those to one side for now.

Tile 48, please. Does this tile record the time of [Baby K]'s birth at 02.12?

TYNDALL: Yes.

JOHNSON: This is taken from [Baby K]'s notes; is that right?

TYNDALL: Yes.

JOHNSON: Could you take us through what's recorded, please?

TYNDALL: So they've recorded the parents' details of [Mother of Baby K] and [Father of Baby K]. That she was born at 25 plus zero as a vaginal footling breech. She weighed 692 grams. Her condition at birth was:

"Dusky, floppy, no respiratory effort, heart rate of around 60 beats per minute."

And then it records a brief antenatal history, which says:

"[Query] cystic hygroma, resolved spontaneously. IVF. SRON [spontaneous rupture of membrane] at 48 hours."

Then they record [Baby K]'s Apgar scores: 4 at 1 minute, 9 at 5 minutes, and 9 at 10 minutes.

JOHNSON: Thank you. Tile 49 next, please. Are these Dr Jayaram's notes?

TYNDALL: Yes, that were written at 04.50.

JOHNSON: Just because this is the first time, and Dr Jayaram will be an important witness, so if we can go straight to the original, first of all, please, and come back to this.

Not necessarily the easiest handwriting to decipher.

What we see there is what the jury will learn is the fairly distinctive manuscript of Dr Jayaram. On the left-hand column is the date and time, so we see:

"17/2/16, written at 04.50."

TYNDALL: Yes.

JOHNSON: Is that right? And if we just scroll down a bit, please. We can see there's all sorts of material recorded there, which continues -- I'm not sure whether it does on this slide, but as we will see in due course it continues on further pages as well; is that right?

TYNDALL: Yes. So I've tried to place the entries at the relevant chronological points in the sequence where I'm able to and the same with the nursing notes.

JOHNSON: Okay. If we look at that page as it appears on the screen and we count up about seven lines we can see Dr Jayaram's written "at" and then he has put a time and then crossed it through and then:

"03.50. Sudden deterioration. O2 sats dropped to about 40%."

TYNDALL: Yes.

JOHNSON: So that entry, albeit it's in this single running note, you will have put into the sequence at 03.50; is that right?

TYNDALL: Yes.

JOHNSON: So that gives us an idea of how you have approached the core material or the source material. If we can go back to your typescript, please. This is -- out of that long note, you have simply transposed the part from the birth, is that right --

TYNDALL: Yes.

JOHNSON: -- or the part that refers to the birth?

TYNDALL: Yes.

JOHNSON: Could you take us through that please?

TYNDALL: "25/40 gestation. Mum 33 years. No previous live births. IVF baby. SRM around 48 hours pre-birth. Received steroids x2. No fevers. Spontaneous labour. Footling breech delivery. Born 02.12 hours. Birth weight 692 grams. Resus by Dr James Smith, paediatric registrar. Initially dusky, floppy, no

respiratory effort. Heart rate around 60. Inflation breaths x2 cycles leading to IPPV. Heart rate [over] 100..."

I always get those mixed up.

MR JUSTICE GOSS: "Greater than" that way round. The other way round is "less than".

TYNDALL: "... at 2 minutes 30 seconds. Gasps from 3 minutes.

Spontaneous respirations at around 4 minutes. O2 sats greater than 85% at 6 minutes."

MR JOHNSON: Thank you.

Tile 50, please. This is a couple of minutes after [Baby K] was born. Is there a digital prescription for which the co-signer was Lucy Letby?

TYNDALL: Yes.

JOHNSON: And that relates to the child RN?

TYNDALL: Yes.

JOHNSON: And the child who we've come across before as being the other child for whom Joanne Williams had responsibility in nursery 2?

TYNDALL: Yes.

JOHNSON: Tile 51, please, 02.32. The source material for this again is that distinctive handwritten note that we glanced at earlier; is that right?

TYNDALL: Yes.

JOHNSON: Have you put this particular entry in 20 minutes after the birth time of [Baby K] at 02.12 because that, in effect, is what the note itself says? It doesn't give a time as such, but it says:

"Successfully intubated at about 20 minutes..."

TYNDALL: Yes.

JOHNSON: "... at third attempt by Dr Smith. Size 2.0, secured at 6.5 centimetres at the lips. Transferred to NNU."

TYNDALL: Yes.

JOHNSON: Thank you. Tile 52, please. Then a nursing note on the computer again for the -- for a different child this time, child AR; is that right?

TYNDALL: Yes.

JOHNSON: Again made by Lucy Letby. And the child AR, of course, is one of the two for whom she was the designated nurse in nursery 2?

TYNDALL: Yes.

JOHNSON: Thank you.

Tile 53, please. Does this tile record the time at which [Baby K] was transferred from the delivery unit to the neonatal unit?

TYNDALL: Yes.

JOHNSON: Could you tell us what it says, please?

TYNDALL: So it says:

"Admission reason: admitted due to extreme prematurity requiring intubation and transfer to tertiary unit. Parents interviewed by J Williams [that's Joanne Williams] and R Jayaram [that's Dr Jayaram]."

This is taken from a paper record and then the computer -- she's admitted on the computer system at 06.04 by Lucy Letby.

They record her observations, so her temperature and the like, on that form.

JOHNSON: Okay. So there are two, on the face of it, sources of information for this; is that right?

TYNDALL: Yes.

JOHNSON: The first is a handwritten form?

TYNDALL: Yes.

JOHNSON: Then does it come to this, that the data, the information on the handwritten form, is directly transposed on to the computer system?

TYNDALL: I believe so.

JOHNSON: And the computer system records the time at which the record is opened and closed?

TYNDALL: Yes.

JOHNSON: Whilst it wasn't Lucy Letby who filled in the handwritten form, she was the person that filled in the admission data on the computer?

TYNDALL: Yes.

JOHNSON: And the computer system records that she began that exercise at 06.04?

TYNDALL: Yes.

JOHNSON: Thank you. We'll come to that in due course.

Next tile 54, please. Is this taken again from Dr Jayaram's notes?

TYNDALL: I believe it's taken from the admission form.

JOHNSON: Right, okay. What does it say?

TYNDALL: It says:

"Discussed with mum and dad. Preterm but stable. Will need surfactant, IV lines, ventilation, antibiotics, and transfer to tertiary unit."

JOHNSON: Thank you. Tile 55. I think this one is from those other notes of Dr Jayaram; is that right?

TYNDALL: Yes.

JOHNSON: What has Dr Jayaram written in [Baby K]'s notes?

TYNDALL: He's written that:

"On arrival V, [which normally stands for ventilation] 21/5 T in 0.4 FiO2 60%. Good chest wall movement. Good air entry. Venous gas pH, 7.23. PCO2, 7. HCO3, 23. Lactate, 4."

JOHNSON: At tile 56 is some more swipe data?

TYNDALL: Yes.

JOHNSON: Again from the door that has been mislabelled as to direction --

TYNDALL: Yes.

JOHNSON: -- recording the passing through that door of Dr Lo at 02.43?

TYNDALL: Yes.

JOHNSON: Thank you. Tile 57, please. Again is this taken from Dr Jayaram's long note written later that morning?

TYNDALL: Yes.

JOHNSON: Does it record the fact that at 02.45 [Baby K] was given surfactant?

TYNDALL: At 2.45, yes.

JOHNSON: And FiO2 does that mean fractional oxygen?

TYNDALL: I'm not sure.

JOHNSON: I'll deal with that with him.

Tile 58, please. 02.45. Are these observations taken of [Baby K]?

TYNDALL: Yes.

JOHNSON: It's her heart rate, her respiratory rate and her temperature that we see on the form that was shown to Dr Gibbs earlier, I think. Is it the first column in that pre-printed but handwritten form?

TYNDALL: Yes.

JOHNSON: So at the top we see the heart rate; is that right?

TYNDALL: Yes.

JOHNSON: Next down, we see respirations, in other words breaths per minute?

TYNDALL: Yes.

JOHNSON: We'll be told what that cross in a circle actually means later by one of the witnesses.

Temperature is next; is that right?

TYNDALL: Yes.

JOHNSON: Underneath that, please, "humidity" is that?

TYNDALL: Yes. I think that's cot details, isn't it?

JOHNSON: Yes. Cot temperature or incubator temperature. Then handwritten is "humidity", which, as we saw on the ventilator explanation video, is something that can be controlled by the ventilator. SaO2 is oxygen saturations; is that right?

TYNDALL: I don't know.

JOHNSON: O2, oxygen?

TYNDALL: Yes.

JOHNSON: Then blood pressure, 50/37, I think?

TYNDALL: Yes.

JOHNSON: Then mean, which is the mid-point between 50 and 37?

TYNDALL: Yes.

JOHNSON: Then at the bottom a space for initials but no initials?

TYNDALL: No.

JOHNSON: Thank you.

If we could return to the carousel, please -- that was tile 58 -
- and go to tile 59. Do we see at 02.50 that Lucy Letby was making an entry on the nursing note entry on the computer for the baby AR?

TYNDALL: Yes, that's what time she finishes writing the nursing note.

JOHNSON: Yes. If we go to that, to the note, just so that we can see how you get that time. It says:

"Patient notes. Nurse notes. Create 17/2/16."

So created at 02.36; is that right?

TYNDALL: Yes.

JOHNSON: Then "LL", Lucy Letby, and then a further "17/2/16" and a closed time of 02.50; is that right?

TYNDALL: Yes.

JOHNSON: That's why you have put it in at 02.50?

TYNDALL: Yes.

JOHNSON: It's the first real one we've seen of this in the evidence. We can see the sort of information that was being recorded albeit it's not for [Baby K]:

"Written for care given from 20.00 hours to present. Emergency equipment checked. Fluid calculated. Austin nursed in an incubator. Observations within normal range. Respiratory rate more settled than previous shift. Remains on CPAP. PEEP 4 to 5 centimetres in air. Weaned for 50 minutes. Placed back on following x2 apnoea brady desat."

Then more information relating to a glucose line that was in place; is that right?

TYNDALL: Yes.

JOHNSON: Thank you. At tiles 60 and 61 were other observations recorded for this child AR?

TYNDALL: Yes.

JOHNSON: I don't think we need to go to them, they're signed for or initialled by Lucy Letby at 03.00 hours?

TYNDALL: Yes.

JOHNSON: At tile 62, please. Is this the prescription for surfactant given to [Baby K] at 02.45?

TYNDALL: Yes, it is what we -- well, it's called an electronic prescription, so it's the computer record of the medication.

JOHNSON: Yes. Thank you. At tile 63, again relating to [Baby K], is this another prescription, this time for a liquid which was - feed which was 10% dextrose; is that right?

TYNDALL: Yes.

JOHNSON: I think Dr Gibbs told us about this earlier, being administered at a rate of 1.7ml per hour.

TYNDALL: Yes.

JOHNSON: Tile 64, please, Mr Murphy. Is this a nursing note entry made by Lucy Letby for the child GT?

TYNDALL: Yes. This is the start time of it and the end time is 2 minutes later.

JOHNSON: GT was the other child, other than AR, for whom she was the designated nurse in nursery 2?

TYNDALL: Yes.

JOHNSON: Thank you. Tile 65, please. This is the first time we've come across this sort of a document, a blood gas record. As part of the walk-through of the neonatal unit, my Lord, we saw the video where the blood gas room was or where the machine was.

This is a record of the readings that the machine provided from a blood sample taken from [Baby K]; is that right?

TYNDALL: Yes.

JOHNSON: It's timed by the machine, is it, or by the record as 03.03?

TYNDALL: On the record it's 03.03.

JOHNSON: Thank you. Tile 66, please. Is this the nursing note made by Joanne Williams for [Baby K]?

TYNDALL: Yes, but like Dr Jayaram's notes it's written later on.

These are the details that I have put in at this point as [Baby K]'s situation around that time.

JOHNSON: Yes. So can you tell us what Nurse Joanne Williams had recorded, please?

TYNDALL: She's recorded:

"Baby girl born at 25 plus 1 gestation. Footling breech delivery. Baby born in fair condition. Please see medical notes for full resus details. Intubated at approximately 12 minutes of age with size 2 ETT. Curosurf given 120mg. Brought through to unit and placed in humidified incubator. Weight 692 grams. Commenced SIMV 21/5, rate 50, in 50% O2. High leak noted."

JOHNSON: Thank you. We'll have all that information interpreted in due course, but for now can we move on to tile 67, please. Is this an entry taken from the child GT's records, showing that Lucy Letby, at 03.04, was making an entry on the computer?

TYNDALL: Yes.

JOHNSON: And the next tile is more notes made at the same time in respect of the same child --

TYNDALL: Yes.

JOHNSON: -- by Lucy Letby?

TYNDALL: Yes.

JOHNSON: At tile 69 do we have door swipe data relating to Dr Jayaram at 03.06, showing that else -- this again is that misnamed door or at least the direction is misnamed -- coming into the neonatal unit?

TYNDALL: Yes.

JOHNSON: Tile 70, please, 03.09. Lucy Letby making a nursing note on the computer relating to the child GT?

TYNDALL: Yes.

JOHNSON: Followed a minute later, at tile 71, by a note relating to the other child, or her other child, in nursery 2, AR?

TYNDALL: Yes.

JOHNSON: Tile 72, door swipe data relating to Dr Lo on the maternity ward?

TYNDALL: Yes.

JOHNSON: Then Dr Lo's passage through an internal door in the maternity ward within the same minute and then into the neonatal -- sorry, then Joanne Williams into the neonatal unit at 03.11?

TYNDALL: Yes.

JOHNSON: Tile 75, please. At 03.15 is there a record made by the transport service concerning communications they were having with Dr Jayaram relating to [Baby K]?

TYNDALL: Yes.

JOHNSON: Can you tell us what is noted?

TYNDALL: They've noted:

"Name of person calling: Jayaram, Ravi. Designation: paediatric consultant. Referring hospital: COC [which is the Countess of Chester]. Accepting hospital: Arrowe Park. Reason for transfer: extreme preterm. Significant obstetric history: SROM for 48 hours, steroids x2 doses. Resuscitation measures/current

problems: inflation x2. IPPV till intubated at 18-20 minutes of life. Surfactant at 35 minutes of age. Breech presentation."

JOHNSON: Thank you. Just to give us an idea of the source of this information, if Mr Murphy would help us by going to the original underneath, please. So what we have here is in effect a running log; is that right?

TYNDALL: Yes, I think...

JOHNSON: Or is this just the single call?

TYNDALL: I can't recall without looking at the whole note.

I think this is the initial call and then the transport team notes start after that.

JOHNSON: Yes. Let's just look through it if we can. I'm not going to read through it because, in effect, you've already done that. If we could keep going, please, Mr Murphy. It's a predetermined list of questions in effect that's filled in by whoever it is that's making the note.

TYNDALL: I think it's whoever has taken the call.

JOHNSON: Yes, thank you. What we will see in a moment, as we move on to further records for the transport team, is there is in effect a chronological running log, all in the same document?

TYNDALL: Yes.

JOHNSON: All right. Thank you. Could we just go back to the carousel, please?

The next one, tile 76, is also a transport team note; is that right?

TYNDALL: Yes, this might be the chronological -- start of the chronological --

JOHNSON: Yes. Let's look at it, please because, again, it may be something that we will look at. Yes, this is what I had in mind. So here we see there is a series of entries that start at 03.15, which corresponds to our tile 76.

TYNDALL: Yes.

JOHNSON: Is that right?

TYNDALL: Yes.

JOHNSON: It records the time of [Baby K]'s birth and we see that four lines down is an entry timed at 03.31.

TYNDALL: Yes.

JOHNSON: Four lines further down, 03.35.

TYNDALL: Yes.

JOHNSON: And as we scroll down the page -- I'm not going to go through each one -- we see more times, 03.41, 05.55, and so on?

TYNDALL: Yes.

JOHNSON: So we will return from time to time to this document as we run through the chronology --

TYNDALL: Yes.

JOHNSON: -- is that right? Thank you.

Tile 77. Is this another computerised medication entry signed and co-signed by Lucy Letby and Caroline Oakley --

TYNDALL: Yes.

JOHNSON: -- relating to the child GT?

TYNDALL: Yes.

JOHNSON: The child GT was one of Lucy Letby's two for whom she was responsible in nursery 2?

TYNDALL: Yes.

JOHNSON: Thank you.

Tile 78, the next one, is more information relating to the same child, signed and co-signed by the same two nurses 4 minutes later?

TYNDALL: Yes.

JOHNSON: Thank you. Do we then have a series of three tiles, 79 through to 81, which deal with Dr James Smith going through various doors, which recorded door swipe data?

TYNDALL: Yes.

JOHNSON: Thank you. Tile 82, please. We're getting to what we suggest is the critical time now.

At tile 82, did Lucy Letby record observations for the baby GT at 03.30 --

TYNDALL: Yes.

JOHNSON: -- both on this tile and then on tile 83, the next tile?

TYNDALL: That's a feed given.

JOHNSON: Yes. She records giving a feed to baby GT. We haven't seen a feeding chart yet, so if we could have a quick look, please, Mr Murphy.

There we see in the third line of the table the time, 03.30:

"Bottle offered. EBM [expressed breast milk]. Amount: 55 [which is 55ml]. Route NG..."

Which is down the nasogastric tube; is that right?

TYNDALL: Yes.

JOHNSON: "PU" is passed urine?

TYNDALL: Yes.

JOHNSON: "BO [bowels open] +"?

TYNDALL: Yes.

JOHNSON: "N/B x2 [ticked]", and then Lucy Letby's initials?

TYNDALL: Yes.

JOHNSON: Thank you. So that's the child GT at tile 83.

Tile 84. So at the same time is Lucy Letby the co-signer with Joanne Williams for morphine, which is one of the controlled drugs that was on the unit?

TYNDALL: Yes. This is taken from what's called the controlled drugs register.

JOHNSON: Yes. I think the jury have seen this during the opening. If we just go to the document itself, please.

Thank you.

"Patient's name" -- and we can see we've blanked out most of the names because they relate to people other than [Baby K]. So we can see that this sheet concerns morphine in 10% glucose syringes. We can see the form itself started on 20 December 2015. If we scroll down, please, that's it, to 17 February at 03.30, we see there are two lines that bear that date and time, the first of which relating to "FI [female infant] [Surname of Baby K]", and is signed by J Williams and co-signed by Lucy Letby in the final or the penultimate column?

TYNDALL: Yes.

JOHNSON: So that's the source of the information?

TYNDALL: Yes.

JOHNSON: Just going back to the previous part of this tile, please, Mr Murphy, can you tell us what all that information comes to, please?

TYNDALL: So I've just transposed that, as you've said, that the morphine is 40 micrograms per millilitre in a 10% glucose syringe. The date and time is 17 February 2016 at 3.30 am. The patient's name is Female Infant [Surname of Baby K]. The amount given, 1 times 50ml. Given by Joanne Williams and witnessed by Lucy Letby.

JOHNSON: Thank you. Tile 85. Are these observations taken of [Baby K] by Nurse Joanne Williams?

TYNDALL: Yes.

JOHNSON: This is what we're going to see here is the same chart that we have seen previously; is that right?

TYNDALL: Yes.

JOHNSON: The previous one was at 02.45. I'm reasonably confident this time that it's behind divider 60 in the hard copy white bundle. We can see there, counting down from the top, second column:

"03.30. Heart rate between 160 and 170. Respirations hovering at about [50 odd]."

Temperature has come down from the previous reading almost to normal, which is denoted by the thick black line. Then the cot incubator temperature, humidity, oxygen saturations, amount of oxygen that's actually being given as a percentage. And no blood pressure reading recorded; is that right?

TYNDALL: Yes.

JOHNSON: Thank you. That's 03.30 for [Baby K]. Are there other readings or data that are recorded for [Baby K] at the same time, 03.30?

TYNDALL: Yes. There's the information on the fluid balance chart and on the intensive care chart, which are the same chart, they're just two different sets of readings that are taken.

JOHNSON: Yes. Let's just look at them on the screen if we can, please. Could you just take us to the underlying documentation, please, Mr Murphy? Is this the document that I mistakenly took us to before?

TYNDALL: Yes. All the readings that are on the left-hand side are what are on tile 87.

JOHNSON: Yes.

TYNDALL: So that's all the ventilator settings. The information that's on the right-hand side is what's labelled as the fluid balance chart information. So that's the readings of any fluid or medication that are detailed on there.

JOHNSON: Yes. Well, again, this information will all be dealt with in some detail with the witnesses, my Lord, so I don't intend to linger over it now.

Could you take us back to the carousel, please, Mr Murphy? Tile 88. I think 87 is just the other side of the chart we looked at before. Tile 88 is a pathology sample that was taken of blood from [Baby K]; is that correct?

TYNDALL: Yes.

JOHNSON: The jury will recall, my Lord, that Dr Gibbs told us earlier that they can't wait for bacterial growth in the lab for 5 days before treating children and so although they were looking for infection and treating for infection, as a matter of fact here we have evidence of the point that there was no infection.

Back to the carousel, please, Mr Murphy, tile 89.

Does this take us, Mrs Tyndall, to more transport team notes?

TYNDALL: Yes. They detail that:

"Called Arrowe Park Hospital NICU [so their neonatal unit] to check for a cot. Spoke to Emma Howard, shift leader. They can

accept baby although they have one doctor on shift as SHO gone home off sick."

JOHNSON: Thank you. This is all activity going on in the background concerning the transfer of [Baby K] to a tertiary unit.

Tile 90, please.

TYNDALL: This reads:

"Informed transport reg for transport Dr R Kettle and she gave me the following message for the Countess of Chester NICU. (1) insert lines, UAC and UVC. (2) X-ray and confirm positions plus ETT. (3) Give antibiotics and vitamin K and then call CMNNTS [which is the transport service I believe] to transfer baby to Arrowe Park."

JOHNSON: Tile 91, please, and 92. Do these relate to the movements of Dr Lo through doors?

TYNDALL: Yes.

JOHNSON: Tile 93. Do we have swipe data for Nurse Caroline Oakley?

TYNDALL: Yes.

JOHNSON: Caroline Oakley, of course, was the nurse who had two children in nursery 1 at the beginning of the shift; is that right?

TYNDALL: Yes.

JOHNSON: She was also the senior nurse on duty, being the shift leader?

TYNDALL: Yes.

JOHNSON: So we have her coming into the neonatal unit at 03.40?

TYNDALL: Yes.

JOHNSON: So it follows that some time before that, she was off the unit or that's an interpretation. At the same time do we have similar information from the same door relating to Valerie Thomas?

TYNDALL: Yes.

JOHNSON: At tile 95, 03.41, did the transport team called Dr Jayaram back with the plan that had been noted in the records 6 minutes earlier at 03.35?

TYNDALL: Yes.

JOHNSON: Do we then have three tiles dealing with -- two of which deal with movements of Dr Lo at 03.42?

TYNDALL: Yes.

JOHNSON: That's tiles 96 and 97. And the third, tile 98, is from the mislabelled door, tile 98, which shows Joanne Williams coming back on to the neonatal unit from the labour ward at 03.47?

TYNDALL: Yes.

MR JOHNSON: My Lord, we now come to the incident itself.

I don't know whether you want me to carry on or take it up on Monday.

MR JUSTICE GOSS: It's probably better to do this in one tranche, isn't it?

MR JOHNSON: I would have thought so. I'm in your Lordship's hands.

MR JUSTICE GOSS: Especially as we're going to have a three-day break now -- three and a half days.

You'll appreciate, there's still quite a lot to go through in relation to these events. We haven't had a break this afternoon and I think that's probably enough. You've had a lot of evidence placed before you this afternoon. We'll just have to break off in the middle of a significant part of the events.

So you've got your non-sitting day sheet, which I hope you'll take with you when you leave today.

Please remember and adhere to your responsibilities as jurors in this case: no talking or communicating in any way with anyone once you have separated. You are not all together and able to speak together effectively from today because I expect you will all drift apart from now on, so to speak, once you have got out of the building.

Please be ready to resume at midday on Monday.

I hope I'll be here by then. I should be. But if I'm not, I'm sorry, it's outside my control largely. Then the rest of next week is a full week, so there are no days off next week. All right?

No research, obviously, about anything or anyone to do with this case by any means whatsoever. Thank you very much. Just leave everything here that isn't personal to you that you want to take home. Thank you.

(In the absence of the jury)

Housekeeping

MR MYERS: My Lord, before we conclude may I just briefly mention the position and where we get to or maybe where we end with the issue of Dr Jayaram. I sent a short note through this morning and I deliberately haven't raised it until now because we've had the flow of evidence. Just to bring the matter to an end, we left it yesterday with the invitation, in effect, extended to the defence to make enquiries of him directly. I have to say, it came as a surprise to me that invitation was extended but I reflected upon it and considered it, and for reasons we've set out, it seems to me to be probably unrealistic for the defence to approach him and inappropriate given the plain nature of the dynamic that exists, and he knows exists, between the defence and Dr Jayaram.

I have set out the detail in the note. Perhaps I should simply say that the position that could entail from defence solicitors speaking with him, asking questions, and then should it be ever an issue, should anything emerge from him in the course of evidence, then having to deal with the provenance and nature of those, is one that could create quite significant difficulties, it may even be associated with some professional vulnerability for my solicitor.

Therefore whatever can or cannot be done with the matter, it's not something we feel we can take further with him. We've thought about that carefully, but I had time to digest the potential ramifications once we'd finished the hearing and that's why I contacted your Lordship's clerk quickly to say that and then followed it with a note. That's where we get to with it, but it seemed right that I mention it now because we concluded with it yesterday and I hadn't formally acknowledged where we'd got to.

MR JUSTICE GOSS: I didn't want to mention it at the start of the proceedings this morning. I was grateful for that. I'm not going to get involved in this issue anymore. I simply say this, that, as I understand it, when all witnesses have been spoken to by

the prosecution, they've been recorded, the conversations that have taken place.

MR MYERS: Yes.

MR JUSTICE GOSS: So that will be a way of obviating any risk of any misunderstanding as to exactly what was said. But it's a matter entirely for you.

MR MYERS: We understand, my Lord.

MR JUSTICE GOSS: I can see it's a delicate decision to make.

MR MYERS: It is. Thank you.

I should add, may we speak to the defendant before she leaves the building? We'd like to speak to Ms Letby, my Lord.

MR JUSTICE GOSS: Yes. Mr Myers will come down for that and see the defendant before she goes.

Thank you very much. 12 o'clock to Monday morning is when the court will be sitting again.

I'm very grateful to Mr Driver for giving me the witness -- will he do the same for Monday so we know where we're going? It's very difficult to estimate.

MR JOHNSON: I think we'll pick up speed now.

MR JUSTICE GOSS: Well, this is obviously important.

MR JOHNSON: Yes, and there's an obvious temptation for all of us that have been down this road before to make assumptions about what the jury actually understand.

MR JUSTICE GOSS: Yes, it's all new to them.

MR JOHNSON: Exactly.

(4.08 pm)

(The court adjourned until 12.00 pm on Monday, 17 June 2024)