Wednesday, 5 June 2013

(10.00 am)

THE CHAIRMAN: Just before we start, to tidy up one point from yesterday: we received some documents yesterday, I think primarily from Dr Taylor, but also, I think, from DLS, and there wasn't time to build them into yesterday's questioning. They will be paginated and circulated and anything that has to be picked up with Dr Taylor will be done during the Raychel governance segment.

MR UBEROI: Thank you, sir.

THE CHAIRMAN: Ms Anyadike-Danes?

MS ANYADIKE-DANES: Dr Hanrahan, please.

DR DONNCHA HANRAHAN (called)

Questions from MS ANYADIKE-DANES

MS ANYADIKE-DANES: Good morning. Dr Hanrahan, just to check, do you have your CV there with you?

A. I do, yes.

Q. Thank you. I'm going to go through the statements that you have already made for this part of the inquiry's work and ask you whether you adopt what is in those statements, subject to anything that you may want to say here today.

A. Yes.

Q. So there was an undated statement for the Trust; the

reference for it is 013-002-002. Then there is your deposition, dated 17 February 2004.

A. Could I just see the previous one you mentioned for the Trust? That's for the inquest, isn't it?

Q. I believe that was for the Trust and formed the basis of your deposition for the coroner.

A. Okay, yes.

Q. I'll pull the coroner's one up as well so you see that. That is dated 17 February 2004, and that's 013-031-111. There you are.

A. Okay.

Q. Invariably, but not always, they're much the same with the statement being read in as the first part of the deposition, and then there's usually a section at the end, which we may come to with you, where there's a record of the answers to certain questions that were put to you during the course of the inquest. All right?

A. Yes.

Q. Okay. Then you made a PSNI statement and the reference for that is 115-049-001. And then you also gave an interview to the PSNI, a PACE interview, dated 2 March 2005, and the reference for that is 116/26 and that goes on to 027.

You have made some witness statements for the Raychel governance part of the case, but I'm not sure

that we need to deal with those now. And then you made two witness statements for this part of the inquiry's work. The series for those are 289, the first is dated 1 November 2012, and the second is dated 15 January 2013.

A. Yes, I have copies of both those with me.

Q. Do you adopt your evidence in those?

A. Yes.

Q. Thank you very much indeed. So now if we go to your curriculum vitae. The reference for that is 315-018-001. If we look at page 315-018-003, we can see then when you qualified. You qualified as a doctor in 1985; that's correct?

A. Yes.

Q. The remaining parts of your CV, with the exception of that dealing with your publications, is really a summary of the posts you have held, the places and the dates, and I don't want to go through all of that, people have it, suffice it to say that you do have extensive experience in paediatric neurology, both in the south, in England, in particular in Great Ormond Street, and also in Northern Ireland. And I think you became a consultant in paediatric neurology at the Children's Hospital in July 1998; is that correct?

A. That's correct.

Q. And in fact, we can see that at 315-018-010. There you have it. By moving through quickly like that, I don't want to minimise at all your experience and expertise in neurology and paediatric neurology in particular because you have very helpfully set that out and described it in your curriculum vitae for us, and you have also put forward some of your presentations that you have given and your publications.

I just note, for example, that herpes simplex was one of the things you did some work on, and that was one of your differential diagnoses for Lucy. Maybe we'll come to that if it assists as we go through.

You are also a fellow of the Royal College of Paediatrics and Child Health --

A. That's correct.

Q. -- and a member of the Royal College of Physicians of Ireland and you have been a member of that since 1990.

A. Correct.

Q. If we come to your knowledge of hyponatraemia. Maybe just before doing that, I ask you this: were you aware at all of two cases before you joined the Children's Hospital, one, Adam and, two, Claire?

A. Absolutely unaware.

Q. Unaware of those?

A. No knowledge at all.

Q. Were you aware of any cases involving hyponatraemia or any issues in relation to the administration of low-sodium fluids, when you joined the Children's Hospital?
A. No, I can remember no case.
Q. Can you remember any discussions about those sorts of matters prior to Lucy's admission?
A. No.
Q. No discussion at all about hyponatraemia or any experience --
A. I can't remember any particular discussion.
Q. Sorry, now you put it that way, does that mean there might have been, you just don't recollect it?
A. Of course there might be, yes.
Q. If we go to hyponatraemia, and you say in your first witness statement -- we don't need to pull this up unless you ask for it, but it's 289/1, page 4 -- and you say:

"The risks of dilutional hyponatraemia were known to me, although particularly in the context of hypernatraemia, where it is standard practice to bring down the sodium level in a guarded fashion by not using dilute fluids."

But you did know about it?
A. About dilutional hyponatraemia? Yes, of course, yes.

Q. And you knew about its relationship to cerebral oedema?
A. Yes, that was the main -- that's the main reason that with hypernatraemia you bring down the sodium gradually. One might surmise that if the sodium is high, that you bring it down as quickly as possible, but you don't, you bring it down slowly. That would certainly be my main knowledge of the risks of dilutional hyponatraemia was coming down from hypernatraemia rather than starting from normal.
Q. Yes, but even though that was your main knowledge, you were aware that dilutional hyponatraemia itself could lead to cerebral oedema?
A. If there's a large enough drop, yes. Yes, it could, yes.
Q. Thank you. In that context, were you aware of the work or the publications of Professor Arieff?
A. At the time of Lucy Crawford?
Q. Yes.
A. Absolutely unaware.
Q. Unaware?
A. Unaware.
Q. I had asked you a little bit about any discussion in the Children's Hospital prior to Lucy's death in relation to hyponatraemia, but because I've asked all the witnesses, in fairness to Dr Nesbitt, I should ask you also about

that.

When I refer to Dr Nesbitt in that context, are you aware what I'm talking about? That Dr Nesbitt at Altnagelvin was of the view that the Children's Hospital had changed its practice in terms of the use of low-sodium fluids; are you aware of that issue?
A. I have become aware of it since. I was unaware of it at the time.
Q. Are you aware of that issue now? (Pause). Well let me help you --
A. Um, broadly speaking yes ...
Q. Dr Nesbitt produced a letter to his medical director, Dr Fulton, very shortly after Raychel's death, I think it was 14 June, in which he had rung around the hospitals to see what everybody else's practice was about the use of fluids after surgery, paediatric surgery, and the upshot of that was he was told that the Children's Hospital had, some six months prior, ceased using it because of its implication, all following several deaths. It wasn't entirely clear from that letter when those deaths were supposed to have happened, but that's what he said. Then he subsequently provided a statement to the PSNI where he developed that by identifying the person that he spoke to, and it might help you if I pull it up. It's 095-010-040.

The beginning of this page is really charting what he did and then he refers to his telephone call, so he refers to speaking to other hospitals. As we come down that page he says:

"I spoke to Dr Chisakuta ..."

You know who Dr Chisakuta is?
A. Yes.
Q. "... a consultant in paediatric anaesthesia and intensive care in the Children's Hospital about their use of No. 18 Solution in post-operative surgical children, and he informed me that they had been using precisely the same regime as Altnagelvin Hospital, but had changed from No. 18 Solution six months previously because of concerns about the possibility of low sodium levels."

And then he goes on to discuss that in relation to other places.

Have you any idea what he's talking about there?
A. No. I wasn't part of that at all, so I don't know.
Q. I know you are not Dr Chisakuta, but was there any discussion at all?
A. Not that I can remember, no.
Q. Let me pull you up a letter that we received from the DLS. We had tried to see if we ourselves, by investigation, could identify whether there had been

a reduction in the use of low-sodium fluids by looking at orders for Solution No. 18. What we received was 319-087c-003. That's a chart, there's a cover letter explaining it, but essentially this is the information that is put into a chart for us.

You can see on the monthly figures that they hold up at round about 300 to 400, peaking in February 2000 at 582 and in December 2000 at 528, but they do start to fall, appear to, round at the beginning of 2001. And markedly so from March onwards, tailing off to almost nothing as you can see in July 2001.

Do you have anything to do at all with the prescription of low-sodium fluids?

A. No.

Q. Would there be any discussion with you, given that you might appreciate -- or do you appreciate their role in hyponatraemia and therefore cerebral oedema?

A. There was no discussion with me about changing Solution No. 18 as a standard. Certainly I would maybe state at this stage that my knowledge of Solution No. 18 at the time of Lucy Crawford's death was that it was a very widespread, practically standard fluid.

Q. Yes. Can I ask you this: were you aware that inappropriate use, if I can put it in those terms, of Solution No. 18 can lead to hyponatraemia?

A. It would not really have been on my radar, that reduction from normal sodium to very low sodium would have because that wouldn't have been in my experience. Certainly the teaching is, as I said before a little while ago, that hypernatraemia and too quick correction of that is the main reason for dilutional hyponatraemia, but clearly it reflects to a very significant and rapid drop in the serum sodium.

Q. I appreciate that.

A. But it wouldn't have been on my radar, for want of a better word, to come down from a normal sodium rather than coming from a high sodium.

Q. Well, I appreciate what you said, but if I can ask you in this way: would you have been able to appreciate that if a child is losing sodium-rich fluids and you are replacing the child's fluids by low-sodium fluids, that that could lead to hyponatraemia developing?

A. Oh yes, yes.

Q. So you would have recognised that?

A. Yes. Dilutional hyponatraemia was known to me, certainly.

Q. That's exactly what I was trying to clarify.

A. As it would have been known to every paediatrician.

Q. If that continues then that can lead to cerebral oedema; would you have appreciated that?

A. I don't want to speculate, but I would imagine that I would have, yes.

THE CHAIRMAN: In the sense that it's the logical conclusion, even though you had not come across it before?

A. Yes, and it wouldn't have been -- sort of coming from a normal sodium wouldn't have been anything that I would have actively considered in terms of teaching with respect to dilutional hyponatraemia.

MS ANYADIKE-DANES: Yes. So if you were recognising that pathway, if you saw on the clinical records that a child was vomiting heavily, suffering from diarrhoea, that would lead you to suppose that that child is losing sodium-rich fluids?

A. Yes. Or losing sodium for other reasons as well, like inappropriate ADH secretion, et cetera.

Q. Precisely. There could be other ways in which that was happening, exactly so. And if that child's fluids that it's losing is going to be replaced, some careful attention would have to be made.

A. You want to create an osmotic gradient, so you're going to get running of water from the dilution to the concentration.

Q. So you would be able to see that. And if you saw what looked like an inappropriate regime to address that, you

could recognise that from notes?

A. Certainly now I would.

Q. Well, sorry, are you saying in 2000 you couldn't recognise in those circumstances whether the fluid regime was inappropriate?

A. No, I -- it depends how closely I would have looked at the fluid regime. I'm sure we're going to come to this in a little while. It's actually the depth of the drop of sodium, which is what concerned me. It doesn't matter about the fluid regime; it's what happened to the sodium that dictates whether or not you're going to get cerebral oedema.

Q. I appreciate that, but unless the sodium is being measured at appropriate intervals --

A. That's correct.

Q. -- then you do have to look at what the fluid regime is because that might give you an indication, in the absence of measurement, what might be happening?

A. Yes, yes.

Q. Isn't that correct?

A. Yes.

Q. And that's why I was asking you, that leaving aside what the measurements might show -- because they may not be being measured at convenient moments -- if you could see on her medical notes and records that the child was

losing fluids and you could identify what those fluids would be likely to be, then you would be able to assess prima facie whether the fluid regime that was being adopted to replace those fluids was appropriate?

A. I think that all depends on the severity of the hyponatraemia.

Q. Yes.

A. If the sodium hasn't apparently dropped --

Q. Sorry, I'm moving away from the sodium level. You don't know the sodium level. At this stage we're just looking at charts and what the charts show you is here's a child vomiting a lot, suffering from diarrhoea, I'm anticipating that that child is going to be on some form of IV fluids and I look and see what they are, does that regime look appropriate to me, or does it at least raise a query that I want to ask something about it?

A. It may not, because as I've said a little while ago, in my perspective at that time, Solution No. 18 was a very widely-used and routine fluid, so I think it often would have been used in my experience in terms of both replacement and maintenance without any complication.

Q. But you would know, if such a circumstance like that went on unchecked, that that had potential hazards for the child?

A. Only by dropping the sodium though.

Q. If you didn't see the sodium level measured you would know that such a circumstance had risks for the child?

A. You mean in the concept of giving too much dilute fluids? Oh yes, yes, of course.

Q. That was the only point I was trying to get at, thank you. But in any event you can't help us with what this chart appears to be showing?

A. I had no input into this at all, no. I note that it seems -- I mean, Lucy died in April and it seems to have gone up since then afterwards, so it's about a year later it starts going down. Whether it's related -- as I said again, I had no input into this. I don't know where these figures came from, who inputted them or who asked for them, so --

Q. Apart from not having any input into them, nobody, so far as I think you have just been telling the chairman, so far as you can recall, was discussing the question of reducing the use of Solution No. 18 for whatever reason?

A. Not to my knowledge, no.

Q. Is it something that you'd expect to hear about?

A. Not for me, really, no. I have very little input into the prescription of maintenance IV fluids and, by the time Lucy died, I had been out of that sphere of medicine for round about 8 or 9 years. I am happy to accept that I wasn't perhaps up-to-date with modern

thinking about fluids at that stage.

Q. Thank you. Can I ask you now about consultant responsibility? You said in your second witness statement to the inquiry at 289/2, page 2:

"I am unsure [effectively what you said] who was in charge of Lucy's care when she was a patient in PICU. I do not recall formally assuming responsibility."

A. That's correct.

Q. What was your understanding about who had responsibility in PICU for the overall management of a child's care, medical care?

A. I actually don't remember any particular discussion about this. We have subsequently had some discussions and things have changed. Before I come back to Lucy's time, things have changed now and there always is a designated PICU consultant and designated medical or neurological consultant assigned to each child in paediatric intensive care. That wasn't the case with Lucy. I had no input into deciding to take her to intensive care. Nobody rang me to say, "Could you come to intensive care?"

Q. Sorry, before we race on to those topics, which I will come to, but firstly, Lucy comes under the name of Dr Crean. That's what's on her admission flimsy. What I'm asking about is, given that the intensivists or the

paediatric anaesthetists change from day-to-day in PICU, in 2000, were you aware of that?

A. Oh yes. That is one of the reasons why we have changed the practice, but it wasn't because of Lucy that that happened. But the responsibility still passed from one PICU consultant to the next.

Q. I'm just going to come to that. But you were aware that that's what happened from day-to-day?

A. Yes. I certainly don't remember --

Q. You are also aware of the fact that there were other specialties working in PICU, for example there might be yourself brought in as a neurologist, a paediatrician might be there, maybe even a surgeon given certain conditions that the child might have. And what I'm asking you is: in 2000, how would a person know who was the consultant who had overall responsibility for the child's medical care?

A. I think there was probably some vagueness and if there had been a discussion between myself and the intensivists we could have decided -- I don't remember anybody formally asking me to, as many people do and I usually agree and I usually write in the notes, "I'm happy to take over care here". I don't remember anybody asking me specifically would I become the lead consultant.

Q. Who did you think was the lead consultant?
A. Whichever paediatric intensive care consultant was in, but clearly I had a lot of input into it and I followed up afterwards as well.
Q. Does that mean that you thought that Lucy's lead consultant on the Thursday when she was admitted was Dr Crean and, on the Friday when she died, was Dr Chisakuta?
A. I don't remember thinking that at that stage. I probably didn't attach a lot of weight to it, I just knew the little girl was in intensive care and I was providing neurology input, so --
Q. Do you not need to know who that person is? Because whoever that person is who has overall charge of her care is the person you need to be discussing with ultimately?
A. I would have known who was in intensive care, which consultant was on, yes.
Q. That's what I'm trying to ask you. By what means do you know?
A. There was a rota.
Q. And that's the way you know?
A. Yes.
Q. So then if I tell you that the rota shows that it was Dr Crean on duty on Thursday and Dr Chisakuta on the

Friday, you would infer from that those people were the main consultants for Lucy on those days?
A. With quite significant input from myself as well.
Q. When you were asked to provide input, did you not regard that and the extent of input that you actually did provide as a de facto taking-over of her care?
A. No.
Q. What would have had to happen from your perspective in 2000 for you to have regarded yourself as now taking over her care?
A. I think I'd be speculating on this. Probably what would have happened is if one of the intensivists had asked me if I would take over care and, in those circumstances, I probably would have.
Q. If you did that, would that be recorded anywhere?
A. I usually would have written longhand in the notes that I'm happy to take over care. That's normally what I would do and most consultants find that helpful that I do that.
Q. Could you have regarded yourself, together with whichever was the relevant anaesthetist or intensivist, to be in joint management of Lucy's care?
A. From this perspective, yes.
Q. What do you mean "from this perspective"?
A. Looking at it now, 13 years ago, yes, we could have

been, but I don't ever remember at that stage specifically agreeing to become the lead consultant.
Q. When you say looking back on it, does that mean you can appreciate that others may have had the impression that if you were not the lead consultant you might at least have been in joint management with an intensivist or anaesthetist of her care?
A. Oh yes, and as a result of that confusion we have now changed the policy in intensive care, and now, as I've said, a little while ago, there is now a policy that each child in intensive care is under both an intensivist and medical or neurological person.
Q. Is there any significance for you in not having taken over the complete management of her care? What's the difference as in 2000?
A. I don't think there's any particular difference. Clearly, some of the follow-up stuff, which I'm sure we'll get on to in a little while, like the discharge summary, et cetera, could have been taken on by me, but it wasn't.
Q. And we will get on to it, but just now that you have introduced it, are you saying it wasn't taken on -- maybe help me with this: is one of the reasons that it might not have been taken on by you because you didn't regard that was your role?

A. Yes, yes. Not necessarily my role, but I think if somebody had asked me if I would do a discharge summary, I would have. I probably assumed that -- most children in intensive care, they don't succumb, and it's when they pass out to the ward under us they become more under us. So there would certainly have been more of a -- so when they do pass out of the ward there's a clearer delineation between the input of the intensivists and the input of the neurologist or the medical person. That clearly didn't happen with Lucy. So I think there was a degree of confusion as to who was in overall care, but I go back to your point a little while ago: there was joint input.
Q. Although you said there might have been a bit of confusion, nonetheless nobody directed you to do certain things that you did do in relation to Lucy. You were asked by Dr Crean -- I don't know that you personally were, but Dr Crean wanted to have neurological input.
A. Absolutely, yes.
Q. And so that was written in the notes and you are the person who provided that. You went on and did a number of other things that weren't directed, but nonetheless you took upon yourself the initiative to do them. Were you doing those things -- well, what's the answer? Why were you doing those things and not simply confining

yourself to providing the neurological input?
A. I presume I was doing those things to be as helpful as I could.
Q. But you stopped short of the discharge summary or a letter to the GP?
A. And in retrospect, if somebody had asked me to do a discharge summary, we could have done that.
Q. But if nobody asked you to take on the issue of the coroner, the hospital autopsy and so forth, why did you need anybody to ask you about the discharge letter?
A. I don't know. It wasn't a conscious decision on my part not to do a discharge summary.
Q. Do you not think, in the circumstances, given the level of involvement that you'd had, that it would actually have been appropriate for you to have done that?
A. With hindsight, yes.
Q. Thank you. Did you know that there hadn't been a letter to Lucy's GP when you looked at her notes?
A. I can't remember not knowing. I don't remember.
Q. Well, when you knew that you were going to speak to the family afterwards, did you not look at the notes? You'd been looking at her file, I presume.
A. I can't remember.
Q. And it would be a useful thing to see what, if anything, had been written out?

A. In hindsight, it would have, yes.
Q. Yes. So if you hadn't written it, which you'd have known you hadn't it, you would have seen there wasn't one there, do you not think it would have been appropriate to say, "What's happening about the letter out to the GP?"
A. With hindsight, yes. It could be construed that it was an omission on my part, but it wasn't a deliberate omission.
Q. Well, maybe you can help us with this: I'm sure that things have changed now, but in 2000 what was the mechanism for making sure that these sorts of things, which are important to the family, don't simply get left behind, that there is a checklist that certain things are done? What was the mechanism for that?
A. I can't remember any particular checklist and in fact, it has tightened up in recent years now and we do get letters done on all our children. Sometimes I would have seen that a letter hadn't been done and it would have gone back to the junior doctor to do it. I wouldn't have been the one to actually compile the letter.
Q. You see, that is where, is it not, the problem about knowing exactly who is in charge becomes -- one sees the difficulties it creates because nobody is entirely sure

which duty they should be taking on; would you accept that?
A. Absolutely, yes, and I think I've accepted in one of my statements that there was confusion as to who was -- I clearly had significant input into Lucy and I think it's probably reasonable to construe therefore that I was playing a major lead role, but that wasn't ever formally taken on by me.
Q. Do you think a discharge letter is an important thing?
A. Yes.
Q. Thank you. If we now move on to Lucy's admission. Your first involvement comes -- we can see it in the notes -- Lucy arrives in the Children's Hospital at about 8 am, maybe slightly before that. She is seen by an SHO and notes are made. Then, although it's not written in the right order, if I can put it that way, if you look at the typed note of Dr Crean's ward round, which can be seen at 061-018-065, we can see from that that the next thing that happens is that Dr Crean speaks to the parents and he conducts a ward round. The result of him speaking to the parents is recorded in the nurse's notes. We don't need to go to that, but in any event they are told that he doesn't really understand what's going on, he thinks there is something going on in her brain and that he will need some neurological input, and

that he has arranged for that. So that's what's being recorded in relation -- and that happens at about 10 o'clock. I'll just find that for you.
Maybe I don't need to turn it up just now. We had that yesterday. Did you listen to any part of the evidence yesterday?
A. No.
Q. It doesn't take us very much further than what he recites there, which is she is to be reviewed by a paediatric neurologist this morning. That conversation with the parents is timed at about 10 o'clock in the morning, and then you make your entry at about 10.30.
A. Yes.
Q. Do you recall the communication from Dr Crean to you, or maybe it wasn't him -- how you knew that a neurological opinion was being sought?
A. I don't remember specifically being called here, so presumably, as would usually have happened, my registrar would have been called and I would have been told, or else maybe they contacted me directly. I don't remember.
Q. Would you make a note of what you were being asked to do normally?
A. Not normally, no.

Q. So your first note is this, and you examine the child?
A. I took a history from the parents, I examined the child, and I arranged further investigations.
Q. Did you speak to anybody else?
A. I can't remember.
Q. Well, is it something that you would have thought at that time to have been a prudent thing to do?
A. Maybe so. I don't remember. I may have spoken to Dr Crean, who asked me to -- I can't remember.
Q. Would you want to speak to Dr Crean if he was available?
A. He may well have told me -- he may well have spoken to me, I don't remember.
Q. I know that; I'm asking you would you want to speak to him?
A. Yes.
Q. Did you look at the earlier entries in her Children's Hospital notes?
A. I presumably wouldn't have missed it. The note that's directly above my note, is it?
Q. Well, not just that. There was actually a sort of two-page history taken at 8.30 --
A. From Dr McLoughlin, yes.
Q. -- would you have -- preceding pages?
A. Yes. So --
Q. We don't need to pull it up, but for reference purposes

it's 061-018-058 going on to 059; would you have looked at that?
A. I presume I would have, yes.
Q. Yes. And the benefit for that --
THE CHAIRMAN: Sorry, I think, doctor, you said a moment ago that you wouldn't have missed the note above your own note.
A. That's right, yes.
THE CHAIRMAN: I don't think you can assume it would have been there because that's not -- that was typed-up after --
A. No, I don't mean that note, I mean the other note from Dr McLoughlin.
MS ANYADIKE-DANES: 061-018-060. I think this is what Dr Hanrahan means. This is your first note, entered at 10.30.
A. That's my first note, yes.
Q. And just above your first note is a record of a telephone call from the referring hospital, the anaesthetist there, to tell Dr McLoughlin what the results of her U&Es were, that her serum sodium was down to 127 and her potassium to 2.7, but her renal function was considered to be normal. And you'd have seen that?
A. I would not have missed that, yes.
Q. And the benefit of looking at the other note from

Dr McLoughlin is that she's got the opportunity to be briefed by Dr Jarlath. We're going to call Dr O'Donohoe from Enniskillen "Dr Jarlath", if you don't mind, and Dr O'Donoghue from the Children's Hospital "Dr Dara", just because it aids with making sure the transcription is correct. She would have had the opportunity to have spoken to the accompanying paediatrician of the child Dr Jarlath when she wrote that note.
A. I don't know that. I'm not sure.
Q. You didn't know that?
A. I didn't know that, no. He may well have come and gone by then. I think they arrived in intensive care from -- at 8 o'clock.
Q. He did have that opportunity. That is her evidence.
A. Fine. I didn't know that.
Q. So that's why I was asking you --
A. Fine, sure.
Q. -- who, given that you say you didn't have access to the notes at the time that you were making that examination, in the absence of notes, I presume you'd be trying to gather as much information as you can from source.
A. Sure, and including from talking to the parents as well.
Q. Yes. Talking to the parents will give you certain important information. Talking to the clinicians will give you important other kinds of information, but you

can't remember whether you did speak to Dr McLoughlin?
A. No.
Q. If she was available to speak to, would that be a useful thing to do from your perspective?
A. I think it probably would, yes.
Q. Dr Stewart is a registrar, and she was about, and I think later on in your evidence to the inquiry you say that you worked quite closely with Dr Stewart. She also saw Lucy earlier. If she was about, would you want to speak to her?
A. Probably, yes.
Q. As I understand it, what you're trying to do is gather as much information as you can so that you've got a reasonable basis for starting to reach what conclusions you can?
A. I think the main information from the Erne though that I would have dealt with at that stage was the handwritten letter from Dr O'Donohoe.
Q. You'd have seen that?
A. Yes, which would have been in the notes. That probably would have been most of the perusal of the notes. I would have relied more on that than anything else because I think that accompanied Lucy in the ambulance.
Q. If you were looking at the transfer letter, and we can pull it up, it's to be found at 061-014-038, and if

we can pull up alongside it 039 -- so you had this. You also had the transfer sheet that had accompanied her. We'll come to that in a moment. But just for reference's sake it's 061-015-040 and 061-016-041. But let's deal with this at the moment, this letter here.

So what were you taking from this letter?

A. That a little girl had come in with, presumably, in view of the vomiting, some kind of bug, and that she had a normal sodium when she presented and then she became very sick.

Q. Just before we get to the normal sodium, is there not some information before that if you're reading this?

A. And capillary refill, et cetera. I'm trying to scan it.

Q. So she has a slow capillary refill --

A. She is certainly a sick little girl, yes.

Q. She's got a slow capillary refill; what does that indicate to you?

A. That suggests she's somewhat dehydrated.

Q. And that might be put together with the fact that she's vomiting?

A. Yes.

Q. Those two things would go together?

A. Yes.

Q. And then we see she's on IV fluids starting about 11 o'clock.

A. From approximately 11 o'clock, yes.

Q. You don't know what they are at this stage, but you know that's what she's on. Then you see that her serum sodium level when she's admitted, that's within normal parameters.

A. That's normal, yes.

Q. And --

A. But her urea is slightly high as well, that would also go along with a degree of dehydration as well.

Q. Yes. But by about 3 am her mother has noticed that she's rigid and she's given diazepam, and in fact you will know that she doesn't really recover from that.

A. Yes.

Q. So she has some sort of event at 3 o'clock. And in addition to having this letter, having spoken to the letter and looked at the notes, even your own notes from PICU, you would know what time she was admitted.

A. It would be consistent with her having a very acute event at 3 o'clock, yes.

Q. And would that have initially troubled you --

A. Yes.

Q. -- that she had been admitted when she was with reasonably normal measurements, if I can describe them in that way, and then, within quite a short period of time, she had had a cataclysmic event?

A. Yes, surely. This was a very unusual presentation, a very unusual and tragic event, and clearly I was very troubled by this because I remained very involved with this girl.

Q. At this stage, this is your initial enquiry. You're trying to see what could have happened, if she came in reasonably normal in terms of her measurements, that could have led to something like that so quickly. Is that essentially what you're trying to do?

A. Exactly, yes.

Q. And then presumably you'd be looking to see, since you're not going to get it immediately from her measurements that all looked reasonably standard, apart from a bit of dehydration, you might want to see what she was administered?

A. In retrospect, yes, but only with the view to seeing what happened to the sodium.

Q. Yes, well, if you were looking to see what she was administered that might also give you a clue as to what they thought the problem was.

A. In retrospect it certainly would have. However, I may well have looked at the fluid balance, seen that she was given Solution No. 18 and, as I have said already, my perspective at that stage was that Solution No. 18 was a very widely-used and standard fluid, so even if I'd

seen that she had been given Solution No. 18, I may well not have attributed as much to that as I would now.

Q. Are you not wondering, if she comes in with reasonably normal parameters in terms of her measurements, apart from those that indicate that she was a bit dehydrated, she doesn't really get anything apart from Solution No. 18, and that she doesn't get until about 11 o'clock, and then by 3 o'clock -- if you can bear with me --

A. Sure. I'm clearly wondering very hard as to what has gone on with this little girl, yes.

Q. I appreciate that. I was going to put it to you in a slightly different way.

But by 3 o'clock she's had her collapse, but all she's really got is her IV fluids. Are you not wondering whether those IV fluids might have anything to do with it?

A. We may well have wondered and it may have passed through my head, but I would have discounted it on the basis of the perceived sodium.

Q. Well, at this stage the perceived sodium you have is 137.

A. Not when I saw her. I knew it was down to 127.

Q. I beg your pardon. You'd have seen the 127 from the 9 o'clock.

A. So I knew the sodium had dropped from 137 to 127 and I did not attribute that as causative of her cerebral oedema because I don't think that is enough of a drop. At that stage I did not and I still wouldn't, although I think there are other issues which have come to light to clarify matters, but at that stage I did not believe that a drop of 137 to 127, no matter what the cause, had caused her cerebral oedema and I've been absolutely upfront and clear, I've written in the notes -- at the very end of my clinical notes I think you can see:

"No cause is clinically evident as yet."

So I am upfront about that.

Q. At that stage you hadn't seen her full notes --

A. No, but I'd seen that there had been a drop of sodium from 137 to 127, which is the way, obviously, that dilutional hyponatraemia affects babies and causes cerebral oedema.

Q. From your experience, what's the basis upon which you would conclude that a drop from 137 to 127 over the hours we are talking about here is not sufficiently significant in a 17-month old child weighing just over 9 kilograms?

A. Because 127 was a very common finding in biochemistry. It was very frequently seen and it's not severe hyponatraemia by any means.

Q. I'm not talking about where it ended up. What you said was the drop to that.

A. And even so at that stage, I did not attribute the drop from 137 to 127 as significant.

Q. I understand that's what you said. My question was slightly different. What is the basis upon which you would have formed that view?

A. Because that was a pattern which I would have regularly seen. Children with 127, even coming on fairly quickly, would have been a very common finding and one that you would say, "Let's just watch that, repeat that", and give them a little bit of sodium.

Q. And you have regularly seen children, in this span of hours, drop from 137 to 127?

A. I have frequently seen children drop from 137 to 127. I can't say exactly from what value, but certainly 127 or even less -- children have done very well from that in my experience.

Q. That's exactly the point I'm making, doctor. You seem to be homing in on the 127 as not being a sufficiently low absolute when the question that I was asking you was your experience of a fall of 10 millimoles in that period of time. That's really what I was asking you: not where it ends up, but that rate of fall. What was your experience of that as at 2000?

A. I can't actually remember any particular child, but certainly both sodium of 127 was not by any means uncommon, and I did not attribute as much weight to it as I would now.

Q. Does that mean you at that stage don't recall ever having an experience of a child dropping that rate at that period of time?

A. Not specifically. All I can say is at that stage it did not strike me as being significant.

Q. I understand. Given that that was all that had really been administered to her that you could see at that stage, is that not something that you might want to discuss with, say, the anaesthetists, who also have familiarity with fluids, just to ask them what their take might be?

A. Yes, and I may well have done that, I don't remember. I don't remember.

Q. Would you have wanted to do that?

A. Perhaps. Certainly now I would have, but looking with hindsight, yes, certainly I would discuss it and I would do a lot more now. But at that stage, I don't know. Certainly I was keen to get involved with the other investigations and, as I've stated quite clearly, I did not attribute as much weight to the sodium as I should have. But if I was confronted with the same information

today, I probably would have made the same decision.

Q. I appreciate that; I am asking you a slightly different question. You have been asked to give a neurological opinion on the child. By the time you've read the transfer letter and the transfer sheet, you have read the notes that have already been written, you have spoken to the family, you actually haven't got a clear view as you record. You have some differential diagnoses, but not any clear view.

A. That's correct.

Q. And not an awful lot seems to have been administered to this child to precipitate, so far as you can tell, such a collapse. And all I'm asking you is: would you not have considered it, even then, leaving aside hindsight, a prudent thing to go back to the anaesthetists and say, "What are your thoughts here because I'm not entirely sure what's going on ahead of any results of tests that I've directed?"

A. If I thought the 127 was significant then certainly I would have gone back to then, but I probably went on and just got on with the investigations that I wanted to undertake, so I would have organised the EEG, I would have organised the CT scan --

Q. Did you notice her weight?

A. I can't remember. The weight --

Q. Should it have been something you looked at?
A. I wouldn't normally look at the weight. The weight of the child reflects the amount of dehydration or indeed over-hydration and in retrospect, yes, I would have, but I didn't look at it at that stage, no, no.
Q. I don't want to confuse knowledge that could only fairly be attributed to somebody in 2013 from that which can be attributed to somebody in 2000 --
A. Sure. In terms --
Q. -- but in 2000, you would have appreciated that the changes in the weight of a child, particularly if there's an indication of dehydration, is a significant factor.
A. In terms of losing weight or gaining weight?
Q. Gaining it.
A. Gaining it? Possibly, but I think the way she would have gained it would have been by being given the bolus of normal saline.
Q. That's exactly right. And you might be being interested to know then -- that leads you in to an avenue of enquiry as to her fluid regime, even if --
A. Absolutely.
Q. -- you are not understanding at that stage what its significance might be.
A. Exactly, but the impression I got was that the normal

saline post-dated the collapse. So I think in that regard I was probably less of a mind to take note of it than if I thought it had contributed to the collapse.
Q. The normal saline, which --
A. The bolus of normal saline, which I don't actually specifically remember noticing. But in answer to your question about the weight, I don't particularly remember looking at the weight. If I'd been more into general paediatrics rather than neurology at that stage I probably would have been more attuned at that stage.
Q. It has been suggested by the inquiry's experts that that is a standard thing, when you're dealing with young children, to look at changes in weight?
A. For general paediatrics it would be. It wouldn't be something that we would routinely and regularly do in paediatric neurology though.
Q. Did you note that she had had a brisk diuresis after she had been administered mannitol?
A. I can't remember.
Q. It's there on the transfer letter.
A. I can't remember noticing that.
Q. Would you have wanted to bear that in mind since we are thinking about fluid issues, even though we don't know what the significance of them is?
A. Perhaps, yes. I can't remember what I was thinking at

that stage.
Q. Would you have noticed that her chest X-ray -- which I'm told, in a child as small as that, once you do a chest X-ray, you're essentially capturing the chest and the abdomen -- all of that is clear; would you have noticed that?
A. Not necessarily, no.
Q. Would you not have wanted to know?
A. I don't -- because of what? How is the chest X-ray going to help?
Q. The chest X-ray is going to help you in terms of whether this child has any -- she's coming in with any condition that might be affecting her.
A. Not really. A chest X-ray wouldn't be a normal part of neurological investigations that we would undertake.
Q. No, at the moment you're trying to find out what has happened to this child and you cast your net quite broadly when you're producing your differential diagnoses. So in doing that, I'm wondering whether you're not equally casting your questions in terms of the information that is available for her equally broadly.
A. I probably would have confined my differential diagnosis to neurological issues, so clearly I didn't ask for a chest X-ray.

Q. We'll come to your differential diagnosis in a minute. When you are examining Lucy, at least when you record you're doing it, which is 10.30, her notes by that time had already been faxed to the Children's Hospital. It's not entirely clear, to be honest, what time they got there because we've got two fax times. But if we work on the 9.51 time, which is the one one sees at the bottom of those notes, that appears to be when they were received. Assuming that's an accurate fax time, it appears to be when they were received in the Children's Hospital.
When you were looking through the notes before you added your note, you would have seen -- the reference is 061-018-059 -- that the Erne notes were requested for further information. Would you have wanted to have her notes when you were embarking on trying to understand what had happened to her?
A. In retrospect, yes, or at that stage I may well have relied on Dr O'Donohoe's letter.
Q. Yes, but Dr O'Donohoe's letter is -- well, are you saying that that would have been a substitute for her notes?
A. You would have expected it to have been a reasonable precis of her notes, a summary of all the salient issues in it.

Q. Wouldn't you have expected to see in there what's the IV fluids she's on, what's her serum sodium level after the collapse or proximate to the collapse? All I know is what it was before she started getting her IV fluids. So that's another measurement that is missing.
A. No, I knew it was 127 at the time.
Q. No, you're saying you expected the transfer letter to be accurate.
A. Yes.
Q. It is singly missing that.
A. Quite possibly, yes.
Q. So if it's missing that, it may not have been a very full recitation?
A. In retrospect it may not have been, and it's possible I attributed too much weight to it and it's possible I didn't look into it in as much detail as I might have.
Q. You see Dr Crean is pretty clear he would have liked to have seen her notes because you want to see, when you're receiving a child from another hospital, as best as you can, what they've actually done at the other hospital and, for that matter, what they thought might be the problem because that might assist you.
A. Although my opinion at this stage was not that there had been a medical misadventure.
Q. I'm not asking you about that.

A. So I would have looked more for neurological conditions, so I'd have investigated that myself -- but I can't actually remember in how much detail I did look at the Erne notes. In retrospect, I should have look at them in more detail and in retrospect I should have looked at the fluid balance in more detail, but I --
Q. I haven't got to you looking at them yet. I have got to you at the start of your examination. What I am --
THE CHAIRMAN: He's allowed to say that without you saying "I haven't got there yet". That's inappropriate. We don't dictate the way in which he answers questions.
MS ANYADIKE-DANES: I beg your pardon.
What I am trying to find out at this stage -- and I apologise -- is whether you wanted to have her notes at the outset and whether you might have been surprised that they weren't there for you.
A. No, because -- well, with retrospect, yes, I would have liked if they were there. At that stage, I clearly was happy enough to go on the note.
Q. Yes, but --
A. But yes, you're right, I was aware of the sodium of 127, although that result may have only come in later on because that wasn't actually Dr O'Donohoe who told us about that.
Q. Sorry?

A. It wasn't actually Dr O'Donohoe who told me about the 127.
Q. The 127 is on her note immediately above yours.
A. I know, but it's not Dr O'Donohoe that told me about.
Q. I'm sorry. I didn't understand the point that you were making.
A. So Dr O'Donohoe may have been unaware of the 127 at that stage when he wrote the note.
Q. Ah, right.
A. But I became aware of the 127 clearly before I wrote my note. And in the conjunction between his 137 and the 127 subsequently reported, I clearly was aware that there had been a drop in sodium from 137 to 127 and I haven't attributed that as causative.
Q. I understand that. The second part of the question I put to you is whether you were rather surprised that her notes hadn't been sent or a copy of them --
A. I am sorry, I cannot remember what I was thinking at that stage. I can't remember being surprised or not surprised. In retrospect, yes, I would like to have the notes, but I may well have been happy at that stage to rely on Dr O'Donohoe's letter.
Q. I understand you said that. Is it common that the children arrive with, maybe not all of their notes, but what's thought to be the important part of their notes?

Is that a common feature as at 2000?
A. As at 2000, I don't remember. A lot of time you would get a photocopy of the notes that come with the child. Sorry, I can't remember what was the practice at that stage.
Q. Did you say a lot of times that would happen?
A. It would happen now, yes --
Q. But you can't remember --
A. -- but, with respect to 2000, I don't remember.
Q. Dr Crean rather thought that that might be something that would happen if they didn't actually accompany the child, that they would be faxed ahead. What I was trying to see is whether that matches with your experience.
A. I don't really remember at that stage, sorry.
Q. But in any event, at some stage you do get her notes and you look at them. Did you know that Dr Crean had spoken to Dr Jarlath?
A. No. Well, I don't remember knowing that. Dr Crean may well have said it to me. I think you're referring to the notes that's made in the Erne notes?
Q. Yes.
A. I was unaware of that conversation taking place. However Dr Crean may well have told me later on about what that conversation comprised of, which is that

Dr O'Donohoe felt that the fluid rate was running less than what was initially reported on the fluid chart.
Q. Were you aware of having any discussions with Dr Crean on the 13th?
A. I can't remember.
Q. Well, do you think it likely that you did?
A. It's likely that I did, but I can't remember the context of it.
Q. Yes. If we just go to your differential diagnosis, 061-018-063. Your differential diagnosis is really fourfold.
A. It's also leaving a catch-all at the end. Clearly, I don't know what's going on here.
Q. No, I meant four in terms of things that you identify. You have got a catch-all, which is that you don't know what it is --
A. Any other cause that I haven't noticed, yes, indeed.
Q. But you have infectious herpes, that's one line. It's up on the screen, Dr Hanrahan, if you want to see it.
A. Okay.
Q. "Infectious herpes, haemorrhagic shock with encephalopathy, some metabolic issue --
A. For example, a urea-cycle defect, which I think was what Professor Kirkham suggested could be checked in every case. That was checked.

Q. Does that mean you agree with that, that is something that you mentally go through?
A. To check on, yes. Oh yes, absolutely, yes.
Q. And then, "Cerebral oedema for some other cause". Does that mean that you thought at that stage she had got a cerebral oedema and what --
A. Yes.
Q. -- you were trying to do is see what was the cause of it?
A. Yes.
Q. So even before she's had her CT scan, you think what you're dealing with is a child who's got cerebral oedema?
A. My clinical impression is this girl had a very swollen brain, which had killed her, unfortunately.
Q. And that impression is from her presentation to you?
A. And my examination.
Q. Yes. So that final -- is the "cerebral oedema for other cause". What are the other causes that there might be that you were trying to capture by that?
A. There's a number. Clearly, there are other ones, for example trauma can cause this, but there's no history of that. Venous thrombosis, there's no real suggestion of that either. That line suggests that I actually don't know what's going on rather than suggesting something

specific. There's no immediate clue from examining her, so I'm trying to cast my net reasonably widely to try and find a diagnosis here.
Q. And if you had perhaps appreciated more the fluid information that was contained with her notes, that might have been somewhere where you would have put a query as to her fluid regime?
A. I don't think, frankly, to be honest with you, that any amount of fluid abnormality would have alerted me to any problem in the absence of a significant drop of sodium.
Q. I understand.
A. So I can't really be more clear in the obvious knowledge that this child has dropped her sodium from 137 to 127. I can't be more clear that I don't attribute that to the cause of her death.
Q. Then does it become quite important when that 127 is -- from what period of time that 127 is being measured and what has happened in terms of her fluid regime before that? Because I presume what you're trying to find out is, well, have we got a significant drop in her serum sodium levels at the time she suffered her collapse?
A. That is not what I was thinking at that stage.
Q. No, but for it to be relevant to you, that's what you'd be, I presume, seeing?
A. For it to have been relevant to me, yes, it would have

needed to be much lower than that.
Q. Exactly. But the low point is what you're trying to see -- is how that correlates to her collapse?
A. Yes. Or, as I thought at that stage, did not correlate to her collapse.
Q. Exactly, but that's the tie-in, the point of collapse?
A. Yes.
Q. So then if that's your way of thinking about it, even almost subconsciously, that's what would be significant for you, does it not become important that you know what her fluid regime was after the 137 and before the 127, and when the 127 is timed at? Because unless you know those two things, you don't know that the 127 is actually a reflection of where she was when she collapsed?
A. In retrospect, yes, without a doubt. And I will come to my witness statement in a little while, the learning points that I've made in this regard. But I would still maintain that at that stage I did not believe -- and I believe I was right to not believe -- that the fluids had anything to do with her demise because the fluids don't cause cerebral oedema in their own right; they cause it by a reduction in sodium, and I was not impressed by the drop in sodium and, as things transpired, I was right not to be because that's a false

reading.

Q. That's exactly where we're going to. I suppose it would have been important to you -- and that's why I sort of framed the question the way I did earlier -- to know that you have got that as an accurate reading of where she was at the time of collapse. When you received her notes from the Erne, you can tell the order of things, if I can put it that way, from those notes.

In fact, when you were giving evidence to the PSNI, you recognised that you could tell that from the order of the notes. Let me pull up the relevant note for you. We'll pull two pages up, but I'm not sure they can go side by side. Let's look at 061-017-049. This is the nurse's note and part of what was faxed. You can see that, at 20.30, Dr Jarlath is called to see -- the child is "sleepy and lethargic".

Then at 22.00, she's seen by Dr Jarlath. Bloods are taken, a cannula inserted into the left hand, and IV fluids of No. 18 Solution started at 22.30, at 100 ml an hour. So the bloods that are taken from that are taken before any IV solution is administered. Okay? That's what you could see from reading that.

You see other results that have been taken, and you see down there that she has a large vomit at 00.15, IV fluids remaining at 100 ml an hour. Then she has an

offensive bowel motion and then, 02.55, the mother is calling because the child is rigid in her arms, and that's been attributed to a fit or seizure of some sort. So the fluids go in at 22.30 on this note and by 3 o'clock she's had a seizure.

Then if I pull up the next note, which is 061-017-050. There you see that after that event, Dr Malik is bleeped and he comes. A history is given, there's an examination, and the IV fluids are changed to normal saline and run freely into the IV line. Then there's decreased respiratory effort at 03.20. There's an airway inserted and bagging is started. Then Dr Jarlath is in attendance and repeat U&Es are ordered.

It's those repeat U&Es that give rise to the measurement of 127. And from that order, you can see that that happens quite clearly after the normal saline has been administered. So on that basis, looking at it that way, you might have asked yourself whether the 127 was likely to be an accurate reflection of what her serum sodium level had been at the point of collapse and thereafter whether the fall was actually greater than 137 to 127. And if it were greater then that's just the sort of thing you were saying, when you started your evidence, might have prompted a concern with you about the implications of her fluid regime in her condition.

Is that fair to say?

A. Absolutely. And if you look at my witness statement, the first witness statement, I actually accept that with hindsight I could have been more rigorous in looking at that. I clearly missed that in the nursing notes. However, I wasn't the only one to miss it -- every other expert missed it as well, including if I may say so, Dr Evans who provided a very hostile report against the Erne. He missed that as well and he assumed that the drop was from 137 to 127, so certainly this was something, in retrospect, that I missed and I would have liked to have picked up on. However, I do think it was reasonable to assume that an acute blood test was taken at the time of an acute decompensation, which I don't think was the case here. But I made a wrong assumption in that regard, so I was working under wrong information when I assessed the degrees of sodium.

Q. But because of the weight that you put on that, that was quite an important assumption?

A. In retrospect it was, yes, but I didn't clearly look at the nursing notes because I was assuming that, as usually happens, a blood test is taken when it's clinically relevant. In other words, at the time of her collapse. It's most unfortunate that I wasn't aware of that, but every other expert missed it as well.

I was on a busy 1:2 rota at this stage and I may not have had time to look through all the notes at the one time. Other experts who were able to look through these notes at their leisure also failed to pick up on this as well and attributed the sodium drop of 137 to 127 as being causative.

I also looked at -- I didn't see any difference in the sodium 137 to 127 except I didn't attribute it as causative. While it's regrettable with hindsight that I didn't pick up on this at this stage, I was not aware of there being any suggestion that the sodium was ever less than 127, although I think in retrospect I think that it was, and I've been quite upfront, I believe, in my witness statement when I was asked to comment on any lessons learned from Lucy's death, that's the first lesson that I've learned.

Q. Can I take it that if you had looked at that and realised the order of things, if I can put it that way --

A. It would have been much more evident that the fluid balance had caused -- that the sodium shift had caused it, but I was not aware of that at that stage.

Q. That was the point that I was going to ask you. That would have then elevated into you: I wonder if the rate of fall would have been relevant?

A. Yes.
THE CHAIRMAN: And you say what threw you off was there was no suggestion in the transfer letter from Dr Jarlath that there was anything remiss with the fluid regime?
A. No. And also --
THE CHAIRMAN: The reading of 127 in itself is a worry, but it's --
A. It's not worrying to me; it's bordering on trivial. It's bordering on trivial, really.
THE CHAIRMAN: And certainly doesn't explain why a child has had a fatal collapse?
A. Not to my mind. Having said that, I'm absolutely happy to accept that in hindsight the evidence may have been there and I didn't pick up on it, but I do, in my defence, think that it is reasonable to assume that that 127 was taken at the time of acute worsening, and that doesn't appear to have been the case.
MS ANYADIKE-DANES: Can I just ask you about that because, leaving aside parsing the notes, if I can put it that way, for what order it is later on, what is actually written about the collapse, there's no indication at the point of the collapse that anybody is taking her U&Es. There seems to be quite a bit of activity in simply maintaining her respiration at that stage.
A. Yes.

Q. So if you were making that assumption, there is no guide to you making it --
A. No, the guide --
Q. -- in the notes at all.
A. The guide was the phone call that came in at 9 o'clock from the anaesthetist, who I presume was Dr Auterson in the Erne, who phoned at 9.30 to say that the repeat sodium was 127. He is one of the few people who has raised a possibility of there being -- he queries when the sample was taken, but he didn't let us know that it may have been taken after the normal saline. This was 4 o'clock/5 o'clock in the morning of course ... you can forgive him almost anything.
Q. What do you mean, exactly?
A. Dr Auterson wonders in one of his reports as to when the sample was taken, but clearly he hasn't either put any great weight on it. He wasn't there when the saline was given.
THE CHAIRMAN: Your point is, when Dr Auterson rang in to confirm the second sodium test result, he didn't say, "But be careful, this might not be the lowest point of the sodium"?
A. No, he doesn't appear to. He may well have and it wasn't written down or something, but that doesn't appear to be the impression from the notes.

MS ANYADIKE-DANES: Just to follow on, Dr Jarlath was obviously there when the bloods for the second test were taken, and he came to find the normal saline solution running in freely. In fact, his evidence is that 500 ml of that was run in.
A. Yes.
Q. So if that's the case, is that something that you would have expected him to have included in his letter?
A. I'm giving evidence for myself. I can't really comment for anybody else. I would have perhaps thought so.
THE CHAIRMAN: I think you've already said that the transfer letter should contain the significant information.
A. Perhaps, yes, although I would say that this was at a very stressful time at 6 o'clock in the morning and things could easily -- I don't know. Certainly the evidence that was given to me was that -- and the impression that I formulated was that this little girl had been perhaps given some unusual fluid formulation, had dropped her sodium only to a little bit and had the repeat sodium because she only had the repeat sodium taken at the time of worsening.
MS ANYADIKE-DANES: Irrespective of whether it had been in the transfer letter, if it is a significant piece of information like that, that is something you might have expected to have been communicated?

A. With hindsight, yes, with hindsight.
Q. Thank you. I just want to ask you something about your characterisation of 127 as representing only mild hyponatraemia.
A. My perception at that stage, but it's subjective --
Q. I was going to put something to you, sorry. Dr Stewart, when she was asked in her witness statement, the reference for it is 282/1, page 4, she classifies sodium under 130 as severe hyponatraemia. So the question I was going to ask you is: on what basis do you characterise 127 as representing only mild hyponatraemia?
A. On the basis of never having seen any adverse sequelae. If 127 is severe, I don't know what 107 is. Is 107 also severe? I don't know.
Q. Have you experienced a child with 107?
A. 107 on very rare occasions, yes.
Q. Who survived?
A. But that was much more -- that was over months. It was a child with Addison's disease. So it was much more ... Children can get used to it if it was over months and months and months. But 107 is known and actually I think one of the Arieff children was down as low as -- there's a couple that were under 110.
Q. 107, one of the Arieff children? I don't think so, but

we can check if you think so.
THE CHAIRMAN: There are certainly Arieff children who were under 127 who survived.
A. There was none over 127. 123 was the highest in the Arieff paper, and the vast majority of them were under -- they were under 120, which would be equal to Raychel later on.
MS ANYADIKE-DANES: Bear with me a moment.
THE CHAIRMAN: It's okay, Ms Anyadike-Danes, we don't need to develop that. I've got the doctor's point about why he describes 127 as mild compared to severe.
A. I don't think there's a -- I don't think there is a strict cut-off. You don't go from one point three point seven down to ... You go from severe from moderate to mild. If I was to see a sodium of 130, I would say that is definitely mild, so I don't think you would go from 130 to 127 and then suddenly have a major shift in severity. Although obviously being in the 120s, you would perhaps notice that, but it's really not far below the normal range. And as I thought at that stage, certainly not far enough below the normal range to have been considered significant. So I discounted that and in discounting the drop of the sodium, I would have also discounted the unusual fluid management which was being discussed in that the fluid

management only causes cerebral oedema by dropping the sodium.
MS ANYADIKE-DANES: Mr Chairman, I would have wanted to put -- and maybe after the break would be the appropriate place to put -- because Professor Arieff has published in a mainstream journal references to the serum sodium level and the caution that should be -- serum sodium levels of that level should be approached with caution. I will put that to you, but maybe after the break.
A. With caution now certainly. At that stage I wasn't -- that was because of a genuine belief in my mind that it was not causative and I think, as subsequent events transpired, I was right to discount it.
Q. Right to discount, sorry, what?
A. The drop of 137 to 127 as being causative.
Q. Actually, Dr Crean thought that drop could be relevant when he gave his evidence.
A. Well, I clearly didn't.
Q. That's what I'm asking you. When he gave his evidence --
A. I said "as subsequent events transpired"; I think I was proved right.
Q. Sorry, when Dr Crean gave evidence at the inquest, he thought that a drop like that could be significant, 137

to 127.
A. Yes, but I would --
Q. What I am trying to ask is the basis of the two of you having a different view.
A. I'm not sure. Certainly my impression -- and that's really all I can comment on.
Q. And it's not anything that you have discussed with him as to why he had that view?
A. No.
Q. But I understood you to say that you thought you probably had had discussions with him --
A. I don't remember exactly.
Q. Sorry, I haven't finished the question. You probably had had discussions with him during the 13th or the Thursday, although you can't remember what those discussions might be. What I'm asking you is: that's during the treatment --
A. Sure, yes.
Q. -- there's then a number of other periods during which a view has to be formed as to what you think the cause of Lucy's demise --
A. Yes.
Q. -- and in all of that time, did you discuss with Dr Crean or Dr Chisakuta or any of the other clinicians there what, in their view, was the cause of Lucy's

condition?
A. I can't remember. And I wasn't here for their evidence either. Did they remember discussing with me? I don't know.
Q. Yes, they do remember discussing with you, and we'll come on to that. So in any event, what we have been going through is your first examination and what, if you had looked at the notes at that time, you would have formed a view on. I mentioned Dr Crean and, in fairness to you, Dr Hanrahan, I should put to you where he says that. I said he gave it in his evidence to the coroner. The reference for it is 113-021-074.
THE CHAIRMAN: Sorry, 013, not 113.
MS ANYADIKE-DANES: I beg your pardon, I'm sorry. 013-021-074. There he refers to:
"The drop in Lucy's serum sodium from 137 to 127 was within a short period."
Leaving aside anything else, would you agree that the period is short?
A. Yes.
Q. Then he says:
"The rate of fall is the crucial factor."
And from what you have said to the chairman, you would agree that the rate of fall is the crucial factor?
A. Within reason. In other words, an instantaneous drop

from 137 to 136 is not going to cause anything. So in fact, within reason. There has to be an absolute drop as well.

Q. Then he refers to how the drop from 137 to 127 would ring alarm bells.

A. Clearly it didn't with me.

Q. And he then says:

"It was wrong to use No. 18 for both replacement and maintenance purposes and using only one fluid. No. 18, had the potential to lead to hyponatraemia."

Were you aware of all of that?

A. This is later on, though, this is --

Q. That's what his evidence was.

A. I was unaware of him saying that, but that still doesn't change the fact of my thinking back in 2000 when I --

Q. So there was just a difference of view between you and Dr Crean as to whether a fall from 137 to 127 -- I don't mean just a difference of view, but there is a difference of view between you?

A. Well, if ...

MR McALINDEN: Perhaps before the witness is to answer this question, it might be clarified with the witness that when Dr Crean was giving his evidence yesterday, he did state that that was the view that he had formed by the time that he had given evidence in the inquest in light

of Dr Sumner's report, but was not the view that he had or the knowledge that he had at the time of this incident in 2000.

A. That could be -- in that case, if I had discussed with Dr Crean -- and I'll emphasise again I don't remember specifically talking to him -- then clearly that didn't come up in conversation.

THE CHAIRMAN: He said that in 2004, the rate of fall was significant to him, but that wasn't so clear in 2000.

A. It clearly wasn't to me either.

MS ANYADIKE-DANES: Yes.

A. But having said that -- well, no.

Q. So do I understand you to say that in the absence of a low serum sodium level or an extreme rate of fall, that you weren't -- I don't want to sound pejorative by saying you weren't that interested -- you would not have been looking at what her fluid regime was?

A. I clearly wasn't on the basis of my note that there is no cause evident for --

Q. At that stage you hadn't actually seen --

A. No, if I'm not of the opinion that the drop in sodium has caused the cerebral oedema and the coning, then I am likely to attach much less weight to the fluid regimen.

Q. Would you even look --

A. I may well -- I mean -- as I've said in my witness

statement as well, there was some of talk in the unit at this stage of unusual -- you know, there was fluid boluses and I may well have considered that, but I've discounted ... You can give whatever fluid you like, as long as the sodium doesn't drop significantly, and that wasn't the case.

Q. Let me put it from another perspective. When you say there was some talk, does that mean there was some --

A. I think people may well have commented that --

THE CHAIRMAN: Sorry, doctor. The questioning we have to get through with you today slows down when you don't let Ms Anyadike-Danes ask the question. I know you're anxious to say a number of things and you will be allowed to say everything you need or want to say, but it helps if you let Ms Anyadike-Danes finish her questions. Okay.

A. Sure. Sorry.

MS ANYADIKE-DANES: That's all right. Does that mean that you were aware of some discussion about her fluid regime perhaps not being appropriate?

A. I think so, yes. Yes.

Q. And that awareness that you had, doing the best that you can, do you think that you had that awareness on her first day of admission?

A. I just had a vague remembrance of some talk in the unit

at the time, but I would have looked at that and said, "Hang on, Solution No. 18 isn't an unusual fluid to use", so from my perspective that was the case. Then I would have looked at the sodium and said, "That's not a significant enough drop", so any talk there may have been in the unit about Solution No. 18 being slightly excessive would not have been relevant to me at that stage, no.

Q. Why I wanted to ask you that is, if you were aware that others -- and the only others there are are two paediatric anaesthetists and your registrar in neurology, and there's also Dr Dara as well, so those are the other people that might be discussing the appropriateness of her fluids. If that hasn't struck you as being particularly significant, but there is some discussion about it, doesn't that really make it appropriate for you to go and ask, "Does anybody think that's relevant to this child's condition?"

A. In hindsight, yes, and in hindsight I regret -- and if I was doing this again I certainly would have talked to a lot more people in a lot more detail. But all I can say is my genuine opinion at that stage is that the sodium had not caused her coning. That was my genuine opinion and I was happy to put that in writing at the end of my clinical note.

Q. Yes, but once you've got to that stage, you are really not in a position to know what has happened.
A. No.
Q. So what I'm trying to explore with you is when your own experience and expertise and investigation and examination of the child has not produced for you any clear idea as to what's happened, does that not then warrant some discussion, maybe with the clinicians at the Erne and maybe with your colleagues at the Children's Hospital?
A. With hindsight, I think I would accept that, yes.
Q. One of the reasons I ask you that is in your PSNI interview -- we don't need to pull it up, but the reference is 116-026-002 -- you said:
"I have a desire to place on the record that I had no conversation with Dr Jarlath or anyone else from the Erne about this patient before or during my management of her."
And why did you want to place that on the record?
A. I think because I was probably keen to scotch the rumour that I had been contributing to her --
Q. Sorry?
A. There was an allegation, actually, made that I was contributing to a concerted cover-up here and I may have wanted to scotch that.

Q. Because otherwise it would be an entirely appropriate thing, would it not, if you couldn't work out yourself what was going on, to speak to her clinicians, the treating clinicians, at her referring hospital?
A. Except that I may well have been happy with the letter that I got, and in retrospect I think I would go into more detail. The note doesn't give as much detail as I would have liked. But that was then, this is now.
Q. Then you examine the child again, Lucy, at 17.45. In between, Dr McKaigue and Dr Chisakuta have made their entries. Then you see the typed-up entry from Dr Crean, which is what he found during his ward round. And you write your next entry, having examined the child again. By this time, the CT scan is back and you can see what it shows.
A. And her EEG as well.
Q. And her EEG, yes. And you record that the prognosis in your opinion is hopeless and that the indications are that she is brain-dead:
"She will need brainstem tests [I'm reading from 061-018-065] and on discussion with her parents, we will offer [maybe I will pull it up] offer these tomorrow."
Then you say:
"In the meantime --
A. "We will defer these until tomorrow."

Q. I beg your pardon. And then over the page, if we put that alongside:
"In the meantime, overnight, if she deteriorates, her parents are agreeable to her not being actively resuscitated."
Can I pause there. What were you explaining, from your knowledge, to the parents at that point?
A. I think that she was irreversibly brain damaged, she was only being kept alive artificially, and she would have no quality of life at all if she were to survive.
Q. And given that you weren't regarding yourself as Lucy's consultant is that a discussion you would have wanted to have in combination --
A. I was actively -- sorry, I'm interrupting again.
Q. That's okay -- in combination with Dr Crean, her consultant, or at least discuss with Dr Crean what you were proposing to tell them?
A. In retrospect, I'd accept that, yes. Yes. But I don't remember ever deciding not to discuss anything with Dr Crean or anything like that ...
Q. No, no. Would it be normal, if I can put it that way, that if you're not going to go in together, that you at least let Dr Crean know that this is now your view, having got the results back, and the parents are here, anxious, you're proposing to talk to them in this way

because it's all neurological, and you have brought me in?
A. I would have thought that I would have spoken to the PICU consultant, just not documented it. I think it's likely that I did.
Q. Nowadays would you document something like that?
A. I probably would, yes. I probably would. Not everything, of course, but yes. I have documented quite a lot here. I could have documented more, clearly, though.
Q. So then what you're essentially telling the parents is that she has gone?
A. I wouldn't use that --
Q. But that's essentially what you're saying. "She's irretrievable"; did you not use that expression?
A. I don't think I would have used that saying to the --
Q. What is the sentiment you are trying to convey to the parents?
A. Just that any prospect of independent quality of life here has gone, that she's effectively brain-dead, that she's not going to make any meaningful recovery.
Q. Then you add your note:
"If she succumbs a PM would be desirable. Coroner will have to be informed."
Did you tell them that?

A. I can't remember. I don't know. Certainly when I did phone the coroner, I think the next day, the family, I would have told them.
Q. If you formed that view then -- and Dr Stewart believed that you were recording that in the notes because she might succumb during the night and effectively it was a direction to her as to what your plan was should that happen. That was how she understood that.
A. Okay. No, that's just my musings really here. I'm writing down that I'm thinking, if she was to die, that a post-mortem might well cast further light on what had gone on here.
Q. And the coroner will have to be informed.
A. Yes. Clearly, there isn't any obvious cause here and also this little girl has died within a short time of coming into hospital, so I think it would be standard practice to inform the coroner of children like that.
Q. Did you tell the parents that you'd reached the view that this is a case that would be reported to the coroner?
A. I can't remember, I may well have. I didn't document it. I imagine I would have, yes. The parents were in the unit the whole time, they were always around.
Q. Did you discuss with any of the clinicians that your view was that if Lucy succumbed, then this is a case

that would have to be reported to the coroner?
A. I can't remember. That may have been a thought I just put down and sort of parked it until we got the brainstem tests done. Then we would have known exactly where we were. When --
THE CHAIRMAN: Anyone who came in overnight or treated Lucy overnight would see that on the note, so that if she did die --
A. I would imagine that I'd writing that note with a view to the next day ...
THE CHAIRMAN: But the note also covers the possibility that she might succumb during the night.
A. Oh, I thought she could easily have succumbed that night.
THE CHAIRMAN: And if she had succumbed during the night, then your note is, in effect, saying the coroner will have to be informed.
A. Yes.
THE CHAIRMAN: So Dr Stewart's interpretation of that note seems to make sense, that that in effect was telling her, since she would be responsible through the night, that if Lucy did succumb, you'd like a post-mortem, but more to the point the coroner has to be informed.
A. Yes, although I was going to be in the next day as well and I would have been around, yes.

THE CHAIRMAN: Okay.
MS ANYADIKE-DANES: Just one point that Lucy's parents were concerned about and it seems that they mentioned it, that they were concerned that the intravenous fluids for Lucy had taken some time before they were actually started.
A. I do remember them being very unhappy with their treatment in the Erne. But I suppose delaying -- a delay in getting the fluids up wasn't the issue in retrospect.
Q. No, but I'm trying, so far as I can to deal in real time, although retrospect is useful because it shows what's been learnt from the case. But in real time, did you know, from your discussions with Lucy's parents on that first day, that they were concerned with the treatment that Lucy had got?
A. Oh yes. Yes, I well remember that, yes. They were very unhappy with that.
Q. Could you understand the basis of why they were unhappy?
A. I think they felt that there weren't people coming in to check up on her and clearly they weren't able to get the drip up as well and I think they felt that maybe she needed more supervision as she got sicker and sicker and sicker --
Q. Leaving that bit aside, the bit I'm particularly

interested in is their concern about the late start of her IV fluids. You remember them being concerned about that?
A. I don't remember that specifically, no, but clearly I do remember that the parents were very unhappy with the care in the Erne certainly, yes.
Q. Sorry, I had put that to you earlier, and I thought you did appreciate that they were concerned about the late start.
THE CHAIRMAN: Why are we getting into this?
MS ANYADIKE-DANES: Because it has relevance for what gets reported to the coroner and what you do.
It's your first witness statement for the inquiry, it's 289/1, page 10. Let's pull that up. I'll read it:
"I do recall their great upset. They were distressed about difficulty in intravenous line placement, but I did not document in writing the exact details of their concern."
So they were concerned about that and that all feeds into the question of the appropriateness of her fluid regime, which to you -- you at that stage weren't seeing that, her fluid regime, as a relevant factor in her demise?
A. Not at that stage, no.
Q. In terms of specialism, would you acknowledge that

paediatric anaesthetists were also well-qualified to discuss fluid regime and the impact of inappropriate fluid regime on a child, the derangements of --

A. In retrospect I would accept they were probably more qualified than I was, actually, with hindsight.

Q. Sorry, do you need retrospect? In 2000, did you not appreciate that paediatric anaesthetists have actually quite a bit of experience and expertise in fluid management?

A. Yes, yes.

Q. So that's not in retrospect?

A. But with the -- but at that stage, as well, I will say again there was not the concern in my mind about the drop in sodium, which would have reflected the problems with fluid. By reality, I was less concerned about the fluid intake or the fluid -- the unusual fluid regimen as the cause of her death.

Q. I appreciate that and why I'm asking you is because you've acknowledged that others were or had concerns about her fluid treatment. And if you recognised that the anaesthetists are people who are well-qualified to have a view as to the likely implications of an inappropriate fluid management, why did that not prompt greater discussion is what I'm --

A. In retrospect, I'm happy to accept that it probably

should have, although I suppose I was fairly definite in my mind that this wasn't a fluid-related problem at this stage.

Q. The problem is that, in the evidence we've heard so far, Dr Chisakuta was fairly definite in his mind that there was a real problem with the fluid regime at the Erne and that there were concerns about it and its implication in Lucy's condition. He was pretty clear in his evidence to the inquiry about that. And Dr Stewart shared that. In fact, the two of them were of the view that that was a generally held view in PICU at that time. That's why I'm pressing you a little bit about it.

A. And I think I've said a little while ago that I actually do remember that there was talk about fluid difficulties, but translating that into the sodium was the big issue insofar as -- with respect to the information that was available to me at the time.

THE CHAIRMAN: But then you ask them, "How does that fit? The sodium level isn't low enough for the fluid regime to be a problem".

A. Because you can give whatever fluid you like as long as the sodium doesn't change appreciably.

THE CHAIRMAN: But that's surely why you would ask people like Dr Stewart or Dr Chisakuta why they're worried about the fluid regime and how this generalised view has

formed?

A. I don't know. I can't explain that. I don't know.

THE CHAIRMAN: If I understand what you're saying to me, it is that: they might have had a concern about the fluid regime, but I didn't; is that not the case?

A. I think it was very confusing at that stage. We didn't have the full information ... I may well have taken on board what they said about this is an unusual fluid regimen that they're giving, but I would have said to myself, "It didn't cause the drop in sodium" ... While I've noted that there was a problem noted -- in retrospect, I am happy to accept that I should have investigated this more and the evidence may have been there if I had looked more carefully.

THE CHAIRMAN: Do you recall any discussion with Dr Chisakuta or Dr Caroline Stewart?

A. Not specifically, no.

MS ANYADIKE-DANES: But it's not just a matter of in retrospect, Dr Hanrahan, because you're going to embark now on a course of reporting this to the coroner with a view, in your mind, I presume, of an inquest. So if, coming from PICU, there is an apparent difference of view, which is as yet unresolved, as to what are the important factors in this child's treatment, you don't know what's happened; you've got an entirely open mind

about it, you don't know what's happened, and then you've got at least two other clinicians who think that what's relevant here is the fluid regime that she received in the Erne. If you were being asked about that by the coroner, which you might have been when you were reporting it, you'd have to give some sort of account as to, "I have discussed it with them and this is what we think", or something of that sort. I'm just struck by the fact that there is a difference which you don't remember trying to resolve.

A. Mm. I suppose because I was quite clear in my mind about the sodium not being as -- that's the key point. That's the --

Q. You have given that evidence and I understand it was the key point for you, but they also had a view and, even before you speak to the parents, there doesn't seem to have been an attempt -- at least there's no recorded evidence of it or recorded evidence of it -- to resolve that difference. It's quite a marked difference and I'm interested as to why you didn't seek to do that, but pursued on the basis, well, that's my view and I don't think that those sorts of concerns are relevant.

A. I mean -- if I was again now, I certainly would discuss more and in more depth and I would actually look at the notes in more depth as well. I didn't deliberately

decide not to. I don't actually remember exactly having any conversation or not having any conversation before I rang the coroner.

Q. Yes. But if you're aware of the difference, you don't even remember trying to disabuse people of that notion in the way that the chairman has put to you, "Well, that can't be right"?

A. I can't remember that. I don't know.

Q. Do you think you would have done that?

A. Maybe I should have. I don't know. I don't know.

Q. Well, the next thing that happens, in fact, is the next day --

THE CHAIRMAN: It's after 11.50. Let's give the stenographer a break.

Doctor, we'll be back in ten minutes.

(11.53 am)

(A short break)

(12.11 pm)

MS ANYADIKE-DANES: Doctor, if we pull up the next day's note, maybe if we can get the two pages alongside, 061-018-066 and 067. So Dr Chisakuta carries out his ward round on the 14th, and this is the note that he makes. He says that she's still unresponsive, she's required mechanical respiratory support, there's been an infusion of desmopressin, that was discontinued during

the night, at 9 o'clock she had a negative brainstem viability test, so the first test is done at 9 o'clock and she is reporting that the plan is to await the repeat second set of tests.

And then you see, at 10.30, the second test has come back and Dr Hanrahan and Dr Chisakuta have performed it, the two of you, and it's negative.

If we pull up the sheet that records all of that, 061-019-070. What time do you come on duty on that day?

A. I was on call that week, so I could have been in at any time. It would have been 9 or so, round about. So I would have gone straight to PICU and done the first brainstem test. I can't remember exactly though.

Q. Do you get an update as to what's happened from Dr Chisakuta? Dr Chisakuta has certainly written his note after the first brainstem test has been carried out. Do you discuss with him?

A. Well, I think the plan certainly was to perform the brainstem test, so there wouldn't have been much more to discuss.

Q. You're anticipating it's going to be negative?

A. Oh yes. Brainstem tests, unfortunately and tragically, usually are.

Q. So you're anticipating that. I wouldn't like to say it's a formality because it's not a formality, but it's

an important thing that has to be done?

A. We rarely do brainstem tests unless we're practically certain that there's -- but it is a formality actually unfortunately. I don't like saying that word, but it is, yes.

Q. So you're looking presumably to what is going to happen afterwards because you anticipate this will be negative. That why I'm asking you, as you're there talking to -- being with him, as it is being conducted, he's the second doctor, do you take an opportunity to discuss Lucy with him?

A. I don't remember. We probably did. But I can't exactly remember the details of the conversation.

Q. So that would have been an opportunity to discuss with a different doctor, if I can put it that way, your thoughts about what has brought Lucy to the condition that she's in. You had opportunities the previous day with Dr Crean, now you have a natural opportunity with Dr Chisakuta to discuss her.

A. Presumably, yes.

Q. And even if you cannot remember actually whether you did that, do you think it's likely that you did?

A. I don't know. I suppose it is likely, but I really don't know for sure.

Q. Would it have been appropriate for you to do it?

A. I probably would have, yes. But I really don't know, it's 13 years ago.

Q. Okay. Would you, in advance of doing this or even after both had been completed, and so you're going to now finalise the completion of the form, would you look again at Lucy's notes?

A. I don't know. There's certainly nothing else at this point that was coming to light to explain her demise, and I still would have been of the opinion of the sodium being irrelevant.

Q. I suppose it's just in case there might have been something you missed because I think you said, in fairness to the chairman, that you may not have had an awful lot of time to look at those notes during the first day of her admission. There are things to be done, tests to be organised to make sure that she is well and truly stabilised. So that has passed now and you're in the final stage and this perhaps is another opportunity for you to have looked again at her notes and I'm asking you, would you expect to do that, to make sure nothing has been missed?

A. In hindsight, I certainly would, yes, yes, and I think I perhaps should have discussed it more, but I certainly don't remember my opinion on the sodium changing in this regard, so I'm still not of the opinion here that the

fluid balance has -- that the fluid balance was causative, and I don't know if Dr Chisakuta said that we did discuss it. I wasn't here for his evidence.

THE CHAIRMAN: But you're still in the dark as to why she died?

A. Obviously there is something in the background here, there is talk about the fluids, but I haven't got the full information.

THE CHAIRMAN: Apart from that, you're completely in the dark about why Lucy's died?

A. I don't know why.

THE CHAIRMAN: It is an entirely unexpected death of a previously healthy girl who has come into hospital with what appears to be a minor problem.

A. So it's unexpected and it's highly, highly unusual.

MS ANYADIKE-DANES: And there's a place on this form where you can answer the question, "Is this a coroner's case?", and you have left that blank.

A. Yes. I don't know why I did that.

Q. Why wouldn't you fill that in?

A. I'm not sure. I should have. I may not have seen that. I don't know. That's an omission because I've gone on the record before this as saying that it was. So it's ...

Q. You have said --

A. No, of saying that the coroner should be informed, sorry.

Q. You said that the coroner should be informed and when you put it here, then this is now the conclusion and the next stage from here is actually to remove ventilatory support and the child will die, so this is a formal document that brings all that together. You are, both of you, recording that as far as you're concerned, there is brainstem death, so she's no longer, to all intents and purposes, surviving other than by assistance, if I can put it like that, and this is the formal place where you would record, in the light of all that's gone before, this is a coroner's case, so this is an important document.

A. I accept that, yes, and I wasn't aware that I hadn't written that, but I think in retrospect I should have written that or one of us should have.

Q. Was there any discussion between you and Dr Chisakuta as to whether she was a coroner's case at that stage?

A. I can't remember that. There may have been, but I can't remember so long ago.

Q. Before we get to you actually contacting the coroner, in the light of how you have answered the chairman, what was the working pathogenesis at this stage?

A. That this was a very unusual case of a little girl who

had most unusually died of a usually trivial illness. That was the working pathogenesis at that stage. Clearly, with hindsight, the pathogenesis has changed and perhaps should have changed then if it had been further investigated. But I think we did not know why she had died. I think that's probably put rather baldly.

Q. Well, Dr Stewart says that when she came to complete the autopsy referral form, she says that the working pathogenesis was, and her reference to it is 115-022-002:

"I stated on the autopsy form that the clinical diagnosis was: dehydration and hyponatraemia, cerebral oedema, acute coning, and brain death. This was the working pathogenesis agreed by Dr Hanrahan and the anaesthetists in the absence of a definitive aetiological diagnosis."

So leaving aside who the other anaesthetists might be, she is very clear that that was agreed with you. In fact, she goes on to say that that was the product of a discussion, she does that in her witness statement to the inquiry, she says she can't recall -- I'll give you the reference to it. 282/1, page 12:

"I don't recall if I was personally present when the working pathogenesis was agreed. From my reading of her

notes [that's Lucy's], it is likely that I was there as I recorded the clinical facts and the general thoughts about Lucy's condition from Dr Hanrahan and from the anaesthetists. My role as the registrar was to transcribe the conclusions of any discussions between the professionals in whatever notes I made to the best of my ability and knowledge. These were not my own personal opinions. I don't remember the specific detail apart from what I had written."

And then she goes on to talk about the working pathogenesis and she does that, she develops that, at 282/2, page 4:

"I meant the working pathogenesis to mean the sequence of problems that affected Lucy and eventually led to her death. It is a term that I've used to describe context, symptoms and clinical signs without having the full picture of knowing the underlying diagnosis. Dehydration was listed as the first problem in this working pathogenesis as that was the reason she was initially admitted to hospital. There are many causes of dehydration and therefore in itself dehydration is not a diagnosis. The working pathogenesis explains what is wrong with the patient, not what caused all the problems. I meant the definitive aetiological diagnosis to be the key problem

or problems identified, which caused the patient's clinical condition. And definitive means clearly defined or formulated and aetiological means the cause of the disease."

What she's describing there is, as I say, leaving aside who the anaesthetists might be -- and there might be some query as to exactly who they were -- but she's certain that that was a discussion that you were involved in and, as a result, she got dehydration, hyponatraemia, cerebral oedema, acute coning and brain death; do you recall that?

A. I don't recall the conversation. And with respect to the hyponatraemia being there, there certainly was hyponatraemia.

Q. Yes.

A. And 127 would clearly be considered to be that.

Q. She has that as part of a chain of cause, if I can put it that way, that leads to her death. That seems to be what she is describing, the sequence of problems that affected Lucy and eventually led to her death. So in that sequence is hyponatraemia, proximate to it is cerebral oedema and then the acute coning. So do you recall having that discussion with anyone?

A. No, I don't, I don't, but I think there is a difference though between stating the fact of hyponatraemia and

I don't think that's the same as implicating it in the chain of events. In fact, it's the rehydration rather than the dehydration which caused the hyponatraemia.

Q. We're going to come to that. What I'm interested in is you having discounted hyponatraemia as being effectively an irrelevance in terms of her condition. That now has found itself alongside dehydration, cerebral oedema, acute coning and brain death.

A. I think this was some time later, wasn't it? This was for the ... Where did this statement come from?

Q. This is her discussion of the working pathogenesis, so this is --

A. I know that. This was composed for whose benefit?

Q. The autopsy request form.

A. Yes, but this statement which she's writing was written some time later, wasn't it?

Q. She's describing how she got the list of clinical problems that she inserted on the autopsy request form. We will come to that in a moment. Why I introduced this is at the stage when you've had the two negative brainstem death tests, the next step in your plan is really to be making a report to the coroner. So I'm trying to see whether this particular formulation is something that was discussed before you did that.

A. I don't remember, but I don't also remember guiding

Dr Stewart to fill out the autopsy form either.

Q. She remembers it.

A. She would have done that herself, I think. I don't recall guiding her in what to write on the autopsy referral form.

Q. We will come to that in a moment. I'm still at this stage just before you're making your report to the coroner. What I am trying to find out from you is this list of clinical problems which you have said in your statement to the coroner, at 289/2, page 3, she was right to detail the above features. In other words, although you can't particularly remember that conversation, you have recognised that all those were features?

A. They were features certainly, yes.

Q. So what I'm asking you is: had you formulated those as features before you contacted the coroner's office?

A. I can't actually remember. I don't remember. I'm not at all sure, though, that she is right in the hyponatraemia as a cause because that would be accompanied, as we know now, by rehydration.

Q. That's part of the problem and we are going to get to that, Dr Hanrahan.

A. I think that's just a description of a clinical feature, which was present, which could maybe have caused

a seizure or something like that as well, which could have been relevant.

Q. Of the many features, given that nobody really knows what happened to this child, of the many clinical problems she has distilled from whatever was being discussed, she says, between you and the anaesthetists, those four found their way as the main ones to put on the autopsy request form. She certainly seems to have them as being given some degree of significance -- what will be another matter, but if I just, please, confine myself to what I'm trying to ask you to help us with at this stage.

If you had not had that kind of discussion with her at that stage, this is just before you're contacting the coroner's office, what did you have in your mind as to the information you were going to give the coroner as to why you're making the report?

A. I don't remember the discussion with Dr Stewart. She may have asked me, "What will I put on the form?", and she may have missed a few things and she may have asked me, "Will I put on hyponatraemia?", because it was there and I may well have said, "Yes, put it on". What I think it certainly indicates though is I was not deliberately withholding the term hyponatraemia at this stage because, if I'd wanted to, I could easily have

done that.
Q. I'm not suggesting that for one minute; I'm simply trying to find out what you had gathered together as the relevant information and where you would have got it from to inform the coroner when you make your report.
A. I think it would have been on the clinical details that we'd had.
Q. Which are?
A. The notes from my investigation.
Q. So even though you cannot actually remember the conversation that you had with anybody at the coroner's office, what is the sort of thing that you consider would have been relevant to have been reporting?
A. I think the facts as I saw them because I wasn't reporting to the coroner as a medical misadventure, which this certainly came out to be; I was reporting it because we didn't know what was going on. I think it is reasonable to put in hyponatraemia as a clinical feature, although I don't recall telling her to put in hyponatraemia as integral part of the pathway.
THE CHAIRMAN: Sorry, doctor, that doesn't help me because you don't remember telling her to put anything in.
A. No, I think I left her to do the form herself.
THE CHAIRMAN: Her clear evidence has been that she completed that form on the basis of the discussions

which had been held with you and others.
A. I don't remember them offhand, I must say ...
THE CHAIRMAN: If I accept Dr Stewart's evidence on that, okay, because particularly in a death where the cause of death is so unclear --
A. Sure.
THE CHAIRMAN: -- she's likely, as a junior doctor, to have sought guidance?
A. She was quite a senior junior doctor at that stage, so I probably delegated most of the referring to her, so I was --
THE CHAIRMAN: She's likely to have sought guidance, isn't she?
A. She may have and she may have asked me, "Will I put in hyponatraemia?", and I said, "There's no reason not to as a clinical feature", but --
THE CHAIRMAN: Okay. Then Ms Anyadike-Danes was asking you what have you in mind to report to the coroner, and you're emphasising, "I wasn't reporting Lucy's death to the coroner as a medical misadventure". That's what you weren't doing; what were you doing?
A. I didn't know why this little girl had died. There was something very unusual about this, which, as you know, the real cause has subsequently come to light, but it was not available to me at that stage.

MS ANYADIKE-DANES: Yes. This was something that we had raised with other witnesses and I put to them a part of Dr MacFaul's report. As you know, he's a expert for the inquiry and he talks about the rarity of children in England and Wales dying from gastroenteritis, which is one of the things that might have brought Lucy to the Erne Hospital, and I think just about everybody accepted that it was pretty rare to have a child die from gastroenteritis. I gather from what you said, you'd consider that to be rare as well.
A. Yes.
Q. In the United Kingdom?
A. Yes.
Q. Certainly in 2000. So you have got not only is that a rare thing, but it happens very quickly, and that's something that Dr Chisakuta picked up on, that she comes in a relatively healthy child, and really within a few hours, actually, she's suffered this seizure from which she never recovers. And I think Dr Crean, for example, yesterday thought that by the time she'd had that event at 3 o'clock, that effectively was it. That's a different matter. But in any event, that shows how significant people thought that the event at 3 o'clock in the morning was. And if she still is moving around or admittedly sleepy and not as you would like her to

be, but she's still doing that within a few hours, then Dr Chisakuta thought really things had moved very quickly; would you accept that?
A. Oh certainly. Certainly, yes.
Q. So things have moved very quickly and not only that, but all that you've really got to guide you as to what her starting position might be is a bit of gastroenteritis?
A. That's right.
Q. So that's an extremely rare thing for a child to die of?
A. Mm.
Q. What you had said when we asked you about the cause of death in your witness statement for the inquiry is that the cause of death was not clear to you, and you highlight this point:
"Lucy also died within a short time of admission to hospital."
So those are two things of concern that might in and of themselves warrant a report to the coroner, yes?
A. Yes.
Q. And Dr Chisakuta says at 283/1, page 5:
"After we had concluded performing the brainstem death test on Lucy, Dr Hanrahan informed me that he was going to telephone the coroner's office."
And he said in evidence effectively that if you hadn't done it, he would have done it because he thought

that it was that kind of death.
A. I have lost the screen here. It's back again. Okay.
Q. So if you're going to make a report to the coroner about the death, what do you look at to sort of gather your thoughts together and distil the information that you're going to give the coroner before you make that call?
A. The clinical details, clearly, the investigations that I've already carried out, and I think the unusual nature of the death.
Q. Do you have her notes with you as you're about to do that?
A. I would have thought so, yes.
Q. Sorry?
A. I don't remember. I would have thought that I would have rung her from intensive care, so the notes would have been, if not with me, very close to me.
Q. Rung who?
A. Rung the coroner.
Q. The coroner's office?
A. Yes.
Q. From intensive care?
A. From intensive care.
Q. And you think you would have had access to her notes?
A. Yes, but clearly I did think at this stage I had a fairly good handle on what had already been done by

then. So I didn't make a contemporaneous note at the time of ringing the coroner, which I perhaps should have done, which would have clarified matters a lot.
Q. Yes. Do you think not doing that is not in keeping with what you would consider your practice to be at 2000?
A. I would certainly -- well, I think this was the first time I'd reported to the coroner at that stage.
Q. Oh.
A. Now I certainly would make a much more meticulous record of our discussion, what had taken place.
Q. If it's the first one that you had reported to the coroner --
A. That I remember.
Q. Yes. Did you think to take any advice as to what you should be doing, what might be expected?
A. I may not have.
Q. Sorry?
A. I may not have and in retrospect, I could have, certainly as ...
Q. Do you think that would have been appropriate to do?
A. Yes, this maybe should have been more of a team effort, and I could perhaps be accused of maybe going off a little bit on my own, my own impressions, without involving other people. But that's with hindsight.
Q. Is there a reason why you did do that?

A. I don't remember. I didn't deliberately decide not to do it.
Q. No. But is there a reason why?
A. No, not that I can think of, no.
Q. Did you see if there were any guidelines or guidance that might cover the reporting of a death to the coroner?
A. No, I don't remember looking at that. And I don't know if there are.
Q. Well, before you actually do it, what did you think would be involved with the actual process?
A. I think to see would there be -- well, one, I wanted to discuss the death with the coroner's office because of the very unusual nature of this and to see whether or not an inquest would be required, I suppose is the end line of discussing with the coroner. So would it be investigated further by inquest or would it be investigated further by other means?
Q. Well, did you know that a clinician's reporting of a death to the coroner is something that is governed by legislation?
A. I may not have been aware of that at that stage.
Q. You didn't know that you might have statutory obligations?
A. I may not have been sure. I was a relatively junior

consultant at this stage. That may not have crossed my mind about that. Certainly I was aware that it's a legal issue, yes.
Q. You were aware that --
A. Yes.
Q. You were aware that you had legal obligations about it?
A. Yes.
Q. And are you also aware that you have professional obligations as covered by the GMC?
A. I would accept that.
Q. If you're aware you had legal obligations, did you know the circumstances in which you were obliged to report a death to the coroner?
A. I think if there was any concern about the death, I think. I think it's a -- the coroner is reasonably -- if you're concerned about any death at all and you want to discuss them -- even if you don't know the reason for the death, I think that is a reason to ring in.
Q. Yes, that's a slightly different point. To report a death to the coroner, you've just said you recognise that there were legal obligations in relation to it. And what I'm trying to find out from you is what you thought were the requirements of you, the circumstances in which you were required to report a death to the coroner.

A. I cannot actually remember what my thoughts were 13 years ago as to what the requirements were. Certainly if there was anything unusual about the death, I think it was incumbent to report. And obviously if there was any misadventure as well.

Q. When I asked that question of the clinicians who have given evidence before, I think some of them said, "Well, during our university time or during our training, we did have a course that dealt with that". Are you aware of ever having been taught about the reporting of a death?

A. No, I can't remember formally, no.

Q. I'm going to read you the relevant bit of it, it's section 7 of our legislation, but it's:

"Every medical practitioner who has reason to believe that the person died either directly or indirectly as a result of violence or misadventure or by unfair means, or as a result of negligence or misconduct or malpractice on the part of others, or from any cause other than natural illness or disease, for which he had been seen and treated by a registered medical practitioner within 28 days prior to his death, or in such circumstances as may require investigation, shall immediately notify the coroner."

Do you think you would have appreciated that in

2000?

A. I was unaware of that as a statement, but I think it's very fair, and I think I would have been aware of the bones of it. I think I did report to the coroner because of the very unusual nature of it.

Q. You did, but I'm just surprised that you would have taken it upon yourself to do that when you now have acknowledged that you weren't entirely sure what the actual legal requirements were, although you knew that in certain circumstances you certainly had to report a death, or for that matter the procedure -- or having actually ever, to the best of your recollection, done it before. I'm surprised that you did that given that paediatric deaths, we're told, are not particularly common.

A. And in retrospect, I think if I could change the way it worked out, I probably would.

THE CHAIRMAN: Doctor, I think you had done your undergraduate degree in the Republic; is that right?

A. Yes.

THE CHAIRMAN: Had you been trained in the Republic on referrals to the coroner?

A. I can't remember. It had been a long time before then since I was an undergraduate.

THE CHAIRMAN: But then you spent quite a time in London, at

Great Ormond Street, and in the UK generally.

A. Yes.

THE CHAIRMAN: At any time during those junior periods, had you been trained at all?

A. No.

THE CHAIRMAN: Then when you came to the Royal in 1998 as a consultant, did you ask for or seek out any --

A. I don't think so.

THE CHAIRMAN: -- information about the circumstances in which you're obliged to report?

A. I don't think I would have spontaneously done that. Obviously since all this has happened there has been -- there are now regular hospital sessions as to the role of the coroner and the duty to report to them, so we are well updated. I accept that at that stage I was maybe not as up-to-date as I might have been.

THE CHAIRMAN: Let me follow you down that sidetrack for a moment. Did you say since then there has been regular training in the Royal?

A. Oh yes, yes.

THE CHAIRMAN: As a result of what?

A. As a result of all the publicity over Lucy and Raychel which happened. Twice a year now, our Tuesday lunchtime sessions are actually given to this talk on the coroner and who to report to.

THE CHAIRMAN: Okay. I think then the -- what we'll go back to with Ms Anyadike-Danes is if you not sure about what your legal obligations are, I think the question that arises is: does that affect the way in which you engaged with the coroner's office when you spoke to Dr Curtis? Maybe pick that up.

A. I don't know. I actually don't remember talking to Dr Curtis as well, so it's -- I'm afraid I'm just going to have to rely on what's written down there.

MS ANYADIKE-DANES: If this is all new territory to you, Dr Hanrahan, then the other thing that you might acknowledge was a bit surprising is that you didn't actually record what had happened.

A. No. In writing, you mean?

Q. Yes.

A. No, because I think Dr Curtis said that this doesn't need to be a coroner's inquest -- coroner's case.

THE CHAIRMAN: How he's going to respond to your call may depend on the information you were giving and your understanding of what you should be telling him. As I understand it, from what you have just summarised a few moments ago orally and what you said in your statements, you don't remember the conversation with Dr Curtis at all; is that right?

A. No.

THE CHAIRMAN: So you can't help us with what you told Dr Curtis?
A. No.
THE CHAIRMAN: And what he told you?
A. What he told me, no. I think he doesn't remember the conversation either. In that regard then, I think that not making a written record of our conversation is something that could have been considered at the time, but wasn't done.
THE CHAIRMAN: Can I ask you this: did you expect when you rang the coroner's office that the coroner would accept Lucy's death and would conduct an inquest?
A. I don't know. I can't remember what I thought.
MS ANYADIKE-DANES: Well, did you want an inquest into her death?
A. I think if I'd wanted an inquest, I would have pushed to say, yes, this child needs an inquest. So I went in with an open mind just to discuss the death with Dr Curtis.
Q. Then let's be careful. Did you think you were reporting her death or did you think you were discussing?
A. I think discussing.
Q. So you weren't reporting her death?
A. I think I was ringing up for a discussion to see whether formal reporting would be necessary.

Q. Then if you're actually discussing, when you got on to the telephone with the coroner's office, who did you expect that you would speak to?
A. A representative of the coroner, I think, but I don't remember what was going through my mind at that stage.
Q. You have just said a representative of the coroner.
A. Presumably, yes. So you ring the coroner's office, so you would expect to speak to a representative of the coroner.
Q. Were you expecting that whomsoever you spoke to was in a position to make a decision?
A. Or to guide me to somebody who might as well.
Q. Yes. So when you are speaking to that person to give them enough information that any view can be taken as to what the next step should be, then does that not mean that you should give them really quite full information because that person will know absolutely nothing about Lucy, save what you tell them?
A. Yes, and I think the slip that I -- referring to the initial conversation that I have is available for study. And I think in retrospect the information which I gave was incomplete.
THE CHAIRMAN: In what sense?
A. Well, I think that I gave the three reasons that I wanted discussed as gastroenteritis, dehydration and

cerebral oedema. And I didn't mention hyponatraemia, which in retrospect was an omission; it wasn't a deliberate omission. But it was a very important omission.
MS ANYADIKE-DANES: Yes. Let's pull it up. It's the record that -- we can pull up what you say in your witness statement. 289/1, page 11. It's at the bottom, (iii):
"I have no memory of the details. It would appear that the information I gave comprised gastroenteritis, dehydration, cerebral oedema."
And in fact, what Mrs Dennison has recorded in the main register of deaths, which we can see at 013-053A-290 ... (Pause).
A. I think it refers to those three terms, doesn't it?
Q. And it goes on to mention some other things that we might want to see. Here we are, it's here:
"Died on 14 April at the Children's Hospital. Gastroenteritis, dehydrated. Brain swelling. Admitted to Erne two days ago. Transferred to the Children's Hospital."
So if we just keep with the clinical matters, gastroenteritis, dehydration, cerebral oedema: do you think that what you could have communicated to Dr Curtis could have been as bald as that?
A. It may have been, but in retrospect it was clearly

inadequate.
Q. If that is what you said --
A. It just --
Q. Sorry. Just like that, how can you have expected him to have understood that as a cause of her death?
A. I don't know. I don't know. I mean --
Q. How would you understand that a child starts with gastroenteritis, they become dehydrated, and they end up with brain swelling?
A. Sorry, it's highly unusual, but clearly with hindsight it was dilutional hyponatraemia which caused this.
THE CHAIRMAN: Could you remind me, this is a note by Mrs Dennison of what Dr Hanrahan said to her or of what Dr Curtis said to Mrs Dennison?
A. No, it's Mrs Dennison, I think.
THE CHAIRMAN: It's Mrs Dennison's note.
MS ANYADIKE-DANES: What she says in her PSNI statement -- to clarify that at 115-033-001, she says, just above the redacted part:
"On the 14th, I took the report of the death. The death was reported to me by Dr Hanrahan. I have written in the circumstances of death as he reported to me."
So this is your report of the death, apparently, either before you get into the discussion with Dr Curtis or after you've had the discussion, but in any event she

has recorded this as a report of death and she has included it in the main register of deaths. So this is where things get not entirely clear in terms of the discussion --

A. Yes.

Q. -- because what she has recorded is a report from you of a death, and she's recorded that where she puts that sort of thing, which is in the main register of deaths.

A. But I don't know if I spoke to her or Dr Curtis first. I would imagine I spoke to her first and then spoke to Dr Curtis.

Q. Yes.

A. And then I would have said to Dr Curtis that this is a very unusual death, that I can't find the reason.

Q. Before we get to Dr Curtis, let's get to Mrs Dennison. You phoned up the coronial office and you are put through or you reach Mrs Dennison.

A. I think so, yes.

Q. And it would appear that this has been reported to her.

A. Yes.

Q. By you?

A. Yes.

Q. That's what I was going to ask you. Leaving aside everything else, if that is what you articulated to her, how could that have made sense to you as a cause of

Lucy's death, just those three items?

A. It doesn't. No, in retrospect, it doesn't. And at the time it probably shouldn't have either.

THE CHAIRMAN: Sorry, doctor, surely you can scrub the words in retrospect. At the time, that couldn't have made sense --

A. At the time it couldn't have, no.

THE CHAIRMAN: So there's no "in retrospect" about it.

A. So it was a description of the terms which were available to me, which I knew about.

THE CHAIRMAN: No, sorry, it was a description of some of the relevant terms.

A. Yes.

THE CHAIRMAN: But to put it bluntly, it was a hopelessly incomplete report on Lucy's death.

A. It was.

MS ANYADIKE-DANES: And then you're put through to Dr Curtis. Your understanding is that Dr Curtis is the coroner's representative -- is that the expression you used?

A. I don't remember. I think he was a pathologist, so he would probably work with -- but I don't remember the conversation with him.

Q. If one leaves aside the details of the conversation, you know you spoke to him?

A. I'm told I spoke to him. I don't remember speaking to him, but I accept that I more than likely did because of the note that's in there.

Q. Who do you think you were talking to?

A. I can't remember. I don't remember talking to -- I may well have been under the impression that he was linked in with the coroner's office.

Q. And what would be the purpose of discussing with him?

A. I think to see -- well, presumably I was advised to speak to him by Mrs Dennison. That's at the bottom of her note there.

Q. If you're going to discuss with him, what sort of thing do you think you would be discussing with him?

A. The clinical scenario, the events leading up to her death. I may have mentioned the fluids, but I may have said at that stage "but the sodium doesn't tie in with that so I don't believe that". But that's speculation and I don't want to do that because I don't remember what I said to him.

Q. Well, if you at least said these three things -- and it doesn't seem like you'd have said any less, so if you at least said those three things, are you going to express a view to him as to how rare a child's death from gastroenteritis would be?

A. Probably. But as I said, I can't recall exactly. Yes,

I think that would have been a part of the conversation, but that's speculation because I don't remember. But I completely accept that this is incomplete. It's not coherent.

Q. What you said when you were asked about it in your statement to the PSNI -- the reference is 115-050-004:

"I am not aware if I mentioned at this point hyponatraemia along with dehydration, but I may not have as it was not something to the forefront of my mind at this time."

Well, going into that conversation, from what you had been looking at in terms of her notes, what you'd been thinking about, what you'd heard from the other clinicians, what would have been at the forefront of your mind?

A. I think the fact that I didn't know the cause of this. I may well have already said that there was some talk of fluid mismanagement and I may have mentioned that to Dr Curtis as well. If I did that, I presume I would have said, "But that doesn't add up to the sodium which we were told about".

Q. If I can just pick up your answer to the chairman then about the information possibly being inadequate that was given --

THE CHAIRMAN: Hopelessly incomplete.

MS ANYADIKE-DANES: Yes. You appreciated that this area was covered by your obligations and the GMC. And in the GMC's Good Medical Practice for that particular period, the reference for which is 315-002-009, it says that:

"You must cooperate fully with any formal inquiry into the treatment of a patient. You must not withhold relevant information."

Then:

"Similarly, you must assist the coroner."

It goes on to talk about when an inquest or inquiry is held into a patient's death. But at this stage, this is assisting the coroner's office to reach a view as to what should happen. And you're not assisting the coroner's office?

A. No, because I'm not in possession of the full facts here.

Q. No, you're not assisting the coroner's office because you're not even -- I think you're accepting in your answer to the chairman, so far as you can see, you're not giving the coroner's office even the information that you've got, which has not allowed you to form a clear view as to cause of death.

A. But I may be looking for help to find a cause of death. That's the whole -- that appears to have been the whole point as to why I phoned the coroner.

Q. If you had been asked at that stage, "Dr Hanrahan, fine, I understand what you say, can you sign a death certificate?", what would have been your answer?

A. I don't think I did sign a death certificate at this stage.

Q. Sorry, the question was not that. If, after you have given that information and the person that you speak to says, "All right, thank you for that, can you sign a death certificate for this child?", what would have been your answer at that stage?

A. I think I would have probably said no. And I don't think I did sign a death certificate at that stage.

Q. I accept that and I'm not for one minute suggesting that you did sign one at that stage, and you have answered it. Your answer would have been no?

A. I think it would have been, yes.

Q. And the reason why it would have been "no" is because you don't know why she died.

A. I didn't know. I know now clearly why she died.

Q. I know that this is very difficult because I'm asking you to speculate about something that you can't actually remember and I appreciate the limitations of that, but I'm asking for your help as to, bearing in mind the information that you did have at that time, what you might have thought was appropriate to share, if I can

use that expression. At that time, when I was asking you earlier, you said that you knew that the parents had concerns about Lucy's treatment at the Erne.

A. Yes.

Q. You knew that. In fact, you knew that there were some quite specific concerns --

A. Yes, because they told me about that, yes.

Q. Exactly. Did you share or at least would that be something that you would have considered relevant to inform the coroner's office about, that not only did you not know why this child had died, the fact that gastroenteritis was there made that really quite rare that she would have died of that, and, more to the point -- or in addition to that -- her parents were very concerned about the treatment that she'd received at her referring hospital; is that something that you would have communicated?

A. I think if I wasn't sure that the concerns which the parents had raised had been a definite chain in the events of death, I might well have not mentioned that to the coroner in great detail, but like you say I'm speculating and I don't remember. I wish I had kept a contemporaneous note, but I didn't.

Q. Do you think it's relevant to tell the coroner's office that parents are concerned about the treatment their

child has received, particularly when it's not entirely clear what has been the cause of that child's death? Do you think that's relevant?

A. I think it is relevant and, in fact, in subsequent referrals to the coroner that I have made, the coroner has asked me as a guidance to whether or not an inquest should happen, "What do the family think?" But at that stage I may not have thought that the concerns of the family, although real, were a definite link in the chain of events of cause of death.

Q. You are trying to provide the coroner's office with information to allow a decision to be made at their end.

A. Yes.

Q. They know nothing other than that which you gave them.

A. Yes.

Q. So all I'm asking you is whether you think it's relevant, as part of the matrix of things, to communicate to the coroner's office that the parents are unhappy with the treatment their child received at the referring hospital?

A. I would think it is reasonable to suggest that, particularly in view of the fact that the coroner, in subsequent referrals, has raised that himself, yes.

Q. Do you think that you would have discussed with Dr Curtis or, for that matter, anybody else in the

coroner's office, whether there would be an inquest?
A. I don't know. I don't know.
Q. Is that not what you wanted to know?
A. I may have asked, "What do you think?", but since I wasn't giving information to him suggestive of an unnatural cause of death, he may well have thought there's no need for an inquest and I would have taken his advice on that.
Q. Sorry, you have just said since you weren't giving the information to him suggestive of an unnatural cause of death --
A. Clearly I haven't said to Dr Curtis, "This has been an absolute mess-up, there's a misadventure here, there's an unnatural death", because if I had said that to him, I would have expected that he would have said, "We had better investigate this further, formally".
Q. But you don't know what happened?
A. No, so I didn't say to him that there was an unnatural death because, if I had, I think it's reasonable to surmise that he would have gone for a full inquest. So I think it's reasonable to assume that I did not say to Dr Curtis that there has been an unnatural death here.
Q. One of the other reasons why you report a death to the coroner, as I just read out to you, is because you think there are circumstances -- in fact:

"An unusual situation which would warrant investigation."
That's one of them. That's the criterion and, which I presume from what you have been telling the chairman, Lucy did fall into that category.
A. But not necessarily by an inquest, so further investigation, as it happens, was by post-mortem.
Q. We'll come to that in a moment. If you thought that a post-mortem would be the answer, then you could have had a hospital post-mortem. So there is a --
A. Sure, yes.
Q. -- a requirement to inform the coroner's office in certain circumstances. You've informed the coroner's office, so it's more than just thinking, "I could get a post-mortem to educate me or educate all of us", you feel that the criteria have been met that obliges you to report the death to the coroner's office. So in those circumstances either there was going to be an inquest or there isn't, or there's a third, which is that the coroner directs his own post-mortem. But some action point has to come out of that process. Did you not want to know whether there was going to be an inquest?
A. I may not have wanted to know that, but I certainly did take what Dr Curtis' said, take his advice, we'll get a

post-mortem carried out and now -- in retrospect, I should, of course, have got back to the coroner once the post-mortem was done.
Q. Let's just not, if I may put it this way, get too much into the retrospect at this stage. So you have just said, well, I may not have wanted whether there was going to be an inquest, but you'd have wanted to know something because that might have affected what you did.
A. Yes.
Q. Because you have already recorded on the child's notes, even before the brainstem-death test, that you would want a post-mortem. In fact, that's how you framed it.
A. A post-mortem would be desired, yes.
Q. You said:
"If she succumbs, a post-mortem would be desirable. Coroner will have to be informed."
So almost whatever happens, you have recognised that you will need some more information before a death certificate can be issued.
A. Mm.
Q. So either that is going to come through the coroner's efforts, through an inquest or a coroner's directed autopsy, or through a hospital post-mortem if the parents consent to it, but something else, you have recognised, is what's required.

A. Yes.
Q. So if there's going to be an inquest, then you don't have to organise the post-mortem, hospital post-mortem. In fact, you don't even have to seek the consent of the parents because that's not an issue if it's an inquest.
A. If it's a coroner's inquest, that's correct.
Q. Exactly. I'm suggesting to you that you do have to know what the outcome is going to be and aren't you wanting to know it to know what steps you should be taking, if any?
A. Yes, I would accept that. But I'm sure it was on the basis of my conversation with Dr Curtis that it was decided not to take it further in the coroner's office. Now, no doubt that was taken on the basis of his discussion with me, and I may have agreed with him that, well, okay, let's take a step back here, let's get a hospital post-mortem and see if that would give us any other indication, any other clue, any information as to the reason for the cause of death.
Q. Dr Curtis has said that if the term hyponatraemia had been mentioned to him, he believes that would have warranted investigation. It's in his witness statement to the inquiry, 275/1, page 7. Just summarising it, he says:
"Knowing about dehydration and hyponatraemia in the

same patient, dehydration would normally lead to hypernatraemia, so this would be an unusual situation, which would warrant investigation."

Whether you agree with his classification of the problem, from his experience if he had heard essentially what Dr Stewart has recorded on the autopsy request form, his evidence to the inquiry is that he would have felt that that death warranted further investigation and therefore an inquest or coroner's directed post-mortem.

A. Yes.

Q. So it seems that not only was, as you've readily acknowledged to the chairman, what you told the coroner's office hopelessly inadequate, but it's actually had an effect on what was to happen.

A. Yes, and it was on the basis, however, of incomplete information and, in reality, hyponatraemia certainly should have been mentioned, without a doubt, but I did not think that it was --

Q. I appreciate all of that, but now it's moving to somebody else's decision.

A. Sure.

Q. And you're giving somebody else information for someone else to make a decision, and what that other person is saying is: if you had, effectively, at least given that information that was recorded on the autopsy request

form, then a different course might have been taken.

A. Although I may well have mentioned hyponatraemia to him as well. I may well have.

Q. Firstly, he can't remember it, and he has said what his reaction would be.

A. I may well have mentioned it.

THE CHAIRMAN: And dismissed it?

A. But dismissed it, yes.

THE CHAIRMAN: And he's also trying to piece together a conversation that he doesn't really recall. His best guess is that if it had been mentioned, he would have directed some further investigation, but the other possible route is that if you had mentioned it and then dismissed it, that may have dissuaded him from any further investigation.

A. And my impression at this stage still was that the hyponatraemia was not low enough to have caused --

MS ANYADIKE-DANES: I understand that.

A. Therefore, I clearly didn't give it enough -- as much weight as I should have.

Q. Yes. Did you ever suggest that you might send the -- well, the decision to be made about what to do in relation to Lucy's case being an important decision and given that you didn't really know what was happening that you might send a copy of Lucy's notes to

the coroner's office?

A. If I'd been asked to, I would have.

Q. No, did you consider doing something like that?

A. No, I didn't consider doing that, no.

Q. Did you consider putting in writing your thoughts as to what had happened, or in combination with perhaps your other colleagues, and giving that to the coroner's office?

A. I don't think I did consider it, no, but if I had been asked to, I would have.

Q. Because Dr Chisakuta, when he was giving evidence, thought that the process of providing information to the coroner's office is something that he believes there would have been quite a bit of detail about in relation to what he believes should have been conveyed, given Lucy's circumstances.

And Dr Stewart, when she was interviewed some time after Lucy's death, she wasn't intending to give an interview, but nonetheless she was interviewed about it. She expressed surprise that more information was not given to the coroner's office, including the notes. That's how she understood it.

A. If I had been asked for the notes, I certainly would have provided them, without any difficulty, and if I'd been asked for a written summary. And I think from now

on, I would certainly consider doing a written summary. That's a lesson that I've learnt, certainly.

Q. I understand that, I'm sorry to keep harping on about it, but if I can put it this way, this turns out to be -- and I know that hindsight is a wonderful thing -- a very significant event because if an inquest had happened at that stage, there's always the possibility that what came out subsequently in Lucy's inquest in 2004 might have come out at this stage and therefore whatever lessons there were to be learnt about her treatment and its implication and the risks of low-sodium fluids and so forth could have been out there to be appreciated by other clinicians, other hospitals, maybe in time to have affected Raychel's treatment in Altnagelvin. That's the significance. It probably didn't come to you weighted like that when you were having that discussion.

A. Certainly not, no.

Q. But that's the significance of whether a coroner's inquest is heard because that's the opportunity to find out exactly what happened and to do it in a public way, more public than a hospital's own investigation would be.

A. I think, with hindsight, I'd have to accept that that could have been the case, but obviously we don't know

for definite, we don't know for sure, but it's a possibility.

Q. Yes. Then in a way that is equally not entirely clear to you, the case is not going to be accepted by the coroner and so there's going to be no coroner's instigated investigation.

A. At this stage, no.

Q. That seems then to have been communicated back to Mrs Dennison, who also records that fact. She records that a death certificate can issue. And you say you don't recall receiving the information from Dr Curtis that there's going to be no inquest.

A. I don't recall what I said, but I don't recall anything about Mrs Dennison getting involved again. Maybe --

Q. She's recorded, I'm sorry.

A. I have no knowledge of that.

Q. Let's pull that up, 013-053A-290. So that's the report that you make, it's very short in three lines. Then you see, "Spoken to Dr Curtis". So that seems to be the order of things. Then, "Gastroenteritis, DC". That indicates the death certificate with gastroenteritis as a feature. So you don't recall being the person who got back to Mrs Dennison and said, "Thank you very much, that's all right, I'm going to be able to issue a death certificate"?

A. No, and I didn't write the death certificate.

Q. No, I didn't say you did. But you don't recall being the person to give that information?

A. I would have thought, if I had contacted her again to say it was okay, to go ahead with the death certificate, I would have done the death certificate.

Q. Did you?

A. I didn't ... So it's not me that got back to her, no.

Q. So at that stage then, after your communication with the coroner's office, to put that neutrally, when you come back from that and you know there's going to be no inquest --

A. At this stage.

Q. -- or coroner's investigation, if anything is going to be done further, it will have to be done by the hospital with the consent of the parents?

A. Yes.

Q. And am I right in thinking that nothing else has happened to change you from your mind or your view that, "I'm not in a position to write a death certificate at this stage"?

A. No.

Q. Therefore you need something further to help with that.

A. That's why we got the hospital post-mortem.

Q. Yes. So you know that you have to seek the consent of

the family. That's not automatic?

A. That's not automatic, no.

Q. And if the family had said no, what would you have had to do in those circumstances?

A. I probably would have pushed them. Not pushed. I would have suggested strongly that it certainly is worthwhile just to try and find out if there was anything else that we missed. But if they had not agreed, we'd have no choice but to respect their wishes.

Q. And do what?

A. I may have gone back to the coroner then at that stage, I don't know. It was his suggestion that we get a post-mortem and if I found out we weren't going to get one, I could have gone back to the -- you're asking me to speculate and --

Q. Who's suggesting that you get a post-mortem?

A. Dr Curtis.

Q. I thought you had already indicated in her notes that you thought a post-mortem --

A. It would be desirable, yes. I certainly do think so. And then Dr Curtis seems to have agreed with me then when I spoke to him --

Q. If he hadn't have agreed with you, would you not still have wanted to have a post-mortem?

A. Desirably, certainly, yes.

Q. So you're not doing it because Dr Curtis has indicated anything to you, you're doing it because at that stage you don't think that you know what the cause of death is sufficient to write a death certificate?

A. That's correct, yes.

Q. Yes. And in fact you didn't think --

A. But I didn't do a death certificate at this stage either.

Q. I know that. That's why you are doing a post-mortem, why you want one.

A. To try and get as much information as possible.

Q. Exactly. So what I've asked you is what would have been your course if, because that is something the parents need to agree to -- what you would have done if they hadn't agreed?

A. I really don't know.

THE CHAIRMAN: We're getting into more speculation, so let's leave that.

MS ANYADIKE-DANES: I understand that, and I apologise, Mr Chairman. What I'm trying to get at is the strength of Dr Hanrahan's view as to his inability to properly comply with his statutory obligations in the writing of a death certificate at that stage.

THE CHAIRMAN: But he said he couldn't write a death certificate. We'll come on after lunch to the

circumstances in which a death certificate was then written.

MS ANYADIKE-DANES: Thank you.

THE CHAIRMAN: 2 o'clock, doctor. Thank you.

(1.17 pm)

(The Short Adjournment)

(2.00 pm)

(Delay in proceedings)

(2.07 pm)

MS ANYADIKE-DANES: Good afternoon.

Can we please pull up 170-001-018? This is taken from the legislation, Dr Hanrahan, and this is where the duty that we've been discussing before lunch, the statutory duty, arises from, so if you look at section 7, which is the important bit. I had read that out to you, but it occurred to me it would have been more helpful for you to actually see it rather than have it read to you.

When you formed the decision to report this matter to the coroner, I understood your reason for that was essentially that they were "such circumstances as may require investigation". Do you see that, about three-and-a-half lines up from the bottom of paragraph 7?

A. Yes.

Q. As you look at that, is there anything else there that you feel Lucy's case met, any of those tests or requirements?

A. Well, the last bit which you have mentioned is quite broad, "Any such circumstances as may require investigation". At the time I probably wouldn't have considered that, but in retrospect I think it clearly did need investigation.

Q. That's her, really? So in fact, although you didn't put it in those terms, that's really what you were seeking?

A. I think so, yes. I think I'd have to accept that, yes.

Q. You'll appreciate from this you don't need to know that. All you need to have is a reason to believe. Do you see that, a third of the way down?

"Every medical practitioner who has a reason to believe --

A. Yes.

Q. You just have to be in that position.

A. Sure.

Q. So if that's what you thought was the reason why you were reporting her death, I take it that there wasn't anything that -- well, that may be an unfair way to put it. What could have come out of that discussion for you to believe that that statutory basis was no longer there?

A. I certainly wasn't considering the statutory basis directly or actively at that stage.

THE CHAIRMAN: You had an instinct that the death should be reported to the coroner?

A. Yes, because there was something very much different here, and there was some talk of the fluid balance as well, but I could not translate that into concern that the fluid balance difficulties had caused the death. So I perhaps under called that and in retrospect that was the wrong decision to do.

MS ANYADIKE-DANES: No, I understand that and you have been very frank about that. I really meant -- in fact, it makes it worse for you because, if you put that to one side, you really don't have a clue as to what was causing it because you don't think it's gastroenteritis because that is a very rare thing to happen. So you're left in this position where there will have to be some further investigation to allow you to know. So why I'm asking you this question is: if that's what you go in with, what could Dr Curtis or anybody else, for that matter in the coroner's office, possibly tell you to close that gap for you?

A. In retrospect, I can't think of a reason particularly what was in my head, and also as I said, I can't remember what Dr Curtis did tell me at that time. It

may have just been looking for some advice, "Where should I go from here?", that that may have been all that I asked him. I don't know.

Q. You also said you weren't entirely sure that you knew what the bases were on which you had to report a death to the coroner; is that correct?

A. I think it was more of an instinct, just a feeling that there was something different here --

Q. No, but that's what you said: you weren't sure of the bases; is that correct?

A. I can't remember what exactly I did say.

Q. You have certified the death of a child before?

A. I had, yes.

Q. The death certificate comes in a booklet; that's correct, isn't it?

A. Yes.

Q. If we pull this up, this would be the front page, to orientate you, 315-019-001. Behind that are the forms that you fill in and you tear off and leave a counterfoil; isn't that correct?

A. Yes.

Q. And it's quite clear that this is governed by legislation, as it says:

"As prescribed in accordance with ..."

Then if we go to the next page, 002. So if you've

filled in a death certificate before, which you say you have, this is what happens immediately next. So we'll get to the bit in bold at the top, but it says:

"No medical certificate of cause of death may be given on the prescribed form unless the certifying medical practitioner has been in attendance upon the deceased during his or her last illness. The certificate must be given and signed by that practitioner. No other person or practitioner may sign the certificate on his behalf."

In bold:

"2. If a death is to be reported to a coroner (see note at the top of this page) a medical certificate of cause of death should not be issued."

Then it takes you up to the top of the page:

"The certifying practitioner must notify the death to the coroner if there is reason to believe that that death took place, directly or indirectly, (a) as a result of violence ..."

And so on in the way that you have been seeing, but from the legislative extract I gave you. And down to (d):

"In such circumstances as may require investigation."

So if you have signed a medical certificate of cause

of death, then those instructions are there and they go on, and we may look at them when we come to the death certificate part of the questions I want to ask you, but it's quite clear that this is all governed by legislation and it's quite clear the circumstances in which you have to report that; do you accept that?

A. Mm.

Q. And that's why I was really asking you: if the child's death is no longer going to be considered by the coroner's office, that's why I was asking you what could you possibly have learnt from all that you knew about the cause of her death to have taken it out of that requirement in relation to (d)?

A. As I said, I don't remember certainly reading all these in detail, so I probably was ignorant of this. And it could be just that I was just discussing with Dr Curtis rather than making a formal referral and he said, "On the basis of what you know, maybe there isn't any cause for an inquest, get a post-mortem", which is what I did.

Q. Firstly, Mrs Dennison has recorded it as reported, but let's leave that to one side. If you think the way it might have happened is that you are really trying to discuss with Dr Curtis and you have received some information or guidance back from him that leads you to suppose that it doesn't meet whatever was your instinct

as a test for reporting a death, Dr Curtis can only be as good as the information that you give him.

A. True, yes.

Q. The information that you had is the very information that has led you to believe that this is a case that you ought to be reporting.

A. Or at least discussing, yes.

Q. Well, at least discussing. And I'm trying to find out what extra he could have brought to it, not having any knowledge of this child's condition at all, that would lead you to suggest that, in retrospect, perhaps the child dying of gastroenteritis isn't quite as unusual as I thought or dying that quickly isn't that unusual, or dehydration and cerebral oedema, perhaps there is some natural connection. I'm just trying to see what he could have brought to you, experienced as you are and having been with Lucy through those two days and read her notes, to have thought that this was something that didn't require investigation.

A. It's possible that I may have mentioned the fluids as well, and he may well have taken that as a fact. There was discussion about the fluids. I may then have said, "The fluids didn't cause it, things just don't add up here". I would think that's what I said.

Q. And if they don't just add up, then more investigation

is required?

A. So we got the death certificate -- the post-mortem done then.

Q. I see. Then in fairness, I had put to you the kind of detail that Dr Stewart thought should be provided if you're going to report a death and discuss matters with the coroner's office. But I hadn't given the reference for it and I apologise for that; it's 069-001-013. And what she says at that stage is:

"I would have assumed all her notes, including her post-mortem notes, would have gone to the coroner."

You hadn't had a post-mortem at that stage. Then she queries at 069-001-024:

"But why didn't the coroner have access to the notes?"

She returns to that later on at 047:

"I don't understand why the coroner wouldn't get the notes and know all of those details."

And then finally, she says at 062:

"I can't believe that nothing was in writing to the coroner."

So her view was that something a little bit more detailed than it appears -- although I recognise you can't remember what was said -- would have gone to the coroner.

A. But I'm happy to accept that something perhaps should have gone in writing. Absolutely, yes.
Q. When you reported Lucy's death or at least contacted the coroner's office to tell them about Lucy's death, if I can put it more neutrally, were you aware that you should have notified your medical director or any senior person that you were doing that?
A. No, I was unaware of that.
Q. We asked that question of the Trust medical director at the time. Well, we raised issues in relation to the coroner. It was Dr Carson at the time. His witness statement to the inquiry, 306/1, page 3. It's in answer to a question at 1(e). What he says was:
"It was [his] expectation that if the coroner was notified about a death, Dr Murnaghan or Mr Walby ..."
You were aware of who they were at the time?
A. Yes, Mr Walby mainly.
Q. "... should be informed by the responsible consultant."
Which would be you notifying.
A. Yes. I was unaware of that, I must say, at the time.
Q. Well, he says that he can't recall being notified of Lucy's death at the time; is that correct?
A. I don't think I contacted him about that, no.
Q. And this goes back to something that the chairman had asked you, which is exactly what induction, instruction,

guidance, if any, the Trust was providing at that stage, being 2000, for its clinicians as to their responsibilities in relation to reporting a death.
A. I'm unaware of having received any of that.
Q. So if there was something there, it certainly hadn't been brought to your attention?
A. No, no.
THE CHAIRMAN: At what stage in your career with the Royal were you told that if you reported a death to the coroner, that you also had a responsibility to report it to senior management?
A. I'm unaware of that.
THE CHAIRMAN: Still today?
A. Mm-hm, yes.
THE CHAIRMAN: Thank you. Are you still in the Royal?
A. Yes.
THE CHAIRMAN: And since Lucy's death, have you reported a death to the coroner?
A. I think I have, yes. Yes.
THE CHAIRMAN: And do you recall whether you reported any of those deaths to senior management?
A. I don't think I did, no.
THE CHAIRMAN: Thank you.
MS ANYADIKE-DANES: There's one thing that I was asked to go back to. I beg your pardon. That is this issue about

whether you discussed the death certificate with Dr Curtis. You remember when I had that entry that Mrs Dennison made into the main register of deaths, she entered the initials for death certificate and gastroenteritis. And we asked you, "Did you discuss the completion of the death certificate with Dr Curtis, and, if so, what was discussed?" And your answer to that is "no". I can give you the reference, it's witness statement 289/1, page 11. And we also asked you in connection with that, "Did you discuss with Dr Curtis whether a coroner's inquest would be held, and, if so, what was discussed?", and you said "no".
The query is this: if you can't actually remember the conversations that you had with Dr Curtis, how do you know or how can you be sure that you didn't discuss the completion of the death certificate with him and didn't discuss whether a coroner's inquest would be held --
A. The death certificate came later down the line, and I think there was discussion then at that stage. That's the reason why I would have thought that, but --
Q. But you have answered you didn't do it; not it wouldn't have been a sensible thing to do at that time. You have said you didn't do it and the query is, if you can't remember your discussion, how do you know you didn't do

it?
A. Well, that may be a miswording. I can't remember.
Q. So would a better way --
A. So I have no memory of discussing that with Dr Curtis.
Q. Would that apply to both of them?
A. It would, yes.
Q. Thank you. Well then, as a result of that exchange, at some point you recognise there's going to be no coroner's involvement and therefore it comes as to whether you're going to have a hospital post-mortem.
A. Yes.
Q. And are you sure in your mind that if there isn't going to be an investigation by way of the coroner, then if I can achieve it with the family I think there ought to be a hospital post-mortem to investigate?
A. I think that's what I thought, yes.
Q. And in order for that to happen, you need two things, do you not? First, to get the family's consent about it.
A. Mm-hm.
Q. And then you need formally to request that, which is a procedure, from the pathologist; isn't that right?
A. Mm-hm.
Q. And do you first speak to the family about it?
A. I think I would have. I don't recall exactly, but yes,

I would have broached it with the family.
Q. In doing that, would you explain to them why you think that's something that would be appropriate?
A. I presume I would have, yes. Again, I didn't document the exact wordings of our conversations, but I think that's a reasonable assumption to make.
Q. Is that one of those things which now in your practice you would record? Or would you not?
A. I don't know for sure. I think it's -- I often would write down what I say to parents, certainly yes, and I think they would be given a booklet now, as well, which might contain all the information they need.
Q. I know that you can't remember this, but you think you did it. If you thought you did it, what is the sort of explanation you'd be giving them or the reason you'd be giving them for why this is appropriate?
A. To try and find out what exactly had happened, would give you any further information as to what's gone on.
Q. I'm not going to get into the issue of how that's achieved because, in due course, you proceed towards a hospital post-mortem.
A. Yes. I don't recall any reluctance on the family's part to engage in it. They were quite keen to engage with us to get as much information as possible.
Q. Then you contact Dr O'Hara to see if he would be

prepared to do it; is that correct?
A. Somebody would have. It may have been me, it may not have. That's the kind of thing I would have happily delegated to Dr Stewart --
Q. Dr Stewart recalls that you were doing it as a consultant-to-consultant exchange?
A. I don't remember talking to him.
Q. Have you ever done that before, contact a pathologist to see if they'll carry out a hospital post-mortem?
A. Yes.
Q. Prior to 2000?
A. Yes, yes. We would deal more with the neuropathologists who are a more specialist band of pathologists, so we would have more intimate knowledge of them. So I think I would be more likely to talk to them than to the general pathologists, but I think I may well have spoken, but I don't remember exactly.
Q. By the neuropathologists do you mean Dr Mirakhur or and Dr Herron?
A. Dr Herron, yes.
Q. But in any event, the process is much the same?
A. It is, broadly speaking.
Q. So if you're contacting the pathologist of whichever specialism, are you doing it simply to ask if they'll carry out the post-mortem or are you going to give them

some preliminary information as to why you want their assistance with this?
A. It would be both, really. Although in general, pathologists are not reluctant to do post-mortems. There has been a fall in the amount of consented post-mortems carried out, so they are quite keen to do as many post-mortems as possible. So certainly, getting them to agree to do the post-mortem, I don't think, was an issue, so the whole idea would have been to run things past them.
Q. I'm not suggesting that there would have been an issue, but what I am trying to find out is what sort of information, given what you had from Lucy's notes and your examination of her, what sort of information you would be seeking, consultant to consultant, to pass to the pathologist.
A. Was there any reason for the cerebral oedema, and I think the -- we'll come to the autopsy request form in a while. So I may well have delegated the filling out of that form to Dr Stewart, which I think she did.
Q. I think you did. In fact, that's exactly what she says, that you asked her to do that, and she did that after discussion, and that is how she gets to the clinical problems that she's going to cite, as I was taking you to that before lunch.

A. Mm-hm.
Q. She says that's where she gets that from. She would not have been formulating that herself.
We can see what's on the report if we pull up -- it's actually three pages, but I'm going to pull up the two relevant pages for our purposes, 061-022-073 and then 075. If we can have those next to each other.
Before we go into the actual detail of this, what in your view would go with this autopsy request form to the pathologist?
A. Do you mean in terms of notes or whatever?
Q. Yes.
A. I don't know, frankly. I don't know.
Q. What do you think would have been appropriate to send?
A. The notes usually would go through, they would accompany children who are living, clearly, to various investigations, so the notes could well have gone, but I don't remember. I may not have been involved in deciding what was to go with Lucy to --
Q. Would it have been appropriate for the notes to go?
A. In retrospect it would, I think, yes, and with foresight as well, I think. But certainly I wouldn't have had any difficulty with the notes going over, and I didn't -- if they didn't go, I didn't deliberately prevent them from going or try and inhibit their going.

Q. Did you know there was guidance to assist on the filling out of these forms and the exchange between the clinicians and the pathologists?
A. I didn't at that stage, no.
Q. What kind of guidance did you give to Dr Stewart, who was your registrar and tasked to fill in this form? What kind of guidance did you give her?
A. I can't remember saying anything specific. She was very competent and very senior junior doctor and I was very happy at that stage clearly to delegate the filling out of the form and the provision of the information entirely to her. So clearly, I didn't try and prevent her from mentioning hyponatraemia.
Q. No. Sorry, I'm not suggesting that you were trying to prevent her.
A. It has been raised as an issue which I missed, but it was an issue that I just didn't recognise. But certainly it wasn't in my mind to suppress every mention of hyponatraemia which was made at this stage because I could easily have done that by, one, telling her not to mention it, or two, maybe insisting on filling out the form myself. But with respect to the form itself, really Dr Stewart, I think, took on most of that mantle and I think I had relatively little to do with it.
Q. She's your registrar, you've asked her to do this. What

I'm trying to get at is what guidance or help you've provided her with and the reason why I'm asking you that question is because this now is your last opportunity to find out what actually was the cause of Lucy's death because, without knowing that, as you have told the chairman, "We can't fill in a death certificate". So either at the end of this you're going to be able to fill in a death certificate or it is going to have to go back to the coroner.
A. Yes.
Q. That is why in this particular case it might be quite important to make sure that you have provided all the information to give the pathologist his best chance of helping you with the cause of death.
A. Yes, I would accept that, but I certainly -- and it could well have been that the notes would have gone to Dr O'Hara. I don't know. As I said, I didn't deliberately try and prevent the notes going. So as far as I was concerned, he had access to all the information which was necessary.
Q. Well, we asked Dr Stewart whether she sent any notes with the form or any other documents. She said that she didn't do that.
A. Okay.
Q. That's not because she didn't think that would

necessarily be relevant, but she didn't think that was her role. The task she was taking on was to complete the autopsy request form. And if anything was to go with that or how that went to the pathologist, that really wasn't something that she thought was part of what she was doing. If you think, as I think you have conceded, it would have been appropriate for the pathologist to have received the notes, then how was all this being organised to make sure that the pathologist had all he needed?
A. I don't remember 13 years on, I have to confess. Certainly in those days -- and now as well -- a lot is delegated from a consultant to a registrar, and I was certainly very happy to let Dr Stewart carry on with that. I don't remember her coming to ask me, "Should I send the notes?", and me saying, "No, you shouldn't", so --
Q. Did you know what the procedure was?
A. I may not have given it any thought particularly as to, you know --
Q. I beg your pardon. Did you know what the procedure was for ensuring that the pathologist had all that he required, how that was actually arranged? Did you know that as at 2000?
A. I probably didn't give that any thought, no.

Q. Did you know it?
A. I don't remember knowing it.
Q. If you didn't know it, why would you think your registrar would know it?
A. I probably assumed that, maybe wrongly. But if the pathologist had needed any more information that could have been easily forthcoming though as well.
Q. You see, the inquiry's expert pathologists, Professor Lucas and Dr Squier, who is a paediatric neuropathologist, who was an expert in relation to two previous cases that the inquiry's investigated, both of them say that:
"Relevant and complete information from the clinicians prior to autopsy, both via the medical records and often verbally, is important."
Those are Professor Lucas' words and they are to be found in his report at 252-003-004.
Dr Squier, when she provided a report in Claire's case, which was also a hospital post-mortem case, and that is why it is a good comparator, the reference for that is 236-004-005, and she says:
"All clinical records should ideally be available as a pathologist needs to satisfy himself that he has an understanding of the relevant history and this is best taken from the clinical notes, but guidance from the

treating physicians can be helpful in focusing on the relevant parts of the clinical record."

And then the guidance which you say you're not sure you were aware of, the relevant one for this period would be August 1991. We don't need to pull it up, but the reference for it is 236-007-068, and it says:

"The notes and results of investigation should be available for study at the time of the autopsy. Radiographs and viewing facilities should be present [and so forth]."

So a combination of the guidance and the inquiry's experts suggests that it's really for the clinicians to provide to the pathologist with all the clinical records and information that from their standpoint they think is important so that the pathologist has a context within which to conduct his or her examination; would you accept that?

A. Certainly I would accept that, yes, and I think, though, that if the pathologist had felt that more information was needed, that could easily have been provided. It didn't occur to me at the time to check how they get that information. I was obviously very happy to delegate that to Dr Stewart and I was unaware that she didn't think she could send on the notes, but in retrospect, yes, the notes could have been sent, yes.

THE CHAIRMAN: I think the point seems to be that both you and Dr Stewart assumed the notes would go.

A. Possibly, yes, and fell between two stools there. I think Dr Stewart was the one that was filling out the form and I assumed that she would, maybe having contacted the pathology department, have checked what else was needed and obviously wasn't told that the notes should have gone over. But if the notes had been requested, I wouldn't have had any difficulty with arranging for them to have gone over with Lucy's body. So I'm sorry about that.

MS ANYADIKE-DANES: No. There's one other element of it, which is that you got certain notes sent over, not you personally, but certain notes were sent over from the Erne. So that's your best account that you have of what was happening in that hospital. It's evident from that record that X-rays were taken of Lucy then. X-rays were also taken of Lucy at the Children's Hospital. You're aware that X-rays were taken of Lucy at the Children's Hospital?

A. Yes, although I wouldn't have ordered them, except for the CT scan. That's the only one that --

Q. But you know that X-rays were?

A. It probably would have been standard in a child who's intubated, yes.

Q. So if there are X-rays from the Erne, it might be useful to provide to the pathologist those X-rays as well so that the pathologist has X-rays from an earlier period and X-rays from towards the end of her life and he can make, if it might be relevant for him, some sort of comparison. But nobody at the Children's Hospital seems to have tried to get hold of those X-rays even though that is one of the few things that's said in the transfer letter, that X-rays were taken.

A. It wouldn't have occurred to me that the X-rays, apart from the CT scan, were important because the main thing was in her brain and the X-rays there wouldn't have had any real relevance to the coning -- at that time anyway.

MR McALINDEN: Mr Chairman, at this stage could I ask if Ms Anyadike-Danes would be able to refer the inquiry to any expert report which says that a consultant pathologist would have been able to valuably interpret X-rays taken in the Erne and in Belfast?

MS ANYADIKE-DANES: I can answer that very easily because we had that issue in Claire. The consultant pathologist doesn't do it; the consultant pathologist has a duty to bring in any specialism that's required and Dr Herron said he did that very thing when he was carrying out the autopsy on Raychel. He brought in Dr Clodagh (Loughrey) - she just escapes me at the moment ... Because he was concerned

about her electrolyte imbalances, he brought in an expert and that was the evidence he gave. So I'm not suggesting that the pathologist would be doing that. What I'm suggesting is that all information is provided to the pathologist and, if the pathologist needs specialist input, then the pathologist does that.

THE CHAIRMAN: I have got that point. Let's move on.

MS ANYADIKE-DANES: Sorry, there was one other thing that -- I beg your pardon, Dr Hanrahan -- I didn't draw your attention to. Because you had mentioned that you had the EEG results. You had referred to that, that was another piece of information that you had. I wonder if we could pull up 061-032-098.

A number of these results are headed up with the consultant of different people. I had taken Dr Crean through that: some have his name, some have Dr McKaigue's name on. This one happens to have your name on, "Dr Hanrahan, consultant paediatric neurologist", and this report appears to be addressed to you. Maybe because you requested it.

What I wanted to ask you is: who provided the history for this report?

A. I don't know. It could have been Dr Stewart, I'm not sure.

Q. Could it have been you?

A. I don't know. I wouldn't have thought so, no.
Q. If one looks at it, it says:
"Vomiting plus plus, hyponatraemia, generalised seizure, tonic phase only."
A. Yes.
Q. So there's hyponatraemia in there. When you got this report back, did even not seeing that jog your mind as to whether you should be thinking about hyponatraemia?
A. I wrote that report.
Q. You wrote this report?
A. I wrote that report, yes.
Q. So you wrote the --
A. No, the history would have been typed in by the technician, and I clearly would have seen that as well, and if I was trying to prevent obviously hyponatraemia --
Q. Please, doctor, I'm not suggesting that you're trying to prevent anything. I'm only trying to ask you about certain things. That's all.
A. Yes, but the hyponatraemia is not necessarily -- could well have been an element in the vomiting, could well have been an element in the seizure, but was not an element in the -- so certainly that doesn't take away from the fact that I was aware that there was hyponatraemia and that was part of a clinical summary.

I think that is very different to implicating it in the chain of events leading to Lucy's death.
Q. Yes.
A. But I wrote that and I had access to that whole -- I could have changed anything there if I'd wanted to.
THE CHAIRMAN: You wrote what's on the right-hand screen of the screen?
A. I wrote just the diagnosis, but I clearly would have looked through the EEG and looked at the technical report as well.
MS ANYADIKE-DANES: If we then put back up the two autopsy request form pages, 061-022-073 and 075. Did you see this autopsy request form?
A. I probably didn't at the time, no.
Q. When do you think you might have first seen it?
A. I may never have seen it. I wouldn't have said to Dr Stewart, "Just show me what you're going to send over and I'll correct it", so I may well have been happy for her to send that without ...
Q. Does a copy of it not go on the notes?
A. It does, but I don't remember ever specifically looking at it and reading it.
Q. Did you not look at her notes before you spoke to the parents after --
A. Yes, but I don't remember specifically seeing this form.

Q. I'm not asking if you remember; I'm trying to, first of all, locate the opportunity.
A. Sure.
Q. If it's on her notes and you look at her notes at some point before you speak to the parents again when they come back after her death, if you had seen that list of problems there, are you still not asking yourself --
A. In retrospect, yes, without a doubt.
Q. Thank you.
A. But the list of problems, though, I think is different in terms of providing a causation as to providing just a clinical finding. Because clearly there's something missing exactly, which was the excess dilute finds which were given.
Q. So that goes off and the autopsy is to be provided. When do you first hear anything from the pathologist? Sorry, what I should have asked is -- if you see there, there's a question just above Dr Stewart's signature:
"Will you or a colleague be attending the review session at 1.45 on the day of the autopsy?"
And it is circled "no".
A. Okay.
Q. I asked Dr Stewart about that and she said that isn't something that a registrar would go to; a consultant would attend that.

A. It's not something -- no, I would rarely go to. I would rely on the report that came from the pathologist.
Q. What I'm wondering is -- and I asked this question of Dr Stewart -- how did she know to say "no"? Because her evidence is: I wouldn't go to that because I'm the registrar. So what she's essentially indicating is nor is anybody else going to go, for example yourself. So how did she know to indicate that you're not going?
A. I don't remember. I don't know. I certainly didn't tell her to put down, to write down "yes" and then change it to "no" or anything like that. I can't explain that. I wouldn't normally go to a post-mortem, certainly, and we would rely on the report.
Q. Yes. I'm going to come to that. But her evidence is that she couldn't take it upon herself to indicate that no consultant is going to attend that without discussing that with the consultant.
A. It's news to me in my memory that there ever actually was a review session planned, so I didn't know that, so it was not a case of not choosing -- it was not a case of choosing not to go.
Q. Given that this was a case where you really didn't have -- I don't want to sound pejorative, but a clue --
A. I think you're correct.
Q. You didn't have a clue as to why Lucy had died, and so

the referral to the pathologist is really a hope that that can produce that clue for you.

A. Mm-hm.

Q. Even if it's not your normal practice, would this not have been a good case to have gone and attended and discussed with the pathologist?

A. I see no reason to say why it wouldn't. Yes, it would have been a good --

Q. It would have been a good --

A. Oh, in retrospect, yes, but at the time clearly I didn't see the need for it.

Q. Why wouldn't you have done that at the time?

A. I don't know. I didn't take a conscious decision not to go.

Q. Then the question that I had asked you is: what's the next communication that you get back from the pathologist, so far as you can recollect?

A. We may get the ... I'm not sure. There was a post-mortem report, wasn't there, that comes? There's initially a preliminary report and then there's a final report.

Q. Yes, there's a thing called the provisional anatomical summary. Let me pull that up and see if that's what you mean. 061-009-033.. Is this what you mean?

A. Yes.

Q. So you get that; are you aware of actually having received that? I don't mean necessarily you personally, but that actually being sent in by the pathology department?

A. Yes. I don't specifically remember receiving it, but I presume it would have come to me, yes. I'm not sure when and I'm not sure how.

Q. It's dated 17 April, so it's immediately after they've conducted the autopsy or very shortly after that. And then you have a provisional anatomical summary. Did that help you with why Lucy had died, really?

A. In retrospect, no, it hasn't, no.

Q. Perhaps if we can put alongside that the first page of Dr Stewart's autopsy request form, 061-022-073. It would seem that much of the information --

A. Very similar, yes.

Q. -- that is in the provisional anatomical summary is actually in Dr Stewart's request form; would you accept that?

A. The main thing really is the finding in the brain, I think, is what they've found, which is cerebral oedema.

Q. Sorry?

A. The main thing is points 3 and 4, which is the finding in the large and small intestine. But from our point of

view, in neurology, would be from the swollen brain with the generalised oedema and then:

"Brain to be further described following fixation."

So it does take a number of weeks for the brain to be fixed and ready for examination.

Q. So we understand. So this is really just the external presentation of the brain --

A. And the presentation of the brain, yes.

Q. In a way, you've already reached the view that you've got --

A. Yes.

Q. -- generalised oedema because you've seen the CT scan?

A. And the clinical presentation would be very suggestive of it.

Q. Exactly. But in terms of an actual image of the brain, you have seen an image of the brain --

A. Yes.

Q. -- and you have described that in her notes and Dr Stewart has described it under the investigations.

A. So like I said, I gave it -- conceded a little while ago it probably didn't help greatly, that initial report there.

THE CHAIRMAN: So it doesn't rule anything out and it doesn't help narrow down cause of death?

A. No.

MS ANYADIKE-DANES: If you weren't in a position to write a death certificate before, this is not going to put you in any better position?

A. No.

Q. Thank you. Then the next thing that happens is that there is contact with Dr Dara about producing a death certificate. How do you get to learn about that?

A. I don't remember this telephone call. Presumably, he phoned me and spoke with me. He's written there "spoke with", so presumably it was over the phone, but I don't remember this discussion or this conversation at all.

Q. If you had had a conversation with him and he's telling you that the family are anxious, they want a death certificate so that they can bury their child, what guidance would you be giving him about the death certificate?

A. I've accepted in my witness statement, number one, that I handled the death certificate extremely badly. I think I was overfocused on being kind to the parents in giving them a death certificate rather than following through what was the -- what should have been on the death certificate. That's one of the big learning points that I've had here. That's the only thing I can think of as a reason for why I would have done that, but I completely accept -- and I have put it in my witness

statement as well -- that what I seemingly agreed with Dr O'Donoghue to go on the death certificate was illogical and was unhelpful.

Q. I understand that and it is very good of you to be so frank about that. But at the stage I'm at, you have an SHO acting up as a registrar --

A. Yes.

Q. -- contacting you to say the family are seeking a death certificate. He's had a look through the notes, he can't see that one has been issued.

A. Yes.

Q. So he's wanting really to know what to do.

A. Yes.

Q. According to him, he has spoken to Dr Stewart, who he could see from the notes had been involved. He had been marginally involved, but involved in her care. And he ends up, according to him, speaking to you. At that stage, the evidence that you've been giving is that you don't think that a death certificate should actually be being issued.

A. In retrospect, yes. I have actually no way of explaining what -- again, I do think I was too much motivated by getting a death certificate, so in that case I would have used the post-mortem, the objective findings on that, to put on the death certificate, but

I completely realise now with hindsight that this was illogical.

Q. No, that's what you put on the death certificate. The stage I'm at is whether you should have been giving guidance to Dr Dara to say, "Actually, you can't issue one at the moment".

A. In retrospect, I think I should have done that and that's the other -- in fact, what I should have done at this stage -- and again I accepted this in my witness statement -- is that I should have gone back to the coroner and said, "I'm not happy here".

Q. Because you weren't happy, were you?

A. No, no, and I should have gone back to the coroner. As you know, I was referred to the GMC as a result of this and that was the main recommendation -- they didn't find a case against me, but the main recommendation, which I am absolutely happy to accept, is that I should have gone back to the coroner at this stage and I didn't.

Q. Yes.

A. So I really can't say any more about that. I think I was wrong in this way and I have no problem in saying that if I was wrong.

Q. I understand that and that's incredibly frank of you.

The problem for Dr Dara is that he says he discussed this with you, he got what you and others have concluded

was an illogical set of causes of death to put on that death certificate. He does issue it and he does sign it, and that has its implications because that's something he is taking on himself.

A. Yes.

Q. So it's not just a matter that you have given that guidance; he is now in the position, with you as his consultant, of having issued something that you now think should not have been issued. Is that the upshot of it?

A. You won't get me trying to defend this. I completely accept that. But I do think that I was just very keen to try and give some degree of closure to this family. I clearly jumped the gun too much in this regard. It was thoughtless and that is something I clearly -- clearly and sincerely regret.

Q. Yes. Can we then go to the post-mortem result?

If we pull up your statement to the PSNI, it's 115-050-005.

A. Can I just say, before we move on, I'm very glad that, in due course, the death certificate was amended after the delayed inquest.

Q. Yes. What you say here is:

"I would have been of the opinion from that [that's the post-mortem] that the pulmonary oedema coexisted,

but was not caused by the brain oedema, and I therefore assume that gastroenteritis, dehydration and brain oedema were put on the death certificate due to this provisional anatomical summary and after consultation with me. And I considered that the final anatomical summary, which is different in that it states extensive bilateral bronchopneumonia, I again believe that this coexisted with brain oedema but was not part of the primary chain of events leading to death and this has not been mentioned at the time the death certificate was being compiled."

So just if you look at it from that point of view, it seems that what you're saying is if there was any bronchopneumonia, which the pathologist felt was seen, that's not something that you are thinking is the cause of Lucy's death; would that be a fair way of putting that?

A. Not directly. I just emphasise again that at the time of this I was still under the impression that the sodium was higher than it turned out to be.

Q. Yes.

A. If I'd thought that sodium was due to -- was a cause of the cerebral oedema, then I could well have considered the bronchopneumonia as a cause of syndrome of inappropriate ADH secretion --

Q. That would be linked to that then --
A. -- which does drop down the sodium, yes. So if the bronchopneumonia has contributed to the cerebral oedema, it has done that by dropping the sodium, but it hasn't dropped it by enough to alert me to the fact that there's been a significant electrolyte shift.
Q. But you weren't seeing any bronchopneumonia from your point of view --
A. No.
Q. -- as being particularly implicated in Lucy's death?
A. No, but I wouldn't have been looking for it either, you know, so ...
Q. I understand that.
A. But if there had been more of a sodium issue, I could have said, "Hang on, there is SIADH here". You can drop down your sodium to the low 20s with syndrome of inappropriate ADH secretion --
Q. And you're aware of the effect of that syndrome?
A. Of SIADH?
Q. Yes?
A. Yes.
Q. And the circumstances that can give rise to it?
A. Really, any illness can drop your sodium by quite significant amounts, but not to the amount that I was aware of at this stage.

Q. I understand.
A. So this whole time -- again, this police statement was written three years after the event, so I don't have the advantage of contemporaneous recollection.
Q. You're quite right, and I will go back to the actual original document so you can express a view on that. Before I do that, I'm being reminded that there was another document, which is the inpatient/outpatient advice note in terms of chronology, which happens before this. That's 061-012-036. There we are.
This, Dr Dara accepted, was a document that was to go to the GP. In fairness to him, he also thought that there was likely to be a telephone conversation with the GP so that this would not be the only information. And you, I think, have said earlier that either you would expect or it would have been appropriate for a letter to have issued to the GP in addition to anything else.
But if one looks at this, is this an appropriate amount of information, irrespective of whether there's going to be a phone call and a letter, to be sending to the GP in relation to Lucy as at 17 April?
A. As at 17 April, I don't know. I don't have any recollection of this being filled out. I had no input into this.
Q. I appreciate that, but if it has to be filled out, and

let's say Dr Dara consults you about it, it's a bit dark so it's hard to see, but that first main box says:
"Primary diagnosis. Write major symptoms if diagnosis not known."
So if you don't know what the primary diagnosis is, which I don't think you did, other than the fact that she ended up with cerebral oedema, then you can write the major symptoms, so that's what that box is for. And then the next box is:
"Underlying conditions and co-morbidities."
So given that's what's required, do you think this accurately represents the information that you had at the time?
A. Um ... It may well, but again I can't comment. I had no input into this at all.
Q. I understand you didn't; I'm asking your view. Is it, to you, complete?
A. It doesn't differ greatly from what -- I will accept the dehydration that I mentioned in the -- when I phoned the coroner and also on the death certificate.
Q. Yes, but is it complete? If this is going to be sent off to the GP, is this a complete document in your view?
A. No, it's not.
Q. Thank you. Dr Dara was fairly firmly of the view that the GP would be contacted by telephone. And one of the

reasons for contacting the GP is it's very likely that the parents go to their GP, so the GP has to have information that he can provide, guidance, information, maybe quasi-counselling, really, to the parents in those circumstances. In your view, who should have been the person to have had that telephone conversation with the GP?
A. In retrospect, probably me. At the time, I think we fell between two stools. I wasn't entirely sure. I may have left that to the intensive care people because most times -- at that stage we would have assumed particular control of children once they moved out of intensive care to the ward, but that clearly didn't happen with Lucy. In retrospect, it could have been me. In retrospect, it should have been either me or the intensive care people, but I think we may have got lost between --
Q. I understand that. And if you're unsure, if it's of sufficient importance, which I think Dr Dara thought it might be, is it not the sort of thing you should at least clarify who's doing this, is it me or is it you?
A. I'm happy to say in retrospect, yes, we should have clarified it.
Q. And if you had had to say something to the GP at this stage, which is 17 April, so very shortly after she

died, what could you have been telling the GP?
A. I would have said, I suppose, pretty much exactly what I'd say to anyone else: this little girl was previously well, came in sick and is now dead, and I would have said that we are investigating. Now, how well I investigated her subsequently is something that I'm happy to accept could have been done differently.
Q. So it's ongoing really?
A. Yes.
Q. Okay. Then if we come to the post-mortem report that you do get, it's dated 13 June, which is after your meeting with the parents. So maybe I won't take it out of turn.
You had, I think, wanted to, or at least thought it might be better to meet with the parents after you'd received the post-mortem report; that's correct, isn't it? I can help you. You wrote a letter.
A. Did I?
Q. Yes, 061-010-034. There we are.
A. Okay, yes.
Q. Do you see that --
A. Yes.
Q. -- saying:
"[You're] happy to meet with them, if they think that would be helpful, but you think it might be wiser

to wait until you get the formal report of Lucy's post-mortem, which [you] don't have to hand, but contact my secretary and let me know if you want to do that"?
So am I right in understanding you that the reason you wanted to do that is because you don't actually think that matters had advanced?
A. By this stage I think I had arranged for the death certificate to be written, although as I've accepted I could have done an awful lot better with that. I think that probably is reasonable to wait until you get as much information as possible just in case I'm able to give them any more information than they've been given before.
Q. I know that you have acknowledged that the death certificate shouldn't have been issued then.
A. No.
Q. It does really bring it into sharp focus, if you're wanting to receive the post-mortem so you can better explain things to the parents, nonetheless a death certificate has been issued.
Can I ask you a question as to the timing of matters? There has been an issue of which different witnesses have expressed different views as to whether you should issue your death certificate before you even seek a post-mortem. And I think Dr Crean, if you heard

his evidence or saw it in the transcript, it's the transcript of yesterday and it starts at page 135. If we can pull up 136 at the same time. Transcript, 4 June 2013, page 135 and next to it 136.
I'm reading directly Dr Crean's words:
"The other thing is that if you're going to get a hospital post-mortem, you should be able to write the death certificate immediately. If you're getting a hospital post-mortem, you should already be able to write the death certificate."
The chairman asked:
"Question: Before the results of the post-mortem come back?
"Answer: Yes. Really what the post-mortem is for is to learn from this. There may be additional information you wish to provide. But you can only write a post-mortem if you know the cause of death. You can't do it and stick it in afterwards."
And then he goes on:
"If you know the cause of death, you can write your death certificate. If you don't know the cause of death, it has to be a coroner's post-mortem."
So Dr Crean was very, very clear about that. Not to say that you don't have hospital post-mortems, you do, but for greater learning, not to give you the cause of

death. If you don't know the cause of death, then it's a coroner's inquest. If you do know it, you write your death certificate and you ask for the benefit of better learning and so forth for a hospital post-mortem. That was his view.
A. I don't know if I'd agree with that in every case, but certainly in some cases you can well suspect the reason, but the post-mortem will give the final clincher. In this case I don't think that was the case, but in this case, as I said a little while ago, this case should have gone back to the coroner once the post-mortem didn't help.
Q. This is an issue that we're going to have to take up with others, so it would be helpful to have your view on it as to the sequencing, if I can put it that way. Some have thought there's no problem and in fact it was -- I can't say it was routinely done, but it was done that you would not have an inquest, you would ask for a hospital post-mortem, you would wait for the results of that, not the full necessarily report, which might take too long, as I think Dr Hicks said, but you would certainly wait until you got a better idea back from the pathologist, and you would use that to complete your cause of death on the death certificate.
The inquiry's expert, Professor Lucas, has said

that's very wrong. In fact, you have an obligation, a statutory obligation, or legal obligation, to act promptly to issue that death certificate. In fact, he can see, in certain circumstances, there may be dangers in doing that because, if you have read his report -- he's not suggesting that anybody was doing that in this case -- but to do it in that order creates an opportunity to shield what the clinicians might think is a death that is problematic.

A. Right, okay.

Q. And what you really want is the clinicians to say, "This is my view, uninfluenced by what the pathologist comes back with"; do you take the point?

A. Although if the death certificate is issued and then something does come up on the death certificate which changes things, that's problematic if the death certificate has already been issued.

Q. Not necessarily, because there is a way -- and Dr Dara did tick it. There's a way in which you can come back. As long as you know the cause of death, there may be other information that allows you to add to that, but if you know a sufficient cause of death, you can issue your death certificate and then -- it's at 315-019-003. This is something that we had raised before with other witnesses.

You can see the note for panel A:

"This applies chiefly to cases where further information is likely to emerge, e.g. as the result of a post-mortem examination or for some other reason. The Registrar General, on receiving a medical certificate in which panel A has been initialled, will send an enquiry to the certifying doctor in due course."

In Lucy's death certificate, panel A was circled by Dr Dara and the Registrar General, as I understand it, in due course, did send an enquiry, and the result of that was there was nothing further to add.

A. I have no memory of that. I don't know. Nobody contacted me about that that I'm aware of.

Q. Now that you have raised that, can I ask you this: given the way the medical cause of death certificate was completed by Dr Dara, do you think there's any information that came out, either as a result of the post-mortem or at some stage prior to the inquest into Lucy's death, which was subsequently conducted, that should have led to communication going back to the registrar to say, "We have further information that can be added to that death certificate"?

A. Probably not, no, although obviously later on, once I found out about the confusion over the degree of sodium, then that would have been something that could

have been fed back. But this was -- I only discovered that until [sic] after the second inquest had happened, the inquest had taken place.

Q. You discovered that, but if anybody else had seen that death certificate or knew what was on it, do you think that anybody else should have got in touch with, on the basis of the facility that had been created, which is that A had been ticked, gone back to the registrar and said, "Actually, we do have other information"?

A. Possibly, except I don't think any other information was forthcoming, sure it wasn't. But my main regret here, though, isn't not ticking panel A or whatever; it's actually not referring back to the coroner, saying, "I'm not happy with this".

Q. I understand that.

A. I was just very keen to give the family closure and I took the wrong decision there.

Q. I understand that. Then I had pulled up that letter that you wrote to the family suggesting that you were happy to meet them --

A. Yes.

Q. -- but indicating that it might be better to do that after you had received the post-mortem report. In fact, it didn't happen in that order did, it? Because the post-mortem report, if it's sent at any stage when it's

signed or afterwards, comes after your meeting. Your meeting with the parents is on 9 June --

A. Yes.

Q. -- and that report comes in on 13 June.

A. I'm not sure. I think the family raised money for the paediatric -- and came up to give it. That could have been --

Q. Sorry?

A. I think I remember the family raising some money for us and coming up to express how well she had been looked after up in Belfast and it could have been that I just took that opportunity to talk to them then at that stage. I don't actually remember the timings or why we decided --

Q. So you don't know whether the meeting with them was in response to your letter or whether they were wanting to meet you?

A. It could have been pre-empted by that later on. I don't know.

Q. Was an arrangement made to meet them or was it just impromptu?

A. I certainly did meet them, but I don't remember a formal arrangement or how we come to the conclusion that we would meet on such-and-such a day at such-and-such a time.

Q. I'm getting a message from the transcribers. If the two of us speak at the same time, it's extremely difficult for them to record.
A. I'm sorry.
Q. Then if we look at the meeting with the parents on 9 June, however it arose, that was an opportunity to explain matters to them.
A. Yes.
Q. Am I correct?
A. Mm-hm.
Q. In fact, what you say in your deposition, it's recorded in two places. First of all there is a record of it in the clinical notes, and we can see that at 061-018-069. You might have to help me with your handwriting. It's your note, isn't it?
A. That's my note, yes. So this is a note I have made after the event, I think. So it's:

"Interview with parents. They have met Dr O'Donoghue ..."

That is spelt wrongly. That should be Dr O'Donohoe:

"... Dr Jarlath O'Donohoe, who did not have her notes. I went over the events around Lucy's death and encouraged them to re-attend Dr O'Donohoe to clarify events in the Erne and I said I would see them again if required, if they wanted."

Q. Yes. And then in your deposition to the coroner, which is at 013-031-114, you say:

"Having discussed with the coroner's office I subsequently interviewed her parents [Lucy's parents] on 9 June and I encouraged them to attend Dr Jarlath to clarify events in the Erne Hospital."

And then before I ask you about that, I just want to gather for you the things that you have said about that. Then you provided the inquiry with a witness statement, 289/1, page 15. You say:

"I usually write to parents whose children have died, offering an appointment to come and see me. I had developed a very good relationship with Lucy's family and wished to do all I could to help them and to come to terms with their loss."

You don't recall what was discussed other than the fact that the Crawfords were unhappy about her treatment.

Then you go on to say that:

"The sentinel event had occurred in the Erne when Lucy collapsed. She was brain-dead on arrival in Belfast and the events that led to her death therefore took place locally and I believe that Dr Jarlath should have been involved in her explanation to Lucy's parents."

And then further on, at the time of the interview, you indicate -- so this is the interview with the parents -- that you had the following concerns:

"The fluid management did appear inappropriate, both in the amount of Solution No. 18 administered prior to Lucy's collapse and the size of the bolus of normal saline that she had subsequently received. Lucy's cerebral complications were, however, due to hyponatraemia, secondary to the Solution No. 18, the degree of which I was unaware of at that time."

And then in fairness to you, at an earlier place in your second witness statement to the inquiry, you say, at 289/2, page 4:

"Notwithstanding the express concern about the IV fluid administered to Lucy, the exact cause of death was not obvious at that stage in view of the seemingly modest drop in sodium measurement."

But the things that you have said there that I would like to pick up with you are: firstly, what did you mean by "the sentinel event"?
A. I think it's the coning when she collapsed at 3 o'clock. She became quite acutely unresponsive, her breathing became difficult. I believe it was then that she coned, that the pressure became so high.
Q. Were you using "sentinel" as a term? I don't

necessarily say that it is suggested that you used that expression to the parents, but when you use it to us, as the inquiry, were you using that as a particular term?
A. Not particularly, no. More of a, I suppose, a climactic event.
Q. Sentinel turns out to have a significance in medical parlance.
A. That's not what I meant though.
Q. Our glossary, assisted by the advisers, says that:

"A sentinel event means any unanticipated event in a healthcare setting resulting in death or serious physical or psychological injury to a patient or patients, not related to the natural course of the patient's illness."

A. That's not what I meant when I wrote the word sentinel.
Q. That's not what you meant?
A. No.
Q. Do you know that that expression has that meaning?
A. No.
Q. So you just meant fatal event --
A. Just as -- fatal event or an indicator, a sentinel, something that indicates something, and that event indicated when little Lucy coned.
Q. So whatever it was, it happened at the Erne and not at the Children's Hospital?

A. I believe so, and there was the -- in the context of some discussion about fluids, and I know the parents had raised particular complaints about the way that the fluids were managed, they couldn't got a drip up and then they poured it in. So in the context of that, I suggested going back to the Erne to get further events. Can I bring up a file?
Q. Of course.
A. 061-005-012. You asked me in my statement did I recognise this event. I actually don't. Clearly, I wrote this, that's my handwriting all right. So the only thing I can surmise, and I think reasonably surmise, is this is jottings I made at the time I met the Crawfords. I suggested putting -- clearly they've raised complaints with me and I've said to put in writing their complaints, in other words to formalise it. I presume that Stanley, that word at the bottom -- they didn't know his surname, they just knew someone called Stanley who is the advocate for patients in the Western Board. I felt he might be able to help them quite a lot, so I suggested putting in writing their complaints and involving him from then on. And I think it's actually Stanley Millar who subsequently has identified the link between Raychel and Lucy --
Q. Yes.

A. -- and really has brought about a lot of the findings here.
Q. Indeed.
A. So it could be considered, at least, in part that I've contributed to actually opening up and trying to find out what did happen, albeit in an unusual way.
Q. Well, if we go back to 289/1, page 15, relating to the fluid management appearing to be inappropriate. It's right down at the bottom in answer to (h). The significance of this is that you are being asked here what your concerns were at the time you were interviewing the parents. So not by the time you have reflected and given your evidence or heard the evidence at the inquest, but at the time you were interviewing them. How was it that you were able to form these concerns then and not previously?
A. I'm not entirely sure. I'm not sure that this -- when I sent them back to the Erne, it was to find out the reason why she died.
Q. If we can focus on this: how were you able to formulate those concerns at that time, 9 June 2000, in light of the evidence that you have given?
A. Well, I haven't denied that there was talk in PICU at the time of Lucy's presentation that the fluids were unusual.

Q. Let's look at what you actually say and perhaps you can help us with how you got to that. Firstly, you have acknowledged the fluid management -- this is you, not just chat amongst other clinicians -- did appear inappropriate.
A. Well, that was the talk, there was talk that -- I personally wouldn't have identified it myself.
Q. You are being asked your concerns, "Did you have any concerns?", and this is the first thing that you have identified as one of yours:
"The fluid management did appear inappropriate, both in the amount of Solution No. 18 administered prior to Lucy's collapse, and the size of the bolus of normal saline that she subsequently received."
You considered that to have been inappropriate and that's a concern.
A. That's probably badly worded by me. What I meant was that I probably heard about concerns and there was some talk going about that the fluid was -- there were misgivings about the amount -- about fluid which was used. But clearly, I didn't come to the -- well, the correct conclusion because I didn't have the full information about the sodium. So there were certainly deficiencies in the Erne at that stage and I thought it was worthwhile to try and investigate them.

Q. Thank you. So it can be framed another way, that you felt that there were deficiencies at the Erne and it was worth expressing that as a concern for the parents to be able to get some answers to that?
A. But I didn't have the information as to how, in reality, those deficiencies had actually led to Lucy's death. So at this stage I am still under the misapprehension that the sodium was actually relatively normal.
Q. Can I ask you maybe if you would agree with it in this way: you did have the information, but you hadn't extracted the information?
A. I hadn't correlated it with her death, no, because the link between the two of them wasn't evident to me.
Q. "Lucy's cerebral complications due to cerebral oedema were however due to hyponatraemia, secondary to Solution No. 18, the degree of which I was unaware of at the time."
So you have there --
A. But that's written 13 years after the event though.
Q. No, no, you're being asked your concerns at the time of interview.
A. But that last sentence there shouldn't be there then.
Q. "The degree" should not have been there?
A. No, that refers to current knowledge, that last sentence. It doesn't -- no, that's wrong, it shouldn't

have gone in there.

Q. You should really have stopped with "subsequently received"?

A. Yes. But I think it's just to clarify that the information was there, but I didn't have full access to the tools to uncover it.

Q. Yes. So then it appears to have been something that you discussed with Dr Stewart because when she was giving evidence to the inquiry on 29 May, page 201, and this is a series of questions really on this point. And then she says -- this is Dr Stewart speaking:

"But he also met them after her death at some point, weeks after her death."

And that's agreed, she did, and I say:

"Question: I'm trying to establish a source of your information; were you there in PICU when he met the parents?

"Answer: Yes.

"Question: When he met the parents in PICU, did he say anything about his concerns about her treatment, if I use it loosely like that, at the Erne?

"Answer: He said, "You have to go back and ask the Erne about their treatment".

"Question: Do you remember that?

"Answer: Yes, I remember him saying that.

"Question: Did he give them any indication as to why he was suggesting they did that?

"Answer: I just remember him saying that you have to ask Dr O'Donohoe in the Erne Hospital. That's all I remember."

What is it that you were suggesting that the parents were to go back to the Erne and find out or ask?

A. I can't actually remember. A lot of this all came from the fact that the parents were very unhappy with the treatment in the Erne. I think it's in response to that that I would have said, "Go back and see what did happen in the Erne". I may well have mentioned the fact that the fluids were a bit off, but I didn't follow it up by implicating that in her death. They were very unhappy with her treatment in the Erne and I think it's reasonable then to ask them to go back to Dr O'Donohoe and to talk to Stanley Millar as well.

Q. Let me put it in this way: you weren't able to help them as to why Lucy had died in the way that she had.

A. Not as much as I should have been, no.

Q. Or even for that matter why she died at all. You weren't able to help them. But in your view, whatever had gone wrong, that had happened at the Erne.

A. Unquestionably in my view.

Q. If you are directing parents who are unhappy and

in extremis with their daughter having died, what is it that you're guiding them they should really be taking up with the Erne?

A. I can't actually remember.

Q. Well, I know that you can't remember the conversation, so if we leave that aside. Given the information that you had, what do you think would have been appropriate to have been telling them to go back and seek from the Erne?

A. I'm not actually sure. I can't remember. It would have been -- I'm speculating now because I don't really remember.

THE CHAIRMAN: Is there anything wrong with saying to Mr and Mrs Crawford: we're not entirely sure why Lucy died, but there is a concern in the Royal that there was something wrong with the fluids which she received?

A. And I may well have said that.

THE CHAIRMAN: Sorry, is there anything wrong with doing that?

A. Probably not. That may well be what I did. But what I clearly didn't do was say that those fluids killed your little girl. I clearly didn't say that. But if I had all the knowledge at the time, I think I would have said that, or else I would have gone back to the coroner.

THE CHAIRMAN: Thank you.

MS ANYADIKE-DANES: Did you provide an answer as to what would have been useful to have told them to be asking about?

A. I can't remember. I'd be speculating ...

Q. I'm just asking you. You have read the notes, you are the person who was most involved in treating Lucy because you treated her both days. So what, from that perspective, would it have been useful for the parents to have been asking?

A. I suppose as to why there was such difficulty with the IV placements. I may well have said to the parents that, by the way, there has been some talk in intensive care that these could have been dangerous, but I don't personally see how it's caused, but Dr O'Donohoe might have an answer for you in that regard.

Q. If they're not asking that sort of thing, what is it that they should be taking up with the Erne?

A. As to the fluids and, if needs be, take it further through legal matters --

Q. Dr Hanrahan, your view is that the fluids weren't relevant on the information that you had.

A. At the time, yes.

Q. So what is it that to --

A. It could well have been --

Q. -- sorry, just a moment -- to parents not medically educated, but having had the tragedy of the loss of a child, what is it, when they're being told that by a doctor, that they're supposed to know they're taking up with the referring hospital?
A. I am just trying to remember what was in my mind at that stage. But the ... I could well have said, "Maybe I'm wrong", I don't know, but I'm speculating now. I probably did say to them that there has been talk in intensive care that the fluids may have been contributing towards your -- but I don't know ...
THE CHAIRMAN: Sorry, just finish that sentence: there's talk in intensive care that the fluids could have been contributing to what?
A. To Lucy's general condition or even Lucy's -- I don't know. But I'm speculating now whether there was some talk at the time of the fluids being abnormal. But I couldn't see, I couldn't see how there was -- how the fluid was going to have caused her demise.
THE CHAIRMAN: If you had said that --
A. Not so much caused it -- no, that wasn't it. There was talk in intensive care that she got too much Solution No. 18, that she got an abnormal bolus of normal saline as well, and I don't personally think that that's caused anything here. But maybe I suppose in

retrospect, what I would do again is not send them back to Dr O'Donohoe, I would send them back to the coroner.
THE CHAIRMAN: We're not asking you about retrospect. I think we're getting more and more speculative about what you did or did not say.
A. Sorry, it's so long ago.
THE CHAIRMAN: Okay.
MS ANYADIKE-DANES: There was a point that I perhaps should have picked up because I think you did it from the chronology, you did it before you met with the parents. Did you tell anybody at the Erne that there was not going to be an inquest?
A. I can't remember. I don't have any knowledge that I did.
Q. Would you have considered that relevant to have told anybody at the Erne, "I have reported this matter to the coroner, there's not going to be an inquest, we're having a hospital post-mortem done"? Would you have considered that a relevant piece of information to communicate to the Erne?
A. I could have, yes, yes, but I would have felt it more relevant if there had been a coroner's inquest.
Q. Given that you don't know what happened there, it might have been highly relevant to tell them, "From the information I had, I have made a report and on that

basis there's to be no inquest", because that would allow them, on the information they had as the treating hospital, to see what they wanted to do.
A. I may have contacted them, I don't remember. I obviously didn't write down every conversation that I had with them. But I did contact -- I think we're going to come on to Dr O'Donoghue in a little while.
Q. Dr Jarlath says on 14 April you told him in a telephone call that:
"[You] had notified the coroner that Lucy had died and that the coroner had agreed that a hospital post-mortem could be carried out with the patient's [sic] consent, and that a coroner's inquest was not being considered."
A. Okay.
Q. Sorry, I should give the reference for that; it's 278/2, page 3.
A. I've no memory of that conversation. I haven't documented it, but if he says it happened, maybe I did ring him, I don't know. But I have no memory of it.
Q. Would it have been a logical thing to do?
A. I suppose it would, yes.
Q. And then he had actually made reference to that same thing in an earlier statement for the inquiry. I give the reference, but we don't need to pull it up, 278/1,

page 7, just for consistency. The question was put to him:
"Were you told that the post-mortem was a consent/hospital post-mortem?"
To which he responded:
"Yes, by Dr Donna Hanrahan, paediatric neurologist at the Children's Hospital, who told me in a telephone call that he had notified HM Coroner that Lucy had died and that HM Coroner agreed that a hospital post-mortem could be carried out with the parents' consent. Dr Hanrahan told me that a coroner's inquest was not being considered."
Leaving aside whether you remember that or not, is that a form of words that you're likely to have used?
A. I see no reason not to think so. If I made the phone call, and if he's documented that I did, then I will accept that I did, but I haven't documented that myself so I'm speculating again.
Q. The reason I ask you that is because that form of words doesn't suggest that you were contacting the coroner's office to have a discussion about, "What do we do about this unknown cause of death?", that is characterised as a report of her death with certain consequences in terms of whether there is going to be an inquest or not.
A. Mm. Maybe.

Q. Then if we go back to the parents, you were telling the chairman that you might have communicated, although you agree it's speculative, but you might have told them that there were some concerns, not necessarily shared by you, that the fluid regime at the Erne might have been inappropriate, might have been implicated in her condition --
A. But that I couldn't see how it would have had that --
Q. But you couldn't see that? Yes, I had that.
A. But that's speculation. I don't know.
Q. I agree it is. What I'm really trying to tease out is: you seem to be absolutely clear that you are suggesting that the parents go back to the Erne essentially to get their answers there.
A. Or to see if there's anything else that we haven't been told or we have missed. I suppose as well to possibly take up further legal issues as well, to investigate it themselves.
Q. Sorry, did you think there might be legal issues at that stage?
A. I don't know. I wasn't going to prescribe or proscribe or anything. If they wanted to get any other agency involved to help them with that, that would have been -- I didn't tell them not to do that.
Q. I appreciate you weren't going to prescribe that, but

was that one reason that you were suggesting that they went back to the Erne because you thought there might be that?
A. No, it wasn't. Because I can't exactly remember the reason I'm speculating, you know. What I do think is when I suggested that they go back to talk to Mr Millar later on, I think he was a patient advocate who would have been in a much better position to intercede and try and get them more answers.
THE CHAIRMAN: He would have been had they been given a clear steer as to what they should have been seeking answers to.
A. I accept that.
MS ANYADIKE-DANES: If you accept that, does that mean you also accept that it's a very difficult position to put parents in in their circumstances with a view that there is something they ought to be finding out from the treating hospital without a clear indication from the clinician at the Children's Hospital as to what that thing might be?
A. In hindsight, yes, I think I would accept that, yes.
Q. So then you have a contact with Dr Jarlath on 14 June; do you remember that?
A. I don't, but I documented it myself so I accept that it happened.

THE CHAIRMAN: Has the post-mortem result come out?
MS ANYADIKE-DANES: I beg your pardon. The post-mortem result has come back, thank you very much, Mr Chairman. Let's go to that because this is a fresh bit of information that you have. If we can pull up two pages, 061-009-024 and alongside it 025.
The anatomical summary, which is now called a final anatomical summary, doesn't appear to change very much from the provisional anatomical summary that was received on 17 April. Maybe I'm wrong on that, sorry. Can you put in instead 061-009-033?
If you see, you will have received or somebody would have received the 17 April, now you're getting the June report. The first one, number 1, is the same, number 2 is the same, 3 is the same. 4, previously you had, "Swollen brain with generalised oedema -- sorry, 3 is more extensive in the provisional anatomical summary. It says:
"Relatively little congestion with some distension of large and small intestine with gas and clear liquid."
Then it goes on to say:
"Patchy pulmonary congestion, pulmonary oedema."
And instead of that, you've got in the final one:
"Extensive bilateral bronchopneumonia."
And then it goes on with:

"Swollen brain with generalised oedema. Brain to be further described following fixation."
And you've now had the fixation and it says:
"Swollen brain with generalised oedema and early necrosis."
And then the final line is the same.
So the only real difference is in relation to the pulmonary congestion, pulmonary oedema; correct?
A. So it hasn't really added greatly.
Q. That's what I was going to ask you. Even though there are those differences, from your point of view had it really added very much?
A. It hasn't really, no.
Q. If we pull down 033 and put back up 025. So that's the report. It's quite short. When you get that -- firstly, do you ever remember seeing that?
A. Do I what?
Q. Do you remember seeing that?
A. Presumably I did, yes.
Q. You certainly were waiting for it.
A. Yes.
Q. You presume you did. If you did, what do you make it of, what is it telling you?
A. Looking at it again in hindsight, it doesn't give the answer. I think it also mentions, if you go back a page

or so, he does actually document that Dr O'Hara has noted that the sodium was low at 126, and he hasn't attributed that; is that right?

Q. Sorry, where is that?

A. If we go back in the ... The next page down would be the clinical history.

Q. Yes.

THE CHAIRMAN: 009-018.

A. Yes.

THE CHAIRMAN: If we could have that for a moment, please. 061-009-018.

A. In the clinical history, it has been typed in that the --

THE CHAIRMAN: In the top paragraph, he has it from 136 to 126, instead of 137 to 127.

A. I'm not sure where that came from, but clearly, it has been identified as well and ...

MS ANYADIKE-DANES: He has identified that and in fact he goes on actually to say -- he's got the EEG, "Isoelectric pattern", and then he has the clinical diagnosis:

"Dehydration, hyponatraemia, cerebral oedema -- In fact, that's straight from the formulation by Dr Stewart.

A. Sure. But he hasn't linked in the hyponatraemia either

with the eventual oedema though.

Q. No. Although when we took up the issue of electrolyte imbalances in the case of Claire, which you won't have had anything to do with, but as I had mentioned before, another case that the inquiry's investigating, which was a hospital post-mortem -- this case was a brain-only -- and both the experts and the two neuropathologists, Dr Mirakhur and Dr Herron, who were involved in that post-mortem, say that for pathologists electrolyte imbalances is not something they can really address because they actually can't see the evidence of that, they're not very good with that, they can only see the physical presentation that they are literally examining. So if there is going to be a relationship between electrolyte imbalances and what they are seeing, then that's something that the clinicians need to help them with.

A. Perhaps, yes, but certainly we have no difficulty in letting off that information about the bit -- so there was hyponatraemia and we did actually document how much there was of it or how little there was of it, depending on the way you look at it. So the actual values are given though.

Q. On that point, the experts and the pathologists in Claire's case had all discussed the significance of

something called clinicopathological correlation, which is, as I understand it, that the experts get together with the clinicians and with their combined information they try and achieve a cause of death in relation to the child. That, the inquiry's experts certainly say, is a very important aspect of the work that's being done and that really you shouldn't conclude the investigation without there being an opportunity to do that. In that case, you may know of this, Dr Mirakhur and Dr Herron talked about neurological grand rounds where these cases are discussed, and that is where they said that the final clinicopathological correlation would occur. Is this something with which you are familiar?

A. Yes.

Q. How did that happen in relation to Lucy?

A. I can't remember offhand, I don't know.

Q. At what point would there be an opportunity to have a clinicopathological correlation?

A. I think that what happens -- and we're going to come later on about the mortality meeting -- usually the pathologists would present at the mortality meeting.

Q. When I asked Dr Taylor about that yesterday, and I'm sure I will be corrected if I'm wrong, he said that the mortality meeting is really the last stage of that, and --

A. Usually, yes.

Q. Sorry, if I just put to you what he said. I'm sure his counsel will correct me if I'm wrong. And you'd have expected that kind of correlation to have already been carried out so you're having presented what the combined forces of the pathologists and the clinicians think is the cause of death and that's the thing that you're going to discuss.

A. Sure. Not necessarily, I must say, but in retrospect yes, I am really sorry that I didn't go back and talk to more people about this and actually we're clearly -- the picture is coming -- clearly is the wrong word -- we're clearly getting a picture that we're not getting an idea of what's going on here and, I just reiterate again, at this stage I should have gone back to the coroner, and that's my mistake.

Q. Even leaving aside going back to the coroner, is there any reason why, given that you really wanted to have whatever light Dr O'Hara, the pathologist, could shine on this, is there any reason why you yourself didn't discuss with the pathologist and give him your views, your concerns, the bridge that you hadn't been able to make between her end point and her symptoms?

A. I can't think of any. I'm happy to accept that that could have been considered.

Q. Do you think it should have been?
A. It could have been, yes.
Q. Just while we're on that page, you can see there that Lucy's weight is being recorded as 12 kilograms. And you would have known the weight that she is recorded as having come in, both to the Erne and to the Children's Hospital, with. Leaving aside differences in weighing techniques or weighing equipment, she's 9.14 at the Erne, 9.8 at the Children's Hospital, and the pathologist is weighing her body at 12 kilograms. Apart from any other thing, would you have considered that to be a significant increase in weight?
A. I suppose it was. I didn't notice that at the time though.
Q. He has done a list of the special investigations he carried out. Before I go to that, if we pull up 021, this is the brain. This is very definitely the new thing that he can bring because at this stage there has been fixation, he has examined it. He talks about the early neuronal changes:

"In one section taken from the basal ganglia there are very tiny areas of spotty calcium deposition."

Did you understand what the significance of this was that was being described in terms of how she presented to you?

A. Yes, I think so, because cerebral oedema and coning would cause hypoxia by constricting the blood vessels. I think it's all -- and I think he mentions some other points as well, some spotty calcium deposition that they didn't consider important. It doesn't help, I think, the post-mortem. It doesn't help, no.
Q. Two more points on this. 022, these are the special investigations. There we are. You see under radiology, post-mortem radiology has been performed:

"The X-rays are on record in the department of pathology."

That was the point I had raised with you earlier, that if you'd had the X-rays that are referred to in the transfer letter, you might have been able to compare before and after, if I can put it like that.

If we go and see where the significance of that might lie, if we pull up his concluding part at 017:

"The autopsy also revealed an extensive bronchopneumonia. This was well developed and well-established and certainly gives the impression of having been present for some 24 hours at least."

Then he talks about the swabs and so forth. He says:

"There is no doubt that this pneumonic lesion within the lungs has been important as the ultimate cause of

death, the changes being widespread throughout both lungs. The pneumonia could be possibly due to the original disease presentation, but equally could have been induced during the time of seizure and collapse."

On the one hand, he seems to be suggesting that it's important as the ultimate cause of death and it could have been there for 24 hours at least, and on the other hand he is suggesting that it could have been induced during the time of seizure and if it was induced during the time of seizure I presume you would have seen that as actually not therefore being the underlying cause of her collapse?
A. No.
Q. Did you understand what he was saying there about bronchopneumonia?
A. Yes, I think he's being unclear really as to when -- I mean --
Q. Sorry?
A. He's unclear as to when it came on. My impression is that it's more than likely that it took place as she got sick and she aspirated stuff into her lungs and got infected. That's --
Q. Or was ventilator-induced or something of that sort?
A. Well, no, I think at the time she collapsed she wouldn't have been ventilated, so I think it is likely that she

had an aspiration pneumonia at the time she collapsed?
Q. And that's what did it?
A. I would think so, yes.
Q. This is out of your experience, is it?
A. Yes.
Q. If you thought that was possible, is that not just one of those things that you could have been taking up with the pathologist and saying, "I don't actually understand where you get the basis of thinking that this might have actually been part of the cause"?
A. Maybe so. I don't know.
Q. When you got the report, what was your response to it?
A. I can't remember.
Q. What do you think your response to it should have been?
A. I certainly would have been very happy to talk to the pathologist if it had occurred to me and if he'd contacted me, I certainly would have spoken back to him. But I still think that if you think what my approach should have been, it should have been to go back to the coroner at this stage.
Q. I was going to take you on to your contact with Dr Jarlath on 14 June. It's in the note you were going to help us with, 061-018-069. It simply says:

"Contacted Dr Jarlath who will see Lucy's parents again, but he would rather wait for the PM report."

That seems to indicate that he knew that there was going to be a post-mortem report --

A. That's right, yes.

Q. -- as opposed to an inquest, maybe, although that might be ambiguous.

A. He may well have mentioned to me as well that there was an investigation going on in the Erne at this stage, but I didn't document that at the time, so I don't know, because --

Q. Before we get to that point, is it you contacting him?

A. I think I did, yes.

Q. Why are you contacting him?

A. I just wanted to make sure that he was going to see Lucy's parents again and he said that he clearly would.

Q. Did you indicate to him --

A. I don't remember what I said to him because I haven't documented it. I should have though.

Q. And why are you anxious to make sure that he's going to do that?

A. I think it's very important that he retains contact with Lucy because I think she died in the Erne and it's important that he sees her again and by this stage I think, I've also probably agreed with the parents that they might link in with Mr Millar. So I may have mentioned that.

Q. Yes, the reason why I'm wondering is you might have thought that, as the child's consultant, of course he wants to speak to the parents in the same way as if you would want to. So you're recognising that consultant to consultant. So why are you nonetheless wanting to make sure that he actually does do that?

A. I'm really not sure. I really can't remember, I'm sorry. I've made a rather sketchy note in that regard and I would be speculating --

Q. Were you wanting to make sure that he would give them the answers?

A. Or whatever answers he might have had, certainly. I was unaware of anything else that he could have done at that stage, but I was very keen he would link in with them and talk to them again.

Q. Could you taken that as an opportunity to have relayed to him some of the concerns that your colleagues had?

A. Probably, yes.

Q. Do you think that would have been appropriate to do?

A. I may have done it, but not documented it, but if I didn't, I think -- I would accept that it's something that could have been considered, yes.

Q. And it would have been appropriate to do that?

A. Yes.

Q. Given that you really didn't know what had happened,

that was an opportunity that you had to find out what had happened at the Erne. It's certainly an opportunity to share the concerns that your colleagues had, but on the other side of it, there's an opportunity for you to find out what had happened.

A. Sure, although I may have thought at the time that we had enough information in the notes. As I said, the information in that note that I wrote about my conversation with Dr O'Donoghue is quite sketchy.

Q. But surely you didn't think that you had enough information in the notes because you've already indicated certain deficiencies.

A. As much information as I thought we were going to get.

Q. What about trying to find out for yourself, using your clinical knowledge to press him in a way that perhaps the parents couldn't as to what he thought had happened? What about doing that?

A. That would be reasonable, I think, yes.

Q. Yes.

A. But as I said, I don't remember the contents of this conversation.

Q. I recognise that. I'm just wondering why you wouldn't want to do that.

A. Well, again, I just say that -- I'll come back to that at the end if I may.

Q. We asked you that question. You said two things about your contact with Dr Jarlath. In your first witness statement for the inquiry at 289/1, page 26, you said:

"Having discussed with the coroner, I attempted to ensure that Dr Jarlath remained involved in the follow-up. I don't remember being told that a local investigation was proposed, but this was set in train after Lucy's death."

"To ensure it was", which might sound as if you were prepared for there to be a degree of reluctance.

A. I'm not sure. I'm not sure.

Q. Then in your second witness statement --

A. I don't want to speculate as to what I was thinking.

Q. I understand that. Then in your second witness statement for the inquiry, 289/2, page 4, you were asked whether you discussed that question that I have just taken up with you about the appropriate fluid management, and you said:

"In the absence of correct information about the true degree of Lucy's hyponatraemia or that he sought to obtain clarification of the events at the Erne which led to her deterioration."

And you don't think you did discuss those things with him?

A. I can't remember. I don't think so.

Q. That's what you told us, that you don't think you did do that. If we then come on to the mortality meeting --

THE CHAIRMAN: We'll take a short break. We're almost there, doctor.

(4.04 pm)

(A short break)

(4.18 pm)

MS ANYADIKE-DANES: Dr Hanrahan, I wanted to go on to the mortality meeting, but I need to go back to a couple of points that weren't perhaps covered fully.

One point is, in the course of your PSNI interview, you were asked effectively what you thought the impact would be on her serum sodium level at the point of collapse if you had realised the normal saline that had run in, if I can put it that way. And you went through a way of reaching a calculation on that. One place to find the start of that is 116-026-015.

Detective Sergeant Cross starts:

"You have come on to something that is of interest to us because we have been pursuing this without success. What you have said is that the sodium level of 127, you're not convinced that that was the lowest sodium level."

And just to orientate you, this interview is being conducted -- I'm trying to see if we have a date for it.

Well, we'll come to that in a moment. It's being conducted on 2 March 2005; okay? He puts to you you're not convinced that that was the lowest sodium level, and you say no. And then he says:

"It would appear to me -- I'm not a medic, but what may have happened is the sodium level is dropping all the time as the No. 18 is put in then at some stage the normal is put in."

And you say yes to that.

If we pull up the next page. And then:

"Are you suggesting then from that point on the level begins to rise?"

"Absolutely."

"And if we say that's 137 at the time the first blood is taken, the 127 is what happened at the time the second bloods were taken."

And you say:

"Yes, when it's on the way up."

And then you do try and calculate what it would be. If we go to the next page of 117, you say:

"Well, I'm speculating, but however the normal saline began running very fast, so I think a significant amount of sodium would have run in."

Then the solicitor:

"Excuse me, could I just intervene for one second?

You would know that -- "

"Why?"

"I think it might be appropriate for you to say that in retrospect having looked at the notes."

Then you say:

"At the nursing notes, yes. There is a sequence."

And then you acknowledge:

"No, the sequence in terms of the writing of the notes is that they change to normal saline and then later on repeat using these orders, so that would suggest that the U&Es were taken after that."

And DS Cross says:

"It would appear to me that the normal saline was running for half an hour at least."

You say:

"I would say that is reasonable, yes. That's speculation."

If we go over the page to 018, which is when you actually do try and calculate it for DS Cross, two-thirds down:

"Could I ask for your opinion? It appears to me that 500 ml of normal saline was run through in one hour."

"Well, it was run through at 500 ml per hour, so it was only for half an hour. It would have been going at

250 ml per hour."

"Now, from your experience -- or would you have any idea what sort of an impression that would make on a sodium level, how far up it would pull it?"

"I would say it would make it down around about 116 or so."

Then he repeats that to you, you say:

"I'm not sure."

And then over the page he says:

"Certainly significantly lower than 127."

And then you concede what you have told the chairman today, that you weren't aware of that at that time. But in trying to calculate it, in your view is it likely that it would have been significantly lower than 127?

A. I believe so, yes, for two reasons. One is because of sequence of events which I've identified and the second is because, in my experience, it's just unconscionable that somebody would cone at 127. So I have no doubt that the sodium was appreciably lower. How much lower I don't know and I'm at pains to speculate -- sorry, to say that I am speculating because I don't know. The fluid would be running in constantly, so we were constantly topping up the sodium. I don't know. Perhaps I was wrong to maybe calculate, although with the rider that I am speculating.

Q. It doesn't matter the figure. The point I am asking you is: appreciably lower or significantly lower?
A. I believe so.
Q. And that's because there doesn't appear to be anything else going on, so if the fluids are implicated in her coning, then you would expect that to have meant that she was significantly lower or appreciably lower than 127?
A. I believe so.
Q. Thank you.
A. And I have accepted that, that I perhaps should have been more diligent in searching for a reason in witness statement number 1.
Q. I understand. Then just linked to that point of learning what the order of events was, and you have said it's there in the nurse's notes, but whatever it was you didn't turn your mind to it at the time?
A. No.
Q. You do refer in this interview to a conversation with Dr Jarlath, and we see it at this series, 006 --
THE CHAIRMAN: The date of the interview is 2 March 2005.
MS ANYADIKE-DANES: Thank you. You see it's your answer in the middle of the page:
"The resultant levels, sodium level, shown at 127 was not the alarm bell that it should have been if it

had been taken at 3 am when the patient coned."
A. "That it would have been."
Q. I beg your pardon. "That it would have been", I'm so sorry:
"I would stress that this was something that I wasn't made aware of at the time of my management of the patient and it is something that has only come recently to my attention at a recent study day at the Royal Victoria Hospital. I had a brief conversation with Dr Jarlath O'Donohoe. I am aware and was at the time aware of the term hyponatraemia. Cerebral oedema can result from hyponatraemia ..."
And so on. That you say you had that conversation with Dr Jarlath and I think in your answer to the inquiry in your witness statements you have indicated that the conversation centred around this issue as to when the bloods were taken in relation to the running in of the normal saline.
A. Well, that part of the conversation, yes. It was an informal, unarranged chat. Both of us had been subject to quite a bit of adverse criticism and I think it was only reasonable that we would chat about things. He said that subsequently, on reflection, he did realise that in fact the sodium was taken after the normal saline. So it was on the basis of that that actually

everything began to fall into place for me after that. And then I realised that in fact there was no doubt then, whereas clearly there was doubt before that Lucy had died of dilutional hyponatraemia of a significantly -- I mean, I don't know whether it would have been as low as the figures in the Arieff paper. I suspect that it would. I don't know if it would have been as low as when Raychel coned. I suspect that it would, but I don't know for sure. I am really quite clear, though, that in my mind I am satisfied that Lucy did not cone at 127.
Q. Yes. That information that he gave you in December, are you sure he didn't give that to you at any earlier point when he spoke to you either on 14 April or 14 June?
A. I don't remember this, no. I remember the clarity that came when he did tell me this and I was unaware of hearing that before.
Q. Can you explain why he would be telling you that at that stage?
A. No. He presumably just -- as talking about the case in general.
THE CHAIRMAN: Sorry, I think you suggested an answer a few moments ago. By this stage the documentary had been broadcast on Ulster Television --
A. Yes.

THE CHAIRMAN: -- and the two of you had faced a lot of public criticism.
A. Absolutely, yes, so I think it was only reasonable that we would gravitate towards each other and chat about what was going on, then he told me that on reflection -- no, I was unaware of that before.
MS ANYADIKE-DANES: So when he told you that and you say that things became clear, the thing that would have become clear is that actually it was her fluid management at the Erne?
A. Yes.
Q. Did you discuss that with him?
A. At that stage?
Q. Mm.
A. I can't remember. I knew there was a police inquiry coming up. I knew that had been referred to -- I think I was referred to the GMC at that stage. It just made things obvious. I wasn't going to discuss with him at that stage the fluid management when there was a PSNI in the offing. That would have been entirely inappropriate in my view.
THE CHAIRMAN: You saw him in December 2004; is that the date of the conversation?
A. Yes.
THE CHAIRMAN: By that time the inquest had taken place.

A. Yes, this was after the inquest. I didn't know this at the inquest.
MS ANYADIKE-DANES: Sorry? That didn't come out at the inquest.
A. The fact that the sodium was lower -- no, not to my knowledge, anyway.
Q. Then did it not come out at the inquest that Lucy had died of dilutional hyponatraemia or at least dilutional hyponatraemia was --
A. This was different. This was in the viewpoint of the various experts who had come together to pronounce upon it. I was basically happy to bow to their knowledge and agree that it was hyponatraemia. But at that stage it didn't -- I was unaware of the sodium ever having been lower than 127.
Q. Sorry, just give me one moment.
THE CHAIRMAN: If we look at the inquest papers at 013-036-140. This is an extract from Dr Sumner's report.
A. Yes.
THE CHAIRMAN: Four paragraphs up from the bottom. It's the last two sentences in the paragraph above that:
"It is possible that the serum sodium had been lower but increased during the administration of this huge volume of saline."

A. Yes, I was unaware of Dr Sumner's -- I wasn't there for him giving his evidence.
MS ANYADIKE-DANES: This is in his medico-legal report which you did get.
THE CHAIRMAN: Please tell me that in preparation for the inquest you were shown Dr Sumner's report.
A. I don't remember being shown it.
MS ANYADIKE-DANES: Before you went to the inquest, were you aware of Dr Sumner's report and his views?
A. I don't think he is saying for definite that the sodium was lower than 127.
Q. Sorry, let's have this one first. Before you went to the inquest, were you aware of Dr Sumner's report?
A. I can't remember. I can't remember specifically what I read. Was I provided with it? I presume I would have been, yes.
Q. I think you would --
A. But he's being --
Q. Let's start with that: you think you would have been?
A. I think so, but I can't remember for certain reading this.
Q. Let's go to this paragraph:
"Hyponatraemia is defined as a serum sodium level of less than 128."
You wouldn't have any issue with that?

A. Oh yes, yes. Even higher, actually. Even less than 135 could be defined as hyponatraemia.
Q. Then he says:
"The second measured sodium level was 127. Within that definition, that's the definition of hyponatraemia, but representing a rapid and dramatic fall from the first level measured at 8.50, which was 137."
That was the point that I put to you before. Are you saying that although Dr Sumner considered that to be a rapid and dramatic fall, you didn't?
A. I probably didn't, no.
Q. You didn't?
A. No, and I think I was right not to have as well.
Q. Well, he thinks -- leaving aside whatever it might have been at 3 o'clock in the morning, even if it were not appreciably different from that, that is a rapid and dramatic fall. Are you saying that you would not recognise that as a rapid and dramatic fall?
A. No. As evidenced by the fact that I didn't say hyponatraemia to the coroner and I didn't put it on the death certificate, so I was not thinking hyponatraemia at that stage.
Q. And then the final sentence is the one that the chairman has picked up with you:
"It is possible --

THE CHAIRMAN: Sorry, in fairness you can't skip out. This is the point that Dr Hanrahan was making, that it wasn't even clear at the inquest when the second set of electrolytes were taken.
A. Yes.
THE CHAIRMAN: So Dr Sumner had raised it as an issue, but he was saying that even if the 127 was the lowest point, that was enough for him.
A. Yes. And I accepted that at the inquest on the basis of Dr Sumner's eminence. But at the time of Lucy Crawford presenting, I did not consider that enough. But I do believe that the sodium was significantly lower.
Dr Sumner is being somewhat circumspect about saying for definite how much the serum sodium had been lower in the last sentence of the paragraph you've pointed out there. Whereas all the other experts, including Dr Evans, who was a hostile witness to the Trust and the Erne did not pick up on this. He's the only one who has picked up on this and in rather a vague fashion.
MS ANYADIKE-DANES: In fairness to you we can pull up the relevant bit from Dr Jenkins' report. This is a report produced for the Trust, 013-032-119, and then if we can pull up 120 next to it. About halfway through on 119 he says:
"This shows a significant fall ..."

So he too thinks it's significant:

"... in sodium from 137 to 127, and in potassium from 4.1 to 2.5, together with an increase in glucose from 4.5 to 10.9. These changes do raise the question as to the fluid management in the period from insertion of the IV line at 2300 hours to collapse at around 0300."

He goes on to say:

"There appears to have been some confusion amongst the staff as to the fluid regime ordered by the consultant. It is difficult to interpret the record made by the nurses ... It will be most important to determine from the staff involved exactly how much of each type of fluid was given at each stage throughout this time period and following the change of fluids to normal saline through until the child arrived in PICU."

So you're right, he too hasn't picked up the actual order of things, but what he is identifying is the need to find that out because he thinks that that is important. And so he's saying two things there.

A. And --

Q. Just bear with me. He's saying he thinks that is a significant change from 137 to 127 and also it wasn't clear exactly what was being given in what quantities and when, and that should have been clarified. So this

is a criticism. This speaks to a criticism that the inquiry's expert, Dr MacFaul, has made of you, that you should have got that information, either directly from the Erne or by a better interrogation of the information that was available to you, and if we go over to the other page so that you can address this as well:

"Although the sodium level of 127 is not in itself usually associated with severe problems, it is likely to be the rate at which the sodium falls rather than the absolute level which can cause problems in this setting, and while no definite conclusions can be drawn regarding the cause of the child's deterioration and subsequent death, there is certainly a suggestion that this was associated with a rapid fall in sodium associated with intravenous fluid administration causing hyponatraemia and cerebral oedema."

Those two points that he's making is exactly what Dr Chisakuta and Dr Stewart were raising, these concerns about the fluid regime, and there we have two experts -- this expert, I think, was giving advice and guidance to the Trust -- and Dr Sumner to the coroner, both of them recognising the significance of this.

A. Although, as events transpired, I think they were both wrong because I don't think she did cone at 127 because we now know that the sodium was appreciably lower at the

time.

Q. Exactly. It was even worse. It was even worse than they thought.

A. Yes, so if it had been worse, it would have been more identifiable by me at the time. Can I just make a point as well that -- I've made a point, "lessons learned by Lucy's death". I completely accept what you're saying, counsel. With hindsight, it could be argued that I could have been more rigorous in questioning the timing of the sodium analysis in the Erne. That's what I've said, I've been upfront. But I genuinely do not believe that she coned at 127, and I really do not know if anybody could show me a child who's coned, going from 137 to 127.

THE CHAIRMAN: Doctor, let me put it to you this way. There is perhaps always some degree of uncertainty, but both Dr Jenkins and Dr Sumner appear to have taken the view at the inquest that even if Lucy had not gone below 127, the fact that she slumped from 137 to 127 would in itself be enough to cause her death because of the rate of fall. Is that the bit that you struggle with?

A. I wouldn't have picked up on that and I don't think that was the case with Lucy. I certainly did not appreciate that at the time. I would consider her going from low normal to mild to moderate hyponatraemia. Like I said

to you, if you go instantaneously from 135 to 134, it's not going to have any effect on you, and that's a very quick rate. There has to be a certain -- as the Arieff paper would suggest, the sodium is really down to really, in most cases, less than 120, as Raychel was, of course, as well.

MS ANYADIKE-DANES: Then before I come to the mortality meeting, the other thing to pick up with you is that you had identified four differential diagnoses in Lucy's notes, three really, because you had a sort of catch-all. The upshot of that is you wanted some further guidance. By the time you got the post-mortem report, had you resolved --

A. Yes.

Q. -- the differential diagnoses, eliminated all of those?

A. I have checked subsequently and the results are all in the notes and they've been seen as well.

Q. So if you were then writing in her notes, having inserted those differential diagnoses in her notes, and having received her post-mortem report back, what would you then be including in her notes as your present view as to where matters lay with those differential diagnoses?

A. I think I would have to say there was quite significant doubt as to what was going on. The results were all

normal, so she was negative for herpes, she was not hyperanaemic(?) and her organic acids were non-contributory as well.

Q. Does that mean effectively you would have been left with "cerebral oedema for other cause" --

A. Absolutely, yes.

Q. -- whatever that was?

A. Yes.

Q. And then --

A. And I think that is where I would actually make quite a strong contrast with the way I dealt with Raychel in that her sodium was much more easily identifiable as being causative. I identified that in the notes and I didn't do any other investigations, which I did do in Lucy.

Q. Therefore, can I just pull up two pages together, 061-018-063 and, alongside that, 061-018-068. That is on the left-hand side, you, your differential diagnosis, and you get to the 14th when the coroner is -- there's a record of you speaking to the pathologist. There's going to be a hospital post-mortem, there's no result written in there. The next entry is by Dr Dara. You can see:

"Contacted by."

There's no indication of who contacted him, but he

says it was a family member:

"Re the death certificate. Spoke to Dr Stewart. Have been waiting for a PM result."

None there yet:

"PM result in front of chart."

That would appear to be that provisional anatomical summary:

"Spoke to Dr Hanrahan. Cause of death."

And you get those three things.

So the cerebral oedema that you have got as your final differential diagnosis, but for other cause, that's there as his point number 1. And if you had those two things, I think your evidence is that you couldn't have gone to 2 and 3?

A. I think I said that earlier on.

Q. So did you go through the process? He says he did this on the telephone with you, but did you go through the process --

A. I don't remember that.

Q. Did you go through the process of eliminating your differential diagnoses, for the good order for the notes?

A. I may have, I don't know. I may have been aware that these investigations had been normal as well by then.

Q. But that's not recorded there?

A. That's not recorded there, no.

Q. Do you think it should have been recorded there?

A. Maybe it should have been, yes.

Q. Thank you. So then the mortality meeting. In your witness statement 289/1, page 22, you say:

"There were regular mortality meetings where attempts were made to discuss the deaths of all children who died in the Children's Hospital and I am unaware of any other process that applied at that time. I believe that Lucy's death was discussed at a mortality meeting."

You go on at page 223 in the same witness statement to say:

"The intention was that all deaths that took place in the hospital would be discussed."

What did you see as the purpose of all of that, that would be the purpose of discussing Lucy's death at a mortality meeting?

A. All deaths were discussed.

Q. Yes. What would be the purpose of discussing Lucy's?

A. To try and learn lessons and to see should anything alternative have been done.

Q. And given what you know from the notes, what are the lessons that you think could have been being drawn out at that mortality meeting?

A. There could have been further investigation of when the

sodium was taken, there could have been further analysis of the fluid balance that was taken. But I don't appear to have been at that meeting, so I don't know.

Q. I'm asking you in a different way. You have said that all deaths went to a mortality meeting. I'm asking you, therefore, what is it, given what you knew from Lucy's notes, what is it that you think could have been being brought out at a mortality meeting to discuss in terms of lessons to be learnt?

A. I don't know because I wasn't at the meeting, so I don't know.

THE CHAIRMAN: Can I presume that what you would have expected to have been discussed and explored at the mortality meeting is what went wrong with Lucy and why she died?

A. Yes.

THE CHAIRMAN: And whether that had been accurately --

A. Accurately identified. And if anybody else had anything to say at that stage, I would have been happy to go back and act on that. It was a routine thing to investigate deaths.

MS ANYADIKE-DANES: In your experience, who presents the death at the mortality meeting?

A. Usually, it's the person who they were under, but, as has been discussed earlier on, there was some doubt as

to who was the lead consultant, so I don't know who presented Lucy. I have no memory of being invited to the meeting particularly and I certainly didn't choose not to go, but clearly I wasn't at it.

THE CHAIRMAN: Are you a standard invitee to these meetings?

A. Yes. All consultants are informed of this. I'm quite a good attender as well and I always sign in, but I don't know why I didn't sign in here. I'm sorry about that.

THE CHAIRMAN: So whether the meeting was in August or September, whenever it was, you would have been invited?

A. I would have known about it, yes, and I would have been informed, I think, of the children who were going to be discussed. I would have perhaps thought that the meeting wouldn't have gone ahead without me, but I think it did in that I wasn't at it, so I can't help you any more with that.

MS ANYADIKE-DANES: If you were a standard invitee and you're not entirely sure in the same way as you weren't sure whether you were the person who would be signing off on a discharge letter, you wouldn't be entirely sure whether you were the person who was to present this, should that not prompt a discussion between you and either --

A. It should have.

Q. -- Dr Crean or Dr Chisakuta as to who's the person supposed to be doing this?

A. Yes, it should have, but, as I say, I don't remember the circumstances of my not attending this meeting. I certainly didn't choose not to go, so I can't help you any more.

THE CHAIRMAN: Doctor, I have to tell you that I'm entirely unsure whether Lucy's death was ever discussed at a mortality meeting.

A. Sure.

THE CHAIRMAN: Dr Taylor said yesterday that, I think it's a lady, that organises the meetings, is rigorous in her organisation and her planning, and makes sure that everything is discussed. But it seems to me that since nobody who has given evidence so far can remember anything about any discussion about Lucy, and since the documentation which was available could not have made any sense at the time, how could I possibly conclude that there was a discussion?

A. I don't know, but I think I perhaps should have been more diligent to make sure that it was discussed, but I didn't. As I said, I don't remember. I don't know.

MS ANYADIKE-DANES: If I can find the reference, I will pull it up for you, but maybe in lieu of that, you'll take it from me that we have the page with all those who

attended signing, and the only two people that we can recognise as being at all relevant -- one is Dr Taylor, who says that he wasn't involved in any way in her care, but he was chairman so he would be there, and the other is Dr McKaigue, who was, as you know, involved right at the beginning. But there is no other person that we've been able to identify from that list that was involved in Lucy's care.

Do I understand what you're saying to be that you wouldn't have thought that Dr McKaigue was the person who would present Lucy's case?

A. Probably not. Did he say that he was?

Q. No, no, he didn't. I'm just trying to deal with whether there was actually anybody there in a position to do that.

A. I don't know. I don't know.

Q. But would you have expected him --

A. I would frankly have expected that I would have had input into presenting at the meeting and I think I perhaps should have ensured that she was discussed and, if she wasn't discussed, that's very disappointing, but I have no memory of choosing not to discuss her.

Q. Just for reference, it's 319-023-003. There we are. You see all those names. You can see Dr McKaigue halfway down on the left-hand side and Dr Taylor,

of course, as the chairperson.

A. Yes.

Q. And there wouldn't appear, would you agree, to be any other name or signature --

A. No.

Q. -- that was involved in Lucy's case?

A. No, I can't see any, no.

Q. But if she was going to be discussed, the purpose of that is to see what lessons there are to be learnt, as I understand it?

A. Yes.

Q. Is that the right place to be trying to find out what the cause of death is at that stage?

A. The right place, as I've said earlier on, would have been in the coroner's auspices if I'd referred back to the coroner back in May rather than writing the death certificate. So I think by extension, therefore, it's probably not the correct place, no.

Q. Given that you didn't do that and given that the amount of time that's available for discussing these cases, Dr Taylor's view is that those cases are presented when there is already a concluded view as to what the cause of death is, and then you're now reviewing how matters got to that stage to see if one can learn lessons about that, not that we can, with my colleagues, try and work

out why this child died, or at least what the cause of the child's death was. Would you accept that?
A. I would, yes.
Q. So that means if anybody was going to present Lucy's case at a mortality meeting, somebody would have had to have a view as to what the cause of her death was?
A. I don't recall being asked to present her and I certainly don't recall refusing to present her, so I'm sorry, I cannot help you any more with this because I don't know. But I completely accept that she's a girl who should have been discussed more and she wasn't. But having said that, I think in comparison to the fact that she wasn't referred back to the coroner, I think that's the main lesson that I've learnt in this regard.
Q. I understand that and I understand that you think that this is a case that should have, in keeping with all children's deaths, been discussed at a mortality meeting.
A. Oh yes.
Q. The point that I'm seeing to see if I can finally tease out with you is, it's a place for lessons to be learnt?
A. Yes.
Q. And leaving aside the main lesson that this is a case that should have gone back to the coroner, leaving aside that issue, is there anything that you think could have

been a lesson to be learnt, might have been identified there and could have been addressed?
A. I think documentation would have been important as well. The documentation really was very poor and was quite vague.
Q. From the Erne, you mean?
A. From the Erne as well, I think, yes.
Q. Is there anything else?
A. Not offhand that I can think of, no.
Q. So if there was a lesson that came out in relation to the Erne, in your view how does that lesson get back to the people who have to learn it?
A. Because at that stage I hadn't equated the management in the Erne with what happened to Lucy.
Q. No, I mean the question in a different way. What is the mechanism or the procedure by which, if it comes out at a mortality meeting that there are lessons to be learnt from the referring hospital, how does that get back to the referring hospital?
A. I haven't had that case, so I don't really know. I think there would be direct communication in the first instance, either by phone or by letter. I don't know.
THE CHAIRMAN: By who?
A. By the responsible consultant who, as I've accepted, could have been me, but it wasn't fully confirmed, that.

MS ANYADIKE-DANES: Professor Scally, who is also an expert for the inquiry, has made the point at 251-002-017. He said:
"If there was any suspicion of inadequate treatment in relation to the Erne ..."
And pausing there, there was, albeit not from you, but there was a suspicion of inadequate treatment from the Erne.
"... that should have been reported formally to the Sperrin Lakeland Trust."
Do you accept that?
A. Yes.
Q. So even if you didn't necessarily link what your colleagues were discussing in terms of their concerns with her demise, you would recognise if somebody was doing that then that really ought to be being referred back to the Trust?
A. Although Dr O'Donohoe had already referred the case himself the next day to the Trust in the Erne.
Q. Did you know that?
A. No, I don't remember being told that. He may have said that to me and I may have accepted that that was enough, but that's speculative.
Q. Yes, I understand that. But leaving that you don't know that, I'm actually trying to look at process and so

forth. Are you therefore agreeing with Professor Scally that if there is a concern, even if it's not one around which there's a consensus, but there is a concern of anything untoward in the treatment of the referring hospital and that comes out in the Children's Hospital, then a communication should go back to the referring hospital about that?
A. I think that's reasonable.
Q. And the answer that you gave to the chairman, does that mean you think that the person responsible for doing that is either the consultant who's in charge of the patient's care or might it be the consultant who has that concern?
A. I suppose it would be the consultant in charge, but in discussion with other people as well, which -- maybe there weren't enough discussions in Lucy's case.
Q. Sorry?
A. I think it's clear there weren't enough discussions in Lucy's case and that's another lesson to be learned, that we need to discuss more and be more open to other people's views.
Q. Yes. And then just finally --
THE CHAIRMAN: Sorry, don't leave Professor Scally for a moment because let's bring this up if we can. 251-002-017. If you look at paragraph 1 on that page

where Ms Anyadike-Danes had you a moment ago:

"If there was any significant suspicion among the staff at the Royal that Lucy's death was due to inadequate treatment, then the matter should have been reported within the mechanisms available within the Royal Group of Hospitals."

To your understanding, what were the mechanisms available within the Royal Group?

A. I don't know at that stage. I would talk to my clinical director now, but at that stage I probably wasn't aware. I was relatively new in post at this stage. I was only in a little over a year and I wasn't as attuned as I would be now.

THE CHAIRMAN: And the point he made about Sperrin Lakeland, he said it should also have been informed in a formal manner.

A. Yes.

THE CHAIRMAN: We can tease this out with Professor Scally when he comes to give evidence, but that doesn't suggest to me a phone call to the Erne.

A. No, I'd accept that, and I think one of the big lessons I've learnt has been to maybe document concerns and document communication. For example, with Dr Curtis. I wish I'd kept a written record of what I said to him.

THE CHAIRMAN: Well, let's take this forward to today when

I'm told that everything is so much better today and this wouldn't happen again. Do you know today what the mechanism is to report a concern about inadequate treatment within the Royal?

A. I would seek advice from my own clinical director if(?) I had to go there.

THE CHAIRMAN: Do you know today what the advice is?

A. Offhand I don't, but I would have no hesitation in seeking advice from my own management on how to proceed.

THE CHAIRMAN: Do you know today what the formal manner would be to raise an issue with what is now the Western Trust?

A. To be honest, I don't, no.

MS ANYADIKE-DANES: You know Dr Chisakuta?

A. Yes.

Q. Did you know that he was a member of and then subsequently chaired the Critical Incident Review Group?

A. No, I didn't actually, no.

Q. You didn't know that?

A. No. At that stage, I didn't know that.

Q. So you didn't know that you could fill in a form and have Lucy's death referred to that group, who would then consider it in a multidisciplinary way?

A. At that stage I didn't know that, no.

Q. Did you think that Lucy's death might be something that

you could report as an adverse or critical incident?

A. At the time, probably not, because I didn't think that the sodium had coned her. But in retrospect, I was wrong about that.

Q. Yes. Well, you didn't think that, but you did know that other consultant clinicians were of the view that there was a concern. Did you think you might discuss with them, look, you probably should report --

A. Yes, I think I said earlier on that there should have been more widespread discussions and maybe even reporting.

Q. No, sorry. I don't mean discussions, you have very fairly said that. But do you think you should have been saying to them, "If that's what you think then you really should be registering some sort of report about that"?

A. I think in hindsight -- and that's what would happen today if I was involved with this again, yes. Maybe I went off on a solo run here on this and I trust too much my own intuition.

THE CHAIRMAN: And you were allowed to go off on a solo run because you don't appear to have known at that stage what the coroner's law was in Northern Ireland, nor do you appear to have known about the Critical Incident Review Group or how to report an adverse incident.

Anything further?

MS ANYADIKE-DANES: No.

THE CHAIRMAN: Any questions from the floor? Dr McGleenan?

Okay, doctor, thank you very much. That brings your evidence to an end. I'm grateful to you for coming here and grateful for the concessions you have made during today's evidence. You don't have to say anything further, but if there's anything more you want to say before you leave the witness box, you're free to do so.

A. Well, if I could change one thing, I would go back to the coroner and I would get Lucy's case investigated more thoroughly. I would say that the fact -- for whatever reasons that I did suggest that further investigations be carried out in the Erne would clearly indicate that I wasn't averse to finding out the real reason for what was going on with Lucy. And I would draw a comparison with Raychel and the way -- clinically, those cases were very, very similar, but my approach was totally different, but the only difference was in the biochemical difference which was perceived. If I could change one thing now, I would not write the death certificate in such an illogical fashion and I would go back to the coroner for further advice.

THE CHAIRMAN: Thank you very much, doctor. You're now free to leave and unless there's anything further, we'll

adjourn until tomorrow morning at 10 o'clock.

Thank you.

(5.05 pm)

(The hearing adjourned until 10.00 am the following day)

I N D E X