Tuesday, 4 June 2013

(10.00 am)

(Delay in proceedings)

(10.08 am)

THE CHAIRMAN: Good morning. Just before we start with Dr Crean's evidence, a few points.

Mr Uberoi, I'm going to deal with the issue which has been raised on Friday on behalf of Dr Taylor about the extent to which Professor Kirkham might be involved in any other cases. That gives everyone -- Mr Quinn and the trusts -- until then to consider what their position is.

MR UBEROI: Thank you.

THE CHAIRMAN: We will deal with it at some point on Friday. And I think, just while you're on your feet, Dr Taylor is to give evidence later on today. As I understand it, an issue has arisen about his involvement in the treatment of Lucy, which was an involvement which was attributed to him in a trust summary; isn't that right?

MR UBEROI: Yes, sir. It just arose, if you remember perhaps, in the middle of Friday where my learned friend Ms Anyadike-Danes mentioned that his name potentially appeared on a prescription sheet. That was news to me and I have taken some instructions on it and I have also had further discussions with my learned friend and I

could foreshadow the evidence that he's going to give and bring you up-to-date with the discussions we have had or I could leave it until the evidence --

THE CHAIRMAN: I'd like to know a bit more before then, if at all possible, through the Trust. At 061-039-125, if that could be brought up, there is an entry just over halfway down the page on the right-hand column. There is an entry which carries four names from 13 April 2000, Dr McLoughlin and Dr Taylor is the second name. That apparently was extracted by the Trust, which prepared this chronology from an earlier page, which is 061-002-004. If I understand the point correctly, if you look down the left-hand side, entry number 7 is what -- the signature at the end is what the Trust attributed to Dr Taylor. You have consulted with Dr Taylor and he says that's not in fact his signature.

MR UBEROI: That's exactly right, sir.

THE CHAIRMAN: In that event, it's important to know that before Dr Taylor gives evidence, but I'd also like to know whose signature it is, if anybody can help us with that. I don't know if Dr Crean will recognise any of these signatures, Mr McAlinden, or if the Trust knows. Were you alerted to this point?

MR McALINDEN: I was. Dr Crean inspected this document, the original, and actually identified Dr Taylor's signature.

So it looks as if he's not able to assist if it is not Dr Taylor.

THE CHAIRMAN: Thank you very much.

MR UBEROI: I'm sure Dr Crean is endeavouring to help, but Dr Taylor was never asked, so the confusion didn't emanate from him.

THE CHAIRMAN: Thank you very much. Okay, there are other issues to deal with as the day goes on, but I'm anxious to hear Dr Crean's evidence, so if Dr Crean would come forward.

MS ANYADIKE-DANES: I think my learned friend Mr McAlinden said Dr Crean had been able to inspect the originals of Lucy's notes. Those are the originals at the Royal; is that right? There seems to be an issue as to whether the originals from the Erne are still available.

We were trying to see the originals just to clarify certain points like this and I wonder if the DLS could help us at some convenient point in a break as to whether there is indeed some issue as to whether her notes are missing in some way.

THE CHAIRMAN: Okay. The notes from the Erne or the notes from the Royal?

MS ANYADIKE-DANES: I'm not entirely sure. We had sought the complete set of her notes to make sure that if there were issues like this we could resolve them fairly

quickly and I think the secretariat has got an e-mail to suggest that some part of her notes may no longer be available or may be missing temporarily or something of that sort.

MR McALINDEN: Certainly in relation to the Belfast records, the Belfast records are preserved in their entirety and in the possession of the Belfast Trust.

THE CHAIRMAN: Yes. My understanding from what I was told earlier, Ms Simpson, is that the original Erne notes aren't available; is that right?

MS SIMPSON: I understood that was the case, but I'll certainly check that.

THE CHAIRMAN: Thank you.

DR PETER CREAN (called)

Questions from MS ANYADIKE-DANES

MS ANYADIKE-DANES: Good morning, Dr Crean. Do you have your CV there?

A. Yes, I do.

Q. You have already given evidence. I think you gave evidence in relation to the governance section of Adam's case; is that correct?

A. That's correct, yes.

Q. So you'll probably know the form. What I'm going to do is I'm going to ask you whether you adopt the evidence in statements that you have already made in relation to

this part of the inquiry's work, Lucy's case, subject to anything that you say in your oral testimony.

A. Okay, thank you. Yes, I do adopt them.

Q. Let me for the record say what they are. The first is the statement that you made -- I think it was actually made for the Trust -- which is undated. It's 013-001-001. It's signed, but undated. We don't need to pull these up, this is just for referencing. Then you have a deposition because you gave evidence to the coroner. That deposition, the reference for that is 013-021-071. It's dated 17 February 2004.

Then you made a PSNI statement, the reference for that is 115-029-001, and it's dated 14 March 2005. Then you've made two statements for the inquiry in this section, the series is 292, the first of which is dated 7 November 2012, and the second of which is dated 23 January 2013. And you adopt all those?

A. Yes, I do.

Q. Thank you very much indeed. Could I ask, before you made your statements to the inquiry or even before you came today, have you discussed Lucy's case with any of your colleagues or with anyone else apart from your legal advisers?

A. No, I haven't, no.

Q. Thank you. So then if we go to your CV and if we pull

up 306-087-001 and then put 002 alongside it. You have been a doctor since 1976; is that right?

A. That's correct, yes.

Q. You have been a consultant in paediatric anaesthesia at the Children's Hospital since October 1984.

A. Yes.

Q. And in fact your expertise in paediatrics, your specialty in paediatrics, goes back to July 1982; is that correct?

A. Even before that, I think. My last rotation before I went off to Toronto was actually in the Children's Hospital, so I started that about January 1982.

Q. I understand. Have you then been in paediatric intensive care since 1984; would that be correct?

A. Yes, I did just over a year's training when I was in Toronto, that was part of my two-year rotation there, so I started there and came back as a consultant in 1984 and I was doing both paediatric anaesthesia and intensive care at that time.

Q. And you were in the Toronto Hospital For Sick Children, July 1982 to June 1984; is that correct?

A. That's correct, yes.

Q. Then if we look at the membership of the societies, we won't go through these in detail, but some are relevant

to some of the questions I'm going to ask you. Leave aside the Northern Ireland Society of Anaesthetists and go to the right-hand page there, 002. Paediatric Intensive Care Society from 1998 to 2005 and then you have your membership of the Irish Intensive Care Society and the Northern Ireland Intensive Care Group. Can I just ask you a little bit about the Paediatric Intensive Care Society? What do you understand was its purpose?

A. In 1988 -- was actually the first meeting and it was just -- in many ways paediatric intensive care in the UK was quite a bit behind what was happening in the US, for example. It was really in its infancy back then and it was just, I guess, trying to get a lot of like-minded people together to discuss common problems. I remember even, I think, at that first meeting john Jenkins from Northern Ireland actually presented a case that I had been involved in with him. So it was really just sharing experiences and just trying to get some sort of a forum where people could discuss common issues because there really wasn't anything like that at the time.

Q. So would I be right in saying what you were really looking for is those particular issues that are of relevance to the very ill child who will be in intensive care and to see, in perhaps a more multidisciplinary

way, how some of those issues might be addressed and how you might share some of your expertise on those issues?

A. Yes, because it was open not only to anaesthetists and paediatricians, but surgeons, nurses, pharmacy people, so it was trying basically just to share experiences and I guess in the early days we were feeling our way in forward to which direction we were going to go and it was mainly based around case reports, I think.

Q. Thank you. And then if we go to 006 and put up 007 alongside it, you were sub-director for anaesthesia in ICU in the paediatric directorate and you were there from 1995 to 1997. You also, going down through your Northern Ireland membership, Paediatric Anaesthetists Group in Northern Ireland; you were chairman of that, and something that I'm sure you're going to be asked in another section of the inquiry's work, about your membership of the working group on hyponatraemia in children.

And then, just on page 007, we see you as a member of the Federation of European Associations of Paediatric Anaesthetists and also a member of the paediatric group for the National Confidential Enquiry into Perioperative Deaths from 1998 to 1999.

Can I ask you, when you say that one of the purposes of establishing the Paediatric Intensive Care Society

was, in a multidisciplinary way, to try and look at common issues for children who find themselves in that kind of unit, when you're meeting nationally like that and then you come back to your local hospital, how do you integrate or what is the means by which you can integrate any learning that you have in that kind of forum?

A. Often, in a forum like that, it's usually the things informally that you hear, maybe in the bar afterwards or something like that, a lot of learning goes on there. One thing you do is maybe reassure yourself that what you are doing is good and appropriate and you may pick up things that you can maybe learn from and try to integrate those into your own working practices as well. That sort of thing. There will be case reports that can be very interesting, but it's about networking and talking to people. And even, you know, having someone at the end of a phone line somewhere that if you do have a problem, you can phone them ask and ask their advice. You can be quite isolated in Northern Ireland when it comes to people to talk to.

Q. I would imagine extending your contacts is very helpful, particularly if you know from having spoken to somebody that they were involved in something which you now feel that you're engaged in and it would be good to chat that

through, but I was thinking in a more formal or systematic way because that may be a bit ad hoc for the purposes of developing something for the overall benefit of the Children's Hospital. Is there a way in which, in a more systematic way, you can bring that learning back to the Children's Hospital?

A. The meeting was pretty loose at the start. It was a guy called Duncan Matthews from Great Ormond Street that actually started the Paediatric Intensive Care Group or Society. He was a paediatrician who worked in intensive care there and I think it was just initially to get people into the same room once a year to try and get a discussion group going and take it from there. It was pretty informal at that time and it was mainly about case discussion and networking at the time.

Q. Yes, that's that group. But as I was taking you through your CV you actually have the benefit of being a member of a European group and a number of other societies than just that particular one from the UK and I meant a more general question.

A. Sorry, okay. Well, the European group, I was at that because I was secretary of the Association of Paediatric Anaesthetists. And it was called the Federation ... FEAPA -- I can't remember what the acronym is right now, it has been disbanded. Really what they were doing was

bringing all the anaesthetic groups in Europe together. And in many ways a lot of paediatric anaesthesia at the time in Europe was in its infancy. Many of them based themselves on the practice in UK at that time, so in many ways the UK was taking a lead in that.

THE CHAIRMAN: I think what we're getting at is this: I understand entirely, because lawyers do the same, you talk to colleagues about what you would do in this situation, what you would do in that situation, and you learn off that. But if you're the sole person at the Royal, I assume, who was an executive committee member of the European association, is that right, at any one time?

A. I was probably only one of two people in the UK on that, not just the Royal.

THE CHAIRMAN: The question is: apart from picking up stuff informally in a over a chat over dinner or something on the tangents of a conference, was there ever a time when anything was brought back formally into the Royal so that you looked at this and said, "Actually, they're doing this better in London than we are and we can improve from London, so let's put something in place in the Royal"?

A. If I can come back to you on that because many of these organisations -- this was like an administrative role

that you had and it was about administering the organisation. What you would have done was that you would have picked this up maybe at one of their four-year meetings. I think what's happened with many of these organisations over the years and the Association of Paediatric Anaesthetists -- I will call them the APA to abbreviate, if I may -- they in the 2000s developed a guideline committee, for example, and I think it was important that you could highlight these guidelines, they were on the website, that you could -- not everyone was a member of that. So you could show people this is a guideline here, it's on the website, maybe you'll want to take on board for your own practice.

THE CHAIRMAN: Exactly. Because if you were one of only two people in the UK who was at these events and perhaps at other events too, for instance Dr Taylor and Dr McKaigue might want to get the benefit of whatever you'd picked up at them; is that right?

A. That's correct, and I think nowadays it's part of your appraisal revalidation process because what you do is that you have to reflect on, you know, meetings and organisations that you have been to and not everyone can get to all the meetings so you try and reflect on that and bring back good practices that you have seen there.

THE CHAIRMAN: How does that good practice become adopted in the Children's Hospital? I mean, have you ever issued a note or a protocol or a formal practice?

A. Well, okay, I'll give you an example of something that's come up recently. There have been concerns, actually, from the group in Sick Kids' in Toronto about the use of codeine in children. Over there they don't use anti-inflammatory drugs for pain relief following tonsillectomy because they're worried about bleeding, so they give these kids lots of codeine home with them and codeine is metabolised to morphine in the body, so what happens -- some children metabolise this very, very quickly and very efficiently and some don't. And what they have found is that have been a number of deaths in America, which has caused great concern. When I heard about this and I knew there was a statement on the APA website on this, I brought that to the attention of my own colleagues here, but also the ENT surgeons as well in the Royal so they were aware of this.

Our practice is a bit different is that we use codeine just for rescue pain relief and we don't give the parents a lot of it at home. I'm using that as an example of how we would try to raise a concern about a safety issue to staff so that parents are protected from that.

MS ANYADIKE-DANES: Thank you very much. That's exactly the sort of thing I was asking. I wonder if I could pull up 315-015-001. These are the Paediatric Intensive Care Society standards for paediatric intensive care produced in 1996, but I suspect they were the subject of some discussion before then. Were you aware of these?

A. Yes. One of the problems about standards is that anyone can come up with a standard and sometimes -- I mean, to get a good standard document out, you would have to have a group of people that would go through the literature, the standards should be evidence-based, there should be a period of consultation so that other people can reflect on what you are saying and then you would come up with a final document.

I remember one of the standard documents from the Paediatric Intensive Care Society was quite aspirational and not every standard document you see out there I would have concerns about, that's all I'm really saying to say. But I'm sure I saw that at the time. I can't remember.

Q. If we pull up 003, now that you mention who might contribute to it. There we are. It seems that there was a previous version of this, which was prepared by a working party consisting of members of the Council of the Paediatric Intensive Care Society. And then they

had a consultation process, received comments and so on. And listed down there is the working party, the membership of the working party, so that you can see who they're talking about. When you get to who they received their comments from, you can see the kind of not only discipline, but also the institutions that those people are coming from. But what I wanted to know is whether you were aware of this particular document?

A. Yes, I would have been, and I know many of the people that were on the working group.

Q. And the reason I ask that is that when we were dealing with Claire's case -- in which you didn't give evidence, but I think you were aware of it --

A. Yes.

Q. -- there was an issue as to whether there were criteria in relation to admission of children to intensive care and that was an issue in that particular case. What we were told was that there weren't actually any established criteria, there was a practice at the Children's Hospital, but not established criteria, and to the extent that there was a practice it centred around whether a child required ventilatory support. And this, as I understood this standard, was actually to try and bring some sort of structure to a set of criteria which one would use to assist in that, amongst

other issues, in relation to the provision of a paediatric intensive care service. And the other thing that it deals with, if we go to -- I think it's going to be 014, it might be 015, I'm slightly out of kilter. It's 015.

You can see that under the management policies there is an issue in relation to clear procedures for the admission of patients and then, under "Data collection and audit", it talks about:

"Assessing the performance of a PICU unit, clerking information, undertaking audit, including details of all admissions and the collection of all patient data and analysis of morbidity and mortality."

And then just a little bit further on in that same paragraph it talks about there being:

"... regular audit meetings so that all staff can be made aware of any adverse occurrence or alteration in the standard and quality of care."

Then it talks about the kind of information technology facility you might require in order to support that.

If we pause there: were you aware of this and had you tried to see what could be done to try and establish something, not necessarily mimicking that exactly, but something along those lines at PICU?

A. Yes, they're all fantastic ideas. They are.
Q. That's not what I asked you. Were you aware of it?
A. Yes.
Q. Of this?
A. Yes.
Q. Was there any move or attempt to see whether those sorts of standards could be established for PICU in the Children's Hospital?
A. I think you're aware that in the anaesthetic department in Children's at that time we were under crisis with manpower, and I think just trying to keep ourselves afloat and not sinking was about the best we could do at that time. All these things are great ideas, but there was no way we could move forward with those sorts of things without additional manpower and resources, and that's just a fact of the way it was then.
Q. Was that point being made to the Trust?
A. All the time.
Q. That there are things that we could do to be assisting with governance, if I can call it loosely that, and, for that matter, its role in the improvement of care, but we don't have the resources to do that?
A. If I can tell you that at the time we were probably working 60, 70-hour weeks as consultants. It was a very, very unattractive job. No matter how much

money you had, people didn't want to come and work with us. They liked working with children, they liked working with us, they liked the staff, but they didn't like the lifestyle, so there was a major recruitment problem. And I think, no matter how much money you could have thrown this, it wouldn't have worked. My wife will tell you she brought our children up on her own. She never saw me and you were just in work the whole time.

I agree, many of these things are very positive, they're great. Many of these things were happening in the Children's Hospital in Toronto when I was there in the early 80s and it would have been great if we could have replicated them in Belfast, but at that time I don't think it would have been possible.

THE CHAIRMAN: I don't want to go over all of Adam's case again, but do I understand what you have just said to be a reference to the number of paediatric anaesthetists that there were in the Children's Hospital in 1995 and 1996, the pressure that was on that small group of people, and the evidence which I heard last year about the extent to which that might have been relevant to what happened after Adam's death in terms of deciding what might be done or should be done about Dr Taylor's handling of Adam's case? I'm trying to --

A. I understand what you're saying, Mr Chairman, and I honestly think that we were pretty cushioned from all the external forces that might have been going on there at the time. I was kind of surprised -- you surprised me with the questioning, if you like, last year. And I've thought about it a lot. I'm not sure I was aware of a lot of the things that were happening outside my own working environment, those sort of factors that were being alluded to last year. I think there was a lot of support going on in the background to let us try and maintain the service and things like that. It was a hard time.
MS ANYADIKE-DANES: If we were to bring matters up a little closer to the date with which we are concerned, which is 2000, had the position changed at all between 1995, when you were discussing it in relation to Adam and 2000?
A. Yes, there were more people involved. Paul Loane, he works up in Coleraine Hospital now, but he came back as a consultant in 1997 and he worked again in the intensive care unit in the Hospital for Sick Children in Toronto, he worked with Des Bohn, who is an adviser to the inquiry, and a lot of the ideas that Des had were all brought back with him as well.

Tony Chisakuta, I think, came back in about 1999 to the hospital as well. He had been working in Great

Ormond Street. So things were starting to ease at that time. People were coming in with new ideas and it was a good experience for us at that time.
Q. If, with that increase in personnel, if I can put it that way, if anybody had wanted to try and introduce standards along the lines that one sees being recommended perhaps, say, by the Paediatric Intensive Care Society, who would be the person who would be able to take that forward in the structure?
A. If you're looking at an organisational person, that may have come from the lead person in intensive care. But at the time, I think we were almost swimming just to stay still, from a clinical point of view. There wasn't a lot of time to do things. For example, I know this has been discussed previously, or at least I think it has. I had a research fellow back in 1989, a guy called Jarlath McAloon, who's a consultant now in Antrim Hospital, and we were doing an audit of a -- a prospective audit evaluating the outcome of children in the intensive care unit, and that was published in, I think, Archives in 1991. And it was a prospective audit over an 8-month period. But when he left, we tried to maintain the database ourselves and it was fairly general stuff about how sick the kids were when they came in, what time they came in at, diagnoses and

things like that, but it was done very much on an ad hoc basis. So it wasn't done in a prospective fashion, you may be going back several days later, you wouldn't be capturing all the data, but at least we were trying to do something at that time.

Q. I understand that, but what I was actually trying to ask you was: who within the structure of management, if I can put it that way, is the sort of person who could be trying to introduce a new standard?

A. Well, I've answered that, I think, in that it would probably be the lead person for the --

Q. Sorry?

A. It probably would have been the lead person for the paediatric --

Q. The lead person? Thank you. That's what I was trying to get at.

A. I was trying to say as well that, no matter what title he may have had, that lead person would have been in many ways an administrative role within the organisation. They probably wouldn't have had a lot of time to do these sorts of things because we were really busy at the time.

Q. I am going to ask you a question about the lead clinician/director of PICU, but before I do that, I want to pick up on something I thought I heard you say, which

is that Paul Loane came back from having worked with Des Bohn and others in Toronto's Sick Children's and I think you said he came back in about 1997; is that right?

A. I think it was about then. I think so.

Q. I think you also said he brought back some of the ideas that Des Bohn had had.

A. Yes, Paul would --

Q. Is that what you said?

A. Yes.

Q. Can I just ask you the question then in relation to that?

A. Sorry.

Q. Because the work that we have done indicates that Des Bohn was one of those people who was interested in fluid management, hyponatraemia, and low-sodium fluids. In particular, he has written some papers, he wrote that 2001 paper with Halberthal. As far as you're aware, is that the sort of thing Paul Loane was bringing back?

A. What Paul was bringing back was, if you like, something that we had discussed, I think, at Adam's last year, and a lot of it was around the use of hypotonic solutions and the use of hypotonic solutions for maintenance fluids only. I think, even for Des in the 1990s, although he was very much in the intensive care unit and

he had these ideas, the general paediatricians, I think, in the Hospital For Sick Children in Toronto in many ways did their own thing with fluids and they had a different philosophy.

Q. If we just stick with what Paul Loane might have been bringing back.

A. It was much the same in Belfast as well and I think Paul was trying to change their practice to maybe just use hypotonic solutions for maintenance only. I can maybe come to something later on with this as well.

Q. Yes. That's what I want to ask you about, actually. Is that what he was bringing back, and if he was bringing it back, what was the forum in which he would begin to suggest might be appropriate to think rather differently about the use of certain IV fluids, particularly the low sodium ones? Where would he be doing that?

A. It could be informal and something slightly more formal as well.

Q. Which was it?

A. It was both.

Q. And when it was something slightly more formal, how did that find expression?

A. Well, Paul was involved, from memory, at the induction course for the trainees, so whenever the trainees -- and

this is the paediatric trainees I'm talking about who came into the hospital. So there would be a new influx of those every six months and he would be part of the induction day for them and he would talk about fluids. I remember him telling me that he would specifically try to get them to focus on hypotonic fluids for maintenance only, and that's where he was coming from. He was also involved in the Department of Health in the 2000s.

Q. I don't want to go too far into that at the moment; I want to stick to where we are. When Dr Chisakuta was giving evidence he said he included in talks on fluid regime the issue of -- and somebody will correct me if I have him wrong, but I think this is at least the sentiment of what he was saying -- that low-sodium fluids should be used for maintenance, and even that carefully, maybe tailing it off at some point, but certainly not for replacement. He said before he was giving those lectures, there were already lectures like that being given by Dr Loane. Does that fit with your recollection?

A. Yes, but if I could maybe touch on those sentiments because I think it's important that I pick that up as well. Although we may have suggested these things to paediatricians, the paediatric view of fluid management would have been different from that. And I would have

to bring you forward a bit, and it really wasn't until the NPSA alert in -- I think it was March 2007 -- which really changed the way even paediatricians viewed fluid management. I think for a long, long time after Paul was appointed, after Tony was appointed, that the paediatricians, not just in Northern Ireland, but a lot of places around the UK, would use a single solution for replacement fluid and for maintenance fluid.

Q. I'm going to specifically come to that point later on. If I could confine it a little bit in this way: leaving aside the perhaps slightly different approach that the paediatricians might have taken, for the paediatric anaesthetists, was there any common ground about the use of Solution No. 18 and low-sodium fluids generally for replacement, any common ground that that was inappropriate?

A. The differences were quite big. They weren't small differences and there was a lot of discussion, I remember, over the years, about this. The paediatricians, their view is --

Q. Sorry, I'm asking you about the paediatric anaesthetists.

A. Well, I am trying to answer that for you in that the paediatricians had their own specific view. They would be looking after paediatric medical patients and it

worked for them and they were reluctant to change that practice. Amongst the paediatric anaesthetists, we had a different view, and it was about you separated out the maintenance fluid from other types of fluid. And this was all the more important in the intensive care unit where you had children with complex fluid needs.

Fluid management, for us, was fundamental. It was the core of our business, if you like. You had cardiac kids in heart failure with restricted fluid, you could have renal patients in there in renal failure with complex fluid needs. You could have septic kids in needing volume loading, volume replacement, inotropic support. It was very, very complex. So in the middle of what we did, our core business was around fluids. And it was often difficult for others to appreciate that in the same way that we did about fluids, and their needs were different. The clinical patients they were looking at were different as well.

THE CHAIRMAN: Let me ask you this way: I get the impression from that that it was critically important for paediatric anaesthetists to be on top of fluid management.

A. Very much so.

THE CHAIRMAN: But surely it was also important for paediatricians to be on top of fluid management?

A. It was.

THE CHAIRMAN: Because if they got it wrong, that could result in a child ending up in PICU?

A. I suppose the reassuring thing for them is that they usually got it right, but it was a different emphasis than we had. That is all I'm trying to reflect.

THE CHAIRMAN: One more point. When you talk about this difference between paediatricians and paediatric anaesthetists, is that an issue only within the Royal or only within Northern Ireland, or was it a UK issue?

A. I think it was a worldwide issue. I think that probably Des in Toronto had the same sort of issues going on there as well.

THE CHAIRMAN: Thank you.

MS ANYADIKE-DANES: Thank you. When you talk about the anaesthetists in a group like that -- and this was the question I was asking you -- was there common ground amongst them that one had to address maintenance separately from replacement and that low-sodium fluids were not appropriate for replacement?

A. Yes. That was always my view forever really.

Q. From your point of view in PICU, where you might see the paediatric anaesthetists treating very sick children, you would have been surprised if there were paediatric anaesthetists not recognising the inappropriateness of

using a low-sodium solution for replacement?

A. It depends, because that's not quite true, because it depends what they're trying to replace. If you're losing -- you have to replace like with like.

Q. Yes.

A. So if you're losing a fluid with a sodium content of 30 millimoles per litre, it would be inappropriate to use normal saline as it has a sodium content of 154 millimoles per litre. It's making sure you replace the losses with the appropriate fluid.

Q. Sorry, I had been too sweeping. Would I be right in saying you'd be surprised that a paediatric anaesthetist wouldn't see the inappropriateness of replacing gastric losses, diarrhoeal losses, with low-sodium fluids?

A. As an anaesthetist you would, but the paediatricians did it all the time --

Q. No, as an anaesthetist.

A. As an anaesthetist, that's not what you would do.

Q. Thank you. And just before I move away from this area, you had talked, I think, about if you had to pick a person in the position who might be able to try and introduce standards, that person would possibly be the clinical lead or the director of PICU, I think you had said. When Dr McKaigue was giving his evidence, he said he was actually the first person to hold that position

and that you had asked him to take that position, which he did. What did you intend that position would involve, that role would involve?

A. I think it was more kind of an administrative role at the time, and to be able to speak for us at hospital committees really. I would have thought it was more a role like that.

Q. Yes.

A. Each of us might have had our own individual areas that we wished to develop within the unit as well, but certainly at that time it was just basically someone to speak for us.

Q. And for you, as a sub-director for anaesthesia and ICU in the paediatric directorate, what was that role?

A. I think we went into this in some detail last year as well with Adam.

Q. Perhaps if you could just summarise it.

A. It was just to reflect the needs of the service at that time for paediatric anaesthesia and intensive care. I guess it was like an operational group meeting every week. It was just about business really, day-to-day business, and staffing issues, et cetera, things like that, funding issues, maybe needing new equipment, organisation of theatre lists, that sort of thing. So it was very much operational rather than strategic

at the time.

Q. Thank you. Then if I move on to hyponatraemia. You had been asked previously about a draft after Adam's death that you approved. I'll just turn it up for you. It's 060-018-036; do you recognise that?

A. Yes, I do.

Q. I won't pull it up, but what the cover fax, which goes from Dr Murnaghan to the solicitors at the time, Brangam Bagnall, says:

"Herewith a draft, which was composed today by doctors Gaston, Taylor, McKaigue and subsequently approved by Dr Crean. These are the consultant paediatric anaesthetists who will be involved in such clinical problems in the future."

What I wanted to ask you about is, if you look at it, had you intended that this could have any benefit, if I can put it that way, for a hospital outside of the Children's Hospital?

A. Again, there was a fair bit of discussion about this last year as well. I suppose I tried to defend it and I defended it basically by saying, "Well, it was about major surgery", that's what this was all about, and carefully monitoring patients during major surgery.

Q. And what did all of you define, you four anaesthetists signing-off on this, as major surgery?

A. Well, you can see there, if you look at the timescale there:

"Measurements performed two-hourly or more frequently."

So it was pretty major stuff: major abdominal stuff, colorectal stuff in kids, thoracotomies, neurosurgery, that sort of thing. It's not the sort of thing that would have been done anywhere else. And Mr Chairman made the point last year: well, you were just writing it up for yourselves, basically. Really, the statement itself, the way it stands there, really only would reflect surgery that was done in the Children's Hospital at the time and subsequently.

Q. What I want to do is to pull up alongside it, if I can find it, the one that actually got attached to Dr Taylor's deposition. I think it's 011-014-107a. It's slightly different. Did you ever see that?

A. I think the only one I saw was -- I think it was left for me in the secretary's office and basically, "Do you agree with this or not?". I think that's the only version I saw at that time. I think.

Q. The reason why I'm asking you is that the -- they call it the draft statement to distinguish it. This is the one that's presented to the coroner.

A. The one on the right?

Q. Exactly. It's different in this particular respect. It says in the middle paragraph:

"Furthermore, the now known complications of hyponatraemia in some of these cases will continue to be assessed in each patient and all anaesthetic staff will be made aware of these particular phenomena and advised to act accordingly."

Did you know about that, that that was a statement going forward?

A. Honestly, I just can't remember. I think I probably saw an earlier version of that, but I can't put my hand on my heart and say, yes, I saw that. I just don't remember.

Q. Well, did you know that the coroner was being told that all anaesthetic staff will be made aware of these particular phenomena and advised to act appropriately? Whether you actually saw this draft or not, did you know that statement was being made?

A. I'm not sure that I may have been aware of that at the time.

Q. If that was going to happen -- and I'm thinking in particular with you in your position as sub-director for anaesthesia and ICU and a senior consultant paediatric anaesthetist -- if that was going to happen, what would be the mechanism for all anaesthetic staff being made

aware of that?
A. Well, there could be many ways of doing it, I guess. You would have, again, formal and informal ways. You could have it embedded into like a teaching programme so that all the trainees coming through would be specifically taught about that.
Q. Did you know if that happened?
A. I think Paul in his teaching -- and he came in 1997 -- would probably have done that, but I don't think it was an outcome from that specific draft statement there.
Q. That would have been Dr Loane towards trainees. But if this statement is going to be executed, then this applies to all anaesthetic staff. That means you would have to know about it, for example.
A. Yes. I mean, I would have known about that anyway at the time. I mean, I would have known about the complications of hyponatraemia at the time in 1996.
Q. You would have had to know about it and all your other colleagues, other than those who actually signed-off on the other version to the left-hand side, would have to know that that is what's going to happen, either for their own practice or, if they're more senior, for what they might be teaching others.
A. There only were the three of us at the time so we all did know in 1996 --

Q. Dr Chisakuta didn't know when he came back in 1997 that there was a statement like that.
A. I think it was 1999 he came back. No, he probably wouldn't have been aware because, as you know yourself, the statement -- nothing really happened with it.
Q. That's what I'm asking you. A statement has been made to the coroner and it's said very clearly what's going to happen in relation to all anaesthetists. And what I'm asking you is: given the position that you then held at the time, what steps were taken or could have been taken to give effect to that statement? And the reason why I'm particularly asking you now is because when I asked Dr Chisakuta whether he was aware of this when he came back to the Royal, he said, no, he wasn't.
A. I think I've already conceded that I really didn't know that this was embedded in the final draft. I hadn't seen it and I don't think I was told about it afterwards. So I agree with you, I don't think very much was done with that afterwards.
Q. Thank you.
A. I'm not taking issue on that.
Q. Thank you. If nothing very much was being done, do I take it you think it appropriate if something had been?
A. Well, I mean, if you said you're going to do something

like that, you should do it. That's what I would say. I think --
THE CHAIRMAN: That's exactly what worries me because the coroner was led to believe that this was exactly what was going to happen on the back of Adam's death. One can infer that he took reassurance from that at Adam's inquest and you have said quite expressly that nothing happened with that statement.
A. That would concern me as well, Mr Chairman.
MS ANYADIKE-DANES: Thank you. When you spoke just a little while ago about what you would expect the paediatric anaesthetists to have recognised in terms of the use of low-sodium fluids and where it's appropriate to use them and for what purpose and so forth, and I think what you said is that in your view there was a fair degree of commonality amongst you about that, when Dr Chisakuta came back he gave a paper, which is called "Recent advances in paediatric anaesthesia", and he gave it to the -- it was a paper at the inaugural meeting of the Western Society. The paper is dated 30 September 1998 and it deals, in particular, in terms of the fluid management aspect of it, with a very recent paper published by Allen Arieff. If I pull out the section of the paper so you can see it, it's 283/3, pages 7 and 8, if we pull those alongside of each other.

Did you know he was giving a paper like that?
A. Sometimes I find it hard to remember what happened last week, without going back to 1998. I'm sorry, I really just can't remember.
Q. Let me put it another way. Were you aware of the paper that Arieff published in 1998?
A. Yes, I was. I knew Ted Sumner quite well because we had both worked on the APA. I think that -- he was actually quite upset and disturbed with many of the events on Adam's death and, coming over here and seeing how the family had been affected, the staff and everything else, and I think he contacted Allen Arieff to see if he could write an editorial. He was the editor of the journal at that time and I think he commissioned him to write an editorial. From memory, I think it was January 1998 that that editorial was written. It was just reflecting on the paper that he had written in the BMJ several years previously. I think it was really just to highlight this issue amongst paediatric anaesthetists at the time.
Q. Yes.
A. And it is an international journal, it's not just a journal for the UK.
Q. Agreed, and that was a point I wanted to take you up with you. When you had been asked in relation to Adam's

case about the link between Arieff's paper and Adam's case in the way that it was seen reflected in that statement, your view was that actually there wasn't a link because Arieff wasn't talking about the situation that had given rise to Adam's difficulties.

A. That's correct, yes.

Q. And that's why I wanted to ask you that because it's one thing to say the chances of there being children out there who will be undergoing paediatric surgery, surgery that could expose them to the sort of thing that Adam had, it's one thing to talk about them; it's a whole different issue to talk about the possible dangers of low-sodium fluids in perhaps elective surgery that's not major or even healthy children, which is what Arieff's 1992 paper was about.

You had said, I think, earlier when I asked you about that, that major surgery was only happening in the Royal, so maybe that's an explanation for why that statement didn't travel, if I can put it that way.

But the sort of work that is being described by Arieff and his colleagues in the 1992 paper and then Arieff in this 1998 paper, that is not a circumstance that's likely to be confined within the Children's Hospital; that's correct, isn't it?

A. Yes.

Q. If we can accept that, then the point that I want to ask you is: did the Children's Hospital give any thought to at least disseminating that message?

A. I don't think we specifically went out there to put forward the concepts that Allen Arieff had in his 1992 paper, no.

Q. But you had a good opportunity to do that because there was quite a bit of publicity generated by Adam's inquest. There was press reporting and so forth. In fact, that particular statement, at least parts of it, found their way into the media. So that would have been a very good opportunity to say, "Look, major surgery may be one thing, but here's something all of you ought to be alive to and there's potential danger for a much broader class of children in the inappropriate use of low-sodium fluid". So what I'm asking you is why the Children's Hospital didn't seize that opportunity?

A. I can't disagree with you. I think that if there has been more formal links and structures at that time it would have been much easier to do something like that because the links and structures would have been there. But at that time there weren't. Maybe we should have thought of trying to do something through the Department of Health to disseminate this information, but I don't think there were the formal links at the time. All the

structures were very informal. In fact, there weren't even informal structures at that time to do things like that.

Q. Well, it sort of comes back to the point that the chairman was asking you. If you go to conferences and seminars and you have this learning that personally enhances your own career and your own contacts, but then there is a possibility for sharing that and the Children's Hospital is the regional centre and district hospitals, other hospitals, could perhaps look to it as being able to disseminate specialist learning, if I can put it that way, and I'm just asking why any of you who were in the position of a quasi-management role didn't say, "Look, we could do this, we could have a seminar where we discuss this, maybe we would just suggest that the CMO or department do something because there are now two papers out from Allen Arieff, and he's not the only person to write on it, talking about the potential risk of low sodium. We happen to know it's something that paediatricians up and down the country are using". Why wasn't the opportunity seized?

A. I understand the inquiry is focused on hyponatraemia, but there were other areas of things that we would be looking at in regard to paediatric anaesthesia as well. If you look at the numbers round the province, in

Altnagelvin, for example, then there were about 2,500 children having operations every year. Similarly, in the Ulster and Craigavon. So there was a big body of work being done there and, as a consultant, I have to keep up-to-date with what I do and the consultants there would have to keep up-to-date with what they were doing as well. One way of doing that is attending meetings and reading journals and things like that. I would like to think that they had taken this journal in their own hospital and maybe reflected on what was written there.

The following year, in 1999, I did try to set up -- and I think I put this into a Raychel governance statement.

THE CHAIRMAN: In Adam's case?

A. No, it's one I've just done recently. Can I talk about that?

THE CHAIRMAN: Yes.

A. In 1999, I was involved in setting up a peer-review scheme in the UK and it's really where one department of anaesthesia in a Children's Hospital reviewed another hospital against a set of standards that had been basically set up by the Association of Anaesthetists and the College of Anaesthetists. I thought it would be a pretty good idea if we could do something locally and set up a group together and try to discuss issues like

that, but it's not an easy thing, actually, to do because you're viewed -- if you like, "You're the specialist centre, you're telling us what to do", and there were tensions there at that first meeting.

THE CHAIRMAN: Doctor, the reason this is significant is because in Raychel's case, Dr Nesbitt has effectively raised a concern or complaint that there were things going on in the Royal about which word didn't get out to places like Altnagelvin, for instance, about the use of Solution No. 18.

A. Yes.

THE CHAIRMAN: And he's also said, "We should have been told about previous incidents because, had we know about previous incidents and/or had we known about issues about Solution No. 18, it may have led Altnagelvin to improve their practices and potentially avoided Raychel's death".

A. I think sharing knowledge is very important. I don't think we did very -- a very good job 10/15 years ago.

THE CHAIRMAN: Can I ask you this, not to leave it hanging, is a better job done now?

A. I think so, definitely. I think there's better communication. I'll just give you an example here: if you had a child coming down from another hospital and you had any cause for concern about any aspect of

a child's care, the first thing you do is you would phone them up and say, "Look, I'm not happy about this, what I'm going to be doing is I'm going to be filling in an incident form, your hospital will be getting a copy of the incident form. Look, this is about learning, it's about learning from things that maybe haven't gone as well as you might hope to. Let's work together on this and see if we can improve this". It's done immediately. People nowadays don't even know or remember a time when there wasn't incident reporting. You would say to them, "You mean we didn't have this a number of years ago?" It's a surprise to them because it's now so embedded in what happens nowadays. So I like to think there have been some changes to improve things over the years, Mr Chairman.

THE CHAIRMAN: Thank you.

MS ANYADIKE-DANES: Now that the chairman's mentioned that, that was the next point I was going on to because there is an issue we're trying to bottom out as to when the Royal changed, if it did, its practices. I gather from how you addressed the chairman that you are aware of the concern that Dr Nesbitt has expressed.

A. Yes, I am.

Q. If you are, you will know that he has expressed it in two ways. It happened very shortly after Raychel's

death. He rang around a number of hospitals to see what their practice was. He was a bit concerned about what had happened in his hospital in relation to her fluid management, I would understand. The upshot of that was that he wrote a letter to his own medical director. He did that on 14 June. We don't need to pull it up, but what he said in that letter was that:

"The Children's Hospital anaesthetists have recently changed their practice and have moved away from Solution No. 18 to Hartmann's solution, and that change occurred six months ago ..."

That is why I gave you the date of the letter:

"... and followed several deaths involving Solution No. 18."

For reference purposes that letter is 026-005-006.

So that's what he was saying very shortly after Raychel's death. He also did mention that other anaesthetists, for example anaesthetists in Craigavon, had been trying to change the fluid but had not been successful. So I think his point was that the Royal had done it and there seemed to be knowledge about the wisdom of doing that, it just hadn't found its way to Altnagelvin. So the first question to ask is whether he's correct on that, but let me help you with something else. When he made his PSNI statement, which is

considerably later than that, 14 March 2006, he's then able, at 095-010-033, to identify the person that he spoke to in the Royal who gave him that information, and he spoke to Dr Chisakuta. What he says he was told was that the use of Solution No. 18 in post-operative children, they had changed that. They had been using the same regime as Altnagelvin, but they changed it six months previously because of concerns about the possibility of low-sodium fluids.

So whatever it is, it's centred around the potential risks presented by the use of low-sodium fluids for post-operative children. Were you aware of that happening, which would have been either the beginning of 2001 or the end of 2000?

A. That there was -- just let me get that right, that there was a change in the fluids we used post-operatively in children?

Q. There was a change in the use of Solution No. 18.

A. No, but I've seen that graph of --

Q. We'll come to that in a minute. Were you aware of that?

A. I can't say I was aware of -- I can't remember.

Q. If you take the first reason he gave. The first reason he gave is because there had been several deaths involving Solution No. 18. Were you aware of that in the Children's Hospital?

A. Deaths where?
Q. In the Children's Hospital?
A. That's rubbish, that's not correct.
Q. So whoever told him that is incorrect?
A. There may have been deaths worldwide, but that doesn't ... That's a surprise to me if that was the case. I knew nothing about that.
Q. Okay. Then let's go to the graph. The graph is at 319-087c-003. I think, when you were answering earlier about the use of Solution No. 18, I think you said that really didn't happen, that kind of major change, until March 2007 or thereabouts. You said partly the reason for that was a resistance on the part of the paediatricians --
A. I'm not sure, if I said that, that's quite what I meant.
Q. Ah.
A. Maybe you'd need to go back and see what the question was. It was about using hypotonic solutions for replacement fluid.
Q. Yes.
A. I mean, to me, nowadays the way I thought about this is half-normal saline is every bit as bad as fifth-normal saline.
Q. Okay, sorry. If I re-frame the question so we're quite clear about what I'm interested in, which is the

incidence and use of Solution No. 18. Were you aware of there coming a time when that became less used, if I can put it that way?
A. I don't remember this acute drop-off.
Q. You don't?
A. No. I know that -- I mean, I remember the NPSA thing that came out in 2007, we had to take it away altogether apart from certain wards, and that was a diktat from on high. But this is a surprise. It is a surprise. I wasn't -- sometimes when you look back at things, you're surprised by what you see, but I'm surprised. That's what I'm saying, really.
Q. Aside from when the alert came out, are you aware of its use being reduced at all before then?
A. Not from memory. I don't ...
Q. Had your practice changed in relation to the use of Solution No. 18?
A. My practice had changed quite a bit in the use of fluids generally.
Q. Yes, but if we can just stick with Solution No. 18. Had you yourself over the years used it less?
A. Yes, I think intraoperatively, certainly with Paul's views and Tony coming back from Great Ormond Street, I think that we would tend to -- there was a tendency to move away from it intraoperatively, for example, just

the way the anaesthetists in Raychel's case did when they were managing her for an appendicectomy. It wasn't the sort of solution that was being used as much during the procedure any more.
Q. Leaving aside as much during the procedure because sometimes, as we heard in relation to Raychel's case, anaesthetists can also prescribe for the immediate post-operative period. Had your use of it in that phase changed over time?
A. I just can't remember. I mean, I -- the only way, really, to find this out is to pull charts and find out what people were actually doing at the time. I just really don't remember what I was doing at that time.
THE CHAIRMAN: Doctor, if this graph is right, and I think --
A. It is right, I'm sure.
THE CHAIRMAN: But if the graph -- if it is confirmed by the Trust that the trends shown on this graph continued, then the National Patient Safety Alert which followed would have had little or no effect on the Royal, would it, because Solution No. 18 had already virtually disappeared from use?
A. I suppose so, but I don't remember this happening in many ways. It is a bit of a surprise to me, I have to say.

THE CHAIRMAN: Thank you.
A. I just don't remember anything like that occurring.
MS ANYADIKE-DANES: Then if we can move on now to Lucy's case more directly. Lucy is admitted under your name; is that correct? 061-013-037. She's admitted on Thursday the 13th under your name.
A. That's correct, yes.
Q. Is there a reason why she was admitted under your name as opposed to under Dr McKaigue's name?
A. Yes.
Q. Which is?
A. The reason is, basically, from a number of years before that -- and I think other people have maybe mentioned this to you as well -- to designate a direct ICU admission from another hospital or directly from A&E, my name was put on the forms to show that the patient came in directly from those wards. That's actually something that happened in the adult intensive care unit.
Q. How long did that practice continue?
A. I stopped working in intensive care in March 2005 and it did continue after that time as well.
Q. Because when I asked Dr Chisakuta about that -- who was, I think, lead at the time Lucy was admitted -- he was of the view that really she ought to have been admitted under Dr McKaigue as a consultant.

A. That name on the yellow flimsy was nothing more, really, at the time than just a signpost as to where the child was going. I think one of the issues as well at the time was that often we would have to accept patients to the intensive care unit before they touched base with maybe a surgeon or a paediatrician. Because the child was so critically ill, they wanted advice from the intensive care staff about resuscitation and ongoing care until the child arrived with us and then it was maybe easier to try and sort out something after that time.

Q. That was one of the things I wanted to ask you about. Because it's not entirely clear whether these concepts are different. A person -- and it will always be a consultant -- who has overall responsibility for a child's care, somebody who is providing specialist input, maybe significant specialist input into the management of a child's care, and then a situation where maybe more than one consultant are jointly managing the child's care. They all potentially seem to be different concepts.

A. They are different concepts, yes.

Q. Can you help with what they mean?

A. Okay. You could have a child coming into the hospital with bronchiolitis -- it's a respiratory illness --

comes under the named consultant and is discharged and it's simple for that consultant to manage that child.

You could have a child that comes in with a respiratory illness and, on examination, you hear a heart murmur, so you would get a consult to the cardiologist, the cardiology service, to have some input into the management of that child.

You could have a child who comes in with a respiratory illness, but has complex needs -- he's being seen by the orthopaedic surgeons, the developmental team, the gastroenterology team, many different teams in the hospital could be involved, but he has come in with a respiratory illness as well. So there are three different scenarios there.

Q. Yes, but at any given time how do you know who has overall responsibility for a child's care?

A. The complex kids are pretty easy because there would be normally be a paediatrician looking after them that way. You would have specialist ones as well. For example if it was a neurology case or a cardiac case, they're pretty well-defined in who's looking after them as well. I suppose things can get a bit blurred if a child's status changes in the hospital, just like with Claire, things get a bit blurred and people are maybe doing different things and those discussions maybe don't take

place.

Q. But is it going to be recorded anywhere? Because I can imagine that there could be circumstances where literally at the time the clinicians who are all working on that child recognise who's got the lead position, if I can put it that way. But that may not be the case if subsequently one looks back at the files and one wants to know who is the consultant that we go to who bore ultimate responsibility for the management and planning of that child's care.

A. No, you're right, it should be completely unambiguous, but I don't think that maybe happened the way it should have done years ago. Again, if we look at what's happening now, I think things are much, much better and the lines of command, if you like, are much more structured there. Certainly people would be writing in the notes a lot more. Communication would be much, much better than it was in the past, I feel. I do think that that has been tightened up and I know the directorate has really been looking at this quite hard in recent times.

Q. One of the reasons I wanted to ask you that is we had obviously asked Dr Hanrahan his view on who had overall responsibility. The answer that we got -- and I will give you the reference for it, it is his witness

statement, 289/2, page 2. He says in terms:

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

Which suggests that there is some process that he believes he would have to go to for him to be in that position, much -- and you mentioned Claire -- as in the same way Dr Steen acknowledged that unless she had formally transferred care to Dr Webb then the consultant responsibility for Claire's care resided with her.

So do you recognise Dr Hanrahan's position that he didn't have responsibility in the way that I've just been describing it unless he had formally assumed it in some way?

A. Well, there was no transfer of care to him from anyone, really. I mean, he may have felt possibly that there was no formal process at the time, and maybe there wasn't, but by his actions I think that everyone thought he was the consultant in charge of this case.

Q. So you mean he had involved himself sufficiently for him to assume that responsibility?

A. Well, that's what I thought at the time, yes.

Q. You see, he regards himself as having been brought in by you to provide specialist input. In fact, you had recorded it in the notes that you wanted him to have --

I don't know that you'd necessarily identified him, but you felt that it was necessary for a neurologist to look at her. It's in your typed-up note at 061-018-065. It's right at the end when you say that you're waiting for the faxes of her notes. Then you say:

"She is to be reviewed by a paediatric neurologist this morning."

And it's also something that's picked up in the nursing notes as well, that that is to happen. In fact, it's their record of your conversation with the parents. We can see that at 061-031-096:

"Dr Crean explained that at present he was unsure as to what had happened to Lucy. Lucy, however, is showing signs that something has happened within her brain and that is a very worrying thing. Further tests will be done today and also the neurologist will come to review Lucy."

Dr Hanrahan's position seems to be he was being called in to provide a specialist opinion, if I can put it that way, in much the same way, actually, as Dr Webb had been asked to do that, to provide that by the registrar for Claire. And he did do that, and he involved himself on a number of occasions, seeing Claire, but nonetheless it was not believed that in doing so the care of Claire or the responsibility for

her care had transferred to him; he was always just providing specialist input. That is why I'm asking you: could that be what happened here?

A. Certainly it was my perception and the perception of others that by his actions, as I've already said, that he was taking a lead role in her management and care.

Q. Did you want him to do that?

A. Yes, I mean, he would have been the most appropriate person to do that.

Q. So if you'd wanted him to do that, why didn't you formally put that in the notes, as opposed to just asking for an opinion or a review?

A. You're right, it should have been made clear at the time. I can't say it shouldn't be. I would acknowledge what you're saying.

Q. Thank you.

THE CHAIRMAN: Could I just ask you, if you can tell me quickly, when you say that system has been tightened up so the notes will always now show who is responsible and there would be no doubt within a hospital about who's responsible?

A. I can speak for the intensive care unit, for example, so whatever paediatrician is on for that 24-hour period, they're automatically contacted for all admissions to PICU. If they wish to call in another specialist,

that's what they would then do. So they are automatically informed, "Listen, we have a patient that came in at 3 o'clock this morning, you're the consultant on call, we're notifying you that you're now that child's consultant", and they will come round and review the child. If they feel they need to bring in anyone else, they can do so.

THE CHAIRMAN: In a way, that's not far removed from what happened with Lucy. She was admitted under your name for the reasons you've explained: you were in PICU from about 9 o'clock that Thursday morning and Dr Hanrahan was then asked to become involved. So is there now a formal system for deciding or for the equivalent of you and Dr Hanrahan to agree, "Yes, she is now my patient", or, "She's still your patient"?

A. That's the point I'm trying to make, because the patient automatically becomes the patient of the consultant on call, unless they decide otherwise that the patient should be referred to another consultant. So they would then make the decision, "Look, I'm not the most appropriate here". And they would formally transfer the care to someone else and it would be a formal process.

THE CHAIRMAN: So the equivalent of "Dr Hanrahan formally accepts the transfer of care"?

A. That's correct, yes.

THE CHAIRMAN: And what is missing here is a formal transfer?

A. I would agree with you, yes.

THE CHAIRMAN: Okay. But it's now done on a formal basis?

A. Yes, Mr Chairman.

MS ANYADIKE-DANES: I'm going to ask you a little bit about what you considered your role still to be.

In your witness statement for the inquiry at 292/2, page 3, you say that Lucy was jointly managed by the consultant anaesthetists in PICU and Dr Hanrahan. And in fact, I think Dr Chisakuta also was of the view that there was joint management between the intensivists or anaesthetists and the paediatric neurologist in this case. His view was invariably in PICU there were two consultants: there would be the anaesthetist or intensivist, and then there would be another, maybe a surgeon, whatever was considered to be the other appropriate discipline. So what I wanted to ask you is: in view of the fact that you have acknowledged to the inquiry that Lucy was actually being jointly managed, she wasn't solely the responsibility of Dr Hanrahan, you were the consultant anaesthetist on duty for that first day of her admission, on Thursday; what did you consider your role to be in the management of her care?

A. I think Dr MacFaul, in his report that he gave to the

inquiry, properly states it much better than I could in that generally, at that time, in 2000, the anaesthetists were there, looking after the ABCs -- the airway, breathing, circulation -- they were there for the day-to-day management, I'm not a paediatrician, I don't have an in-depth knowledge of general paediatrics and certainly not specialist paediatrics. They would be there to kind of investigate and that would be their role and the follow-up and things like that. So we were there really to try and look after the ABCs, improve the clinical situation of the child. We would do kind of routine investigations, but the paediatricians would be doing a lot more in-depth detailed investigations. I can order chest X-rays and U&Es, but when it comes to kids with complex metabolic problems I have no idea, I'm just totally out of my depth.

Q. But if there was a fluid issue, is that within your competence?

A. I agree, and that is why I'd be doing U&Es, urine and electrolytes, things like that. But if you're looking at the complex paediatric patients that we have and things like that, that's when they come into their own. I think it's working together and understanding what each other's strengths are.

Q. Sticking with Lucy, and because you have mentioned Dr MacFaul, we have two references for what he says, the first is 250-003-019, and he says that:

"In life, doctors Hanrahan, Crean and Chisakuta were jointly responsible for Lucy's care."

He thought that you and Dr Chisakuta were responsible for her stabilisation and withdrawal of therapy after brainstem tests, and he considered, though, that the responsibility for her diagnostic care and the continuity of care rested with Dr Hanrahan, and he also thought that Dr Hanrahan was responsible for the post-death management.

A. Yes, that was the bit. I thought he put that very well. That's the section I was sort of alluding to.

THE CHAIRMAN: But is your summary of that point that you accept that summary, but it does leave a degree of ambiguity, but in some circumstances a degree of ambiguity is unavoidable?

A. I think it is. Unfortunately, yes.

THE CHAIRMAN: Thank you.

MS ANYADIKE-DANES: If we come now to actually what happened as Lucy was admitted. I want to deal with the period of when she arrives and your ward round and certain aspects of your discussion with her parents, although not overly so. In your witness statement -- again, we don't need

to pull this up, 292/1, page 3 -- you say that you think it's likely that you spent some time during the initial part of the day stabilising Lucy. I think it was Dr McKaigue said he believed that she had become rather unstable during the course of her transfer from the Erne Hospital to the Children's Hospital and he had wanted Dr Chisakuta to insert a central line to help, and you therefore were trying to further stabilise her; is that correct?

A. Yes, I was here on Thursday and on Friday morning, so I heard that being said. For people who don't work in this environment, it can be hard to take on board what happens some days. It's like a battle zone, that you're walking into these things, and you're just trying to resuscitate and stabilise patients and get things on an even keel before you can even draw breath. I can't remember the details of all this, but I'm sure I walked in, had to do all this stuff, and there's a real pressure for you to try and feed back to the parents as well. Because if you have a child who's been transferred from another hospital and they've collapsed, the parents are going mad with worry about what's happened there and you're trying to get an idea of what's happened and then get back to them and have some words with them to let them know what's going on. So

there's a lot of things happening, a lot of pressure, and you also have other kids in the ward that you have to get round and see. You're kind of, "This is what I have to do first", so you're kind of triaging all the different things that need to be done.

Q. I understand. Dr McKaigue says he had to go off and attend to just the sort of thing you have mentioned, an emergency with another child.

A. Yes.

Q. He said he communicated the relevant information to you and to Dr Chisakuta. I'm going to ask you about that, but in particular what I want to ask you is. Were you aware of Dr O'Donohoe being there at the time you come on? You come on just before 9 o'clock --

THE CHAIRMAN: Let's say "Dr Jarlath" and "Dr Dara" because we're going to get hopelessly mixed up between O'Donoghue and O'Donohoe. Okay?

MS ANYADIKE-DANES: Okay.

Dr Jarlath in the Erne. Were you aware of him still being there in the Children's Hospital when you came on duty?

A. I'm really struggling to try and remember all these events. I'd have to say I just can't remember. I really can't remember.

Q. If he was there, would you have wanted to speak to him?

A. I'm sure I would have wanted to speak to him just to find out exactly what was going on. I could have got some information from him and the local team in the intensive care unit as to what they had done so far because I think Lucy had been in for a few minutes before I came in at that time.

MS ANYADIKE-DANES: Mr Chairman, I'm looking at the time. I'm about to go on to a lengthy section.

THE CHAIRMAN: We'll take a short break.

(11.40 am)

(A short break)

(12.00 pm)

MS ANYADIKE-DANES: Just before we had that short break, you said that if Dr Jarlath had been available to you, you would have wanted to talk to him. What exactly would you have been wanting to find out or what information would you want from him?

A. I guess it would just been a fairly brief handover just to get the salient details of what had happened, just to get the specifics, what had she come in with, what basically was going on, what did he think was going on with the events leading up to her acute collapse. It would have just been fairly brief, I'm sure.

Q. Do you think at that stage you would have read the transfer letter and be asking him on foot of that, "What

else can you tell me?"

A. I don't even think I would have -- I might have done. It depends what I had to do immediately when I came in. I mean, I have noted on my note there -- I was just looking at it and you brought it up just before the break -- that she was on an adrenaline infusion, so her circulation was poor, she needed that to maintain her blood pressure, she had a metabolic acidosis, and that was all about tissue perfusion. She wasn't -- things weren't going very well at that time and I think she probably needed quite a bit of work just to get stability. So it depended -- I know that I was taking over from Dr Chisakuta. He probably was in the operating theatre that day. It would depend on so many things. I would have liked to get a brief handover if Dr Jarlath had been there and hopefully I would have had a glimpse of the notes as well, but --

Q. Dr Jarlath has said in his inquiry witness statement -- the reference is 278/2, page 5 -- that he believes he relayed the repeat electrolyte results in a verbal handover on arrival. The issue, as you probably know, is in the transfer letter there is a reference to her serum sodium results when she was admitted, or at least the first testing after her admission, and there's nothing else in the transfer letter about the fact that

they did repeat U&Es. You don't see that until you see an entry made by Dr McLoughlin at about 9 o'clock. But what Dr Jarlath is saying is that when he came, and he was having a verbal handover -- and Dr Chisakuta and Dr Stewart all acknowledge that they did discuss with him that he relayed the repeat electrolytes, the 127, during the course of that. Do you remember anything like that, having that information?

A. I don't remember, but it looks as though it was in the notes pretty soon after that anyway, I think. It wasn't going to make any difference to her management between 8.30 and 9 o'clock, I think.

Q. No, but it might explain why she got to where she was, which at some point in time is a conversation to be had with the parents.

A. You mean the sodium of 127?

Q. Yes.

A. Do you want to get into that?

Q. I'm going to get into that, but when you say it wouldn't have made any difference, it had its significance in terms of explaining how she got into the condition that she did. So it might have had some significance for that.

A. Um ... The significance to me, I think at the time, would have been that her sodium was low, a bit low.

A bit low. I mean, I think other people have said this as well, that those sort of sodium levels are commonly seen in children all the time.

Q. I'm going to come to that.

A. I just wasn't sure how you wanted me to comment.

Q. All right. I picked that up simply because you said that it wouldn't have made any difference to your ongoing management, which is true, but it doesn't mean that it's an irrelevance, if I can put it that way.

If we pull up your ward round notes, 061-018-065. You haven't timed it, but in your evidence you think that it would be about 9 o'clock.

A. No, I'm not --

Q. Sorry, let me give you the reference to where you say that, 292/1, page 3. It would have been usual to start the ward round at about 9 o'clock?

A. Yes. Because I couldn't remember I was stating what usually happened. But I think -- for me to have walked in there and started the ward round at 9 o'clock with all that was going on at that time, I don't think that I would have done that. I think I would have probably, that morning, had to stabilise her. The bit I've said here:

"In the early hours of this morning, mother noticed her breathing became erratic and she developed

a seizure."

I mean I think I got that information from the mother before I started the ward round. That's really what I'm trying to come to. I noticed that in the nursing notes we have, as you know, got a communication section about whenever people talk to the parents and I think that was timed around 10 o'clock by the nursing staff. So I think after stabilising her, what I would have wanted to have done is go and have a word with mum and dad to let them know what was happening and started the ward round after that time.

Q. Is it possible that you actually discussed with the parents and that note of approximately 10 am -- you're right that's what it says; the reference for it is 061-031-096 -- is something that actually happened after your ward round; is that possible?

A. What happened after the ward round?

Q. That explaining to the parents about Lucy's condition to the extent that you were able to do so is something that actually happened after the ward round; is that possible?

A. I doubt it because I think that information that I've got there -- I think I got some of that information from mum and dad. I've said here:

"The parents say it took three-and-a-half hours to

establish an IV line and during that time she was fairly unresponsive."

I would only got have that information from the parents.

Q. So the way that would work, you would have spoken to them first, from what you're now thinking, and then you would have conducted your ward round?

A. I think so, because as I've said before, the parents -- there has been a catastrophe, as far as they're concerned and the last thing I would want to do is leave them waiting. I would want to get out to speak to them as soon as I can just to let them know what's happening, what we're doing, what we're thinking at that time.

Q. But if you speak to them first, before you have done a ward round and examined her or done anything in particular --

A. I would have assessed her initially as part of my stabilisation and then I would have wanted to have had a few words with them before doing the ward round because, remember, the ward round isn't just about her, there would be other children as well, so I would want to, after I have assessed her, have nipped out and speak to the parents. That's what we often did. Then you would have the formal ward round being conducted after that time.

Q. Is there a reason why you didn't put it like that in your witness statement?

A. I just hadn't seen it that way until I was just reading it through there. It became aware to me just as we were speaking now that that's maybe what happened.

THE CHAIRMAN: Doctor, as you're giving your evidence this afternoon and this morning about this, would you please indicate to me if there's any specific point which you do remember?

A. Yes.

THE CHAIRMAN: Because I gather from what you're saying that, for some understandable reasons, you're trying to reconstruct what happened on that Thursday and perhaps the Friday. So if there's some point at which you specifically remember something, please tell me, and I will take it that otherwise your evidence is your best attempt to reconstruct; okay?

A. Yes. Thank you, Mr Chairman.

MS ANYADIKE-DANES: Thank you. So then if you're seeing Lucy a little bit later on than the customary start of the ward round, seeing her in the context of a ward round, if I can put it that way, that means that you look at her notes, do you, as part of the ward round?

A. Yes, whatever notes are available to you at the time, yes.

Q. In that case what would have been available to you would be the quite long note, timed at 8.30, that Dr McLoughlin makes. We don't need to pull it up, it starts at 061-018-058. That's informed by the transfer letter, by the discussion with Dr Jarlath and by a discussion with the parents. So you'd have had that. You'd have had the entry that she makes at 9 o'clock, which is following the contact by, we now know, Dr Auterson, the anaesthetist from the Erne, who rings in the repeat U&Es, so you know that her serum sodium level fell while she was at the Erne from 137 to 127. And you would have had the information on the transfer letter and also on the transfer sheet; is that correct?

A. That's correct, yes.

Q. Can I ask you, just for the location point of view, who accompanies you on that ward round?

A. There will be usually the senior nurse, you may have two nurses doing the ward round with you. There will be the patient nurse at each bedside as you go round, and usually all the medical staff would be there as well, unless one of them has to be called away to another patient that needs something fairly acute to happen at that time. But it would normally be the medical team, the senior nursing team would do the ward round.

Q. And is that a multidisciplinary team, if I can put it

that way?
A. It can be, yes. You could maybe have the physiotherapist there as well. I'm not sure if we had pharmacy doing the ward round at that time. But it would be multidisciplinary, there would be a few people there.
Q. So Dr Dara could be there?
A. I would assume he could be there.
Q. Dr McLoughlin, could she be there?
A. I think she was on the night before so she may well have left. They may well have done a handover, you see, and then she would have gone --
Q. And Dr Stewart, could she have been there?
A. She was the neurology fellow?
Q. The neurological registrar.
A. No, she wouldn't have been there.
Q. She wouldn't be there?
A. I wouldn't have thought so, no.
Q. Then if we look at what you actually recorded as a result of that, you've got that, "She was pyrexic, she was vomiting". Then:
"IV access was difficulty and the parents say it took 3.5 hours to establish an IV line."
Would you have thought that to be significant?
A. It can be difficult to get an IV in a child.

Q. Sorry, I beg your pardon, I meant the period of time within which she had not been receiving IV fluids. Would you have thought that could be significant?
A. It's quite long really to leave the child, that's all I'm really saying, yes. What was significant to me as well -- I think mum says somewhere that she'd had -- there were 11 attempts to get an IV up. It's painful sticking a needle through your skin and what's clear there is that she was pretty unresponsive at that time. And we've always taught that the unresponsive child, the quiet child, is a very ill child, and I'm not sure that people maybe realised how ill she was at that time. But you have to be very, very careful about the unresponsive, quiet child. It's certainly taught widely now about recognition of the ill child. I think I was pretty concerned about the way she was earlier in the evening when she was admitted to the Erne Hospital.
Q. Is there any reason to suppose that, in 2000, a consultant paediatrician wouldn't appreciate that the unresponsive child is a child that one has to be particularly alive to in terms of the potential seriousness of their condition?
A. I think I would have thought most consultant paediatricians would appreciate that. It was something that was taught to me when I was in the Children's

Hospital in Canada and it's pretty well-known, those sorts of facts.
Q. If you were looking at the information that was available to you, not necessarily saying that you would have done it all at the ward round, but in due course you would have wanted to take stock, if I can put it that way, of the information that you've received and its potential significance. If you were looking at it, you would have seen that she had a slow capillary refill. I'm talking about before you actually got the notes now. On the transfer letter it refers to it being greater than 2 seconds. Might that have indicated to you perhaps some level of dehydration?
A. It would have done. Certainly from the history, she had been unwell for two or three days. I think mum was giving her boiled water and she wasn't keeping that down. I'm sure her intake had been severely diminished over the last 24/48 hours. I mean, she was well behind in fluids at that time.
Q. Yes. Well, in due course it turns out that her tongue was moist, so maybe she wasn't that dehydrated, but in any event, dehydration might be something that you would have noted, the possibility of it, and if you had noted that, would the fact that they hadn't managed to get an IV line in for her, in other words to get fluids into

her for a period of about 3.5 hours, have been something that you would have also been noting?
A. Well, I did note it, that they took 3.5 hours to establish the IV.
Q. The significance of it, I mean.
A. It shows that there was a delay there in getting the IV. Obviously they wanted to get an IV up and there was a delay in getting it up because it took three-and-a-half hours.
Q. If you were looking at her transfer letter, you would see that she starts off with a serum sodium level of 137 when she's admitted and, in combination with the note that Dr McLoughlin adds, you would see that that at some point -- I don't think you'd have known when at that stage -- but at some point that has dropped to 127. You would know that she had some unspecified IV fluids starting at 2300 hours, and that she developed watery and profuse diarrhoea and that she, at about 3 o'clock, had what might be considered to be a fit and collapsed and that her pupils were noted to be fixed and dilated, and that she receives mannitol, which produces a brisk diuresis. You would also have known just from the transfer form at the top of it, it says -- the only reference to fluids at that stage would have been 500 ml of normal saline at 30 ml an hour. And you would have

known when she came to the Royal, the Children's Hospital, that her pupils were still fixed and dilated and that she was unresponsive to pain.

A. That's right, yes.

Q. If you put all that together, how do you at that stage, even ahead of getting her notes, interpret the significance of any of that in terms of her condition?

A. I think that my feeling at the time with the unresponsiveness and everything else -- because I felt that there was some acute neurology going on with this child from the time she came in and, whatever had happened, she had further deteriorated.

Q. Yes.

A. And something progressive was going on there. I mean, at that time we didn't have a CT scan, she could have had encephalitis, she could have had a brain tumour, I just had no idea what was going on at this stage.

Q. You may see many transfer letters from children being transferred from other hospitals to PICU. Would you have wanted more information or different information in that transfer letter?

A. The more information that you can get, the better, but at the same time something acute happened at about 3 o'clock in the morning.

Q. Mm-hm.

A. All the staff were doing their best at the time to try and resuscitate and stabilise the child. Dr Jarlath had been up most of the night. The people were tired. It's trying to understand from their perspective what was going on as well. Often you would like the notes to be photocopied, but then at night-time you've almost got a skeleton staff as well. So you're looking to get someone, can they go off and find a photocopier that's working, get notes photocopied -- I believe they did the best they could with the resources at the time.
I believe they were tremendously concerned about what had happened to Lucy and their focus was on Lucy at that time.

Q. Would you have expected her notes, or a copy of them, to accompany her or to be faxed?

A. A copy was faxed. You know, they probably left -- I don't know, it's about an hour and a half to get up from the Erne --

Q. They left about 6 o'clock.

A. It's maybe not something that was on their radar at the time. Their focus is basically towards Lucy, getting her up to Belfast, trying to get her stabilised, trying to find out what is wrong. I wouldn't condemn them for not doing that task.

Q. I'm not asking you to do that. I'm asking you what your

expectations were because in previous statements you have expressed a degree of frustration that she didn't come with her notes and that her notes weren't faxed ahead. In fact you have expressed yourself as simply not being able to understand why they didn't fax her notes ahead.

A. Well, certainly with some of the kids that we've had transferred up from other hospitals, we have had notes faxed through or they've been photocopied, but I guess it all depends on local circumstances and what resources and staffing they have there at the time.

Q. You also said in your witness statement to the inquiry at 291/1, page 5, that:

"As part of her initial resuscitation [Lucy's that is] it would have been helpful to have full knowledge of her fluid regime as well as the rest of her clinical history."

A. Yes, it would have been.

Q. Yes. But when I was asking about what else you wanted to know, forgive me if I missed it, but I didn't hear you say, "Actually, I would have liked to know what her fluid regime was"?

A. You would have liked to know all the events.

Q. Her fluid regime is something that wouldn't have taken very long to write down in the transfer letter because,

as it turns out, prior to her collapse, she hadn't had very much else other than her IV fluids. So you might have wanted to get information on what actually had been done to this child from when she was admitted until she collapsed to try and get some sort of view as to what might be responsible for her collapse.

A. You're right, it's pretty usual to get a lot of the basics in a transfer letter. You would have expected to have basic things like that about IV fluids, the amount they've had, any other medications they've had, the status the child was on admission, and you're right it wouldn't have taken very much to put those details down in a letter. That could have easily been done on two sides of A4.

Q. And just so that you help us, when you see in the transfer letter that the response to the mannitol is a brisk diuresis, how did you interpret that? Did that indicate anything about her hydration status?

A. No, it doesn't, that is just what happens, it's an osmotic diuretic, it pulls fluid out through the kidneys. I wouldn't have drawn any significance from that at that time.

Q. Why is it being administered?

A. I think that when they contacted Dr McKaigue, she had some acute neurological collapse. With fixed dilated

pupils in a situation like that you think of brainstem coning and what you would normally do in a situation like that is give mannitol, half a milligram per kilo of mannitol, and that would be the normal practice.

Q. Yes, he thought cerebral oedema and that's something that could have been produced by an inappropriate fluid regime. In fact, if an inappropriate fluid regime had produced a hyponatraemia that had in turn produced cerebral oedema, mannitol is one of those things that you would, in fact, be administering.

A. Yes, but from looking at the notes and looking at how things were described to me at the time, I would have been thinking about some acute neurology at that time. I know, as an anaesthetist, you're into fluids in a big way, but that is not the first thing that would have hit me back then. It really would not have.

Q. Let's go to when you --

A. From a clinical point of view, that is not something that would have bounced out at me there.

Q. Let's go to when you do receive the notes because you do receive the notes at some point. There's a slight uncertainty about the time they were faxed because they have a different time at the bottom than they do at the top. If you go with when they're faxed, the top one is 8 something or other and the bottom one is 9.51. But

leaving that aside, shortly before it's timed that you're speaking to the parents, the faxed notes come in. In your note, you're wanting her notes. I think you've either been told they are going to be faxed, since you are awaiting them, or you have issued some sort of instruction that they should be faxed to you. Quite apart from that being included in your note, it's also included in Dr McLoughlin's note that that is what is to happen. She says:

"Erne notes requested for further information."

And then you say when you type up your note:

"I am awaiting a fax of her notes from the Erne Hospital."

The latest fax, if we use the latest time on the bottom, that indicates that got to the hospital at just before 10 o'clock.

A. If the clock is correct, yes.

Q. Yes, if the clock is correct. If the other clock is right, they got there even earlier, but leaving that aside, they are addressed to you personally. We see it on the fax cover sheet, 061-017-042, you at the ICU in the Children's Hospital. And it's clear that they are:

"Details of notes for Lucy Crawford on admission as requested by telephone."

So it's quite clear they're for you. If you're awaiting that kind of communication and you clearly want to have it to help you in your understanding of what's going on, how do those notes get to you?

A. It could be that I'm waiting for the secretary to bring them round. The fax machine was in the secretary's office, in the intensive care unit, and it may be that I was waiting for those to be brought to me. It may be that I went round myself to pick them up. It could be various ways of getting those to me at the time.

Q. We asked that question of Dr Stewart and see if you agree or disagree with her view of how it happens. It's in her witness statement of 282/2 at page 5. It says:

"The fax machine was in the clinical area of the PICU unit and [this is quoting from her statement] there was usually a ward clerk present in PICU for general administrative duties during normal working hours. He or she would have managed the fax machine. A member of staff would have been told when the fax they were expecting had arrived."

A. No, that's not correct. The fax machine is in the secretary's office and that is not in the clinical area. There's a doctor's office to the right and the secretary's office is to the left and it has always been the secretary's office.

Q. Are you then alerted to it or whoever is the clinician alerted to the fact that it's come in?

A. Not necessarily. You may have to wait for it to come through, you may having to go round yourself. The secretary may bring the fax to you. It depends if the secretaries are in the office at the time it comes in and what they consider to be the urgency of the fax.

Q. In any event, you do see those notes at some point.

A. I have seen those notes at some point, yes.

Q. Some point that day?

A. Yes.

Q. But you can't recall whether you saw them before you spoke to the parents or after you spoke to the parents?

A. I thought they said that I had said to them that I was waiting for the notes, so it would have been after that, I think.

Q. I beg your pardon. It would have been afterwards.

A. Yes.

Q. You did say that. When you see them --

A. Can I just say also that what has happened is that I've obviously, whenever the neurologist came to see Lucy, he's requested to get a CT scan? We haven't got one in the Children's Hospital. I don't think we got one until the following year. So what we would have had to do is take Lucy across to the neuroradiology department,

and that's in the main Royal, and that means organising an ambulance, bring her across there, getting the scan done, organising an ambulance to bring her back. So I probably was out of the ward for maybe a couple of hours. It's usually the consultants -- in fact it was nearly always the consultants -- who had to do those sort of transfers at that time. I probably wasn't back until maybe 1/1.30 in the afternoon.

Q. The time when you come back and you might be seeing her notes at that stage you will have already seen the results of the CT scan or have known --

A. You'd have seen the notes of the CT scan at that time.

Q. So you'd have known essentially she has coned?

A. You'll know that there's gross cerebral oedema and the coning is basically just a clinical diagnosis.

Q. Yes.

A. I mean, I think she coned at 3.30 that morning.

Q. Yes, but in any event you'd have known that that is what you're dealing with, if I can put it that way?

A. Yes, and we were looking for the cause of why this all happened.

Q. And then you were going to look for what had produced that.

A. That's correct.

Q. A number of other people have gone through the notes.

Dr Auterson gave evidence on Friday. I think you said you were here when you gave his evidence.

A. No, I left at lunchtime. I met him before I left.

Q. In his view, the problem was obvious: Lucy had received an inappropriate fluid regime. That was the problem. And he thought that was almost so obvious, it hardly needed stating. Dr Chisakuta also thought that the fluid regime, in common with Dr Stewart, at the Erne was problematic, and it was that because the 100 ml an hour of Solution No. 18 just didn't make sense to them, and they thought there might be a difficulty in relation to the fluid regime that she had received. In fact, they thought there was a reasonably common agreement amongst the clinicians that there was a problem with the fluid management at the Erne; would you accept that?

A. No, I wouldn't accept that at all. I would completely disagree with that.

Q. Ah.

A. Certainly at no time did I ever hear from anyone that they felt that the fluid management caused the cerebral oedema to occur.

Q. I didn't put it in those terms. I said that they thought that the fluid regime that she had been on at the Erne was problematic because the rate and type did not seem to make sense to them.

A. Okay.

Q. Let me put it this way to you. Does 100 ml of Solution No. 18 an hour make sense to you?

A. If you let me go through the calculations as to what I would have done at the time.

Q. Yes.

A. Lucy, I think, was just over 9 kilograms when she came in and she was dehydrated.

Q. What had you assessed as to her level of dehydration?

A. I think that she was more than minimally dehydrated, she wasn't severely dehydrated, so it was somewhere in the middle.

Q. Why did you think she was more than minimally dehydrated?

A. Any child that hasn't been drinking properly for a couple of days would have been quite far behind in their fluids and the fact that her capillary refill time was more than 2 seconds would give you concerns about her circulation.

Q. Wouldn't you have been encouraged to note that her tongue was recorded as being moist or her mouth was moist?

A. But that isn't necessarily a hugely important factor when you're assessing dehydration. It is something that you would take into consideration, but I think she was,

looking at her, quite dehydrated. Certainly her urea was elevated as well when she came in.

Q. If we just pause there on the dehydration point because Dr Sumner reaches a view about that. It's 013-036-139. Have you seen his report before?

A. I have seen his report.

Q. He's dealing with trying to assess how dehydrated Lucy may have been at that time. And you see he says:

"It is difficult to judge exactly how dehydrated she was on admission to hospital. A capillary refill time in excess of 2 seconds is one sign of approximately 5 per cent dehydration. However, this sign is likely to be hard to interpret in a febrile child. At this level of dehydration, mucus membranes are dry, but it was noted that Lucy's tongue was moist. I think, on balance, that she was mildly dehydrated, perhaps somewhat less than 5 per cent and involving a fluid deficit of approximately 350 ml."

Do I take it that you take issue with that?

A. Yes, I think Dr Evans in his report as well thought she was moderately dehydrated. So there wasn't exactness on this. This is a very, very difficult area. You're making an assessment, a judgment, and you're basing your fluid management on that, and the fluid management that you would come up with is not exact and precise because

you have to take it in conjunction with the response the child has to the fluids. Often what you're looking for is for the urine output to improve, for the child to get better fairly quickly as well. So it's a ballpark figure that you start with and you're looking for the response at that time.

Q. Does that mean that you make an initial assessment as to think what you think might be an appropriate rate and you adjust that depending on what happens with the child?

A. I think so, yes.

Q. Does that mean it would be inappropriate to say something like 100 ml an hour of Solution No. 18 and just leave it open-ended like that, that would be inappropriate?

A. That might be appropriate if nothing else is changing, but if for example if the child starts having loads and loads of loose bowel motions and the losses start to increase during this period you may have to reconsider what you are doing.

Q. That might be appropriate? Okay. I wonder if you can help: we pulled together a bit of a schedule from the information that we have received about the fluid management in a dehydrated child. If we pull up 325-010-001.

So there it is. Lucy's weight for the purposes of this was assumed to be 9.14 kilograms and her maintenance rate, in terms of the Holliday-Segar formula, was 914 ml a day, which works out at 38 ml an hour; would you accept that?

A. Sorry? Just run that past me again, please.

Q. You can see it at the top, it's in the blue. Her maintenance rate --

A. I wouldn't have done it that way. Lucy was dehydrated; I would have --

Q. At the moment we're just getting her maintenance rate; forget about the dehydration point.

A. Yes, and if I can maybe --

MR McALINDEN: This line of questioning started with the witness being asked about what fluid regime he would have considered reasonable. He then started to try and explain the fluid regime that he would have implemented and then we got sidetracked in terms of whether the child was moderately or slightly dehydrated and now we're being sidetracked again. In my submission, it would be fair to the witness if he was allowed to give his evidence in relation to the fluid regime that he would have implemented having regard to the child's weight and his assessment of the child's level of dehydration.

MS ANYADIKE-DANES: Of course. Sorry, Dr Crean.

A. When Lucy came in, I think that I would have assessed her dehydration as being moderate. And moderate dehydration means that there has been a 10 per cent reduction in body weight. That's what it means. So if she was just over 9 kilograms whenever she was dehydrated, it would mean that her body weight normally would have been about 10 kilos. So if she has lost 10 per cent of that weight, it would be 10 per cent of 10 kilograms. That's the way I would have done it. And I would have based her maintenance fluid on her normal body weight of 10 kilograms.

Q. What would that have given you?

A. She's 10 kilograms, so her maintenance fluid would have been 100 ml per kilogram per day, and that would have been 1 litre. She would have had a 10 per cent deficit, again that would have been another litre. So in the first 24 hours, we would normally give the maintenance and replacement fluid over a 24-hour period and you give them together. That basically to me would work out at around 80 ml or so per hour.

Q. In total?

A. Yes, in total.

Q. So far as you're concerned, would that all have been Solution No. 18?

A. If I can bring -- can I bring something up on this, on the computer, to show you what the sort of practices were back in that time?

THE CHAIRMAN: You can bring it up on the computer if we have it. Do you have a reference?

A. I have a reference here, 319-065-002, and it's a document, it's the Paediatric Medical Guidelines, it's the second edition, pages 85 and 86.

MS ANYADIKE-DANES: Can you tell us what year?

A. 1999, so this was the year before Lucy came in. And basically this is a document produced for the trainees in the Children's Hospital so that they can look after various aspects of clinical care in children. The section I've brought you to is the management of acute diarrhoea. You can see the assessment there, "mild, moderate and severe". And if we go on to -- and also, the shock, if shock is present you're using 20 ml per kilo of colloid and repeating if necessary. If we go on the next page, you've got it there.

That is as I've described. For the first 10 kilograms it's 100 ml per kilogram and subsequently, if the child is heavier than that -- for Lucy, she would have been receiving 100 ml per kilogram per day. If we then look at the dehydration, as I have said for 10 per cent dehydration, that would have been 100 ml per

kilogram, and that would have been given over a 24-hour period.

Within this guideline, with a normal serum sodium, you treat shock if present and then use fifth-normal saline/4 per cent dextrose as the infusion fluid, and the fluid may be replaced over 24 hours. What I'm trying to say to you is this was the practice at that time. With a low serum sodium, you treat shock if present and you would then use half-normal saline if their sodiums were low. So that was a commonly-used way of managing dehydration --

Q. Was it your way? Is that what you would have done?

A. Let's look at the way paediatricians do it because I didn't look after children with gastroenteritis. This is the way children were commonly being managed on the wards. If I could go back to what Dr McCord said in his evidence that he gave on 13 March, and it's pages 34 and 35, I think the chairman was asking him about children with gastroenteritis, about the frequency of doing electrolyte estimations. And basically, he's talking about the fluids that he would use, and it says here quite clearly:

"No. 18 seemed to get most of them over their illness, which was short-term."

And he says that it's only rarely that he would have

had to use anything stronger than that. What I'm trying to suggest to you is this was the practice at that time, this is what was commonly used, not only in the Children's Hospital but elsewhere. And we would often see children coming in on this type of fluid regimen. I'm not saying it's the way I would have done it, but I'm an anaesthetist, I look after children in the operating theatre, I look after children in the intensive care unit, but I'm not involved with these sorts of children, so we accepted at that time: this is the way children are managed.

Q. Can I put two points to you? First of all, can I just ask you: is this the fluid regime that you would have put Lucy on?

A. I can't -- that's a very unfair question for you to ask me because I don't manage children with gastroenteritis. I have little --

Q. Leave the gastroenteritis. Would you have used Solution No. 18 to replace a 10 per cent deficit?

A. I did not treat children with gastroenteritis, and that was not the normal way of managing them. Look, let me go --

Q. Sorry, Dr Crean, it's a simple question. If you've got a child who is dehydrated to the level of 10 per cent, would you, in 2000, have used Solution No. 18 to have

replaced that?

A. That is not the way I would have chosen to manage a child with dehydration. However, you must realise that this was the common way of doing it --

Q. Yes, I am going to come to that point --

A. -- so I did not have any concerns that when I saw that fluid regimen --

THE CHAIRMAN: Let me interrupt. How on earth did Dr Chisakuta tell me last week that there was an early shared concern in the Children's Hospital about Lucy's death and the treatment she had received in the Erne?

A. That doesn't ring true to me, Mr Chairman. I am surprised when I heard this and I heard what you said on the Thursday morning when I was here and I share your concerns about that.

THE CHAIRMAN: Dr Stewart also said that there was a general view in PICU that the Erne fluid treatment of Lucy had been inappropriate.

A. Based on what? I have no memory of anything like that ever having taken place.

THE CHAIRMAN: You see, the point is, doctor, that they do. The two doctors who gave evidence last Wednesday, who both were involved to some extent in Lucy's treatment, both specifically remembered that there was a view within the Royal, from a fairly early stage, that Lucy's

treatment in the Erne had been inappropriate and that there was a concern about the fluids she had received.

As I understand it, you're saying to me, "I really can't remember very much about that Thursday. It's a long time ago, I'm looking after other children", and I accept all that. But what I find very hard to understand is how they specifically recall that view, which they say was not personal to them, but was a common view in the Children's Hospital, and how you say," Not only do I not remember it, but it wouldn't strike me on working my way through the notes".

A. This is a common fluid regimen that many of the paediatricians used at that time. Looking at that, I don't think I would have considered that inappropriate for them. It's not what I would have done, and I would say to you that we often had discussions around fluid management in the ward about patients like Lucy coming in, and we would have said to the trainees at the time, "Listen, fifth-normal saline is probably best to use only for maintenance", and that is something that I know Paul Loane would have said at that time.

MS ANYADIKE-DANES: Why do you tell them that?

A. Because we thought that this was a better way of managing children.

Q. Why do you tell them that? Why is it significant that

you tell them that?
A. Because you're replacing the deficit fluids with a more appropriate fluid.
Q. Exactly. So even if the paediatricians in certain hospitals were not doing that, you recognise that there might be risks in actually replacing the more sodium-rich gastric losses with a low-sodium fluid. You recognise that. So irrespective of whether that was something that was commonly done, if you saw a child coming to you in a certain state and you knew what the fluid regime was -- and not saying it from the point of view of trying to apportion any blame, but trying to understand what might have produced that -- you, with your greater appreciation of the effect of these things, might have thought that the fluid regime was problematic.
A. I don't think that that is something that concerned me specifically on that day.
Q. On that day? Let me help you with something else. On that day, according to Dr O'Donohoe -- and you don't deny it in particular because you don't have a clear recollection of that day -- you phone Dr O'Donohoe to find out -- that's Dr Jarlath -- you phone Dr Jarlath to find out more about Lucy's fluid regime. One assumes that you did that, having received her notes, because of

what you say to him. We can pull it up, it's 027-010-024. It's the bit down at the bottom, dated retrospectively, 14 April. It says here:
"Yesterday, Dr Peter Crean rang from PICU Children's Hospital to enquire what fluid regime Lucy had been on. I told him a bolus of 100 ml over one hour followed by Solution No. 18 at 30 ml an hour. He said he thought that it had been Solution No. 18 at 100 ml an hour. My recollection was of having said a bolus over one hour and 30 ml an hour as above."
If that's your conversation with Dr Jarlath on the Thursday, that means you're having an exchange with the consultant paediatrician who had actually not wanted her to be on the regime that it appears that she was on or is noted to have been on when she came to you, had recognised that he wanted her to be on a different regime, and he prescribed one thing, according to this, and she's getting something else. Faced with that information, would you not be a little bit concerned as to what her fluid regime had actually been?
A. That would have concerned me, obviously, and that fluid regime that he's suggested there makes absolutely no sense at all.
Q. His fluid regime makes no sense?
A. That makes absolutely no sense at all in a dehydrated

child, giving 100 ml for the first hour and 30 ml thereafter. That just does not make sense.
Q. Does the 30 ml an hour make sense?
A. None of it makes sense. No, it doesn't. 30 ml an hour does not make sense.
Q. If the 30 ml had been normal saline, would that have made sense?
A. It wouldn't have made sense either, no.
Q. But you know that she's on 30 ml of normal saline because that what it says on her transfer sheet. Right at the top --
A. No, no, no, what he's said here is that --
Q. I know that; I'm talking about a regime that makes no sense. You have just said that if she had been on normal saline at 30 ml an hour, that would have made no sense to you. But if you look at 061-016-041, right at the top, that's exactly what you're being told she was on.
A. That makes sense then.
Q. That does make sense?
A. At that stage, that makes sense to me, because a child with an acute neurological collapse, we would have always put them on to normal saline and we would have run them at about two thirds maintenance fluid, so that to me makes sense.

Q. And does what she is recorded as having actually received make sense to you? What she's recorded as having actually received is 100 ml an hour of Solution No. 18 and then an hour's worth of 500 ml of normal saline. Does that regime make sense?
A. Can I just say something about -- you have said it already today and it's in the nursing notes as well, that Lucy had a stiffening episode about 3 am on the 14th, which was the Thursday morning, and the nurses called the doctor.
Q. Yes.
A. And what happened then was the doctor examined Lucy, they did a blood sugar, the stiffening episode could have been a febrile convulsion. I think they were concerned about her low blood sugar as well. At 3.15, it says, I think, the blood sugar was 13 or so and what the doctor ordered was for the infusion to be changed to normal saline at that time, at 3.15.
Q. It's not entirely clear that that's what happened; that's part of the problem with the notes. If one looks at 061-017-048 --
A. Well, I'm looking at 061-017-050.
Q. If we look at this one, this is 3.20. This is the nursing note. Dr O'Donohoe comes to see the patient who had developed respiratory arrest. Then you see she's

passed a large, foul-smelling stool:

"Normal saline, 500 ml given over 60 minutes."

If you look at that, it's not entirely clear when that 60 minutes relates to.

A. Okay. But this is the point I'm trying to come to: if you look at the note on page 061-017-050, it clearly states that the blood sugar at 3.15 was 13.4.

Q. Yes.

A. IV fluids were changed to normal saline and run freely into the IV line. You can see at 3.20 that there was decreased respiratory effort and that's when she started to cone. At 3.30, if not sooner, I think you said on Friday, her pupils were fixed and dilated, and that's when she coned. She was brain-dead then.

Q. Yes.

A. So no matter how much fluid she had after that, in my mind, it's completely and utterly immaterial. And I'll tell you, it probably took a few minutes for them to get the fluid changed over, and the fluid may not have started until maybe 3.20 in the morning, and it was at that time she started to cone.

Q. The problem is -- and we'll hear his evidence in due course -- when Dr Jarlath comes, by the time he arrives, because he is summoned after Dr Malik, 500 ml of normal saline has run in, so there is a problem on the notes as

to exactly when the 500 ml goes in in relation to her collapse.

The point that I'm asking you, before we get too bogged down into that, is -- I was exploring with you your view that the fluid regime that she was actually on, whether you considered that to be appropriate.

A. Well, what I'm trying to tell you is that often we saw children on similar regimes. It's not the way an anaesthetist would have written it up, but we didn't look after these children; they were looked after by paediatricians and they were common fluid regimens that we saw and we accepted that.

Q. It's not that point that I'm trying to get at. What I'm trying to explore with you is, even if you recognised that that was something that paediatricians may use, that regime --

A. That's what they did use.

Q. -- at that time, nonetheless you with your greater expertise in fluid management could see better than they the implications of such a regime. That was the point that I was raising with you. And in fact, Dr Auterson saw the implications of it because he thought, even before Lucy was transferred to the Children's Hospital, her problem was down to her fluid regime. Dr Sumner, when he reviewed her notes, formed the view that her

problem was due to her fluid regime. And Dr Jenkins also formed a view that her problem was largely due to her fluid regime. So all those people have formed that view from simply looking at what the notes record she was given as for that matter did Dr Chisakuta and Dr Stewart. So I'm asking you, if all those clinicians could, why were you not in a position to form a view -- and you can say why you didn't -- but to form a view that her fluids may be implicated in her condition?

THE CHAIRMAN: What's wrong with the question?

MR McALINDEN: I think that the witness has actually answered the question. If my learned friend had listened to what he was saying, he's saying that if the normal saline started at 3.15 and that the coning started at 3.20, the administration of normal saline certainly had no causal effect in relation to this child's state.

MS ANYADIKE-DANES: No, Mr Chairman, but the administration of Solution No. 18 might have and that's the point.

THE CHAIRMAN: It's the view of doctors Auterson, Sumner, Jenkins, Chisakuta and Stewart that it did; isn't that right? Dr Crean, you're not compelled to accept their view, but isn't it correct that the doctors I've just listed attribute Lucy's problems to the fluid regime which she received in the Erne?

A. Mr Chairman, we all know now that that's what it was, but I'm just trying to say to you that at the time I don't ever recall anyone saying to me or me saying to anyone else, "Listen, I have major concerns that this could have been implicated in her death".

THE CHAIRMAN: Just let me understand your evidence. When you say to me, "We all know now that that's what it was", what you're saying is that we all know now that what doctors Auterson, Chisakuta and Stewart thought at the time was correct?

A. No, sorry, what I was saying is that we all know now that her deterioration was caused by acute dilutional hyponatraemia related to her fluid balance. What I'm trying to say to you is that back in 2000, I don't think that's what I thought at the time.

THE CHAIRMAN: And I understand your view is that that's not what you thought in 2000. Dr Sumner comes in later, Dr Jenkins comes in later. But in 2000, the view which was later agreed to by doctors Jenkins and Sumner was formed contemporaneously by doctors Auterson, Chisakuta and Caroline Stewart?

A. Well, Mr Chairman, I honestly have to say I was completely unaware of this. I have no recollection of that discussion having taken place.

THE CHAIRMAN: Whether you were aware of it or not, you have

heard the evidence that they have said that that was their contemporaneous view.

A. I accept what you've said to me today, yes.

THE CHAIRMAN: It's not what I've said; I'm summarising what they have said and what you picked up from last Wednesday's and Friday's hearing.

A. Yes.

MS ANYADIKE-DANES: Just in fairness to Dr Chisakuta, what he said in his evidence on 29 May was that firstly -- I think it's at page 72 -- he thought there was a questionable standard of treatment in the Erne; that's in relation to Lucy's fluid regime. Then he goes on to say that he believed that you had a similar concern, and I think he says that at page 73, and he would have been surprised if you had not expressed or had that concern at handover to him, and he says that at page 91. Does that mean that you disagree with that?

A. I have no recollection of anything like that having been said. Listen, there was no reason for me to do anything like this if that's what you're suggesting. The following year, for example, whenever Raychel came in, we phoned the coroner up immediately; it was evident exactly what had happened. There was no reason not to do that. But to me, it sounds absolutely preposterous where I would take a line like that and not follow it up

if that's my concern. That's not the way I am.

Q. Well, Dr Crean, nobody did very much. That's the whole point, that's why I'm asking these questions --

A. But --

Q. If you bear with me, I'll just put to you what you put in your witness statement to the inquiry because we asked you about this. This is worth pulling up, 292/1 at page 6. The question is:

"Did you have a view as to the appropriateness of that fluid regime?"

That is the fluid regime that we've just been talking about that is recorded, for Lucy, as having been received:

"Please give reasons for your answer."

Then you say that you can't remember:

"However, I anticipate that on looking at the Erne fluid balance chart now, I would have had specific concerns regarding the administration of boluses of hypotonic fluids to children. It would appear from Dr Jarlath's note that he wished to give a bolus of fluid to Lucy. Fluid boluses would normally be given to improve circulation. It would have been normal practice to use normal saline as the bolus fluid. The administration of large volumes of hypotonic solutions may produce very low concentrations of electrolytes, in

particular sodium, leading to undesirable fluid shifts. The volume of fluid given would have depended on the patient's maintenance requirements and the degree of fluid deficit. A fluid deficit would normally have been replaced with normal saline."

Whatever fluid deficit she had was not being replaced by normal saline.

A. Yes, that is my view, that was my view, and it is still my view. The point I'm trying to make is that that is not the way the paediatricians practised when they were giving IV fluids to children with gastroenteritis.

Q. Sorry, Dr Crean, you're answering a question that I'm not putting to you. I'm not asking you what paediatricians normally did. The point I am trying to get at is whether you could see from the regime that she had been on the potential risks in that for her, which is not a question about what normal paediatricians do; it's a question of your own understanding about fluid management.

A. Well, I would never have considered a problem with the fluids with a sodium of 127 back in 2000. I would just not have considered that.

THE CHAIRMAN: As you said to me a few moments ago, that we all know now that that's what it was, what doctors Auterson, Sumner, Jenkins and so on said it was, when

did you reach that view?

A. I think I reached that view at the time of her inquest. Certainly whenever I was asked to review the notes by the coroner back in 1993.

THE CHAIRMAN: At the time of Lucy's death then in 2000 --

A. Sorry, 2003.

THE CHAIRMAN: At the time of Lucy's death in 2000, why did you think she died?

A. I didn't know. I was involved with Lucy on the Thursday and at that time we were looking at some form of acute neurology at that time. I just looked after her for that day and I wasn't in the intensive care unit the following day. So my --

THE CHAIRMAN: So any question the following day about referral to the coroner would not have been in conjunction with you?

A. I wasn't involved with that, Mr Chairman.

THE CHAIRMAN: Dr Hanrahan had already noted on the Thursday that if she died, it was a case for referral to the coroner.

A. Yes, that's right, yes.

THE CHAIRMAN: Did you discuss that with Dr Hanrahan on the Thursday?

A. That the child was going to be referred to the coroner?

THE CHAIRMAN: Yes.

A. I honestly can't remember, but it was definitely in the notes that that was going to happen, Mr Chairman.
THE CHAIRMAN: Yes.
MS ANYADIKE-DANES: Then let's go to the point that you were making --
THE CHAIRMAN: It's 1.05. We'll resume at 2 o'clock, thank you.
(1.05 pm)
(The Short Adjournment)
(2.00 pm)
(Delay in proceedings)
(2.07 pm)
MS ANYADIKE-DANES: Dr Crean, you gave evidence at Lucy's inquest about her fluid regime and your views on it. If we pull up 013-021-074. Firstly, you say that in your view the position was irretrievable. Then you say:
"On admission to the Erne Hospital, her sodium level was within normal limits. It then dropped 10 to 127 within a short period. The rate of fall is the crucial factor."
And in answer to Mr Fee, you also return to that and, having dealt with the business about her notes, you say:
"The drop from 137 to 127 would ring alarm bells."
And why is that?

A. To try and put this into context, Lucy died in 2000, and this was four years later. There had been a lot more published in the literature. I had received the expert witness reports. There wasn't very much written in the literature at the time regarding rate of fall, but it was alluded to, I think, by Dr Sumner in his expert witness report and it seemed to answer the mechanism about what happened at that time for me.
Q. Sorry, can we just be clear about this? Sorry to cut across you, but I just wanted to be clear what you're talking about. When you were answering questions at the inquest, you were not answering what may or may not have rung an alarm bell in 2000; you were answering, am I to understand you, what would have rung an alarm bell if Lucy had presented herself to you in 2004?
A. Yes, absolutely, yes.
Q. Did you make that clear in your evidence to the coroner?
A. I think that it was clear to me that that's what I was trying to say at the time. I don't think there was much in the literature at that time around 2000 where people were talking about rate of fall. It's only something I picked up subsequent to that. Remember I was working with the Department of Health working group, looking at fluids. You have mentioned yourself a lot more papers that became available in the literature that Des Bohn

and other people were involved with and I think in the early 2000s there was a lot more written about this and I was trying to find evidence of this --
Q. We're going to come back because you've helpfully turned up an exchange between Arieff and Ellis on the point.
A. Oh, yes.
Q. I don't want to get into that exchange right now; I want to ask you: are you saying that when you saw Lucy's notes in 2000, and you realised that at some time after 7.30 -- let's call it 8-ish because that's roughly when she might have had her bloods taken -- that she has a serum sodium level of 137 and then, at some time later on, a few hours later on in fact -- let's say at about 3.30 -- she's got a serum sodium level of 127, did you conclude or have a view at all about that fall?
A. No, I think this is a very important point because, certainly in 2000, I would have had no realisation of anything to do with rate of fall. If I could try and tell you what my knowledge was at that time. I had seen the Arieff paper, 1992, that was in the BMJ. I was aware of the editorial that Ted Sumner had got for the Journal of Paediatric Anaesthesia, but I don't think in the editorial for example he had mentioned rate of fall and I don't think in the BMJ paper he had talked about rate of fall either. So this was not something

that I was aware of at that time.
Q. You had seen the 1992 Arieff paper?
A. Yes, I had, yes.
Q. If we pull up 220-002-203. If you go to "Brain adaptation to hyponatraemia in children", he is exactly dealing with that point. If you see the bottom third of that paragraph, just before you get to "Effects of physical factors":
"Furthermore, neither the actual concentration of serum sodium nor the rapidity of development of hyponatraemia seemed to predict the ultimate outcome in these 16 children."
A. I didn't pick that up from the paper, but I can see what you're saying now.
Q. It's a pretty significant thing have said because it's sort of counter-intuitive that no matter how quickly it goes or at what rate it falls, that's not well correlated with the degree of cerebral damage.
A. That's right, yes. That's why, when I --
Q. Sorry, just focus on this. But you are saying that you read that paper, which was a fairly innovative paper in and of itself and you didn't pick that point up?
A. That's correct, that's what I'm saying.
Q. Because if you had picked that point up, then the fall from 137 to 127 wouldn't necessarily have meant anything

to you at all and you certainly wouldn't have been saying to the coroner the rate of fall is a crucial thing.

A. Yes, neither would any of the other experts at the time because, if you remember, it was Ted Sumner that alluded to that and he talked about that rapid drop as well. We all did and I don't think any of us were aware of that concept at the time. I no more than anyone else did and I actually picked this thing up about rate of fall from the experts at that time.

Q. No, but Dr Summer talks about rate of fall because he has given that some consideration and he believes that to be significant. What you were telling the chairman a little while ago is you didn't think it was significant in 2000.

A. I didn't know that it could have been significant in 2000. I didn't say I didn't think it was significant --

Q. Did you think it had any relevance at all?

A. I don't know, I hadn't thought about that at the time.

Q. You have two parameters, it drops 10. Do you not at least raise a query and say, "Let me discuss that with my colleagues. Maybe that's significant, maybe it's not"?

A. I disagree with what you're saying. I didn't discuss it with my colleagues, I didn't think about it at the time.

I also didn't think a sodium level of 127 per se was a problem. We saw it so, so frequently that -- I'm not saying I discounted it, but I didn't give it a lot of relevance at the time.

Q. Did you think there was any possibility that actually it might not have been 127, that it might have been lower?

A. At the time I didn't. I never thought about this because whenever the blood test was done, at about 3.15 in the morning, I guess my assumption was that that's when bloods were done.

Q. Sorry?

A. I guess that that was my assumption that that's when the investigations were carried out. I assumed it was a blood sugar and maybe a U&E was done at that time as well.

THE CHAIRMAN: Well, do you now understand the notes to indicate that the second U&E, which produced a result of 127, was given after Lucy had received a considerable amount of normal saline?

A. Yes, I do, and where I -- I think I have given a reference to it. It was on the -- it was in the coroner's papers somewhere. It's somewhere -- I've given a reference to it -- and it was actually a letter from Dr -- I have forgotten his first name, in Enniskillen. It was a letter that I had sent to his

legal people at that time. I think it was January 2004. And I found this just a few months ago on the inquiry website. And it says there in that that basically he came in and the normal saline was running at that time.

THE CHAIRMAN: That's Dr Auterson?

A. No, it was the Dr Jarlath down in the Erne Hospital. It was alluded to by Ted Sumner in his --

MS ANYADIKE-DANES: Sorry, what was alluded to?

A. The fact that there was a chance that the sodium level had been taken at a later stage.

Q. But you can see that in the nursing note. The very nursing note you took us to to show one point that you were trying to highlight precisely addresses that very question. I don't want to spend an over amount of time with it, but one can see it if we go to 061-017-050. Halfway down, exactly where you were:

"IV fluids changed to normal saline and run freely into IV line."

If you have picked up from the note that Dr Malik had written, he says she's had an hour of it. But leaving that aside, Dr Jarlath is then in attendance, "repeat U&Es ordered". So whatever you want to make of how much normal saline has been run in, certainly the sequence of events is there, on the face of the document that was faxed to you, which is that she gets her normal

saline and then the blood is taken for U&Es.

A. You have obviously noticed this. I've been through this chart so many times and I hadn't noticed that until you just pointed it out to me, and I have spent a lot of time looking at this and I had not noticed that before. This is the first time I have seen that.

Q. Right. Dr Hanrahan has that point put to him. In fact, in his PSNI interview, they're discussing that, and he concedes that you can see that from the sequence of events from the nursing notes that were faxed over. He says that in his PSNI interview, the reference is 116-026-017.

He can see that. It's certainly there in the nursing notes and you've been asked to -- you had time to look at those notes to try and form a view as to what had happened to Lucy.

A. I didn't have time to conduct a forensic investigation of the notes. I would say to you that I was in that ward that day, I was looking after several patients and I would not, I think, have been able to go through the notes in huge detail at my leisure. My life in intensive care was never like that.

THE CHAIRMAN: Would you have had the chance to look at her notes in advance of the inquest when you were assisting the coroner?

A. Yes, Mr Chairman. I've actually looked through these notes so much recently, I'm just saying I hadn't noticed that.
MS ANYADIKE-DANES: Could that have made a difference to her serum sodium level at the point of collapse?
A. I thought intuitively it would do.
Q. Sorry?
A. I thought intuitively that it would do and I put it in my witness statement. I thought that would probably have meant that if the sodium level had been checked before she had got a half-litre of normal saline that it would probably be much, much lower, less than 120, for example. And that's intuitively what I -- and if I'd known that at the time, if I'd picked that up at the time, I may have thought, "Oh my goodness, this was a really low sodium here", but I didn't pick that up at the time.
Q. Well, Dr Jarlath says he communicated that to Dr Hanrahan, and I am wondering if part of the issue here is that even though there were a number of consultants attending to Lucy's care, there may not have been the best communication amongst them all, when she had died, to try and find out what people thought was the cause of death.
A. Can I ask you a question back?

Q. Sorry?
A. Just for clarification. When in fact did Dr Jarlath tell Dr Hanrahan?
Q. I took you to it earlier this morning: during the handover. That's his evidence. During the handover -- sorry, if it wasn't Dr Hanrahan, it was --
A. Dr --
Q. If it wasn't Dr Hanrahan, it would have been Dr McKaigue. Sorry, let me find the place for you now that you have asked me. Yes, it would have been Dr McKaigue. He says it in his witness statement, 278/2, page 5. He states that he believed he relayed the repeat electrolyte results at the verbal handover on arrival.
A. I remember you telling me that earlier. He told him what the values were, but that's not the same as telling him when he did the blood test. Am I picking that up correctly from you?
Q. We can move on.
THE CHAIRMAN: Sorry, I think to be fair to the witness, that's right. It's not clear from the information which we have that, when Dr Jarlath said what the repeat blood test result was, he indicated that the repeat blood test came after the administration of normal saline.
A. And he told that to Dr McKaigue at the time?

THE CHAIRMAN: That's not clear. What appears to have been told to Dr McKaigue is what the repeat test result was --
A. Thank you.
THE CHAIRMAN: -- not the point at which the repeat test was taken.
MS ANYADIKE-DANES: That's correct, Mr Chairman. What he then goes on to say in his witness statement, 278/1 at page 12, was that:
"[He] relied on the entries in the fluid balance chart to inform the receiving clinicians as to the nature, quantities and timings of any fluids administered to Lucy."
Then if you put that together with the nursing notes, his view, I suspect, would be you could have worked out from that that the serum sodium tests came after she received normal saline. But you're saying you didn't see that?
A. What I'm saying to you -- I ... Coming up to this day, I have gone through these charts so much. I suppose what happens when you look at things, you look at specific things that you feel are important and you are maybe missing things. This is the first time I've seen that or I don't recognise having picked that up previously.

Q. Yes. This is the first time that you've seen that's what it said in the note?
A. That's the first time I've picked that up in the nurse's notes there.
Q. When did you first appreciate there might be an issue as to whether her 127 was actually a record of her serum sodium level at the point of collapse? When did you appreciate that that might be an issue?
A. I think I first considered that when I read Ted Sumner's note. Because if you look at his report -- if you look at Dr Evans' report, he didn't mention it, but I think Ted Sumner did in his report towards the end of it. He basically said something like "and there's a possibility of". So even when he was doing his report, as you clearly say there, it's there and evident for all to see, but he was just speculating, I think, in his report. That's where I kind of got that notion in my head as well. So many of us have probably not picked this up at the time.
Q. Well, others will speak for themselves. Can I ask you about a point that I had just picked up before we started to think about what the source of that point might be?
A. Okay.
Q. And that's to do with discussing Lucy's case with the

other clinicians. Another clinician that you had available to you to discuss is Dr Hanrahan. You had brought Dr Hanrahan in to review Lucy. Did you discuss with Dr Hanrahan his thoughts or views, having reviewed her?

A. I'm sure I would have at the time because I was -- my mind was blank when she came in as to what was going on, and he ordered a lot of investigations when he reviewed her at that time. So I'm sure there was some discussion at that time about that.

Q. What would have been the upshot of that discussion?

A. Me going over to the CT scanner with her to try and find out what the CT scan of her brain -- because that would have had to be organised immediately.

Q. And so when you come back and you know what the CT scan shows, but I take it from what you said you're none the wiser as to why she's in that condition, so then are you not trying to understand why she is and discussing with the very person that you brought in to provide a specialist view?

A. The thing is, though, it's not like snapping your fingers and you get an answer immediately. We had to get a blood ammonia done, the metabolic screen that had to be done does take time. They did a toxicology screen as well to see if there were any substances in there

that could have caused this collapse as well. These blood tests do take time to come back. Some of the tests didn't come back several days after she had died. I know that a rotavirus was grown in her stool. That didn't become evident until 4.15 on the following day, in fact it didn't become evident until she had died. A lot of these tests do take time to come back; you're not going to get an answer immediately about this.

Q. Yes, I appreciate that. What Dr Hanrahan has -- and he inserts it in the notes before you have put your note in, so I presume it's there for you to see, it's at 061-018-063. That's his differential diagnosis. You see it roughly halfway down the page, starting about a third down where he says:

"Infectious? Herpes? Haemorrhagic shock? Encephalopathy? Metabolic?"

A. "Urea cycle defects."

Q. Yes:

"Cerebral oedema for another cause?"

A. "Other cause", yes.

Q. That's a query, and he doesn't know exactly what it is, but those are the things on his radar, if I can put it that way.

A. Yes.

Q. What could have been the other cause of cerebral oedema

in those circumstances?

A. I have no idea. I'm not a neurologist and I wouldn't like to speculate on what was going through his mind at the time.

Q. But you knew inappropriate fluid regime can cause cerebral oedema?

A. I knew that and I've said that, but that's not something that would have come on my radar with a sodium of 127. There's just no way I would have thought that and I wouldn't have told him something just because I knew it. There had to be a reason for saying it. And with 127, I just wouldn't have thought it.

Q. So at this stage neither you nor he have a really clear view as to why Lucy is in that condition?

A. That's what I've told you already today.

Q. Sorry, so that's yes?

A. Yes.

Q. Did it occur to you, given that the notes are not the clearest, let's get on the phone to the Erne, there's an anaesthetist there who stabilised her and he's the one who rang through results, let's talk to him, or let's see if we can talk to the consultant paediatrician again? Did that occur?

A. Well, I did talk to the --

Q. I said again.

A. I'm not sure at that time I would have -- I'm not sure at that time, at 10.30 -- I think the note was dated, or at the time the note was dated, I'm not sure at that time I would have even seen the faxes. I think probably after the ward round or even maybe after coming back from the CT scanner. That's speculation, but I don't think at the time --

Q. Let's grant you that.

A. Okay.

Q. When you bring her back from the CT scan, you see she's got cerebral oedema, in all probability she's coned, although the brainstem death tests are still to be carried out, but I think, in your view, there was no coming back. But you didn't know what was the cause of that. Would it not have been helpful to see if you could speak to the anaesthetist at the Erne?

A. I don't think so, no, not the anaesthetist.

Q. Why not?

A. Tom Auterson is not a paediatric anaesthetist. He would have very, very rarely been looking after children.

Q. But he did get the right answer.

A. I didn't hear what he said yesterday. If he had concerns about it, he had concerns about it, but from my knowledge of the general anaesthetists in DGHs, they just -- if there are any children there, they don't take

a lot in dealing with them. They really just secure the airway and, if they have been involved in the transfer, they would bring them back up to Belfast.

Q. He had made the effort to contact the Children's Hospital and, on his evidence on Friday, he had actually worked out what was the problem, and in fact he thought it was quite straightforward, what the problem was. So if you had contacted him ... but anyway.

A. It would have been more relevant to contact the consultant paediatrician, I believe, and I still would believe.

Q. And when you contacted the consultant paediatrician and realised that there had been some mix-up over her fluids, did that not concern you?

A. Of course it concerned me. It means that the fluids that she got were not planned, they didn't plan to give them that way.

Q. Yes.

A. One of the issues that I saw that there was no written evidence that they had actually assessed the amount of dehydration, there were no fluid calculations there. There was no fluid prescription in the chart either.

Q. That would have meant, if you'd heard that from her consultant paediatrician, that you would have had

a concern about the fluid regime. Because the notes perhaps didn't lend themselves, so far as you were concerned, you might not have worked out exactly what the role of that was, but you would have had a concern about her fluid regime.

A. Listen, I'm not trying to defend the actions of the paediatricians in the Erne Hospital. I'm not trying to say that they did everything that was right. They made many mistakes.

Q. No, Dr Crean, I'm simply asking you: with that information, would you not have had a concern about her fluid regime at the Erne?

A. I had a concern about her fluid, the way her fluids were managed in the Erne, because they were not doing what I just suggested a couple of minutes ago.

THE CHAIRMAN: Sorry, when you say:

"[You] had a concern about her fluids, the way they were managed in the Erne."

Is that a concern which you had in April 2000?

A. I think that's why I phoned them up, just to get clarification as to what was going on. Mr Chairman --

THE CHAIRMAN: Sorry, doctor, when I raised with you this morning, the fact that this concern was, according to doctors Chisakuta and Stewart, recognised fairly quickly after Lucy's admission to the Children's Hospital, and

her fluid regime had been identified as problematic, to put it gently, you said to me that you had no recollection of that and that you were concerned to hear the evidence which they'd given on Wednesday. You have just told me that, on that Thursday in April 2000, you did have a concern about her fluids and the way they were managed in the Erne. Which is it?

A. The point I'm making is that I would have obviously had concern about the clarification of that or else I wouldn't have made the phone call. Look, I'm not trying to defend what happened there.

THE CHAIRMAN: What happened in the Erne and the treatment which Lucy received is not the subject of this inquiry. What is the subject of this inquiry is that I am told there was nothing learnt by anybody in the Erne or the Royal as a result of Lucy's death. And that is in the face of the evidence, which I have already heard from doctors in both hospitals that the problem which brought about her death was recognised at the time. And to put it bluntly -- let me spell it out -- there are people who believe there was a cover-up and that the cover-up was that it involves the Royal, not just in covering-up what happened in the Royal, but being willing to cover-up what happened in a completely different hospital. I have to spell that out to you. I'm not

saying that's the view that I hold or the view that I will conclude having heard all the evidence, but I am pretty sure that is a view, which is held by some of the families who have lost children, the loss of which has led to this inquiry.

A. From my point of you, to do something like that would be absolutely crazy. There's absolutely no sense behind it.

THE CHAIRMAN: I'm afraid, doctor, I have already heard evidence in this inquiry, which suggests to me that when doctors make mistakes, there is a reluctance -- or there was a reluctance in the mid-1990s -- for other doctors to face up to that and to encourage the doctors who had made mistakes to face up to it. So if this happened in Lucy's case, it would, on one interpretation of the facts, be an extension of what had happened before.

A. I agree with you, but the following year, Mr Chairman, with Raychel, I informed the coroner. I was critical of what had happened then.

THE CHAIRMAN: Yes.

A. And I don't think my attitude had changed dramatically from one year to the next. I think that the same thing follows on.

Look, I'm not trying to defend what fluids she received. All I was trying to say earlier, before

lunchtime, was that the fluids she received that day, that evening, were not planned for. But based upon what paediatric practice was at that time, I didn't see them doing her any harm either. That was my opinion at the time.

MS ANYADIKE-DANES: Then one final question for you, Dr Crean, on this point. It's in your witness statement, 292/2, page 3. This question is:

"You have indicated that you remember having concerns about Lucy's fluid management at the time [that's at the time of her admission to PICU]. What do you think those concerns were?"

And then you say:

"Although I have difficulty remembering what my specific concerns were at this far remove from that time, I anticipate that my concerns would have been in relation to the lack of fluid prescription [which is a documentation point you have made] with appropriate calculations documented."

Then you go on to say, if we go over the page:

"The administration of volumes of hypotonic fluid in excess of maintenance requirements ..."

That is not just a recording issue; that's an issue that you have about what was administered to her. And according to this answer that you gave to the inquiry,

that was part of a concern you had at the time.

A. Yes, but at the time, although ... I think that the majority of children coming from medical wards to the intensive care unit, we did have concerns about their fluid management. And it was giving hypotonic fluids in excess of maintenance. But what I'm trying to say is that at that time that was the norm. We all had concerns about it, and in fact those concerns -- my concerns are the same for Dr Evans in his report. That's what he's done as well in his report. He's suggesting that best practice at that time is to give a hypotonic solution, which is half-normal saline with glucose, for both the maintenance and the replacement of deficit. I have concern about that. I had concern with the practices that happened in Northern Ireland right up to 2007 and 2008, and it's only then that things have changed. I always had a concern of any child receiving more than maintenance of a hypotonic solution.

Q. If you had those concerns and you know that paediatricians up and down the country were doing that very thing, then it really does raise the question why the experts in the Children's Hospital could not have been getting that information out.

A. It's not just the experts in the Children's Hospital, it's anaesthetists everywhere. I'll tell you, whenever

things like this would happen, we were, on a regular basis, phoning the paediatricians up and saying, "Look. I think it would be better if we just restricted hypotonic solutions to maintenance fluid". There was a great reluctance to change. And you'll probably come to this when you're doing the part of the inquiry to do with the Department of Health, because I'm sure you have the minutes there --

Q. Let's stick with this for the moment. You said that you were phoning --

A. I said we would phone on a regular basis when we got children like this. Where consultant paediatricians were administering hypotonic solutions above maintenance, we would often feed back to them: this is maybe not a good idea, maybe you might wish to consider A, B and C. This is something that was happening all the time. I know that I did that, I know that Dr Loane did it on a regular basis.

Q. Did anybody do that in Lucy's case with the Erne?

A. I know that I phoned Dr O'Donohoe up at that time. I know that he said to me that from what he has written, "I gave a bolus of fifth-normal saline". I can't remember if I said to him at that time, "Actually it's not a very good idea to give a bolus of No. 18 Solution over the maintenance fluid", but that is what we were

doing all the time with the trainees and others. But I can't put my hand on my heart that I exactly had that conversation with him 13 years ago, but we were doing that on a pretty regular basis.

Q. Well, if you could think to do that before Lucy had even been declared dead, if I can put it that way, the consultants who were there when she did die, is that something you would expect them to be doing?

A. Sorry, you'll need to ask me --

Q. You made contact with Dr Jarlath on the 13th.

A. Yes.

Q. Lucy actually died on the 14th. You weren't on duty that day.

A. No.

Q. Dr Chisakuta was on duty that day as the anaesthetist and Dr Hanrahan as the neurologist. What I'm saying is, given that this is the practice that you say the Children's Hospital was doing, would you have expected one or other of them to have contacted the Erne and said, "Lucy, unfortunately, has now passed away and our considered view is that there was something inappropriate in her fluid regime"?

A. Well, if they had considered that themselves, then they should have done that, and they should have informed the coroner about that as well.

THE CHAIRMAN: Just before we move on, on the occasions when you and Dr Paul Loane were ringing other hospitals about the fluid management of children who were coming into ICU, how many of those children died?
A. They didn't die.
THE CHAIRMAN: So they hadn't died before Lucy?
A. No.
THE CHAIRMAN: But Lucy died.
A. Lucy died.
THE CHAIRMAN: So the type of concern that you say you and Dr Loane have been ringing a number of hospitals about over a period of time about fluid management, none of those involved, in cases in which a child died?
A. That's correct.
THE CHAIRMAN: So Lucy's the first case in which a child died coming into the Children's Hospital from another hospital with issues about fluid management who died?
A. I'm not saying they had issues about fluid management and that's why they came into the hospital. They came into the hospital and these were the fluids they were receiving and we would take that as an opportunity to feed back to them and say, "Look, I think you might wish to consider just restricting your No. 18 Solution to maintenance only and consider normal saline for the replacement". It was, I suppose, like an ongoing

educational thing that we were trying to do and trying to change practice.
THE CHAIRMAN: Okay. But in Lucy's case, tragically, any change of practice was too late to save her.
A. It was, I agree with you. Mr Chairman, I've struggled with this over the years as well.
THE CHAIRMAN: Doesn't that make it all the more blindingly obvious that this was a case for the coroner?
A. I thought it was going to be a coroner's case. To me, it was an unexplained death at the time. I didn't know on that day that that -- what the cause of her demise was.
THE CHAIRMAN: It also fits in with Dr Chisakuta and Dr Stewart saying there was a concern from fairly early on the Thursday.
A. About her fluids?
THE CHAIRMAN: Yes.
A. I think we were constantly concerned about fluids managed in this way, Mr Chairman. I'm not trying to defend the use of No. 18 in this way. We were critical of it all the way through and we were -- I would be critical of any hypotonic solution used in this way. I would be critical of Dr Evans' use of hypotonic fluids, the way he did. And he was one of the expert witnesses. The only person here I wouldn't be critical

of was Ted Sumner in his report.
MS ANYADIKE-DANES: Were you surprised when there was no inquest in the circumstances that you have just been relaying to the chairman?
A. I'm not trying to say it actually went off my radar, I just don't remember what I thought after that time. I wasn't involved after that day and I wasn't exactly sure what happened thereafter.
Q. Then let me ask you this. If at the time when Lucy actually died you had been asked to complete a death certificate, would you have done that?
A. I didn't know what she died from. I couldn't have done it.
Q. So would you have issued a death certificate for Lucy?
A. When I reviewed her notes in 2003, the death certificate, what was written --
Q. I'm going to come to the actual death certificate.
A. I'm trying to come round to this. When I saw what was written on her death certificate, what was written on the chart, it didn't make any sense. That's the point I'm trying to make.
Q. So would you have been able to write one when --
A. Absolutely not, no.
Q. Thank you. That was the point I was asking you.
And then it turns out that she's not going to have

an inquest and the decision is that she will --
THE CHAIRMAN: I think, to be fair to the witness, that's not something that you specifically recall registering with you?
A. What's that, I'm sorry?
THE CHAIRMAN: The fact that she wasn't going to have an inquest.
A. No.
THE CHAIRMAN: Your memory at this remove is that you don't recall the lack of an inquest registering with you and you wondering, "How on earth can she not have an inquest, we don't even know why she died?"
A. I didn't follow the things up because I assumed they were going to be waiting for -- informing the coroner, waiting for some of the results and things that they had sent off to see what was going to come back on that.
MS ANYADIKE-DANES: According to Dr Stewart, you were one of the consultants who agreed the working pathogenesis that would go on the autopsy request form. There wasn't going to be an inquest. Dr Hanrahan and Dr Chisakuta were of the view that, for some of the reasons you have just said, we need an autopsy, post-mortem, to help us with why she died and what Dr Stewart says is the working pathogenesis on the autopsy form was:
"Dehydration and hyponatraemia, cerebral oedema,

acute coning and brain death."

And I will give you the reference for where she says is, 115-022-002. She says:

"This was the working pathogenesis agreed by Dr Hanrahan and the anaesthetists in the absence of a definite aetiological diagnosis."

And then she is asked subsequently by the inquiry as to:

"Who were the anaesthetists?"

And she says -- sorry, this is 282/1, page 12:

"The anaesthetists involved in looking after Lucy were Dr McKaigue, Dr Crean and Dr Chisakuta, and there may have been others working in PICU who I can't remember."

And she goes on to say:

"I do not recall if I was personally present when the working pathogenesis was agreed. From my reading of her notes, it is likely 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 had made to the best of my ability and knowledge. These were not my own personal opinions and I do not remember specific details apart from what I

have written."

That is how she is saying she got to the working pathogenesis that she inserts into the autopsy request form. You can find that at 061-022-075. You see it there, list of clinical problems. It says "in order of importance", and in fairness to her, she says she wasn't putting them in order of importance, she was putting them in order of presentation. You see:

"Vomiting and diarrhoea; dehydration; hyponatraemia; seizure and unresponsiveness leading to brainstem death."

When she was asked in her evidence about that link between the hyponatraemia and the seizure, and indeed the dehydration, her view was that what probably should have gone in there is that it was the response to the dehydration which was inappropriate which led to the hyponatraemia, which in turn led to the seizure, what she would call the cerebral oedema, the "Seizure, unresponsiveness leading to brainstem death". So that's the line of causation, if I can put it that way, that she says, and that's the rationale for it.

The reason I've put it to you is because you had answered previously that you weren't aware that there wasn't going to be an inquest, but if she has got you as one of those who were agreeing a working pathogenesis

for the autopsy request form, then you can only be having an autopsy request form if you're not having an inquest because otherwise the coroner would direct it.

A. I think there's some ambiguity about this. I was here last week, as I have mentioned, and I remember Mr Chairman, you saying just because she has talked about "the anaesthetists involved", she may have been referring to the anaesthetists involved in Lucy's care. That wasn't necessarily the anaesthetists that put this working pathogenesis together. That's really what I'm saying. I did hear you say that last week. It is ambiguous, so I don't know. Looking at the working pathogenesis, Caroline has identified the sorts of issues that were there at the time. What I don't see there, for example, is some of the other differential diagnoses that Dr Hanrahan came up with. Because I don't think results from the metabolic screen and other things had come through at the time, so I don't think they could have been excluded.

Q. In any event, there is a very clear answer to that. She's absolutely clear that that is something that Dr Hanrahan had agreed irrespective of who the other anaesthetists might be.

A. But 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.

Q. Sorry?

A. If you're getting a hospital post-mortem, you should already be able to write the death certificate.

THE CHAIRMAN: Before the results of the post-mortem come back?

A. 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.

THE CHAIRMAN: Yes.

A. You can't do it and stick it in afterwards.

THE CHAIRMAN: Sorry, you can only write a death certificate --

A. If you know the cause of death. If you don't know the cause of death, it has to be a coroner's post-mortem.

MS ANYADIKE-DANES: That was one of the issues that we were putting, and the short answer seemed to be that there were circumstances -- certainly in this jurisdiction, and maybe in others -- where you await the outcome of the post-mortem and then you write the death certificate. Now, that is something that Professor Lucas has criticised. It's something that Dr Keeling recognises is a possibility. Both of them are experts for the inquiry. And it's also something

that Dr Hicks, who was at the Children's Hospital at that time, said did happen from time to time. So there doesn't seem to be a clear answer about that, but you're quite right, Professor Lucas is very concerned about a practice that entitles you or enables you, I should say, to wait, get the results of the post-mortem and then write up your death certificate accordingly.

A. If I can maybe help you there.

THE CHAIRMAN: Please do.

A. Dr Hicks is a neurologist and there are occasions where the neurologists have been looking after a child, basically all their life, and they have never discovered in fact what was wrong with the child. They could have a muscle problem and become weaker and weaker and die from respiratory failure. So there could be occasions where they have to wait many months until they get results back before they put anything in. I don't know, I'm only speculating here, but things like that do actually happen.

THE CHAIRMAN: I'm interested in the basic approach which you outlined a few moments ago: if you have decided to ask for a hospital post-mortem for a child, you should already be able to write the death certificate.

A. Mr Chairman, that's my understanding of it. You have to have a clear idea of what's happened. There may be

additional learning from the post-mortem. There's a possibility that you could add to the death certificate, but you have to be able to write the certificate first of all.

THE CHAIRMAN: There will be a debate about this over the next few weeks, but there has been criticism from some experts about the fact that the death certificate -- first of all, you have already indicated that the death certificate, when you saw it, the original death certificate made no sense to you.

A. Absolutely none at all.

THE CHAIRMAN: The other point is the death certificate was issued before the post-mortem report became available.

A. Okay.

THE CHAIRMAN: Do I understand you to say that wouldn't make any sense?

A. I thought, having read around this recently, that the death certificate came out about three weeks after Lucy died. And I thought they had received the preliminary report of the post-mortem.

MS ANYADIKE-DANES: No, they hadn't. They had received the anatomical summary, not the preliminary report; the preliminary report comes out in June.

A. Then I misunderstood that.

THE CHAIRMAN: And the anatomical summary, as we went

through last week, doesn't appear to add to the information which was already known.

A. The one thing I picked up from the post-mortem, having read it through, was that there are things there that I think Denis O'Hara was trying to say and maybe didn't say it very clearly. What he did say was about the finding of bronchopneumonia. Often, pathologists find bronchopneumonia, and I think ... You have talked about SIADH quite a bit in the past. There are certain things that cause SIADH. You can get brain things like brain tumours, meningitis, encephalitis. Pulmonary things can cause SIADH on their own, things like tumours in the lungs, bronchopneumonia can as well, and there are certain tumours like -- a carcinoid tumour can do this.

Although he didn't explicitly say it, I think what he was trying to say was to tie the cerebral oedema and the low sodium in with an SIADH promoted by the bronchopneumonia. But often, children that come into ICU, when they are in extremis the way Lucy was, will get a ventilator-induced bronchopneumonia. That's not really significant and she didn't have any respiratory symptoms either.

MS ANYADIKE-DANES: I was just about to ask you that question. Professor Lucas said that that should at least have been a possibility, that it was

ventilator-induced; do you think that's credible?

A. I would concur with that because I don't think -- unless -- I don't know -- unless Lucy -- I mean, what could have happened, for example, is that whenever she had her acute deterioration, she would have aspirated, but that was at the end of the events that were happening that evening. So it would have been like a pre-terminal thing that happened, it would have been cause and effect. That's my opinion anyway.

Q. That was a point I wanted to ask you. Thank you very much.

Can I ask you very quickly about the discharge summary because you have mentioned that one of your practices -- and I don't think it is you alone, you said Dr Loane did it as well -- was to get on the phone and make communication with the referring hospital, if I can put it that way. Another way of doing something similar is either a discharge letter or discharge summary, some way of communicating what has happened to the child. In your Claire witness statement, 168/2, page 12, in answer to question 55 -- at the same time as saying that for administrative reasons you were quite often the named consultant, and you say your name appeared on all hospital admission slips and all hospital discharge summaries, you then go on to say that:

"A hospital discharge summary from PICU would be completed if a child died."

A hospital discharge summary was not completed for Lucy. We can see it, it's just blank, 061-004-011.

That's it. It was in her notes, but it's blank, it's not completed. And, so far as the inquiry has been advised, no discharge summary was ever completed for Lucy.

A. What that has on it, if you can see, it says:

"Admission to Musgrave Ward."

And Musgrave Ward is a medical ward in the hospital, and what it was doing in her notes, I'm not quite sure of. This could well have been a specific discharge summary note that came from that ward. I don't remember us using this on a regular basis.

Q. Leaving that aside, you said a hospital discharge summary --

THE CHAIRMAN: Sorry, it's as close as we have to a discharge summary. It's the only discharge summary that appears in Lucy's records and there is no completed discharge summary in Lucy's records.

A. There's another form there that was used in triplicate that was used. I can't remember the name of it, but I think I saw it there somewhere.

MS ANYADIKE-DANES: There's an "inpatient/outpatient";

is that what you mean?

A. I can't remember.

Q. I'll turn that up for you. If we put that alongside, just to make sure you can compare them, 061-012-036.

A. Yes.

Q. Is that what you mean?

A. That's it, yes.

Q. So this was in lieu of the discharge summary?

A. Yes. This would have been -- I mean, I still use those today. This would be filled in when the patient is discharged. It would be, for example, if you were being discharged home and you had been admitted for a respiratory illness and you were writing the drugs and things you wanted the patient to be on, they can then bring that to their GP and they know exactly what the diagnosis was.

Q. Yes, but Lucy's dead, so what's the purpose of this document?

A. What would happen there, it's a form that's filled in on all patients, whether they survive or not.

Q. To go on the GP?

A. That would go to the GP -- and also what we would do is give the GP a call as well because if mum or dad come around to the GP and he is not aware that the child has not survived, it's --

Q. I understand. Can I ask you: do you regard this form as being accurate in light of what you have been discussing with the chairman?

A. It gives some of the detail there.

Q. Is it accurate?

A. It's accurate as far as it goes, but it doesn't fill in the blanks. There should be other -- it's the same as the death certificate: it doesn't give the whole story, is what I'm trying to say.

Q. Is there any reason why it shouldn't give the whole story?

A. Because they didn't know at the time what the whole story was.

Q. But there is less on here than is on the autopsy request form, for example. That at least has some of the things which have been established as being involved in her demise.

THE CHAIRMAN: And am I right, doctor, that it also has the illogical jump from viral gastroenteritis to cerebral oedema?

A. It's not --

THE CHAIRMAN: Illogical in the sense that there's at least one or two entries in between?

A. I would agree with you there, yes.

THE CHAIRMAN: So sending that to the GP is a fairly

meaningless exercise?

A. I think probably what had happened is they phoned the GP up as well and they're just filling in bits of the form just to get it completed and out of the way.

MS ANYADIKE-DANES: If you could tell the GP on the phone, why couldn't you record it on the form?

A. I can't answer that. I'm not disagreeing with you.

THE CHAIRMAN: It depends what you're telling them on the phone.

MS ANYADIKE-DANES: Yes. There has been a comment made by the inquiry's expert, Dr MacFaul, that a discharge letter would have been appropriate, and you may recall from the Claire case that there was a discharge letter that went out to the GP. In fact there were two: one that went to the family and one that went to the GP. One consultant wrote to one and one consultant wrote to the other. We have not been able to find any evidence of a discharge letter in that way going out to the GP.

A. I realise that and that --

Q. Would that not have been appropriate?

A. It's wrong not to do that. It's essential, not appropriate, essential.

Q. Thank you. And then I have just very few questions to conclude. Did you regard Lucy's death as being an adverse incident at the time?

A. At the time, on the 13th, when she came in, I didn't know exactly what was going wrong.
Q. At the time of her death, did you regard that as being an adverse incident?
A. At the time I didn't think it was an adverse incident. It was an unexpected and unexplained death to me at the time, but that's changed nowadays, that is not the way things are done. Any unexplained or unexpected death would become an adverse incident, and it would be managed as a serious adverse incident, it would go up to the Health & Social Care Board, the Public Health Authority, and it would be reviewed and regulated from there. These sort of events are treated very, very seriously nowadays.
Q. You have very helpfully attached for us, in your second witness statement, the procedure for an adverse incident reporting form. You also attach, if you just bear with me:
"Clinically-related adverse incidents which should be reported."
Both those documented are dated March 2000. If we go to "Clinically-related adverse incidents which should be reported" and pull up witness statement 292/2, page 54. There we are. Here are the things that should be reported as adverse incidents:

"Unexpected death as a result of treatment or procedure."
That's one of the bullet points. Could Lucy's death not have been termed that?
A. I don't think so because I think what they were alluding to -- my reading of this is that that would be, for example, if you were carrying out, I don't know, some sort of invasive procedure and there was a complication and the patient died or some sort of treatment and the patient died as a consequence of --
Q. She did have treatment. She came in with suspected tummy bug, gastroenteritis, and a few hours later than that, she has collapsed, never to recover. I mean, Dr Chisakuta thought that was unexpected and sudden.
A. It was an unexpected death, but at the time I didn't see -- certainly on the Thursday, I didn't see that as being as a result of the treatment.
Q. If you leave what you thought on the Thursday out of it because you don't necessarily have to be the person that reports it. By the time you got to the fact that none of the clinicians should really have written a death certificate because nobody really knew what had happened to her and, in those circumstances, when she did die should not one of those consultants have actually reported it as an unexpected death as a result of

treatment or procedure?
A. You see, this was just coming in at the time, and I don't think that at that time people would have reported the result of a treatment from elsewhere, to be quite honest with you. I think it would have been -- you would have probably filled it in if had happened in your own hospital.
Q. I beg your pardon, thank you very much. That was going to be my next question to you, which is: if all that happened at the Erne had actually happened in PICU, would you have reported that as an adverse incident?
A. You would have done, yes.
Q. Am I understanding you correctly: the only reason you didn't do that is because it happened in a different hospital?
THE CHAIRMAN: No that's too general. That's suggesting the only reason Dr Crean didn't do that --
MS ANYADIKE-DANES: I didn't mean you personally; it wasn't done.
THE CHAIRMAN: Under the system that was coming in, if anybody was to report Lucy's death as a clinically-related adverse incident, it was to be the Erne, not the Royal?
A. Yes. I would agree with that.
THE CHAIRMAN: How would the Royal know if the Erne had done

that?
A. They wouldn't have known because there wasn't that sort of crossover of information. It's different now because we have people in place and this is their job to do and they will pass that information between each other. Also, at the top, you have got the Public Health Authority, the Health & Social Care Board, and they work together, looking at all these serious adverse incidents. We got reports about serious adverse incidents now and there's an annual report. Most of them, they do do a review of what happened. Some they de-escalate and think, "We don't need to do a review here", but most of them they do.
THE CHAIRMAN: If Lucy died now in 2013 in the equivalent circumstances to 2000, would the Royal complete an adverse incident report?
A. Yes, I think what we would do is fill in an adverse incident report and that would be immediately escalated to a serious adverse incident report, which is a higher level, and that then would be shared with the PHA and the Health & Social Care Board.
THE CHAIRMAN: Would that mean, under the system which prevails today, there would be two serious adverse incident reports, one coming from the Erne and one coming from the Royal?

A. I don't think so. I think what we would probably do is send a copy of ours down to the Erne and let them known we've filled one in and share that information with the Erne. We'd phone them up obviously, and I think a copy of the report that came from the Royal, the person at that level would contact her equivalent person in the Erne and send them a copy of the form.

THE CHAIRMAN: Is that because the forms haven't changed but there has been a change in the way that the system is operated?

A. I think the system has really just got more robust. We're talking 13 years ago. This was a new thing and it was trying to introduce to people a different culture, a no-blame culture, and sharing misadventures that took place so that we could share these and improve safety for patients, and not only for patients, but for staff as well.

MS ANYADIKE-DANES: Yes, but the purpose of having adverse incident reporting is so that these things are investigated, there is an understanding of how they've happened, if something needs to be changed to reduce the incidence of that happening again, then that is instituted and then one evaluates and monitors the change. That's the whole purpose of it.

A. I agree with you.

Q. If you're not going to do that in your hospital because you take a view it didn't happen here, should you at least not satisfy yourself that somebody else is going to do it so that that is investigated and one does get that learning from that incident?

A. You're probably right, but we were in our infancy of what was going on here. We were trying to get people to buy into this process, and I think it took quite a while to get the culture to change, for people to do that. I think the worry for a lot of people was, "If I put my head above the parapet and say about this, they'll shoot me for it", and it was trying to get people to think in a different way.

THE CHAIRMAN: Pause a moment. Who would shoot who?

A. I'm just saying --

THE CHAIRMAN: Sorry, doctor, this is a serious point for me. Who would be regarded in a bad light in 2000 in the Royal for reporting -- or 1995 or 1996, for that matter -- for reporting inadequate treatment which had led to or contributed to a child's death?

A. That maybe was a bad analogy when I was trying to talk about a child's death. But if it was something to do with, say for example, lab reports going missing or something like that there, people might feel, "They're going to blame me if I say there was something wrong

here", because the incident reporting wasn't just about what happened to Lucy.

THE CHAIRMAN: What I'm trying to follow up on is this: there's now a system which you tell me is much more robust and is followed much better and I'm sure the families who are listening to this are desperately anxious to hear that that is so so that lessons are learnt in a way which were perhaps not learnt in the deaths which I am investigating. But does that mean that before the introduction and increasing adherence to this adverse incident reporting system there was, in effect, no system under which deaths of children were reported where lessons could be learnt?

A. Mr Chairman, I'm not an expert on this, but I --

THE CHAIRMAN: You worked through this period that time concerned with.

A. I'm not sure there was at that time either.

THE CHAIRMAN: Okay. If that is the case, then it's fingers crossed as to whether anybody learnt any lessons?

A. I can't disagree with you there. But I do think -- I do have to say that I think there's been a big change in the way things are. I think I might have said earlier today, I can't remember, but people who have been appointed in the last number of years, they don't ever remember a time when this kind of reporting system

wasn't there. If I can reassure anyone that things definitely have changed and there's definitely a different culture out there nowadays.

THE CHAIRMAN: This is moving a little bit away, but it's one of the big issues that I'm concerned about looking forward. What brought about that change?

A. I think there was regulation. I think it was all -- it was -- Gabriel Scally in 1999 came up with the concept of clinical governance within healthcare systems and I think there was a cultural change back there, that things had to change at the highest level, and I think that's when maybe things started moving then. I don't know a lot of the legislation that happened back then, but that's something I remember, the term, the concept, that came into being back then.

THE CHAIRMAN: Thank you.

MS ANYADIKE-DANES: Thank you. There was, so we are told, a mortality meeting in relation to Lucy. There's no record that you attended it. Why is that?

A. I'm not sure. I don't know. If I can maybe tell you a bit about the mortality meetings. What happened, they were a half-day meeting, it was an audit mortality meeting. They would happen every month. They would happen at different times of the week and people would be free to go to those in that their clinics and

operating lists would be cancelled to facilitate that to happen. For example, this year already I've missed two of the meetings, but that's because I ended up in theatre covering emergencies those days. So there is usually a reason why people can't go. If I was in the intensive care unit on a Thursday morning and that meeting happened on the Thursday morning, I probably couldn't go because you saw the sort of things I was doing with Lucy that morning. So there will be occasions when people can't go because they're not free, but if they're not busy doing emergency work, they should be free to attend or they may be on holiday, but if they're at work, they should be able to attend.

Q. What would you have expected to be the outcome of such a meeting into Lucy's death or in relation to Lucy's death?

A. If it was left just the way it has been described on the death certificate, I think people would have been jumping up and down asking all sorts of questions: this doesn't make sense. That's what I would have thought.

Q. The date of it, just to help you with that, is said to be 10 August 2000 --

A. Okay.

Q. -- whereas her death certificate, I think it's 4 or 5 May. So that obviously precedes that. What would

you have expected to be the outcome of that meeting?

THE CHAIRMAN: In other words, if people were jumping up and down because what they were told about Lucy's condition and death and then were told about the death certificate just didn't add up, what's the practical consequence? Do people just walk away saying, "That's all a bit of a mess", or do they actually do something?

A. I have tried to look into where I was that day, so I was able to see the list of people who were on that. And there are some pretty senior people on there. Elaine Hicks, for example, was there and she was the clinical director there and she's not the sort of person who would turn her back on something. So if people looked at this at the time and said, "This doesn't add up or make sense", you would have done something and try to look into this, "There's something not right here ".

MS ANYADIKE-DANES: Could that turn itself into an adverse incident as a result of that?

A. I don't know if you'd do that, but you'd certainly look into it and say, "This doesn't make sense, we haven't got to the bottom of this". If the pathologist wasn't there, "Let's talk to the pathologist", maybe, "Let's take this back to the coroner, this is not right, this doesn't add up for me".

Q. So am I understanding you to say that if a meeting like

that had taken place and assuming that the position was as is recorded on the death certificate, then something more is likely to have happened because the sorts of people who are attending that would have recognised, as you did and others have said, that that simply didn't make sense?

A. That would certainly be my expectation.

MS ANYADIKE-DANES: Thank you. Mr Chairman, that's it.

THE CHAIRMAN: Thank you very much. Mr Quinn, do you have anything?

MR QUINN: No.

THE CHAIRMAN: Before I come to Mr McAlinden, does anyone have any questions?

Doctor, thank you very much for helping us again. Unless there's anything you want to say before you finish that we haven't covered, you're free to leave now.

A. Okay, thank you.

MR QUINN: Mr Chairman, there is one point that I should have covered with my learned friend, which I was going to cover with Ms Anyadike-Danes at the interval, and it's in relation to the make-up of the death certificate, which my solicitor has alerted me to just today. Perhaps if we could have two or three minutes now to go over this with my friend. It may be relevant

to this witness.

THE CHAIRMAN: I won't stop you doing that, Mr Quinn, but the doctor has said this afternoon, when he saw the death certificate, it made no sense to him and he couldn't have issued the death certificate.

MR QUINN: Yes, I realise that.

THE CHAIRMAN: Is there something more than that?

MR QUINN: There is, because I have just been given a blank copy of the death certificate. This matter did arise in Claire's case where on the back of the death certificate you have a portion where you can add to the cause of death at a later stage. It may be relevant that this witness should be asked: was he aware of that and should the death certificate be added to later in relation to what came up at the post-mortem?

THE CHAIRMAN: Or what comes out of the mortality meeting?

MR QUINN: Either of those issues.

THE CHAIRMAN: Are you familiar with that?

MR QUINN: We don't have the reverse of the death certificate in this case.

MS ANYADIKE-DANES: We do. If you give me one minute, Mr Chairman, I'll find it.

THE CHAIRMAN: I'll rise until 3.30. Doctor, we'll finish this single point and you can then add whatever you want to say and we'll go into Dr Taylor's evidence.

I understand Ms Anyadike-Danes is confident we can get Dr Taylor finished today.

(3.18 pm)

(A short break)

(3.32 pm)

MS ANYADIKE-DANES: Dr Crean, there is only one point, and I wonder if I could pull up 319-055-002. This is the counterfoil to the death certificate. Just as my learned friend Mr Quinn said, there is a place where you can indicate whether you can offer further information. Dr Dara completed this or signed it. His view was that putting "yes" there really meant that he was available if there were any queries or anybody wanted to ask anything more that -- so it's a passive thing, really, not suggesting that should any further information come, that that would be sent off. That's how he interpreted it. Do you yourself have much experience in completing death certificates?

A. I have done a bit years ago. It was quite a long time ago.

Q. At the time you were doing it, did it have this format as well that you could indicate further information?

A. I can't remember, but it's something maybe we touched on just before --

Q. In Claire, yes.

A. Just generally about death certificates, that if you felt, if you ... You have to be able to fill in the death certificate on death. You have to know what it is, but there are occasions when you would get a hospital post-mortem done as well to learn or there may be other things that have come out of that. So say, for example, something did come out of that, then you could put -- I thought then you could put the information on this section as the further information that you would add to it.

Q. Does that mean if something had come out in whichever of these fora we've discussed, the mortality meeting or the receipt of the autopsy report, if something had come out, by indicating "yes" there, do you understand that to mean that would then be provided and that could perhaps lead to a change in the death certificate?

A. Possibly, yes. That's the way I would read that.

MS ANYADIKE-DANES: Thank you very much indeed.

THE CHAIRMAN: Mr McAlinden, do you have any questions?

MS ANYADIKE-DANES: I beg your pardon, there's one thing.

When I was putting to you the procedure for adverse incident reporting and I had mentioned to you that that form, also with the "Clinically-related adverse incidents which should be reported", both those forms are dated March 2000. What I hadn't drawn attention to,

and I'm sorry about that, is that there is the Trust policy, which is TP9/00, and is signed off by Mr McKee. And if we can pull these pages up side by side. 292/2, page 45 and 46, side by side. It's really for clarification, Mr Chairman.

You'll see this is the policy signed off by Mr McKee as the chief executive. He's dated it May 2000 and what it is including is the documents that we've just been looking at. So it may be that those documents were not intended to be in use until Mr McKee provided them under cover of the adverse incident reporting policy of May 2000. So that's something we'll need to explore, but it's possible that although the documents had been created before Lucy's death, that they weren't intended for use until May or some time after her death.

A. I just tried to find a lot of the documentation for the questions when I was responding to them. I have to say I wasn't exactly clear about that issue either.

Q. We'll try and see if we can clarify that with the Trust, but in any event I think your answer to the chairman might be that until this policy was rolled out, I think was the expression that you used in your witness statement, there really wasn't very much in terms of formalised adverse incident reporting; would that capture your evidence?

A. I think so, yes.

MS ANYADIKE-DANES: Thank you very much indeed.

THE CHAIRMAN: Dr Crean, I think before the break, did I understand that you wanted to say something further before you left? You don't have to. It's a matter for you entirely.

A. It's kind of hard, but can I say something to the families at this stage? Is that okay to do that?

THE CHAIRMAN: Yes.

A. I think I'm the oldest person left working in the Children's Hospital now, and I've been around a while. I know I looked after Adam and you heard today that I looked after Lucy. I know Raychel's mum and dad are here today and I was there with them when Raychel passed away.

Friends of ours, about 10 years ago, they lost their son, it was an accidental death, and it's the worst thing I've ever seen, it was just absolutely terrible, and they've tried to get through it the best they can, and it's just been devastating. It's changed their life completely. There's not a day goes by that they don't remember him. They're still trying to keep him alive for their grandchildren now. So I can't imagine what it's like for these families, but I'd just like to extend my sympathies for the families whose children are

included in this inquiry, Mr Chairman.

THE CHAIRMAN: Thank you very much, doctor.

(The witness withdrew)

DR ROBERT TAYLOR (called)

Questions from MS ANYADIKE-DANES

MS ANYADIKE-DANES: Good afternoon, Dr Taylor.

A. Good afternoon.

Q. Dr Taylor, we've been through your CV previously, so I'm not going to go through it, apart from to highlight some points that are relevant to what I am going to ask you here today. The reference for your CV is 306-019-001 and then I should like to ask you if, subject to the evidence that you give here this afternoon, whether you adopt your inquiry witness statements? For the record I'll read out what they are. They're the series 280, the first is dated 2 November 2012, and the second is dated 15 January 2013; do you adopt those?

A. Yes.

Q. And before you prepared those witness statements and indeed before you came this afternoon to give your evidence, with the exception of your legal team, have you discussed your evidence with anybody or the circumstances of Lucy's case with anybody?

A. With my family and with Professor Michael Shields, who I had occasion to contact about the -- he handed over

mortality, if you remember, from -- previous audit facilitator to me. And after I read Dr MacFaul's statement, I had reason to contact Professor Shields to ensure that my understanding of the handover and of the recording of the mortality was accurate to previous evidence I have given and evidence I would like to rely on for this element of the inquiry.

Q. I understand.

A. Apart from that, nobody else.

Q. You also are a member of the Paediatric Intensive Care Society.

A. Yes.

Q. And how long have you been a member of that society?

A. I think, like Dr Crean, I was there for the very first meeting at the Institute for Child Health in Great Ormond Street in 1988, just before I went to Toronto.

Q. And you also were lead clinician and director of the paediatric intensive care from 1997 to 2000; is that correct?

A. Yes.

Q. Just for reference purposes, but not to be pulled up, it's 306-019-011. And you were a member of the clinical audit committee from 1997 to 2006 and its chairman from 2003 to 2006; is that correct?

A. That's correct.

Q. So you were a member, but not chairman, at the time when Lucy died?

A. That's correct.

Q. Thank you. And for that matter, a member at the time when Raychel died.

A. Yes.

Q. If I may quickly ask you, because you're lead clinician and director of PICU just after Claire's death, probably in the year when the post-mortem report would be coming back and then possibly coming up to -- if not exactly, but very close to, depending on when in 2000 you stopped -- when Lucy died, what did lead clinician and director of PICU mean to you?

A. It meant attending meetings, it meant meeting with the senior nurses in the intensive care, the sisters, to ensure that we weren't -- that the medical staff were communicating well with all the nurses, that we weren't expecting -- we were expecting the degree of nursing care that we would expect and they would expect the degree of medical care that they would expect. A lot of the time was meeting about the junior medical staff of PICU, the trainees who were attached through the paediatric training committee, and I do recall part of my time there negotiating with the postgraduate council to get a fellow in PICU. So this is instead of the

trainees coming for three months and just when you are beginning to get them utilised, to knowing how the protocols work, how the ventilator works, how you could actually trust them to look after the ICU every night and allow yourself to go home to get some sleep. That does require a degree of trust with people who were only in for a few months. So I was very keen, as were my colleagues, I hasten to say, that we could get somebody for a full year, and I successfully negotiated the various strands of the medical education system and the paediatric SAC letters to encourage manpower planning, so that not only could we have somebody, I suppose, being selfish, that would provide a service for us, to let us sleep more peacefully at night and our patients to be safer, primarily, but also that person would be seen as a future consultant that we could train up and meet this, what you have heard about, difficulty in recruiting and retaining paediatric intensivists and paediatric anaesthetists. And that was something that was going on in England, that fellows, longer-term trainees were encouraged to spend time if they were interested in paediatric intensive care so they would be fruit for the future.

Q. I can see from what you have said, and for that matter from what Dr McKaigue said when he gave his evidence,

that that whole utilisation of resources was quite an important issue for the person in your position to try and manage?

A. Yes.

Q. When you mentioned communication there and you were doing it in the context of between the nurses and the doctors, to some extent in the questions that I was putting to Dr Crean today, one might think it was important to ensure that there was adequate communication between the clinicians actually to make sure that people knew who had the primary responsibility for the child's care.

A. Yes.

Q. And that they shared their ideas where the actual cause of a child's problem wasn't immediately apparent. Did you have any role in trying to facilitate that or to see how that might be better improved?

A. Yes. During my time as the lead clinician in PICU, we developed a problem at the PICS meeting, the UK Paediatric Intensive Care meeting. I spoke to colleagues about, and that was children, long-term ventilated children, children there for 3, 6 months a year. And they were capable of being looked after outside intensive care, they were on what we call home ventilators, so they didn't need all the technology and

the bells and whistles that needed intensive care, but they could for their own neurodevelopmental well-being and for families' well-being -- families were coming quite long distances across the Province to visit them every day and some of the communications with different doctors every day was difficult.

So what one of us would do is take on a lead role with that family and that child so that we could work through with the paediatrician who also developed a lead role and one of my major challenges -- and I have to say, it was successfully concluded -- was to develop protocols, guidelines, training, care pathways to allow these children to transition out of PICU to the wards and actually to community care.

The savings were of the order -- I think I did a calculation at that time that these children were costing, in terms of resources, £1,600 per day in PICU and the community would be about £100 a day, so there was a major element of resource issues. There was also the difficulty that five of them were occupying most of the PICU beds, so that made PICU beds unavailable for children who perhaps could benefit from that, and also the most important thing, rather than cost and resources, is the families wanted to have these children in their home. And I knew from English and Scottish --

York Hill and Glasgow, had a very well-developed package for long-term ventilated infants and children and I in fact -- one of the developments was to get two of the leads, the nurse and the doctor, who led their long-term ventilation patient group over to Belfast. We arranged a conference and I would say within days of that conference we had community services, hospital services, and departmental level starting to agree that these children will be better managed in their home environment, in the community environment, and that's a successful --

THE CHAIRMAN: Did you have 12 beds in PICU; is that right?

A. No, six.

THE CHAIRMAN: So this meant that five out of six were regularly occupied?

A. It was a constant form of pressure, not only between doctors and nurses within the unit, but I would also say with doctors in the DGHs when they phoned up at night to say they wanted a patient to be admitted under emergency circumstances, there would be occasions when we would have to say that we were full and the child would have to go to Dublin or another intensive care.

MS ANYADIKE-DANES: If I just ask you about some of the other things you might have been able to achieve in that role. I'm not suggesting whether you should have, but

what that role gave you a possibility to do, if I can put it that way, is the Paediatric Intensive Care Society produced standards and you've told us about the development of protocols and so forth, admittedly for a particular purpose.

A. Yes.

Q. But I wonder, being an active member of it, whether you sought to see which of those standards might usefully be introduced into the Children's Hospital.

A. Yes.

Q. You know the document I mean.

A. Absolutely.

Q. For reference it is 315-015-001.

A. I find the document very useful -- I'm trying to think of a diplomatic term -- but to encourage the management of the Trust, who were cutting resources by 2, 3, 4 per cent per year to actually spend money to save money and, for instance, things were -- technology was increasing, guidelines were introduced. One of the guidelines, I think I showed earlier, was dose calculators, dosages for reducing drug errors in intensive care. This was a common occurrence. It's now a less-common occurrence and is now the subject of major incident, adverse incident reporting. But one of the things I developed was a dose calculator, it was

a little bit of complicated maths, but you typed in the child's body weight and the printer churned out an A4 page with all the drugs calculated to that patient's body weight, and that included dangerous infusions such as adrenaline, noradrenaline, dopamine and so on. That's something I also, through the Sick Child Liaison Group, which I'm sure you'll enquire of me, I shared with doctors who were looking for such a resource for their hospital units and it ran on a disc, it ran on a spreadsheet, so it was compatible with most computer systems. That was one of the standards that was recommended. Just an example of one of them that we tried to meet that quite aspirational document Dr Crean called it.

A lot of those recommendations and standards did require a fairly major investment of resource and, like Dr Crean said, resource was not easy to achieve in the 1990s or 2000s, or even today.

Q. But in terms of some of your work, I think you were telling the chairman that some of those protocols would actually enable cost savings.

A. Well, I certainly felt, and as I say, I did a back-of-an-envelope calculation to say that if children were discharged from ICU who did not need to be in intensive care, in fact they could have been

emotionally, physically and psychologically better in the home environment, and if that could save the poor taxpayer money as well, surely that would be a no-brainer. But that took more than just the calculation argument to do; it took a lot of work with community teams.

Q. The section 2 of that standard, which was thought to be a new section, dealt with the standards of practice for the transportation of the critically-ill child, which turned out to be quite an important thing insofar as the development of paediatric intensive care services was -- so far as I understand it, the idea was that these specialisms that you had in the lead centre, or the regional centre as the children's hospital would be, that would extend back into the referring hospital and try and ensure that that degree of expertise was brought to bear before the child was actually transferred or at least if they couldn't go out and do it, that guidance was given to the referring hospital to try and make sure that the child came in the best possible state to enable the specialist equipment and expertise to give that child the best chance of survival or quality of life when admitted to PICU. That seems to be the idea behind the transport services. And I noted from your CV that you were on actually a group looking at that very thing.

If one looks at it in your CV, you were on the working party for neonatal and paediatric transport SAC, which is a special advisory committee, paediatrics, in 1995. Just for reference purposes, 306-019-011.

And if I pull this up, maybe Dr Taylor, you can help us with this, there's a minute of a meeting on 12 November 1996, so that's not so far after that paediatric intensive care section 2 came out. The reference for that is 320-050-001.

It's not coming up, okay. This is the minutes of the meeting of the specialty advisory committee, paediatrics, held on 12 November 1996, and that's a meeting at which the CMO would chair, am I right in that?

A. I don't think she chaired the working party.

Q. No, the minutes of the meeting, not the working party.

A. Sorry?

Q. She would chair that meeting?

A. I presume so.

Q. Yes. And then when we finally do get this up and running, I will give you the reference for the actual place where your work is discussed, it's 320-050-003. And it's headed up in the minutes:

"Paediatric intensive care transfer arrangements."

And:

"Professor Halliday tabled a paper which he had prepared with Dr Bob Taylor, which examined the need for and problems associated with the transportation of ill neonates and children. Dr Jenkins, also present, pointed out that present services were based on inadequate transport facilities. There was a need to develop a dedicated regional retrieval service as existed in some regions of the UK."

And:

"Dr Trevor Brown stressed that this issue should be considered a clinical priority."

So you had prepared a paper for that; is that correct?

A. I can't remember from that time, sorry.

Q. Do you remember the issue that you were dealing with?

A. Of course. It's still present today.

Q. Yes. And then what I wanted to ask you about is, apart from being able to provide guidance to the transferring hospital, did you also seek to ensure that the child came with all relevant -- not necessarily all, but the relevant notes, charts, X-rays and so forth to put the receiving hospital in the best position to treat?

A. Yes.

Q. Thank you. There was another document then that came out, and it's "Paediatric intensive care: a framework

for the future". You'll remember that.
A. Yes.
Q. The reference for that is 315-016-001. And was that a development of the idea of trying to develop specialisms around intensive care and also some consistency as to how those services were to be provided?
A. Yes. This was the Troop report. Pat Troop, deputy CMO, had a public inquiry. This was a result of the public inquiry into the death of Nicholas Geldard, who was a child who died in England, being transported between hospitals in the north-west of England, and is a tragedy that happened. There was a public inquiry, and the Trip report looked at the centralisation rather than regionalisation of children's intensive care services and discussed the need for children not to be looked after in adult intensive cares. It proposed a smaller number of larger paediatric intensive care units throughout England and Wales. It didn't apply to Northern Ireland. I believe this was written for England and Wales, but I was very keen that the managers and the senior people in the Royal Belfast Hospital for Sick Children would look at this in the light of the need: why should Northern Ireland have a lower standard than that which would have been needed for the rest of

the UK?
Q. Is that not in the what happened, that although it related to England, some of those recommendations were nonetheless taken up in Scotland, Wales and by the Children's Hospital?
A. We would have tried to aspire to these standards and the workload and the issues that came through this document because it was the matter of a public inquiry.
Q. If I pull up just two pages to put side by side, 315-016-049 and alongside of that, admittedly out of order, 315-016-054. Paragraph 94 says:
"A coordinating group recommends that protocols should be developed setting out which types of care for critically-ill children can be provided in which hospitals within the area and when the transfer of children should take place."
So that is very much part of what you had been thinking about before. And then if we look to the other side, the second bullet:
"The lead centre should assist in assessing training needs across the geographical area in consultation with the professional staff involved."
And under "Audit and research", it refers to:
"... requiring interaction between the health authorities and hospitals within each defined area and,

so far as clinical audit is concerned, some wider comparisons to ensure that the highest possible standards are being achieved and maintained."
Within the terminology of this report, that lead centre, that was going to be the Children's Hospital?
A. I would imagine, yes.
Q. Yes. And then shortly after that, a few years after, you see 093-035-110n, this is a memo dated 9 February 1999, all this, of course, pre-dating the transfer of Lucy and Raychel. You refer to:
"... the clinical implications and implementation of the recent 'Framework for the future' document [that was the one we've just been looking at] for paediatric ICU. In particular, I would like to consult widely on agreed guidelines for admission, initial management and transfer of critically-ill infants and children."
And then you are trying to set up a meeting to do that thing, and there's a series of people that you CC on that or are targeting, and you can see those from Altnagelvin. There's Dr Corrigan, consultant paediatrician from Altnagelvin. Did matters progress from there and, if they did, where had they reached by the time of Lucy's transfer and Raychel's?
A. This was the embryonic first letter that went out from the Sick Child Liaison Group.

Q. This turned into the Sick Child Liaison Group?
A. I think at our first meeting we said we -- if you look at the top left hand corner, it says "SCLG", which is an abbreviation for Sick Child Liaison Group, so I think the clinicians attending said the title of "Clinicians with an interest in the care of the critically-ill child" was a bit unwieldy and they thought it should be the Sick Child Liaison Group. It was suggested by others and I adopted it.
Q. I'm going to ask you about that in a little minute. But in any event -- because I want to come back more specifically to other things you were doing in the Sick Child Liaison Group -- did you actually progress towards reaching any standards, protocols, in relation to the transfer of children?
A. Yes, and I think they've already been sent in previous statements to the inquiry.
Q. I see.
A. One was a meningococcal guideline for Northern Ireland and --
Q. Yes, I saw that.
A. -- one was a bronchiolitis guideline and one was a --
Q. Sorry?
A. A bronchiolitis, "Care of the child with bronchiolitis". And I think another one was -- the nurses' benchmarking

group asked us to ratify a document that they had produced, which was a transfer checklist, transfer sheet, which we were happy to do.

Q. In light of the work you were doing and what you were trying to achieve, if one looks at Lucy's case particularly, what would you have expected her to be transferred with if I can put it that way?

A. Well, at the moment -- in the context of 2000, there was no retrieval service. We were the only Children's Hospital in the UK -- and still are -- without a 24/7 dedicated paediatric retrieval team. Northern Ireland is the only service. The Republic of Ireland doesn't have a 24/7 paediatric retrieval service either. Every other hospital in the UK has a paediatric intensive care retrieval team who will go out, assist with the resuscitation and management, initial management of a patient, and decide whether to retrieve that patient to PICU or to perhaps not retrieve that child.

Q. In the absence of that, without having a system where you could physically go out, is there any way that you can do the best you can by offering guidance and having perhaps a more detailed conversation over the phone that you might otherwise have?

A. Exactly, and therefore to continue from my last point,

it would be incumbent upon an anaesthetist and/or paediatrician or both to resuscitate and manage the patient, and we would always have been, as a group -- and certainly I as an individual would always have been sympathetic to that person. We may have done very little paediatric management to assist them with the choice of drugs, with the dose of drugs, which I've already alluded to, and I would certainly say if they had difficulty calculating the dose in drugs in children, there's a reckoner calculator that we can send them. So we would have opened our communication line for them to tell us how the child was, what drugs we would recommend that they give, what fluids we would recommend they give -- obviously that's the relevant bit you're interested in -- and even down to who should accompany the child.

Q. Is that a service that you would have been offering in April 2000?

A. Well, absolutely. I think all the intensivists -- we were busy people, but our phones were constantly ringing and I have to say that I would have received much fewer calls for help than perhaps there should have been.

Q. Is that because the fact that you offered that kind of service wasn't particularly well-known?

A. No, everybody knew that there was a paediatric anaesthetist in the Royal 24/7, who was available at the end of a phone or the unit, the PICU, would have no hesitation, I can tell you, in giving them my home phone number. Those were the days before mobile phones. But certainly I would have had a phone call beside my bed any hour of the day or night from a concerned anaesthetist or paediatrician.

Q. Then was there a bit of a culture perhaps that had to be got over with people maybe being reluctant to not exactly seek help, but discuss in that way with the regional centre, with the suggestion that maybe in some way they can't manage their own patient themselves; could that have been an element in the reluctance?

A. I can't comment on that. You'd obviously have to ask the doctors out there. I certainly would have a very good relationship with doctors and they would have never been discouraged from phoning me at any time of day or night. I don't know the reasons why they would fail to lift the phone.

THE CHAIRMAN: Okay.

MS ANYADIKE-DANES: Thank you.

Then on that theme of maybe disseminating learning, giving guidance and so forth, just making use of the resource of your expertise at the Children's Hospital,

in your first witness statement in relation to Adam, the reference for it is 008/1, page 9, the first substantive paragraph talks about the Sick Child Liaison Group, it's the penultimate paragraph that I want to draw your attention to:

"From 1991, I met twice a year with other consultants in paediatric intensive care at organised conferences of the UK Paediatric Intensive Care Society. At these conferences fluid management of critically-ill children was discussed on several occasions. At a meeting in Great Ormond Street in October 1999 a whole session was devoted to the subject of the optimum fluid for such children."

And I'm going to put to you a question which I put to Dr Crean. When you had the benefit of meeting with those sorts of people who were also experts in their own fields and received that kind of information, what was the mechanism by which that could get translated into practice if that's what you thought was appropriate at the Children's Hospital when you came back?

A. Well, some of my colleagues would go to the APA, the Association of Paediatric Anaesthetists, someone had to stay at home and hold the fort. I tended to be the one who missed out on the APA meetings, but the recompense was to go to the PICS meetings, so I ended up

choosing or following the PICS line, but maintained my anaesthesia CPD as well as PICS. So we would have various meeting, either informally in the coffee room or formally where I would feed back information.

Now, before 1999, the major fluid controversy was the use of albumin versus saline and there was a major fuss about a Cochrane review about albumin versus saline and it concluded that albumin increased the mortality of children significantly over normal saline. This was a very hot topic. Roberts, who wrote the paper, was brought in front of the PICS meeting and was given a fairly torrid time about choosing the meta-analysis and some of the papers he chose were not deemed to be academically correct. The whole idea of albumin being an unsafe fluid compared to saline was really rejected by the consensus at that meeting and I brought that back and said to my colleagues that, "Guys, no matter what you read, the consensus is that albumin is still a safe fluid to use, that's what other intensive care doctors are using and that's what, if you want to use -- and there's since been a major study called "The safe study: saline versus albumin for infusion", and that concluded -- a big study that concluded that albumin was as safe as saline for fluid resuscitation.

Q. I don't know if you got to see Dr Chisakuta's paper that

he presented in September 1998.

A. Yes.

Q. In fact, immediately after the section where he deals with hypotonic fluids, he also deals with a paper that was published in the BMJ in 1998, which is exactly that, "Human albumin therapy during resuscitation of a child", and he's got that under that same section of controversies; were you aware of that?

A. Yes, that was the biggest fluid controversy at the time.

Q. If you then wanted to, in some way, introduce or make use of the concerns that were being expressed in relation to low-sodium fluids, or at least, rather, the risks they presented, if I can put it that way, how did that feature in the practice at the Children's Hospital?

A. I think that anaesthetists of all -- whether paediatric or adult -- were philosophically used to giving balanced salt solutions intraoperatively. We all trained in adult anaesthesia before we developed into paediatric anaesthetists. So the anaesthetists came from a background of people who would use a balanced isotonic salt solution. On the other side, paediatricians went straight into paediatrics, tended to go straight into paediatrics after their houseman's year and they were philosophically programmed, if you like, to see No. 18

as the safe and reliable fluid for children. So there were two philosophical beasts. They came together in the Children's Hospital and there was respect given to each side prior to the death of Raychel, certainly, and I think, although there was an evolving situation, I would say prior to the death of Raychel, where perhaps hypotonic fluids were being seen as not as safe as they should be. That's just my impression.

Q. We've asked a similar question to the witnesses that we've had so far in this part of the hearing, and Dr Chisakuta, for example, said that he had actually tailed off his use or his prescription of Solution No. 18 pretty much by the time he returned back from Great Ormond Street and Altnagelvin to work in the Children's Hospital and I think Dr Stewart is not entirely sure when she started to reduce, but it wouldn't have been so far away, round about 2000, something of that sort, I think maybe early 2000.

What we were trying to find out is whether any of you could help with a statement and a letter that Dr Nesbitt produced, which, if you were here this morning you would have heard me refer to Dr Crean, and you may have already seen the statement and the letter Dr Nesbitt produced. The upshot of it was that he was of the view that he was being told that the Children's

Hospital, some six months or so before Raychel's death, had actually stopped using Solution No. 18. And not only that, which he said Altnagelvin didn't know about, but not only that, but some other anaesthetists in other hospitals -- and he mentioned in particular Craigavon -- had sought to do that, although with not entire success, but nonetheless the feeling was there was a mood of change in relation to the use of low-sodium fluids.

We weren't able to actually pin down when that happened or see the evidence of it until we got a chart showing the supply of Solution No. 18 to the Children's Hospital from the pharmacy. If I just pull that up and very quickly see if you can help us with it. 319-087c-003. You can see the tail-off and you will have heard the evidence in relation to that, certainly today. Dr Crean wasn't really able to help us with that. Can you help us with why there should be a tail-off that starts just before, really, Raychel's death, which might fit in with the idea of a reduction six months previous? Can you help with that?

A. I can't explain those figures.

Q. The other thing that Dr Nesbitt said is that that change had been prompted by two things. He said one, in his letter to his medical director, was several deaths. Obviously we're going to ask, but at this stage it's not

quite clear when those deaths were happening, but that is put as the trigger for it. The other, which he says in his PSNI statement, is a concern about low-sodium fluids, perhaps the risks they pose. Were you aware of any deaths in or around this time in which Solution No. 18 might be implicated?

A. No.

Q. If there had been something like that, would you have been aware of it?

A. Yes.

Q. For this tail-off in use, if I can put it that way, to happen, what in your experience would have had to happen in the hospital to produce that reduction in use?

A. Well, I didn't know much -- most of the No. 18 would have been used on the wards, the medical wards, I presume, and there is a blip each winter, and that reflects the fact that infectious diseases are more common in the winter months. I would certainly see a blip in the winter months. I think this is too short a graph to get a full picture for the prescribing. There perhaps was a worry -- I remember at the millennium bug around December 1999/January 2000, and there was a panic situation going on where people might want to stockpile -- people were predicting all sorts of end-of-the-world scenarios and ordering may not happen,

and the shelf life of No. 18 is three years, I believe, in boxes.

Looking at this graph does not give a very accurate picture of the actual numbers of bags prescribed to children. It doesn't take account, for instance, of wastage. My sister is a ward sister in the children's ward in Musgrave Park Hospital and she says that if she opens a box with maybe 10 bags in it, the pharmacy refuse to take the whole box back because it has been tampered with. That's just information I happen to know because of my sister's situation.

So I don't know how to interpret these figures, I don't remember any point in time, as I've said in my previous written statement, at which I or anybody else was told to stop using No. 18. It is still available in our hospital, as I've written in my answer, in strictly controlled and carefully monitored situations.

Q. I think it is recognised that there are some conditions for which it is appropriate to have it and to administer it. What I was wondering is: in that earlier witness statement that you provided, in relation to Adam's case, and you talked about the papers that were being circulated around about optimum fluids and so forth, is it possible that doctors, leaving aside any formal policy from the Children's Hospital, simply began to

reduce their use of it in response to the emerging literature, if I can put it that way?

A. I don't know what papers you mean that I circulated.

Q. Well, sorry, you've referred to going to the Paediatric Intensive Care meeting -- particularly the one in Great Ormond Street in October 1999 -- where you say a whole session was devoted to the subject of optimum fluids for such children and you refer to Dr Bohn publishing several papers on hyponatraemia and speaking at that meeting.

A. Yes.

Q. So is it possible that as the information percolates, if I can put it like that, from the increasing literature on the subject of low sodium, the incidence of hyponatraemia and so on, that people start to adjust their practice and use of it?

A. I can't disagree with that.

Q. Then if I can ask you about the Sick Child Liaison Group.

A. Yes.

Q. In that same witness statement, you say -- we can pull it back up so you have the benefit of it, 008/1, page 9. You don't actually say when it was founded, although you have said that the memorandum you sent out was a sort of precursor to it. Do you know when it was

actually established?

A. I think it was around about that time. Because I think on that statement there was a choice of dates for consultants to meet, so it would have been the date -- one of those three dates, I would imagine, would have been the first meeting.

Q. Thank you. Then you say its purpose was:

"To improve the quality of care to critically-ill children being transferred to paediatric ICU mainly by better communication."

And that you chaired those minutes. And then you have talked about the guidelines you provided or that were produced, and one of them included advice on fluid management of children presenting with meningococcal disease. You have also provided a minute of one of the meetings on 26 June 2001. It's at 093-035-110o. Then you refer to the transport of critically-ill child guidelines, so that looks like you have actually developed a guideline at that stage.

A. Can I just correct you there? This is a product of the Paediatric Benchmark Nurses' Project. So it was not developed, I think as I've already clarified, in my previous written answer, to that question. This was not developed by the Sick Child Liaison Group; it was brought to that group for adaptation or for comment, and

the nurses who developed the Paediatric Benchmarking Group were keen that -- they'd heard about my group and they were keen that consultants in the big four hospitals --

Q. And was it adapted?

A. It was adapted, yes.

Q. Thank you. Under the chairman's business, you see:

"Hyponatraemia. BT [that is you] presented several papers which indicated the potential problems with the use of hypotonic fluids in children."

Can I ask you which papers you presented?

A. I think it was the paper by Bohn & Arieff and Halberthal, I think. I think they were the major papers at the time, but I don't have a copy of the actual papers I presented. They would have been the papers that would have been in publication at that time.

Q. This seems to have been a forum where you could do that, and I wonder whether you had thought of doing something similar earlier, given the research, the published research that was already out there by Arieff, some of which was new to people. For example his 1992 paper was new, and his 1998 paper prompted Dr Chisakuta to include that in his presentation. Had you thought that the issue of the use of hypotonic fluids was sufficiently important to try and get some earlier dissemination of

that?

A. If I had thought, I would have used this as a forum to communicate that, but if you look at the date on this, I believe this was following the death of Raychel Ferguson.

Q. Yes.

A. And this was, I believe, the first time that this group had considered that hyponatraemia and the use of hypotonic fluids was a problem in children.

Q. Well, this meeting is dated 26 June 2001, but the other dates that were being canvassed for what turned out to be the meeting of the Sick Children's Group was -- they were all March dates, but they all seem to be in 2000.

A. Yes.

Q. So the previous year. And I'm wondering why you didn't think to do it earlier and why you waited, if you like, for the 2001 paper and, indeed, for that matter, for Raychel's death, because that 2001 paper preceded Raychel's death?

THE CHAIRMAN: I don't think it's quite fair to Dr Taylor to say that he waited for Raychel's death.

MS ANYADIKE-DANES: I beg your pardon, doctor, I didn't mean that you waited for Raychel's death, but it was Raychel's death, as I think you have just said, that prompted you to discuss this. What I'm trying to ask

you is why you weren't prompted earlier to do it?

A. I believe, looking back through our work in the Sick Child Liaison Group, that our priority before this date and after the meeting was with the meningococcal guidelines. I believe I've already answered questions to say that deemed, through mortality reviews, to be a major problem in that era before the paediatric vaccination programme started to reduce the deaths from meningococcal disease. So I believe our work in that first year of meeting was primarily to produce an agreed guideline on meningococcal disease in Northern Ireland and that was successfully concluded by that group.

Q. Does that mean that this group could be a forum for looking at things that came out of mortality meetings?

A. Well, the meningococcal certainly was seen to be, and I recall it being a major concern to make sure that the child who presented with severe meningococcal disease was optimally treated the whole way through their journey.

Q. Yes. If I move on from there and come to the circumstances of Lucy's actual care. I want to put something to you to see if you can help us with it. Your counsel has already given an indication, but just to confirm matters. 061-039-125. That is a chronology of care that was produced by the Trust to assist the

inquiry in the events that occurred and who was involved in those events. And if you see alongside 13 April 2000, your name is included as indicating that fluids were prescribed by you to Lucy.

A. Yes, I see that.

Q. I can pull up the chart which is said to provide the evidence of that, 061-002-004. If you see the line from 7, it's a prescription, 500 ml, and then under "prescribed by (signature)", that, I think, is where the Trust got its information. Can you help with us that?

A. It's not my writing and it's not my signature. I can't help you decipher who it is, I'm afraid.

Q. Thank you very much. I think Dr Crean and others have said that one of the ways you know who the consultant paediatric anaesthetist, in relation to the treatment of a child, is because they have certain designated days. So for example, Dr Chisakuta is on duty on the Friday, Dr Crean was on duty on the Thursday. Do you have a designated day for being on duty in PICU?

A. At that time I did. Monday.

Q. Monday would be your day? Thank you. And just to complete that, did anybody ask you about that intravenous fluid prescription sheet before that chronology was drawn up?

A. Not that I can recall.

Q. Thank you. I wonder if I can ask you about audit now.
You were, as I think you've already agreed, a member of the clinical audit committee at the relevant time, if I can put it that way, for Lucy --
A. Yes.
Q. -- 1997 to 2006. In your witness statement for the inquiry, 283/1, page 12, you have said that:
"The goal of these meetings was to discuss every child's death for learning purposes amongst the clinicians present."
And then you say you go on to say, regarding a review of Lucy's death:
"It would have been my expectation that her death was presented and discussed at one of the monthly mortality meetings, which were part of the clinical audit meeting, and this would have involved a presentation by her named consultant and the pathologist, if a post-mortem was done, followed by a discussion by the clinicians present."
And you can't recall what, if any, conclusions were reached.
If I pause there, maybe you can help clarify something. The mortality meetings you've described are part of the clinical audit meetings. Can you help by explaining what the two sorts of meetings are doing, if

I can put it that way?
A. I did explain this with Claire Roberts in her governance statements, so my answers in that transcript I have reviewed and I have no addition to make to that, but --
Q. I understand you wanted to do again in the light of Dr MacFaul's --
A. Clinical audit is a process of looking at one's practice, one's outcomes, compared to a preset national standard. So for instance, with the current hyponatraemia guidelines issued by the NPSA and the Northern Ireland Department of Health, every guideline should come with an audit tool and this one does. It means that there are audit triggers issued alongside on the laminated form in all the clinical areas of a children's hospital. With the Northern Ireland Prevention of Hyponatraemia guideline, there are triggers that should initiate a serious incident report, and there is a need to audit one's compliance with the standards set out in a guideline. So now, to my knowledge, all good guidelines must be produced, or all good standards documents, such as this standard, must be produced with an audit tool.
Q. Does that mean if you don't comply with some element of the guidelines then you have to initiate a report?
A. That's correct, and in -- I checked it recently,

although don't quote me, but there are triggers for a patient with a sodium of below 130, I believe. That is an automatic trigger in Northern Ireland for an adverse incident -- or sometimes it's called an IR1 form -- to be completed by the clinician who does that blood test or who's notified by that blood test.
There's also an adverse incident to be reported if a sodium solution is given with a sodium less than 130 millimoles per litre. Again, don't quote me -- it's quite difficult to remember, that's why it's on a sheet, so that one can then look it up and then one must -- that guides one's reporting mechanism.
That's not really clinical audit, but adverse incidents is part of governance, clinical audit is part of governance, my role as audit facilitator included an element of governance. A clinical audit is where one compares one's practice this month, a snapshot, if you like, of one's practice against a preset guideline. So one would look at the hyponatraemia guideline and say no child should have a sodium solution running of less than 130, so one would compare one's practice for that week, that month, depending on the numbers, and conclude that one was 98, 99 or, I would imagine, 100 per cent compliant with that preset standard. That's the clinical audit process.

Q. When you're doing that, does that mean, depending on what periodic interval you choose -- let's do it weekly or whatever -- does that mean you gather in all the children's notes for that week to see whether any child had a result back with a serum sodium level of less than whatever it is that creates the trigger and then you compare and see whether a report exists for that incident; is that what you're doing?
A. That's correct, but can I just improve your methodology by saying instead of looking back over last week's notes, one would make out a pro forma and look at the current prospective notes? But it's absolutely correct, one would look at current practice, mostly prospectively -- doctors don't like retrospective analysis because one can miss certain things, as we know, but one would look as much as possible to look prospectively over this current week or current month at how one is complying with a guideline. That's a good audit.
One then looks to see if one's deficient at achieving that standard, inserts an action plan where one wants to come up to that standard and re-audits. The big thing I was teaching as audit co-ordinator was: don't stop your audit, just as you've said, by doing a snapshot of your practice; look to improve through the

audit cycle or, as I was fond of saying, the audit spiral, and come back continuously to look at a re-audit of one's practice, re-action plan it, and make it better so that one increased the quality of care to one's patients. That's the audit process as I understood it.

Q. If there's a deficiency and there's a plan then for how to address that, then you audit the plan as well as the continuing --

A. You audit the practice after the plan has been instituted.

Q. Thank you. So that's clinical audit --

A. But mortality is not --

Q. We're going to come to that. Is that what you were doing in the clinical audit committee?

A. The clinical audit committee -- every audit facilitator on each directorate in the Belfast Trust -- it was called the Royal Trust in that day, it wasn't the Belfast HSC Trust then, it was the Royal Hospitals Trust -- and each directorate had their own audit facilitator. I was paediatrics, somebody else was anaesthetics, somebody else was medicine, somebody else was surgery. And the convenor was Dr Conor Mulholland, he was chair at that time of the clinical audit committee and he would call a meeting of all the facilitators on a monthly basis and make sure that

we were all following the correct audit procedure, supporting the audit department, and returning our audit monthly reports.

Q. And if we come closer, in fact, actually to Lucy's admission, in terms of the care that she was receiving, were there actually any standards that you would be benchmarking that against?

A. Um ...

Q. Well, Lucy had come in in effectively a moribund state.

A. Yes.

Q. She had been stabilised.

A. Yes.

Q. She had had a CT scan, which showed the position was irretrievable, she had had two brainstem death tests which were both negative, and as a result of that she passed away on the 14th, and then there was a report to the coroner, and ultimately a hospital post-mortem was carried out and a death certificate issued. In all of that, are there any standards that would have been looked at by the clinical audit committee?

A. At that time and with the time pressure, I can't think of any. Now, all perioperative deaths are captured under NCEPOD. She wasn't a perioperative death, but there's now CEMACH, which is the Confidential Enquiry into Maternal and Child Deaths. And every --

I believe -- my understanding of it is that every maternal and child death is now returned to a central register, confidential, and that work is -- I don't know who the contact person is -- somebody in the hospital will know that -- I will -- they will collate all the deaths centrally in Northern Ireland and then that will inform the CEMACH committee. I don't know if it's part of RQIA or the Department of Health, but every child and maternal death is reported in the same way as NCEPOD. I do not believe that was in place in 2000.

Q. Does that mean that, so far as you can tell, because of the circumstances surrounding the treatment that Lucy is likely to have received at PICU, that there wasn't already a standard or benchmark by which her care would be measured at one of these clinical audit committees?

A. No, but nowadays there is also an audit, if you like, or a review, which is presented at the monthly audit committee, usually every three to six months, of adverse incidents. So the adverse incidents are all collated and they are, in a way, audited to make sure that the standard is continually improved, that action is taken about, for instance, pharmacy errors, dispensing errors, prescription errors and that, through the audit cycle, there is an attempt made to eliminate all pharmaceutical errors in the same way as there might be to eliminate

other errors in the practice that's highlighted by the adverse incident reporting.

Q. So far as you're aware, when Lucy died on 14 April 2000, even though the adverse incident reporting was in its infancy and maybe not even formally instigated, was there any way of achieving something like that?

A. Not to my recollection at the moment. If I think of something, I will inform the inquiry --

Q. Thank you very much.

A. -- but I can't picture it now.

Q. So then if that wasn't going to happen because that system wasn't up and running, if I can put it that way, the other way in which her death would be looked at is the mortality meeting.

A. Yes.

Q. And when there is a mortality meeting into a child's death, I think I understood you to say that there weren't really minutes of the mortality meeting.

A. No. As I said, I asked Professor Shields this recently because he handed over to me, and he was given instructions not to keep minutes of mortality cases that were discussed.

Q. Who gave him those instructions?

A. Professor Mike Shields gave those instructions to me when I took over as audit facilitator.

Q. What we can see, though, is, if we pull up 319-023-004 --

MR UBEROI: I think there may be a misunderstanding in the question and answer there. I believe the question my learned friend asked was:

"Who gave the instructions to Professor Shields?"

And the answer that came back was, "Professor Shields", because I think the question was misheard.

MS ANYADIKE-DANES: Ah. Who would have given the instructions not to maintain minutes?

A. I think you should ask Professor Shields that question.

Q. Thank you very much.

If we're not keeping minutes, this is the best that one receives, which is you know that five cases were presented and discussed, and then anything outside the five cases, the presentations there listed, and there will be a record somewhere of those cases, is that right, of the actual five cases?

A. Yes, the PICU secretary, Mona Riley, was delegated the responsibility of the mostly administrative task of running the mortality, and I again remember discussing whether I should take over the audit facilitator or not, because I was a very busy person and Professor Shields was keen to give it up, and one of the selling points

that he told me was that -- the ways not to sell me the thing was he said the mortality was a major administrative task and he found it very difficult to keep it going. So I discussed it with the PICU secretary. I said that I would like her to take on the role of recording every death that came, mostly through PICU, so she was recording -- or she had access to those deaths anyway, and that would she please take on the role of administering that task, contacting the relevant consultants, picking a date when they would all be present for the presentation and doing all the necessary arrangements, which was a lot of telephoning and organising, and leaving me free then to concentrate on what I thought I would prefer to do and be skilled to do and be trained to do, which was actually encourage my colleagues to undertake the clinical audit process.

Q. Yes. When these cases were being presented, can you help us with roughly how long would be available for a discussion? It may turn out to be as long as a piece of string as it might have something to do with the complexity of the case, but can you give us an idea?

A. You're absolutely right, there's a variation. Some children unfortunately will be brought in to the A&E department without a heartbeat, and obviously one's interested in knowing why they died, but if it was

a traumatic death with a car accident or whatever, then there would not be an awful lot of items to discuss regarding that death. Perhaps about encouraging the public safety campaigns and whatever, but really some deaths were unavoidable. But deaths of a child in intensive care for a long time or who was known well to the hospital with heart disease or chronic disability, the story and the narrative leading up to the child's death would obviously be important to tell to those who would attend that meeting.

THE CHAIRMAN: We'll get directly to the point, doctor: in Lucy's case would there be something substantial to discuss?

A. I can't remember Lucy's case.

THE CHAIRMAN: I understand that you don't remember, and we're not helped by the fact that there's no record of the meeting, but from what you know of it now, which may be different to what you knew of it in August 2000, would there be something substantial to discuss about Lucy?

A. Yes, I think any death where there was concern about the death certificate or concern about the cause of death -- as I have already said, these meetings were not passive, people sitting, drinking coffee, they were very active meetings and, from that, serious matters were discussed

and -- a recent meeting, for instance, very shortly after the start of the presentation, the clinicians present asked the presenter to please stop the presentation and take the case for a serious adverse incident and the person presenting then said, "That's what I was concerned about. It seemed a bit of a grey area for me to bring it here", and that case is currently, I believe, undergoing a serious adverse incident investigation within the Trust. So this was an opportunity for people, and is now an opportunity for people, to say, "Stop, get an adverse incident going".

MS ANYADIKE-DANES: Let's think about 2000 though, when you have just said that didn't really exist at that time.

MR UBEROI: To be accurate, we've seen the note earlier, which shows it was coming in at exactly at that time, preceding the mortality meeting, which you're just about to go on to ask about. So there's the gap there, but we've seen it was propagated by May 2000.

THE CHAIRMAN: The Royal Trust policy came in in May 2000 and this meeting takes place in August.

MS ANYADIKE-DANES: You're quite right, thank you very much indeed. I'm so sorry.

So there was a way in which to do that. So if there is a robust exchange and there is a concern about the

death certificate in the way that you may have heard the clinicians say they were still unsure really, nonetheless the death certificate was issued, but if you had asked them clinically to be able to say exactly how Lucy had died, there may have been some difficulty about doing that, and if that kind of thing emerges during the meeting, what would you have done in 2000? I know that you can't remember actually, but what would you have done?

A. I was the chairman, so I ensured that debate took place, that it was orderly, that we did keep to time because without a time limit this could go on endlessly and that would leave less time for another death to be discussed or another element of the agenda to be ... So there was a need for a summary, a review, but remember they only were bringing cases that already had undergone a coroner's inquest or a hospital post-mortem or the death was certifiable. So this was of the end of the investigative process.

Q. Lucy's death had, by this time, undergone a hospital post-mortem. There was a report in June.

A. I believe so.

Q. So if that's the case -- and some of the clinicians have expressed the view that they're not entirely sure that that had advanced matters terribly from the concerns

that they had when they referred the matter to the pathologist. So let us say that that is what's still -- there is still a concern about exactly how Lucy came to deteriorate and die. If that emerges in a meeting, what do you do or what do you think you would have done as chairman?

A. I'm an anaesthetist like Dr Crean, I'm not a paediatrician, a surgeon, a cardiologist, a neurologist. I don't have the diagnostic training and skills to work out, "Was this a death from meningitis versus brain tumour?", or whatever. So I would rely on those other attendees to say, "I know about paediatric medicine, I'm interested in this disease process, I think there was poor management of this case", and I would encourage them to get the message to the person presenting. I can tell you that when the person presenting the case which we stopped, she, the consultant, there, in that case said, "Thank you very much for giving me the confidence and the encouragement to take this to ...", so it wasn't seen as a slap on the wrist, "How dare you bring a case, you naughty person?", it was seen as a way of giving the paediatric community, the paediatric consultant and trainees support for that doctor to go ahead and make it a serious adverse incident.

Q. Could you have done it yourself in 2000? Because the culture may have changed more. This has been in existence for longer, maybe in 2013 people may be more predisposed to see it as a friendly act to guide them. In 2000, when it was in its infancy, people may not have regarded it in that light. If you got the feeling that there might be a resistance, did you have the ability to refer something yourself?

A. I would. I don't know if I would have the credibility because a bunch of paediatricians and highly-trained specialists in paediatric neurology or paediatric cardiology would say, "How is an anaesthetist telling me how to treat a patient with complex heart disease?". So I think there might have been a credibility issue with someone like me telling somebody else how the child died -- or a pathologist --

THE CHAIRMAN: Doctor, let me ask you this: there aren't any minutes beyond what is on the screen in front of us; can you remember or point to anything of substance which emerged from the mortality meeting in Lucy's case?

A. Not in Lucy's case.

THE CHAIRMAN: Can you help me understand why nothing emerged of substance from a discussion of Lucy's case?

A. I can't understand why a serious incident didn't happen. I do have experience around this time of a consultant

who did present a case and that led to an investigation of that consultant's competence through the medical director process. So this was a group of doctors and nurses who were not shy of not only encouraging that person to report it as an incident themselves, but if that person was deemed to have not reported that incident themselves, to go above that person to the clinical director or, in the case I do recall, to actually the medical director, and that led to, as I say, an investigation of that consultant's competence.

THE CHAIRMAN: Okay. Without going through all the details that we've been discussing for the last week, do you accept that on the information which would have been available at that time there should have been serious concerns registered about the treatment which Lucy received in the Erne and the cause of her death?

A. Well, yes. I wasn't there for her treatment, I wasn't there at the time of her death, I don't recall her presentation. I don't even know if her presentation was on 10 August as stated because the people presenting it were not on the attendance register and I would not have allowed, as the chairman of that session, a case to be presented without at least two of the three major people involved. So I fail -- it defies logic to conclude that her case was discussed at that meeting.

THE CHAIRMAN: Okay. Then let's put it this way: Lucy's case should have been discussed at a mortality review; is that right?
A. Correct. The secretary was very good and very tenacious at making sure that every case was presented.
THE CHAIRMAN: Whether it was July, August, September, whenever it was, does that change the answers that you gave to me a few moments ago that nothing of substance emerged and you can't understand how there was no serious incident review on foot of the sort of analysis and exchange which would have taken place at such a meeting?
A. I should caveat that by saying it was early days in the adverse incident reporting. There may have been not the full generalisation of the usefulness and the need to use that system. Certainly today, to give you confidence, there is no fear or shyness about telling a consultant that this case needs to be incidented.
THE CHAIRMAN: But you remembered -- you told me a few moments ago about an incident from around that time, of issues being raised about the competence of a consultant.
A. Yes.
THE CHAIRMAN: So it looks as if this review system kicked in pretty quickly?

A. Well, I can't remember the date of the case I quoted.
THE CHAIRMAN: It was from around that time generally?
A. In my memory, it seems to be from around that time.
THE CHAIRMAN: Would it --
A. There are other issues involved, but it was triggered by a mortality presentation, I believe.
THE CHAIRMAN: Would it have mattered that, to the extent that there were concerns about the treatment which Lucy had received, that that treatment was given to her in the Erne rather than the Royal? Would that have been relevant?
A. I can't truly answer for the time, but I can give you an example of a case that happened two years ago with me. A child came into another hospital -- it wasn't Altnagelvin and it wasn't the Erne, but I'm not going to name the hospital -- and the child presented with hyponatraemia. It wasn't dilutional hyponatraemia. The child was having a seizure, which was thought to be a febrile seizure. The child was intubated and treated and transferred to us, and when the child got to us I completed an adverse incident report, even though the child was no longer seizing in my department. I now know that that adverse incident report goes to my medical director, who shares it with the other hospital's medical director and it's fed down to that

paediatric department. At the same time, I contacted the consultant paediatrician involved and let him know that I felt his management of the patient should have required hypertonic saline as per the protocol, and after a discussion he agreed with me that it was fair to fill out the adverse incident form and it was fair to criticise his management, but he had been under the thinking that the child had a febrile convulsion, not a hyponatraemic convulsion.
THE CHAIRMAN: Dr Crean said earlier this afternoon that the outcome of any mortality meeting in Lucy's case would have been that people would have been jumping up and down at the content of the death certificate. Does that ring true with you, his --
A. I presume he means metaphorically jumping up and down. I don't think the consultants and the trainees I know would jump up and down. But I think what he's trying to express is what I've explained when this other case was presented, that a body of consultants made it very clear that this case should be stopped now and reported as a serious incident. So that would be metaphorically jumping up and down.
THE CHAIRMAN: But that didn't happen and you can't help me to understand why that didn't happen?
A. No, I'm sorry.

MS ANYADIKE-DANES: It's right, Dr Taylor, that you have an opportunity to respond to some of the points which are critical points that the inquiry's expert Dr MacFaul has made. They're all in his report, 250-003, and they're essentially three points he makes. The first is that you did not ensure that the cause of Lucy's death was adequately scrutinised at a mortality or audit meeting in August 2000. I suppose he might add to that, if it wasn't going to be August 2000, at some other point you didn't ensure that that happened.
    You failed to identify that Lucy had received an excessive volume of fluids at the Erne Hospital before her admission to the Children's Hospital and that her hyponatraemia was likely to play a role in that. He goes on to say:
    "... and that the autopsy had not disclosed the cause of the cerebral oedema from which she died and that the death certificate was illogical in its description of the sequence of pathogenesis."
    That is one, which may be all rolled up by saying you failed to make sure there was proper scrutiny in that way of Lucy's death.
A. Well, I think Dr MacFaul is very unfair to me because, as I've said earlier, I am not a pathologist, a neurologist, a paediatrician. I do not have the

skills and training to understand what the different diagnostic paediatric conditions might be that can lead to the death of a child, and it would be unfair to put an anaesthetist in charge of scrutinising the death when it would be the members of the meeting who would be better placed to scrutinise the death of that child.

Q. If we conclude that bit by this question to you. If it had emerged that what had been put forward and indeed recorded as the cause of her death was what's set out or was, until it was corrected, in her death certificate, even as a paediatric anaesthetist would that not have concerned you?

A. I have never seen a death certificate included in the medical records. The death certificate goes to -- so I can't comment on what the death certificate says.

Q. Sorry, I beg your pardon, Dr Taylor, that's not the point I meant.

MR UBEROI: [inaudible: no microphone] relevant to the question you're asking.

THE CHAIRMAN: Sorry, Ms Anyadike-Danes, give me a moment.

Are you saying that the death certificate would not have been at the mortality meeting?

A. I have never seen a death certificate included in the medical notes. The death certificate goes with the funeral director to the Register of Deaths after the

body is released.

THE CHAIRMAN: Are you saying then that the content of the death certificate would not have been outlined or referred to at the mortality meeting?

A. Yes. There is often a note of what is included on the death certificate in the medical records. That would be the normal -- but I was asked did I see the death certificate.

MS ANYADIKE-DANES: No, sorry, I didn't ask you if you saw the death certificate. I said if you were told that the cause of death was as recorded on the death certificate. That's why I corrected it because I realised that's what you had thought. That's what I want to know. If you're given that sequence, as a paediatric anaesthetist, if you heard that sequence, would that have concerned you?

A. I understand, I'm sorry.

Q. That's all right.

A. Yes, that would not make sense, that death certificate. If I recall, it was cerebral oedema due to dehydration. That is not a correct cause of death.

Q. So if that had emerged in the presentation of Lucy's death at that meeting, that is something that would have concerned you and you'd presumably want to know a little bit more about what the explanation for that was?

A. That's correct.

Q. Thank you. So that is one criticism he makes. The other he makes is that you failed to identify the fact that Lucy's death remains unexplained or that it had occurred as a result of treatment and failed to take steps to ensure that her death was formally investigated by the Trust and its cause the subject of an accurate explanation. Just for referencing purposes to tell you where that comes, it's 250-003-134 at paragraphs 715 and 716. Can you comment on that criticism?

A. Well, it's quite a long statement. I can't remember every point he made, but again I think he is unfair. I think he's confusing the audit -- sorry, I beg your pardon -- the mortality presentation with an investigation of death. And to try and suggest that I was in some way the convenor or the investigating officer of a mortality investigation is not my understanding of my role as the audit facilitator and chairman of that meeting.

THE CHAIRMAN: Okay. Well, is it fair to describe it in this way, that the mortality meeting which should have raised issues about how Lucy died failed to do so? Is that fair?

A. Can I give you a little bit of extra information about the mortality?

THE CHAIRMAN: I was going to ask you a two-part question.

Let me tell you what the two parts are, which might help your explanation. The first is, is it fair to say that the mortality meeting should have raised concerns and issues about Lucy's treatment and death? And secondly, if it did not do so, is that a failure on the part of that meeting? Rather than perhaps a personal failure to you, is that a failure on the part of that meeting because it failed to achieve what it should have achieved?

A. Yes. The extra information -- you can decide if it's relevant or not -- is that the pathologist is the trump card. When a pathologist presents the pathological organs, the cause of death, he or she is the person who gives the final answer. I have never been at a mortality review where the pathologist's cause of death has been not taken as the gold standard. In fact, in Toronto it was very often very dramatically portrayed that the clinicians would present the clinical course of the patient, the investigations, the presumptive diagnosis, and then it would be all revealed by the pathologist.

Now, that wasn't quite as dramatic in Belfast, but certainly when the pathologist stood up and showed how the patient's organs looked after the time of death, that was seen to me as the gold standard of the

mechanism, the cause of death, and it was never to my memory disputed by the clinicians.

MS ANYADIKE-DANES: Is that because, Dr Taylor, by the time you got to this mortality meeting and the pathologists would be presenting together with the clinician, if you like, that the clinicopathological correlation had already taken place? So if there was an impact of what the clinicians had seen during treatment with what the pathologist was finding on autopsy, that reconciliation or correlation had already occurred?

A. I couldn't put it better myself. Correct.

Q. I have only two more questions to ask you, Dr Taylor, subject to what anybody else may say. One is, when Dr Crean was giving evidence, he said, and it was particularly in relation to the difference, if I can put it that way, between the paediatric understanding of appropriate fluid regimes, particularly in relation to the use of low sodium, and maybe the paediatricians, so between the anaesthetists and the paediatricians, if I can put it that way, and he said that they were forever going back to their colleagues in the district hospitals if they saw that some inappropriate regime had been used.

I think he referred to always telephoning colleagues in the district hospitals about using hypotonic

solutions for replacement as well as maintenance or if they became concerned in some other way about the fluid regime that had been used in the referring hospital. Did you yourself engage in that in phoning the referring hospital and speaking to the paediatrician and explaining your thoughts on the fluid regime?

A. Well, I've given an example of when that happened to me recently, yes.

Q. But in 2000 did you do that?

A. I have no recollection of doing that in 2000.

Q. Do you believe you were engaging in that practice that far back?

A. I don't think I ever commented on somebody's fluid practice, but I would probably have commented on somebody's drug practice, on what drugs they used to resuscitate a child with meningococcal disease, for instance.

Q. Then the final question is -- and if we can pull up 043-101-223 and then 224 alongside it. This is a document that I appreciate you haven't had very long to look at and, in any event, it's likely to be the subject of another part of this investigation, but it might help if you can address this with me. Do you recall whether you sent this document out to the Erne Hospital or Sperrin Lakeland Trust?

A. I recall offering this document. I do not recall the circulation list, but it's likely that I would have sent it to various hospitals.

Q. It's likely you would have sent it?

A. Yes, or I would have given it to a colleague who was from that hospital.

Q. And if you were doing that to the Erne, then can you recall why you would have been doing it, what would have been prompting you to do that?

A. I think this was following the death of Raychel Ferguson.

Q. Then I think we'll leave it for investigation later on to perhaps investigate better the circumstances of it. I recognise you have only seen it latterly.

A. Thank you.

MS ANYADIKE-DANES: Mr Chairman, I have no more questions.

THE CHAIRMAN: Thank you very much.

Mr Quinn, have you anything for the doctor before I come to Mr Uberoi? Any questions from the floor? Mr Uberoi?

MR UBEROI: No, thank you, sir.

THE CHAIRMAN: Doctor, thank you again. Thank you for coming back.

(The witness withdrew)

Ladies and gentlemen, that concludes today. We've

got Dr Hanrahan tomorrow at 10 o'clock. Thank you very much.

(5.08 pm)

(The hearing adjourned until 10.00 am the following day)

I N D E X