Thursday, 27 June 2013

(10.00 am)

(Delay in proceedings)

(10.09 am)

THE CHAIRMAN: Good morning. Ms Anyadike-Danes?

MS ANYADIKE-DANES: Good morning. Could I call Dr Roderick MacFaul, please?

DR RODERICK MACFAUL (called)

Questions from MS ANYADIKE-DANES

MS ANYADIKE-DANES: Good morning.

A. Good morning.

Q. Dr MacFaul, do you have your CV there with you?

A. Yes.

Q. Thank you. Mr Chairman, I wasn't going to go through Dr MacFaul's CV in any detail because we did that at some length in an earlier hearing. In fact, the reference for it is 13 November 2012, from pages 1 to 46 of the transcript. But there's a discrete issue in relation to it which I will deal with. Other than that, I wasn't going to go to it.

Dr MacFaul, you have produced two reports for the inquiry in relation to this section of its work.

A. Yes.

Q. You have a main report, which is dated 25 April 2013, and the reference for that is 250-003-001. You have

a supplemental report, dated 24 June, and the reference for that is 250-020-001. I understand that there is an aspect of that report which you would want to defer to other experts, is that correct, in relation to the levels of serum sodium?

A. Yes.

Q. But before we go there, subject to that, do you adopt what's in those reports as your evidence, save for anything that you may say in your evidence today?

A. Save for one point in the main report. It's a typographical error, which is possibly significant. It relates to the calculation in a table on paragraph 109 where the footnote says "63 ml per hour" and it should be 67 ml per hour. That doesn't detract from the conclusions.

Q. Let me pull it up so people can see where you mean. The reference is 250-003-034. Yes, there's a table there, and just immediately under it you have an asterisked note saying:

"After the bolus had been given, this would have been 63 ml an hour."

And that's the reference you wish to correct?

A. To 67, yes.

Q. And that is simply typographical, it doesn't affect the calculations or the conclusions you have reached?

A. This table does duplicate the one in paragraph 115 to some extent and I would prefer to rely more on the one in paragraph 115.

Q. We can pull that up. That's at 250-003-036. That's correct, is it, that's the one you would prefer to rely on?

A. Yes.

Q. Thank you very much indeed.

If I can now just deal with that particular discrete issue in relation to your curriculum vitae and that relates to your experience as a medical director. It has a particular bearing in the comments that you make in relation to Dr Kelly and Dr Kelly -- as you know, as part of the evidence that was submitted to the GMC, there was a report put forward by Dr Michael Durkin and you and Dr Durkin have differing views as to Dr Kelly's conduct in the relation to the review that was carried out at Enniskillen. The issue there is Dr Durkin was a medical director, as indeed was Dr Kelly, and the question that arises is what your experience is in that field in order to enable you to comment on Dr Kelly's conduct as a medical director. I think you have made reference to it in your supplemental report.

A. Yes.

Q. When you were giving evidence about that, you did

explain what the extent of your experience was, but perhaps if we go directly to your supplemental report, 250-020-004. I think it starts at "While ..." -- it's the "Comment". In relation to Dr Kelly, you refer to the correspondence that has been received:

"It was requested that my attention be drawn to the decision of the GMC in respect of Dr Kelly in October 2012. That complaint is no longer outstanding and that the GMC concluded that Dr Kelly did not fall below the standard expected of a reasonably competent medical director when the time of the incident is considered.

"The GMC was informed by the opinion of an experienced medical director from another trust on behalf of Dr Kelly and it has been pointed out that I have no experience of ever having held such a position."

And the comment you make is immediately there. And although we can see what you say there, I wonder if you can explain the point you're making about your experience and its relevance.

A. Well, in the role in the middle 80s when I was the consultant member of the general management team, I was working in the kind of post that a medical director would have been working in in a medium-size general

hospital together with regional specialties of neurosurgery and burns. So that was a time when there were not medical directors in post. In the next phase, when I was in management, I was working in the next layer down and therefore had quite a lot of interaction with the medical director and discussion and to and fro with him directly and also with the chief executive of the trust about professional matters and about governance matters and management matters. So to an extent, although I have not been a medical director, I am aware to some extent -- but not completely, of course, because I have not acted as one -- of the kind of things that could be expected of a medical director, and I would defer, not in total, because I do still have some reservations --

Q. I wonder if I can pull up what you said -- when you provided --

MR GREEN: The doctor said he would defer. I would be grateful on behalf of Dr Kelly, sir, through you, if we could obtain clarification as to what he would defer to.

THE CHAIRMAN: Let him finish the sentence before we go to any other document. You had been saying:

"I would defer, not in total, because I do still have some reservations --"

To whom or what do you defer, doctor?

A. To the more authoritative role, I suppose, of the experience that Dr Durkin has had in acting as a medical director.

MS ANYADIKE-DANES: You said "not in total" and we'll come to that in a moment. What I was going to take you to -- because this issue arose in relation to the report that you prepared for Claire's case. I was going to take you to your transcript of what you said there. The transcript is of 13 November 2012, if we can bring up alongside each other pages 40 and 41.

While it's coming up, maybe I can read what you said. It was questioning that was led by the chairman on that occasion. What he was trying to identify is the structure in which you worked in the hospital and what your duties were. In particular, in relation to divisional coordinator and the medical division, and you held that post from 1993 to 1996, which was material for Claire. Claire was admitted and died in 1996. The answer you gave is:

"That involved providing the lead in the management structure in our own hospital for all non-surgical specialties which were clinical specialties, so we had a surgical division coordinator and we had a medical division coordinator and in that role I worked in general management as the lead clinician for the

non-surgical clinical services, which was adult medicine, neurology and adult care."

And then you were asked by the chairman about your experience in paediatrics and you said:

"Yes, and it included paediatrics."

Then I asked you:

"Question: Can you recall the size of the hospital at that time in terms of beds?

"Answer: The size of the hospital -- I think it was probably about 500, I can't be precise, but it's that sort of size.

"Question: And what area did it service in terms of population; are you aware of that?

"Answer: While the hospital had a mix of some regional services, it had spinal injuries, it had burns, it had neurology, neuroradiology was still there, and that was serving a population of perhaps three-quarters of a million. So far as the burns were concerned, a much larger population. For the general hospital services, it was covering a population of about a quarter of a million to 300,000. I say 'about' because we provided services for South Leeds as well as the Wakefield conurbation and it's very difficult to identify exactly what the population you are serving is, but it was in that order."

For those who want to see that further, you then go on and develop the role that you played there, but that was indicating at that time to the chairman quite a significant managerial role and responsibility over a range of services, not just paediatrics.

A. Yes.

Q. When you were answering just then as to what you defer, I think you qualified that with "but not in all things". Are there specific elements that you would still retain your view, notwithstanding the fact that you had not actually had the position of a medical director? Maybe you could help with us that.

A. Yes, there are a number. Not very large, but a number.

Q. What are the aspects which you consider, in relation to the issues to do with Dr Kelly -- we'll come to them more particularly, but just at the moment so we have an indication of the sorts of things you feel are still important and you still hold to.

A. In relation to the involvement in the review itself --

Q. Yes.

A. -- and then subsequently after the review. In the management of the review itself I would take issue with Dr Durkin, where he mentioned that he would not have expected Dr Kelly to have interviewed the consultants because he thought, Dr Durkin, that this was a form of

micromanagement of a review. In that context, however, I agree with Dr Durkin that Dr Kelly was the person as the lead in the investigation, the clinical investigation. He states that and I agree with him.

The other point was that in relation to the return of the information to the review, I did not feel that Dr Kelly had looked into the issues relating to fluid, which had been obviously central to the review, and the lack of referral to that in the written submissions from the doctors, and so that was another aspect where I did not feel that in the course of the review --

Q. That's helpful, we'll perhaps come and allow you to develop that when we look at those particular points later on.

If we may start first with the fluid management at the Erne Hospital. This is another area which has become the subject of more specialist guidance, if I can put it in those terms. If we pull up your supplemental report, 250-020-006. Maybe if we can pull up the immediately preceding page and have that alongside.

So this relates to some queries that the Trust submitted in relation to certain aspects of your original report. If we take them in order, you see at paragraph 541 it says:

"Dr Crean did not take account of the effect of

a rapid infusion of a large volume of normal saline on the blood sodium, which might conceal a much lower level at the time of Lucy's collapse and indicate that Lucy's death was unexplained in April 2000. But the second blood sample was obtained during the respiratory resuscitation and the case notes do not identify the sample time, nor who obtained it, or whether it was taken before or following the start of the normal saline infusion, but Dr O'Donohoe reported to the Trust review that it was taken by him, and thus after the saline was running, in his report to the review."

The point that the Trust makes is firstly:

"That irrespective of when the blood sample was taken in relation to the infusion of saline, they take issue with the suggestion that if that happened, if the blood sample was taken after the saline, then it would actually have revealed a much lower serum sodium level for the point of crash."

That's the first point they take issue with you about.

Then they say that:

"The exact volume of the normal saline infusion received by Lucy prior to the blood sample is unclear, although it is unlikely to be have been any more than 250 ml and the effect of 1,000 ml of infused fluid on

serum sodium can be calculated. And they go through a calculation and the upshot of the calculation is to express the view that her serum sodium levels at the point of collapse, 3 o'clock, was unlikely to be very different from that at the time the bloods were actually taken after the infusion of normal saline."

And this, of course, differs from your view because your view is if that's the order of things, then her serum sodium level was likely to be lower at the point of collapse. You respond to that, you say:

"As a general paediatrician, I make no claim to any expertise in how to quantify electrolyte changes resulting from infusions of normal saline as calculated on behalf of the Royal Trust. I would defer to clinical chemistry or intensive care specialists in this respect as it is beyond my expertise. Thus I can make no comment on this calculation other than as follows. It does appear the Trust acknowledged the possibility that a volume of 250 to 500 ml of normal saline infused rapidly could have led to a lower level of blood sodium being reached in Lucy than the one mentioned in her at the Erne but, from the calculation above, the Trust's position is that this might have been a marginal change."

And then you go on to explain why you mentioned it

in the first place, by saying:

"My intention --

THE CHAIRMAN: This is the report which everybody now has. I don't think we need to read the whole report paragraph after paragraph into the record. If we could condense the point, please.

MS ANYADIKE-DANES: Notwithstanding that you claim no expertise in a precise calculation of that sort, is the point that you are making that the rate was nonetheless excessive?

A. The rate of what, sorry?

Q. The rate of administration of fluids to Lucy was nonetheless excessive.

A. It was excessive, yes.

Q. The use of Solution No. 18 for replacement fluid was incorrect in your view?

A. Yes, in my view.

Q. The rate of administration of the normal saline was excessive?

A. Yes.

Q. And that the fluid management or record keeping should have been clearer, which could have made transparent the order of things and the amount of fluid infused?

A. Yes.

Q. So irrespective of whether you have the expertise to

challenge a calculation of that sort, you would nonetheless hold to that view in relation to her fluid management?

A. Yes. The level could have been lower. It was a possibility and that needed to be taken account of.

MS ANYADIKE-DANES: Mr Chairman, this is an area that has been referred to expertise. The inquiry has engaged Dr Simon Haynes, who has been an expert before for the Trust, a consultant paediatric anaesthetist, and there is also a statement from Professor Young, who has also calculated matters.

So as I understand your evidence, in terms of the precise calculation of it, you would defer to those experts?

A. Certainly so, yes.

Q. But that does not detract from, as your view, the significance of the fact of those four matters that I just put to you and you accepted?

A. Yes.

Q. Thank you. Just so that we're clear, that aspect of the -- if I just give you this to start. The use of the Solution No. 18 for replacement fluid being wrong, is it your view that that was the position in 2000?

A. I tried to articulate that in my report. In some units it was used in replacement in mild to moderate

dehydration.

Q. Yes.

A. And indeed, the guidance, Paediatric Medical Guidelines from the Royal Hospital Trust at the time, which were current, indicated that after a bolus of saline was given in more severe dehydration, No. 18 Solution would then be used.

Q. That's not the way in which it was used for Lucy.

A. No.

Q. In the criticism that you make of the way in which it was used for Lucy, is that a criticism that you say is made out by the practice in 2000?

A. Yes, because the fluid was used inappropriately, in the volume used, according to the state of Lucy, as recorded and according to guidance at the time.

Q. And can you help develop that? What do you mean by that?

A. Well, all of the fluid given over the four-and-a-half hours or so to Lucy was No. 18 Solution.

Q. Yes.

A. And the rate at which it was given was appropriate for resuscitation volumes, really. She was given just over 10 ml per kilogram per hour for four-and-a-half hours. So the profile of the use of the volume was wrong. It is possible to give a bolus initially, so you have

a high volume given over a short time and then thereafter you give a rate which is appropriate to the child. But that initial large volume should always be saline plasma or some other form of colloid.

THE CHAIRMAN: That is what Dr Jarlath O'Donohoe said he intended, though it wasn't recorded. He said he intended the bolus would be normal saline which would be followed by a lower dose of Solution No. 18.

A. Yes.

THE CHAIRMAN: So if that had in fact been given, you would have been far less critical of that?

A. I would have been less critical of the pattern of its use. The volume after the initial bolus intended by Dr O'Donohoe is a bit small actually, as it happens.

MS ANYADIKE-DANES: In fact what he said he had intended she be given was 100 ml as a bolus of normal saline, thereafter 30 ml an hour Solution No. 18.

A. Yes.

Q. So if you're critical of what was actually administered, had what he prescribed been administered, would you have been critical of that also?

A. Not within the framework of the practice at the time, except for the comment that I have just made that the volume of the continuing infusion was on the low side, but I think Dr O'Donohoe has explained that, that he

thought that she would be taking oral fluids.

Q. But absent oral fluids, would 30 ml an hour be something that you would have been critical of?

A. In the circumstances, yes, because it wasn't quite sufficient for her replacement.

Q. Thank you. So then if we pass on to the other element of her fluid regime that you're critical of, which is the rate of administration of the normal saline. You say that was excessive. First of all, do you say that was excessive for the practice at the time?

A. Yes.

Q. And why do you say it was excessive?

A. She was given at least 250 ml, and as we all know, it could have been up to 500 ml because we have Dr O'Donohoe's account that the infusion was almost through by the time he attended.

Q. Let's start first with the 250 ml.

A. 250 ml would be more than 20 ml per kilogram and if you gave 20 ml per kilogram, it would be in a state attempting to treat circulatory shock, circulatory insufficiency. And there wasn't any indication when Lucy collapsed from the clinical notes that she was in that state. She was therefore given quite a rapid infusion of more saline than was indicated on top of the previous overload with No. 18 Solution.

Q. We'll deal with that first before we pass on to the 500 ml. If she was given, in your view, more than should have been administered to her in terms of normal saline on top of more than should have been administered to her in relation to Solution No. 18, do you think that excess amount of normal saline had any bearing at all on her condition?
A. It is conceivable -- and by that I mean conjectural -- that it had an adverse effect on her. I was thinking of the notion that perhaps she had a seizure, generated by the rapid fall in the blood sodium and the water overload and that that might have been -- and this is purely conjecture -- it might have been recoverable. But then if we add in another large slug of fluid of a significant volume in an already overloaded situation, say with a bit of brain oedema present, then that could have had an adverse effect and tiptoe into a respiratory arrest, possibly, depending upon the time of it. And that is supported by Dr Halberthal in his paper.
Q. You mean the 2001 paper?
A. Yes, where he describes that if you have brain oedema in a baby, where the volume of the intracranial content is fairly tight, and you then add in a large volume of isotonic fluid -- and saline is isotonic -- that that could trigger a worsening of the cerebral oedema and

perhaps trigger the coning. But this is conjectural, really.
Q. Thank you. If that's your thoughts about 250, what is your view of 500 ml?
A. Well, 500 ml would be a grossly excessive amount. Generally speaking, if you need to give more than 20 ml per kilogram as part of a resuscitation, and you then step up to, say, 40, which would be 360 ml, at that time the guidance -- and indeed practice -- would be to consider intubating and ventilating because you had such a sick and collapsed child. Beyond that, in another clinical situation of course, where there is vascular leakage and meningococcal disease, when you start giving that kind of volume you can trigger and produce cerebral oedema, and I've seen it happen in a child we've had to do that to who was conscious and talking, but because we had to give him so much fluid to keep his blood pressure up, we knew we would trigger brain oedema. His level of consciousness went down, but that was anticipated by intubating and ventilating.
Q. Thank you. I want now to move to some of the issues that arise in relation to what happened when she reached the Children's Hospital. There is an issue to do with who was the consultant responsible, and you've addressed that point and you addressed a rather similar issue

in relation to Claire's care. Here it arises differently because I think you've acknowledged that in a paediatric intensive care setting, you do quite often have joint responsibility for the child's medical care.
You say that -- the reference in your report is 250-003-019:
"Having reviewed the papers and the statements in Lucy's case, that in life [your] view was doctors Hanrahan, Crean and Chisakuta were jointly responsible for Lucy's care."
So that is the paediatric neurologist, Dr Hanrahan, and the two paediatric anaesthetists, Dr Chisakuta and Dr Crean. Why do you say that or at least why do you think they were jointly responsible for her care?
A. Well, Lucy was admitted to paediatric intensive care from outside the Trust. When a child is admitted to a Children's Hospital, they always come in under a named consultant.
Q. In this case it was Dr Crean.
A. Well, I was just saying on to the general wards.
Q. Ah.
A. So I'm taking it out of -- just to put it into context. If they come into the general wards or some specialty ward, not the intensive care unit, they're admitted under a consultant. That's clear-cut. And that is true

in a district hospital. When they're admitted then from the Children's Hospital, having already been admitted under a consultant, and they need to go to intensive care, then there is a consultant in charge, if you like, and that consultant is joined by the paediatric intensive care team. So the consultant who had already been identified in the Children's Hospital remains linked in, surgeon or physician. But the situation is different when a child is admitted directly into a regional intensive care unit because they are admitted into the intensive care unit without a named, identified consultant within the trust, within that hospital. They come in under the paediatric intensive care team. Dr Crean's name was on the label, but I think that he has explained why that is.
Q. Mm-hm.
A. There is a need then for support of the child's life and then there is a need to undertake diagnoses and management of the condition which has led to that life-threatening illness. And that could be cardiac, it could be renal, it could be neurological. In Lucy's case it was neurological and, quite properly, the intensive care team adds on that specialty. And then it's jointly managed, the problem is jointly managed with the intensivists keeping the child stable and the

specialty consultant investigating and managing the underlying cause. In Lucy's case, that was what happened because she had a neurological illness.

Q. Yes. When Dr Hanrahan was asked in evidence about that -- in fact, prior to that, he had already in his witness statement said that he was unsure who was in charge of Lucy's care when she was a patient in PICU. We don't need to pull it up, but the reference is his witness statement 289/2, page 2. Then he says he didn't recall formally assuming responsibility. He goes on to say that he thought that he was providing advice and not actually formally being asked to take over responsibility.

However, when he continued in his actual oral evidence, he accepted that there was a degree of vagueness over consultant overall responsibility in PICU and said that things had tightened up now. The reference in the transcript is 5 June 2013, page 16.

If I just go to that point that he's making, would you have accepted that in 2000 there was some uncertainty about exactly who was the consultant who had the main responsibility for a child's care?

A. I believe that the care was joint while she was alive. I think that the situation can be vague when, for example, a child comes in with a neurological illness

and also has a heart illness, or then has a renal illness, and you have therefore a cardiologist, a neurologist and a nephrologist.

Q. If it is or was vague at the time, would you agree with Dr Hanrahan that the position has tightened up or is tighter now than it was then, so that kind of vagueness or uncertainty is less likely to occur now? Would you accept that?

A. I think that's probably true. I wouldn't wish to comment on anything beyond 2006 because I have been retired. But I think that generally speaking there was an improvement in all aspects of governance over that time. Nevertheless, by custom and practice, what I have described was the case in 2000, and indeed earlier in the late 90s.

Q. In terms of --

THE CHAIRMAN: Sorry. Just before we leave that, when you say it's joint care between Dr Hanrahan, Dr Crean and Dr Chisakuta, between Dr Crean and Dr Chisakuta is their responsibility for the time they're on duty?

A. Yes.

THE CHAIRMAN: When Dr Crean leaves and Dr Chisakuta comes on, then Dr Crean no longer has joint care, that passes say to Dr Chisakuta, and when Dr Chisakuta goes off duty, his successor --

A. That is as you describe it, sir. The problem is in intensive care units exactly that, that the continuity can be provided by the lead -- say, in Lucy's case, the neurologist or in another case by the ... The continuity is provided by the paediatrician, if you like, in this situation, or by a surgeon if it's a surgical case, and what you describe is exactly the problem in relation to paediatric intensive care in 2000, which has been resolved more lately by having full-time paediatric intensive care intensivists in the paediatric intensive care, or at least one, depending on the size of the unit, who does not have any duties or very little duty outside the unit.

Most paediatric intensive care consultants in 2000 were anaesthetists and therefore they would do surgical lists, but as the specialty has expanded, we now have another type of consultant intensivist who is a paediatrician by training, who does not do anaesthetic lists, but spends all of his or her time in the intensive care unit. Then it becomes more clear who has the continuity on the intensive care side.

MS ANYADIKE-DANES: In the circumstance that you were just accepting from the chairman as something that did pertain in 2000, so far as you're aware, did that create continuity problems in having somebody who had the

overall management and direction of care as opposed to what might be described as the baton changing every day?

A. It can cause difficulties, but it is a way that -- it tends to be resolved by good handover and by good note keeping.

THE CHAIRMAN: But we shouldn't exaggerate how much of an issue it is because most of the time the system works pretty well?

A. Yes, absolutely.

THE CHAIRMAN: And the evidence about it not working well, say, between Dr Crean and Dr Chisakuta is questionable?

A. I have not seen any such.

THE CHAIRMAN: Yes.

MS ANYADIKE-DANES: But in your view, whatever it is, good handover and good note keeping provide the link between the care provided from one clinician on one day to another clinician on the next day?

A. Yes.

Q. And that most times that was perfectly adequate?

A. Yes.

Q. Thank you. Then can I ask you about the position post-death? So once Lucy has had two brainstem death tests that have both proved negative, there's going to be a withdrawal of life support, and then there are matters that have to be addressed in relation to that;

who do you say has the responsibility for that period?
A. Well, I think at the time of death, there is almost a sort of handover from the paediatric intensive care team to the clinician and the clinician obviously then picks up, or has done in Lucy's case, as Dr Hanrahan did, the issues relating to consider what the cause of death was, the referral to the coroner, the death certificate, the interview with parents and so on.

The responsibility for writing a discharge letter is one of the thorny questions here. In recent years, in the early 2000s, with increasing numbers of trainees in paediatric intensive care being specifically in the unit, then they might, as a registrar, write the discharge letter or be tasked with it, and I note that in Belfast the paediatric junior staff staffed the intensive care unit rather than anaesthetic.

So who was responsible for the discharge letter? But the paediatrician caring for Lucy was Dr Hanrahan and his team, and I'm fairly clear that the responsibility for the discharge letter as well fell to Dr Hanrahan and his team.

Q. In order to write that discharge letter, are you of the view that it would have been prudent for Dr Hanrahan to have discussed what happened with the other clinicians who had been responsible for her care while she was in

PICU?
A. Yes, I think at the point of death or just around that time it would be obviously important for the consideration of the intensivists to be joined with that of Dr Hanrahan in considering what had been the cause of the cerebral oedema and also in how to complete the report to the coroner, what aspects would be conveyed, how did they formulate the method of death. If they had no explanation for it then -- they knew there was cerebral oedema but they didn't know the cause of the cerebral oedema.
Q. Well, I know that you have looked at the transcripts. Then you will appreciate that there are differing views as to the significance of her fluid management regime at the Erne for her condition. It may have been that had there been a discussion between Dr Hanrahan and the anaesthetists, that that would have become more evident if it wasn't already clear to him and that they would have had to resolve that amongst themselves to determine how to go forward and what to tell the coroner.
A. Yes. I think that is so. A review of -- as I've said in my report, Dr Crean had raised a question about the fluids in the Erne Hospital, but it wouldn't, in my view -- and he would be able to answer better -- affect how he was managing Lucy in the unit thereafter. But

a question had been raised. And then we had a diagnostic problem at the point of death: what had been the cause of the cerebral oedema? A detailed scrutiny of her notes, the notes that had been faxed, did contain sufficient information for a clinician reviewing those notes to determine that she had been given an excessive fluid volume and that she had been given an excessive volume of hypotonic fluid and that she had a blood sodium which had fallen rapidly, which is a measure of fluid overload.

So we have a little girl who has a fluid overload and she has a cerebral oedema, and therefore it's difficult to see how those two could not be linked.
Q. Yes.
THE CHAIRMAN: When you say that Dr Crean had raised the issue about fluids, but that didn't affect how he managed Lucy, to put it bluntly is that because there was nothing that could be done with Lucy by the time she reached Belfast?
A. Yes, I think in my view -- and I think I have said it in my report -- the responsibility of the intensive care team was to support Lucy while diagnostic tests were being done to try and find the cause.
THE CHAIRMAN: What Dr Crean or the other anaesthetists did for Lucy, they didn't need to explore what had happened

in the Erne, but at the point of death from then on, in formulating a death certificate and speaking to the parents and deciding what to report to the coroner, they need to put their brains together and identify what has brought this situation about?
A. That's my opinion. Of course, I think that Dr Hanrahan was the neurologist, she had a neurological illness, and one might argue that perhaps it was more his responsibility. But you know, it's a matter of balance and practice.
MS ANYADIKE-DANES: Dr Hanrahan's view is that he wasn't terribly experienced in relation to the fluid management aspect of it. In fact, when he was giving evidence, he accepted that the anaesthetists were more experienced in relation to fluids. So that might have made Lucy's condition precisely one where the neurologists and anaesthetists ought to have been discussing because she had two aspects of that in her condition and they could have combined their expertise and knowledge?
A. Yes, I agree with that.
Q. Before we go on to how the reporting to the coroner was handled and might have been better handled, if that's your view, if we just go back to the element of Dr Hanrahan's position -- his evidence was he did not regard the sodium level of 127 to be causative of

cerebral oedema. When he was giving his evidence, and he was pressed a little on it, about, "Well, what about the rate of fall, what about the extent of the fall?", the upshot of that was he did not regard a rate of fall of 137 to 127 as being particularly significant in terms of a contribution to the cause of her cerebral oedema.

There were two principal reasons for that: firstly, 127 wasn't low enough. In fact, actually, that was the main reason, that 127 wasn't a steep enough fall; it would have to have gone below 127. And his general view was: unless it fell below that, then there wasn't anything that caused him to want to investigate her fluid regime. He was perfectly prepared to accept that her fluid regime may not have been optimal, but whatever it was, if it did not have the effect of reducing her serum sodium levels to much lower than 127, then in his view it wasn't causative of the fatal cerebral oedema.

You, of course, have said that you thought it was causative, that sort of fall. I don't want to take you into the territory where you say you would defer to either Dr Haynes or Professor Young, but are you able, as a paediatric clinician, to express a view as to that fall to 127 as it would have appeared to you if you had seen it?

A. I think what was striking about that fall was the rate

of fall. Because as a minimum that indicated a water overload. The question about, "Does a level of 127 actually cause cerebral oedema?", I think I have worded it in my report "cause or contribute to".

Q. Yes.

A. I have been cautious about that because I do recognise the position that Dr Hanrahan has adopted, "How could 127 in itself cause cerebral oedema?" In other words, we see a very large number of children with a blood sodium of 127 or lower where there is no cerebral oedema or any other adverse consequence. Rather like Dr Quinn, who expressed surprise, it's the rate of fall, I think, that is probably more significant, and that is why I expressed surprise that a paediatric neurologist would not be aware that a fall of that scale could contribute to cerebral oedema, for example had there been a pre-existing brain disease, because that is part of paediatric neurological practice. So that would be one point. The second point is we --

Q. Just before you go on to the second point, have you yourself had experience of a fall of that rate and magnitude being problematic or causative or contributing to cerebral oedema in any way? I'm looking to where you get your impression about that.

A. We had a child who had a head injury, a minor head

injury. As far as we could tell, there was no intracranial bleeding on the CT, and she had no cerebral oedema on admission, and she started vomiting, which children do when they get so-called concussion. She was put on to maintenance fluid, No. 18 Solution, and her blood sodium fell to that sort of order, and she developed brain swelling and a coma. It was that which triggered us to look at the literature, but this is late 2001 and led to us changing our practice in our hospital in -- well, we changed it in paediatrics in late 2001; it took us six months to get the surgeons and anaesthetists to change.

So I have seen a case where that has happened, but there was a pre-existing brain illness or, if you like, brain disorder. So the call, in an otherwise healthy child, I think is a question mark and, as far as I can see, Professor Kirkham has raised questions about this. In the first Arieff paper, and I think it was 1992 --

Q. Yes, 1992.

A. -- I think I've quoted it to say -- and I hope the quotation is correct -- that in some children it wasn't the absolute figure of the sodium or even the rate of fall, but he still observed the phenomenon. But that is just one observation.

Q. It's that sort of experience that would have led you to

question a fall like that. You were going to go on to make a second point.

A. The second point was in relation to paediatric practice in general paediatrics where, when you have hypernatraemic dehydration, that is a child who's developed a high concentration of sodium in the blood, we all know that you have to be very careful in giving fluids to avoid a rapid fall in blood sodium because we know that if there is a rapid fall in blood sodium you can trigger cerebral oedema.

Q. Thank you. Then is it --

A. Sorry, just before I finish, that would be, say, from a figure of 160 to 149. So you can get cerebral oedema at 149 or 145 because of the rapidity of fall.

Q. Yes. Is it your view that when, after Lucy had died, and they were formulating their thoughts, they should have been going through her notes very carefully, and had they done that they would have seen the sequence of matters, namely that she'd had her blood serum test of 127 in relation to bloods taken after she'd received the administration of that normal saline; is that your point?

A. Well, she could have had a lower level. I mean it is speculative, but it could have been concealed by the normal saline that had been given.

Q. But that's your point, that that sequence should have become obvious and then somebody would have had to start to think about whether that was significant or not?
A. My opinion is that it wouldn't have become obvious from the case records. I know that there's been something made of the nursing record, about that, but I would not myself have concluded or deduced the sequence from the nursing record. I know others have, but I don't think it's clear.
THE CHAIRMAN: When you say "the sequence", the sequence of when the second reading was taken as opposed to when the normal saline was given?
A. Yes, the linkage that there was saline given first and the blood test afterwards.
THE CHAIRMAN: Your view then ties in with the evidence that Dr Sumner gave to the coroner when he said -- he was saying that the drop from 137 to 127 is the problem here and then he adds, almost in brackets, but it could have been even lower depending on when that test was taken, and you agree with that?
A. I do agree with that, yes.
THE CHAIRMAN: The order in which you would expect things to have been done would have been the second blood test was taken and then the normal saline would have been started, and then the results would have come back from

the second test; is that right?
A. Something like that. In the way that the nurses have written it, it could have been taken at the time before the collapse. It's not clear, it's just stated that bloods were ordered.
THE CHAIRMAN: So in the same way as we don't take the nursing records and the medical records as being perfect in every case, we don't necessarily construe that nursing record to be a perfect description of the order in which events happened?
A. Yes, and that was important for the Royal Hospital because they had no idea from the records.
MS ANYADIKE-DANES: Yes. And then if you were in that situation, so you're now looking at the records and you've reached the stage where you're troubled about the fluid regime in the sense of the type of fluid she received and the amount or rather the rate at which she received it, you are troubled about the rate of the fall of her serum sodium levels --
A. Yes.
Q. -- and let's say that you have reached the stage that Dr Sumner reached, which is that you're not entirely sure where that blood test relates in terms of the administration of sodium. So it could have been low, you're just not entirely sure about that. Would you say

that would have been a reasonable position for those clinicians to have reached?
A. Yes, I think there was evidence from the fluid regime that more fluid was given than was indicated, quite a lot more, and that the low sodium was at least a measure of water overload, whatever else.
Q. And if you'd reached that situation and, as the chairman had put to you, maybe it was lower, but certainly I'm troubled by a 137 to 127, does that put any onus, so far as you're concerned, on the Children's Hospital clinicians to get in touch with those at the Erne to try and find out exactly what the regime was and to get a better picture of what happened?
A. It would have been a good thing to do. Dr Crean had made an attempt, but obviously that was just on the immediate admission. It would have been helpful. The records that they had, however, did show that a large volume of hypotonic fluid had been given and it showed, as far as they could tell, that up to 500 ml of saline had been given over one hour.
Q. Yes.
THE CHAIRMAN: Isn't the single big factor, doctor -- and please correct me if this is wrong -- that when Lucy died it wasn't at all clear why she died and, if it's not clear why she died, you have to investigate what

happened --
A. Yes.
THE CHAIRMAN: -- and the investigations within the Royal and within the Erne were inadequate?
A. Well, opportunities were lost in the Royal Hospital to review and consider more carefully what had caused the cerebral oedema, and those opportunities were at the time of the preparation of the clinical summary when talking to the coroner's office, at the time preparing the autopsy request form, and at the time of preparation for the audit meeting when the mortality section would be prepared. Those were the opportunities for the case records to have been reviewed in detail.
I was asked just then if it would have been practice to have rung the Erne. Well, it could have been done, couldn't have been done. It would be within the way things were done not to have contacted the Erne, but ideally of course it would have been sensible to have clarified.
MS ANYADIKE-DANES: Can I put it to you in this way, Dr MacFaul: when the clinicians in the Erne were being asked about transferring Lucy to the Children's Hospital, what they had is a baby, a 17-month-old baby who had collapsed, they weren't entirely sure why she had. Whatever it is, she was

going to need support, support that they could not provide at the Erne. So she was going off to the Children's Hospital for that. She was also going to have to have further investigations because although, I think, they thought that her situation was irrecoverable, nonetheless there would have to be some investigation as to how and why that had happened and the place to do that was in the specialist centre, the Children's Hospital. They did not have the equipment and they did not have the specialist expertise that was in the Children's Hospital. So that's the scenario.

As the chairman has put to you, essentially when Lucy gets there, there is not much, probably nothing, that could be done to retrieve her. What can be done, though, is to find out what had happened, both for learning and for providing that to her parents. So if that's the primary task of the Children's Hospital, stabilise her so that she can undergo the brainstem death tests and then we can carry out some proper investigation as to what happened, if that's the primary task of the Children's Hospital, why is it not just a matter, whether it's protocol or practice, why doesn't it make sense to contact the referring hospital and talk to those clinicians? They're the people who know what they were doing and how she presented and exactly what

happened.

A. Well, that was attempted by the review at the Erne Hospital and --

Q. No, no, I'm talking about the Children's Hospital. Why does it not make sense for the Children's Hospital to do that?

A. Well, they would have contacted Dr O'Donohoe, I suppose.

Q. Yes. And for that matter they could have contacted Dr Auterson. Dr Auterson himself contacted the Children's Hospital to phone through, apparently, the 127 serum sodium result. So he's already made contact.

A. I don't think it would be usual practice for you to contact the anaesthetist who has supported you. The prime contact would be Dr O'Donohoe.

Q. Yes. So it would have made sense to contact Dr O'Donohoe?

A. Well, they did. Dr Crean spoke to him on the telephone and was given information by Dr O'Donohoe.

Q. I meant at the time when they're trying to work out, "Firstly, what do we think happened, how are we formulating a cause of death? We're going to refer this matter to the coroner", because that's already in her notes and it's there in her notes before they conclude the brainstem death tests. So they know what they're going to have to do and they are discussing that. Why

at that stage don't they have a more detailed discussion, in your view, with Dr O'Donohoe to see if there's anything that he can provide to them to assist in that process?

A. Well, I think it's a reasonable suggestion.

Q. That they should have done that?

A. I wouldn't say they should have done. I would say that they might have done.

Q. Yes, they might have done. Then if we go to the issue of the reporting to the coroner. What in your view had to be done in order for an appropriate report to be made to the coroner?

A. I think a review of what might have caused the cerebral oedema. They knew -- Dr Hanrahan and the intensive care team knew that Lucy had cerebral oedema. They knew that she had almost certainly died as a consequence of that, but they did not know the cause of the cerebral oedema, and I think they should have considered -- well, they did have the information about the fluids, and I believe a summary of the fluids pre-admission to intensive care should have been made and a discussion held between Dr Hanrahan and the intensivists if he needed help on the fluid interpretation. It would have become evident that -- and it was evident from the records -- that these volumes were excessive.

Q. So what is it that you think should have been reported to the coroner?

A. Well, I think the child had got cerebral oedema and that we had no other explanation for this, but it does appear that an excessive amount of fluid has been given.

Q. And so in your view, part of the explanation to the coroner for the concern is a linking of the cerebral oedema with excessive fluid?

A. Yes.

Q. Dr Michael Curtis was asked about the cerebral oedema. You may know he is in the State Pathologist's office as a pathologist and he's the person with whom contact was made when the report was made to the coroner's office.

A. Yes.

Q. Perhaps we can pull this up. It's the transcript of 25 June, page 9, and if you could pull up alongside it page 10. Essentially, Dr Curtis was being asked about a response he might have had -- and of course all of this is covered by the fact that Dr Curtis doesn't remember having a conversation, and for that matter nobody really remembers the conversation. What we have is a record that Mrs Dennison, who took the initial call, put into the main register of deaths. And she has "Gastroenteritis, dehydration, brain swelling". It's assumed that Dr Curtis would have been told at least

that, although it's not known, and it was asked on that basis that if he had been told that would he have seen that as illogical and been asking himself if there is something that ought to be inserted between the dehydration and the cerebral oedema.

A. Yes.

Q. And the answer that he gave, you can see here, it really starts at line 12:

"Question: Would you have been surprised to hear that a person had both dehydration and cerebral oedema?

"Answer: No."

When he's asked about that he says:

"Answer: Because cerebral oedema can occur due to a variety of mechanisms."

And he goes on to talk about:

"... the lack of oxygen getting to the brain can cause brain swelling and if there is severe dehydration, that affects or can affect the amount of circulating blood volume and the effect of that and that insult can cause the brain to swell, produce the cerebral oedema."

And then he talks about the dehydration:

"In dehydration the blood can sludge and clot, and that also can bring about a cerebral oedema."

So what he was really saying is: you wouldn't necessarily -- or he wouldn't necessarily -- think that

there was anything illogical in seeing that combination of dehydration and cerebral oedema, and it wouldn't necessarily have caused him to wonder what the child's fluid regime might be. But you have very clearly put a fluid management issue with the cerebral oedema. Can you express a view on what Dr Curtis says?

A. Yes. My opinion has been, and I've stated it, that I do not consider that dehydration can cause cerebral oedema. If you look at what Dr Curtis is saying, he's saying that hypoxic ischaemic brain injury can cause cerebral oedema. I agree with that. He's also saying that cerebral vein thrombosis can cause cerebral oedema, and I agree with that. Both of those are seen in children in the tropics, for example.

Q. Does that mean if you were writing --

A. That's untreated -- it's unsatisfactorily treated dehydration.

Q. That's an unsatisfactory treated dehydration --

A. Yes.

Q. -- would lead to those conditions which, in and of themselves, can bring about cerebral oedema?

A. Yes.

Q. And if that had happened, in the same way as the chairman has heard, if you were wanting to write a proper sequence for Lucy, you would have to put in the

hyponatraemia in between the dehydration and the cerebral oedema. If those other two mechanisms for getting to cerebral oedema had occurred you would similarly have been inserting them in between the dehydration and cerebral oedema?

A. Yes, something to that effect, cerebral vein thrombosis, which I suspect, but I would defer to a radiologist, would have been evident on imaging. It certainly would be evident on MRI -- I'm not sure about CT, but I suspect so. And there was no documented episode of hypoxic ischaemic injury in Lucy.

Q. So then, on any basis, does that mean that there should have been something between the dehydration and the cerebral oedema, and to fail to do that was to fail to give a full account of what had happened and the mechanism of death?

A. That is my opinion, yes.

Q. Thank you. Then if I just ask you this from your experience: Dr Hanrahan felt that he had not really had any guidance on the whole issue of reporting to a coroner; this was the first one that he'd ever made.

A. Yes.

Q. Are you surprised that he didn't know about the requirements in reporting or notifying a death to the coroner?

A. I'm not surprised. I think it's not something which is done very frequently. There is guidance on the death certificate for what you should do and so on, and there is guidance just generally around. There's a consciousness that if a death is sudden, unexpected, without explanation, that that should be referred to the coroner. There's a consciousness, obviously, that a patient who's died on the table in surgery or within a day of surgery should probably be referred to the coroner. Where there has been injury, we all know that we should refer to the coroner.

In unexpected death, without an explanation, in paediatric practice, the most common one for us to refer to the coroner has been in what used to be called cot death, sudden infant death. But the guidance as such wouldn't -- clinicians are not all that familiar, paediatricians were not then, and that has been recognised. So I'm not too critical about Dr Hanrahan in that sense. He knew he had to refer to the coroner or make a report.

Q. Can we then come to the quality of what he ought to have been telling the coroner? If you formed the view that the circumstances are such that you need to refer or notify the death to the coroner, in your experience what is the quality of the information that needs to be

provided?
A. You need to have an account of what you consider as being the cause of death. My experience has been that you contact the coroner's office and you usually speak to a retired police officer, as it usually happens, who is the coroner's officer. I think Mrs Dennison was acting in that role, from having seen her transcript.
Q. That wasn't the way the office was organised when Mrs Dennison was there. There was Mrs Dennison and as many as three other colleagues doing different things, but all of them at some point or other would take the telephone calls of a report or notification of death. She described her role, none of them had any medical or legal training -- certainly she didn't -- and she described her role as really taking the call from the clinician, gathering in as much of the relevant information, and to that extent she was very heavily dependent upon the clinicians. In her evidence, they realised that because they knew she had no training. Once she had gathered that information, she would then try and contact the coroner for the coroner to be able to take a view as to what he was going to do about the exercise of his jurisdiction in relation to that death. And that in summary was what was happening.
So if you're a clinician, recognising that you're

not speaking to another clinician and you're making a report or notification of a death, in Lucy's circumstances what do you think should have been being told?
A. Very often, the coroner's office will ask you, "Do you feel able to issue a certificate?", and you might say yes or no, but then he would convey your view to the coroner and ring you back. That's what used to happen locally. Rather than hold on, you would get a call back, saying, "Yes you can go ahead and issue a certificate, or not". There were some instances of course where you did not feel able to issue a certificate because you had no explanation for death. And in those circumstances, a formal -- there are a number of ways in which this term is used: "reporting to", "referring to", "sharing information with". All these terms are used around this process. And I think in a way -- and "notification". In a way it doesn't help that we use these different terms and I have used them in my report.
Q. Dr Hanrahan has conceded that the information he gave was hopelessly inadequate. So he's conceded that fairly. Bearing that in mind, do you think anybody else had any obligation or duty to extract whatever was the relevant information from him or did he bear the

responsibility for making sure that he had provided what was appropriate in those circumstances?
A. Well, in my view I think it did fall upon him to do so.
Q. Thank you. You have also expressed the view -- we don't need to pull it up, but the reference is 250-003-140 -- and this is still in this area of trying to establish, form a view as to what is the cause of death so that you can inform others. We've just dealt with the circumstance when he was notifying the coroner's office. But at that reference, you query how Dr Hanrahan could have engaged with Lucy's parents and explained that cerebral oedema had led to her death without mentioning the possibility of either low sodium or some sort of assault to the brain. If he is going to speak to them, in your view, is it really not possible to leave out the issues you have been discussing in relation to fluids?
A. If he had no concept that they had led to Lucy's cerebral oedema, then he would not have been able to mention them, and I do not know how he did explain the cerebral oedema to the parents.
Q. If he at that stage still has no concept of how she has developed or how the cerebral oedema had developed -- you were giving your opportunities to find out or to ascertain what had happened -- is that another point in time when you think he ought to, if he hadn't already

done it, been discussing, certainly with his other colleagues in paediatric intensive care, to see if he can, even at that stage, get a better understanding of what would happen so that he could talk to the parents?
A. Well, he could have done. What is evident from the notes -- I'm sorry to come back to it, but it applies to Dr Quinn as well -- is that there was evidence of fluid overload and also evidence of cerebral oedema and there was evidence of pulmonary oedema, which is another measure of fluid overload, on the autopsy. So in absence of any other explanation for Lucy's cerebral oedema, it seems reasonable to me to have put those together to have concluded that the fluid regime may have played a part.
Q. Yes. Then if we just continue on a little bit more with the notification to the coroner and move to the Erne. According to Dr Hanrahan, he reports that death, Mrs Dennison records it, but what onus do you think there was on the clinicians at the Erne to also make contact with the coroner's office?
A. I don't think at that stage they had the -- Lucy had died in Belfast, and I think that in practice the team caring for her at Belfast would be the ones notifying, reporting, however you put it, to the coroner. If, on the other hand, the clinicians had a concern about the

fluid regime, Dr O'Donohoe, then you could argue that he had identified an error of therapy and considered referring to the coroner, but that would require him to recognise the problem.

THE CHAIRMAN: The senior coroner who gave evidence on Monday has said that he doesn't remember receiving different reports on the same death in his long experience.

A. Yes.

THE CHAIRMAN: That wouldn't surprise you?

A. No.

MS ANYADIKE-DANES: Can I ask you to explain that point that you just made there? Because of course a report to be coroner could be made on a number of different bases, not all of them have to relate to any error being made. For example, and it seems insofar as he can reconstruct it, Dr Hanrahan's basis for reporting Lucy's death to the coroner was because it was unexpected, it had happened within a fairly short period of time and he thought it was something that needed further investigation. He did not anticipate that a child who had come in with gastroenteritis would die shortly thereafter, or at least suffer the crisis that she had shortly thereafter. So that was his reason for the further investigation basis, which is the sort of

catch-all in section 7. But it's also possible to report because you do feel that there has been some act that has brought about the collapse.

A. Yes.

Q. And if you're not sure the basis upon which a child's death or any death has been reported, but you have information to indicate a particular basis, in your view, is there any duty to communicate with the coroner's office or the other hospital to check what basis it was referred?

A. I think this is -- at the time of referral, I don't necessarily think that applied because Dr Hanrahan was reporting on the basis that he had no explanation, no satisfactory explanation for her death, and that is in itself sufficient. Secondly, Dr Hanrahan was not aware at the time, as far as I can see, that the fluid regime had been inappropriate, sufficiently inappropriate.

Q. I'm referring to Dr O'Donohoe.

A. Oh, Dr O'Donohoe?

Q. Sorry, just to be clear. The scenario I'm putting to you is let us say that Dr O'Donohoe believes or has been told that the death has been reported to the coroner. He doesn't know on what basis that death has been reported -- it could be reported on the one we've just said, it needs further investigation. However, he's of

the view that the fluid regime is implicated in Lucy's collapse. If you're in that situation, is there any onus on you to satisfy yourself as to the basis upon which the report has been made because you might have relevant information?

A. I think that's a difficult one and I would have to defer to others' views on this because Bridget Dolan has gone over this. The question is: how much should you volunteer --

Q. Yes.

A. -- or how much would you await an approach from the coroner? As far as I understand Bridget Dolan's summary, it is proper to await. This applies to Dr Kelly as well later on in the process. But the question comes here whether one waits for an enquiry to be made of you or whether you volunteer the information in addition. If you think or understand that a referral has been made and the coroner will be conducting an inquest, then you know that an enquiry will explore and you would be perfectly reasonably within your rights and practice to await that approach.

There is another aspect to it, which is, "Should you volunteer information?", and the only guidance on that is from the chief medical officer's letter, which is in Bridget Dolan's report and I have not seen the

letter myself, but which suggests that you should volunteer information. The General Medical Council guidance appropriate to 1998, Good Medical Practice, does not mention the coroner at all. And the one in 2001 does, but just encourages doctors or expects doctors to respond honestly and openly.

THE CHAIRMAN: Thank you.

MS ANYADIKE-DANES: Thank you.

A. May I just say one further point on the coronial referral process? In the Confidential Inquiry on Maternal and Child Health, a report on childhood deaths in 2006, one of the significant problems identified both by that inquiry and I think by the predecessor of the Care Quality Commission, Commission for Health Improvement, CHI, both identified significant problems in paediatricians not understanding the process of reporting to coroners and not understanding the process of assembling the information. So I put that in because it puts into context the fact that Dr Hanrahan -- although I have criticised Dr Hanrahan because I believe that it was appropriate for him to do what I've said, it wasn't outside the range of common practice for these errors or omissions to occur.

Q. The particular report, is it the "Why children die", that report?

A. Yes.
Q. The reference for that is 315-029-002. We don't need to pull it up, but there is a commentary on the work that they carried out by Aiden Cotter, "The Coroner's Perspective", and that can be found -- it's page 73. The reference for it is 315-029-083 and on to 085. That is his analysis of some of the difficulties and the limitations in the present system. In fact, he does go on to talk about, also from a resource point of view from the coroners, in trying to address these matters. But in any event that's the study that you're talking about?
A. It is, and I think that last point is important and perhaps I could just explain that a bit further.
Q. Yes.
A. In the process of investigation of sudden death in infancy, which is one of the commonest reasons why a general paediatrician speaks to the coroner's office, the understanding that I have formed, both at local level and in communication with the Home Office later on in my role in the College or the British Paediatric Association as it was then, was that the coroner was interested in only determining whether this was a natural or an unnatural death. Having decided it was natural, that was the limitation of his interest, if you

see what I mean, in terms of, "Was it A, B, C, D as a cause of natural, but not in my interest?". And the reason this came about because, when we identify a baby at home, a cot death, we want in ourselves as paediatricians serving a community to try to identify -- not as a research thing, but in order to help understand and support the parents, for example -- what might have triggered the death. And so we wanted to take blood tests and we wanted to take urine samples, which may mean a stab through the bladder, which would look bad on a post-mortem if you have blood in the bladder and a needle stab and stabs in the arms to take blood. And we may take samples of stool and throat swabs, all of which costs money. And the coroner locally and all over the country would not fund that.

So we agreed with the coroner that we could, even though a child was dead, take those samples. And he was happy as long as the NHS was paying. And that is where the resource issue comes in. That article does refer to research. This wasn't so much research; it was surveillance.

Q. Thank you. So just so that we're clear, your view is that it was the Erne who had the principal responsibility to report the death to the coroner?
A. No, I'm sorry.

Q. I beg your pardon, exactly the opposite, the Children's Hospital --
A. Yes.
Q. -- who had the principal responsibility to report the death to the coroner.
A. At that stage, yes.
Q. At that stage?
A. Yes.
Q. And in your view, is there a stage at which it becomes a responsibility or the onus may be on the Erne or any of its clinicians to report?
A. Well, I believe that -- and I said in my report -- that in 2002 when Dr Kelly had two pieces of information, those pieces of information were that he knew that there was to be no inquest and at that stage he had information given him from two sources, Dr Jenkins and also from the joint College report that the therapy used in Lucy had likely triggered the cerebral oedema and her death. In possession of those two pieces of information, I think it's arguable -- and I will defer to the legal view on this -- that he had a duty to refer to the coroner when he had those two pieces of information as a medical professional.
Q. Thank you.
A. When you get to 2001, there is a different argument, and

in 2000, although I've said "responsibility to share the review with the coroner", I appreciate that that is not under any guidance or even in custom and practice, but is more in the context of openness as was trying to be commended to the NHS by the chief medical officer and others.
Q. Thank you. I was going to take you to the contact between the Children's Hospital and the Erne. In large part, you have addressed that, but I wonder if I might pick up some discrete points within that. Would you have thought at any stage, apart from the initial notification that you'd reported it to the coroner and the coroner was not going to exercise his jurisdiction over it, and that apparently was a communication between Dr Hanrahan and Dr O'Donohoe --
A. Yes.
Q. -- would you have thought at any time there should have been discussion between any of the clinicians or even the two hospitals about Lucy's death in connection with reporting it to the coroner? Or is this something that carries on with each hospital in isolation from the other, if I can put it like that?
A. Well, I think in just general terms, I understand -- and I've said in my report -- that there was no guidance on what you should do, but it seemed to me that if you have

conducted a review into a child's death and you have asked an external paediatrician to look at the notes and you have asked your own team of nurses and doctors to comment, that you should, knowing that Lucy had been in Belfast and died there -- that some form of communication with one of the clinicians there was almost ... It's difficult to understand, in my view, why that wasn't done, at a minimum, to seek a discharge summary, which would give them an account of what had happened or what the treating clinicians in Belfast had thought had caused the cerebral oedema because it's such a rare complication of gastroenteritis. I thought that was a striking omission in the course of the review and then when it was absent from the review that Dr Kelly, after sort of quality-assuring the review, could have done himself.

Q. Starting from that standpoint as to whether, in the course of the review, anybody at the Erne should have communicated with anybody at the Children's Hospital, I think Dr Anderson gave evidence about that. In the transcript, which we don't need to pull up, of 11 June, page 51, he says:

"We understood our remit was to look at what happened within the Erne Hospital and didn't recognise that there should be, or it was even appropriate to be,

looking at the views of the clinicians in the Children's Hospital as to what they thought had happened to Lucy."

Is that a reasonable position to make? Can you understand that?

A. At that point in the course of the review, you couldn't argue that. When, at the end of the review, Dr Quinn had expressed his view quite clearly that he had no satisfactory explanation for the cerebral oedema, then -- and as far as the Erne Hospital was concerned, they had no explanation for the death, I felt that they should in fact have tried to find out what the clinicians in Belfast had thought. I also felt that a wider investigation should have been conducted than the preliminary one. Dr Quinn, after all, was only engaged on the basis of a preliminary look at the notes and got rather caught up in the process.

So yes, I think there should have been at that point. I can understand Dr Anderson's position. He and Mr Fee were asked to look at what happened in the Erne, but the result of the review was: we still don't know why Lucy died.

MR GREEN: I wonder if through you, Mr Chairman, I could invite Dr MacFaul to identify the place in the evidence where he derives the proposition that the Dr Quinn

review was a preliminary opinion.

THE CHAIRMAN: Well, there's a specific point in the documentation where it's referred to as a preliminary review of the notes. That's absolutely specific. There was also a degree of vagueness when Dr Quinn and those associated with that review gave evidence about the extent of his involvement.

MR GREEN: But he did give a report in the end.

THE CHAIRMAN: Yes, he gave a report, Mr Green, but one of the difficulties and one of the problems about this report is it's referred to in correspondence as a preliminary review and it's not at all clear whether it ever went beyond a preliminary review or whether it ended up as a full and final review. But it ended up as a report, I accept that.

MR GREEN: Yes, I follow. I was just seeking clarification. Thank you very much.

MR COUNSELL: Mr Chairman, you'll recall that the letter from Mr Fee instructing Dr Quinn used the expression "an initial review".

THE CHAIRMAN: Yes, sorry, that's the precise term, thank you.

We can go through this in some detail, doctor, but what strikes me is that, in the Royal, nobody quite understood why Lucy died, in the Erne nobody understood

why Lucy died. The review, which included Dr Quinn's report, didn't really give a clear steer about why Lucy died. So the end result of this series of examinations -- preliminary reviews, initial reviews or whatever they were -- was that there's a 17-month-old girl who is admitted to hospital, who has unexpectedly died, and nobody is quite sure why; isn't that what rings the alarm bells?

A. Absolutely, yes.

THE CHAIRMAN: Thank you.

MS ANYADIKE-DANES: And in a sense, the justification perhaps for the clinicians at the Erne contacting those at the Children's Hospital once they had not been able to formulate a satisfactory or a conclusive view as to the cause of her death is because that was the specialist centre where they had sent her to, and it might be reasonably thought that, if anybody was to have an insight into what had happened, it was likely to be there where they'd carried out the CT scans, they'd carried out the investigations and where they had a level of expertise in paediatric intensive care.

A. Yes, certainly. For example -- and this is speculative -- Lucy might have had an inborn metabolic disease, which would be important for parents to know. She might have had a severe infection, which had been

missed at the Erne Hospital, and they didn't know that. And any number of other possibilities. So it seemed to be incumbent to determine: here you have a child that died from gastroenteritis, what was the process by which she died? And that, it seems to me, just on the basis of logic, would steer you towards finding out what the team in Belfast, who had conducted a series of blood and imaging investigations -- what conclusion had they come to.

THE CHAIRMAN: And if they told you, "We don't know either", far from bringing an end to the investigations, that would only require the investigation to be stepped up?

A. You would expect either to set up your own investigation or to await the coroner, but at least to find out when the inquest is to be held.

THE CHAIRMAN: I'm told that happily, despite the way we might get sidetracked with the details of the inquiry, that happily children's deaths are comparatively few.

A. Yes.

THE CHAIRMAN: So if there's comparatively few, I would deduce from that that the deaths of children in Fermanagh are even fewer.

A. Yes.

THE CHAIRMAN: So we've got an unexplained death of a 17-month-old girl in Fermanagh, nobody is quite sure

why, there are reviews done and it all somehow drifts away.

A. Mm.

MS ANYADIKE-DANES: I've got a note about a break, Mr Chairman, but just before that, I wonder if I might sort of put it in this way to you, doctor. The chairman, of course, has put it to you that one can go through all the detail and parse all these reviews and reports and so forth, but when you stand back from it, as he has invited you to do, you have the district hospital, they have conducted their review and have involved a number of people to do that and the upshot of it is they don't really know why. You have the Children's Hospital, who hasn't done that, but nonetheless the lead clinician, he doesn't know why. He's had a post-mortem by consent, a full post-mortem, to try and ascertain, he's no better informed when he gets that, he doesn't know why, he doesn't really know the cause of death, but nonetheless a death certificate is issued and, as the chairman just summed it up, it just goes away. There is no further conclusion as to how and why that child died and no further investigation set up to determine that. Does that not surprise you, even for 2000?

A. Well, in fairness to the Erne Hospital, they were

labouring under the view that there was going to be an inquest. The fact that they didn't find out, I think, I've criticised, that, at the very least, to find out when it was likely to be, if only just to get prepared for it, for the clinicians to make a report perhaps while their memories were fresh. And I did find that surprising that no contact was made to determine when the inquest was to be held.

Q. If I just pause you at that stage before you go to the next bit of it that might have been surprising. If they believed that there was going to be an inquest, then as you've just said, is not one of the important things to make sure that you've got as best a record of what happened by those clinicians and nurses who were directly involved, and would you not have thought that very soon after the event you would be marshalling that, even if you hadn't been asked for it, in due course it will come if there's going to be a coroner's inquest, so there's no point in recording people's recollections two years down the track, is it not better to get a full account of that then and there?

A. I think they had done their best to do so. The fact was it wasn't good enough and that was their review.

Q. That's the point that I'm getting at: should they not have had a full attempt to do that so that they could

best assist the coroner, if that's what was going to happen?

A. Well, I believe so, and that's why I have identified what I saw as flaws in the review itself and also, having done the review, to consider whether to share that with the coroner. But that would be advice rather than on a voluntary basis, or at least to stow it away to use for when the inquest was to be held. That begs the question of the fact that the review itself wasn't particularly well done.

MS ANYADIKE-DANES: Yes. Mr Chairman?

THE CHAIRMAN: We'll break for ten minutes, doctor. Thank you.

(11.45 am)

(A short break)

(12.05 pm)

MS ANYADIKE-DANES: Dr MacFaul, can I take you back to something that you had referred to earlier? When I was asking you about whether, in your view, a clinician in 2000 would have appreciated that the rate of fall of 137 to 127 is likely to have contributed to a cerebral oedema if a cerebral oedema did indeed occur in those circumstances, and you said, yes, you thought that was so, and I asked you what the basis was for you forming that view, and you referred to a particular case.

Admittedly, there was a head injury involved, but nonetheless solutions were administered and there was a fall and you said that it was that that precipitated a change in practice in your hospital; is that correct?

A. Yes.

Q. That case happened in 2001?

A. Yes.

Q. So if we're discussing what the clinicians might be expected to know in 2000, and you are saying nonetheless you would have expected them to have appreciated or at least thought about a fall from 137 to 127, what is it that you identify as the source of that?

A. In 2000?

Q. Yes.

A. I was referring really to paediatric neurology practice where, in existing brain disease, whatever it is -- and in that particular child she'd had a concussion -- that rapid change in blood sodium is known to make the cerebral oedema worse, and that is ground which was covered in discussion of Claire Roberts' case. So that was well-known in the 1990s. That is why I expressed surprise in the context of a paediatric neurologist. Now, as far as causation of brain oedema is concerned of itself, in a child without a brain illness, then that was only information which became available more

generally available in the early 2000s. What we don't know with Lucy, I suspect, is whether she had indeed some kind of preceding encephalopathy. I don't want to raise a hare, but I suppose I have to. Deaths through that mechanism are so rare that one has to consider what else might have been present, and I mentioned in my report rotavirus encephalopathy because we do know that Lucy had rotavirus infection and we do know that she had a brain illness.

This is a condition which is disputed and disputed to the point where the comment has been made, "Oh, it doesn't happen because you don't see much pathology on the brain", et cetera, but also that if you obtain the virus from the cerebrospinal fluid by a lumbar puncture, which is a way the identifying its implication, that is because you have contaminated the needle, because the child has diarrhoea, you put a needle through the skin and it's likely to have been contaminated, which I think is likely to have been an argument and also challenged because the last -- well, probably the only case which I clearly identify in my own practice of rotavirus encephalopathy, the pathologists refused to send the cerebrospinal fluid for rotavirus because they said it doesn't happen. I felt that they ought to send it, they did and we grew it. So bully for me.

But the point is that it is a condition, I don't think we contaminated the lumbar puncture and that child had only a mild encephalopathy and recovered in a matter of about eight or ten hours, and I have a video of her, but I'm not able to release that, obviously, to share it. So it does exist and it tends on the whole to recover. So the question is: did Lucy have such a condition? And I would have to defer to a pathologist about whether or not the autopsy was conducted in a way which would have identified the presence of that on brain examination, but I did comment in my report that no lumbar puncture was sent on Lucy, which you wouldn't want to do in life because of the brain swelling, but could have been done just after death or could have been done by the pathologist, and it wasn't.

THE CHAIRMAN: Thank you.

MS ANYADIKE-DANES: Thank you. If we move on to the specific issues to do with the hospital post-mortem. As you know, the inquiry has an expert pathologist, Professor Lucas, who has given evidence before, and he has produced a report specifically to deal with the autopsy elements of this case. So I presume on the actual pathology you would defer to his report and his views?

A. Yes.

Q. But if we look at it from the perspective of the clinician -- so not what you would be saying a pathologist ought to have found or ought to have done faced with a hospital autopsy in those circumstances, but the clinician receiving the report -- what in your view should have happened with the receipt of a report like that, which doesn't appear to be conclusive in terms of how the cerebral oedema developed and became fatal?

A. Well, the preliminary report, which was available to Dr Hanrahan when the death certificate was issued, showed evidence of fluid overload in the sense that Lucy had brain oedema and she had pulmonary oedema. So it was consistent with the fluid overload situation.

Q. So if he had received -- which he did; he received that report or he or his registrar, Dr O'Donohoe, received that report -- before the death certificate was issued, what do you think is the implications for them of having got a report with those sorts of findings?

A. Well, of course, with the benefit of hindsight -- and I want to underscore that because we all have to face that issue; this has been looked at in a very detailed way -- it is possible to conclude that Lucy had cerebral oedema, she had evidence of fluid overload and it would be reasonable to say, "Is it likely that the two in some

way are related", and provided an explanation and then to look at the fluid management in more detail. That would be ideal.

Q. If you weren't going to do the ideal, what's the alternative?

A. Well, there wasn't one because he didn't have an explanation, a satisfactory explanation otherwise, and that is the issue here.

Q. So does that mean what you describe as ideal in fact turns into the prudent step because you don't have any other explanation?

A. Yes, I'm just trying to be fair on the predicament facing Dr Hanrahan.

Q. Yes, but leaving aside wanting to be fair, the fact is he has received a report, it has those elements in it and somehow he's going to try and work out how she got the fatal cerebral oedema because it doesn't tell him that precisely in the report. Am I understanding you to then say you have got to start thinking about how did she get the fluid overload and is the fluid overload related to the cerebral oedema?

A. The situation, as far as the position facing Dr Hanrahan is, is that he had no other explanation, but he did have features of fluid overload on the autopsy and if he had reviewed the fluid regime -- and the documentation was

present in the Royal -- it would have been evident to him that fluid administration had been incorrect and could have contributed to the cerebral oedema.

Q. Is that something --

THE CHAIRMAN: Sorry. Doctor, you prefaced your answer to the last two or three questions by saying that you wanted to emphasise that you were saying this with the benefit of hindsight. Okay? Do I take those last two or three answers as with the benefit of hindsight, and if I do, if we then go back to April 2000, Dr Hanrahan has been involved in Lucy's care when she moved to the Children's Hospital, he's been involved in referring her death for a hospital post-mortem, he gets back the preliminary report. Without the benefit of hindsight, do you qualify the answers you have just given?

A. I withdraw those qualifications, sir. I think he should have identified the linkage.

MS ANYADIKE-DANES: So he doesn't need hindsight to work that out?

A. No.

Q. And that's in 2000 standards?

A. In my opinion, yes.

THE CHAIRMAN: Am I right in understanding that, even if he doesn't get the linkage between the fluid overload and the cerebral oedema, at the very least he doesn't

understand why Lucy has died --

A. Yes.

THE CHAIRMAN: -- so he has to keep digging?

A. Yes.

MS ANYADIKE-DANES: And if he's in the situation of having to keep digging, does that mean, in your view, a death certificate shouldn't be being issued until whatever digging has happened has delivered a cause of death?

A. In my opinion, he should not have issued a death certificate. I think when he received the autopsy report, which had taken him no further, in my opinion he should have reported back to the coroner or just notified without question or reservation that this was a case that, as far as he understood, was appropriate for the coroner to take on.

Q. In fairness to Dr Hanrahan, he does say that. He regrets now he didn't do that and believes that when he got that report back, given that it hadn't answered the questions he might have been hoping it would, then he should have gone back to the coroner. He said that quite fairly and, in your view, that would have been correct?

A. Yes.

Q. Thank you. Then if we can come to the issue of the mortality meetings, and I wonder if you can help us with

understanding what, so far as you have observed, is the system for a hospital trying to identify the cause of a child's death, on the one hand, or at least deal with those issues that gave rise to the child's death on the one hand and, on the other, trying to see what are the more general lessons that might be learnt in terms of improving procedures or practices. In your view, what are the systems or avenues available in the hospital for doing that?

A. Well, at the time, some hospitals would only examine events in detail which had been regarded as an adverse event. A minority reviewed all resuscitations or major events. I think that the fact that the Royal examined every death is to be commended, and that was their process.

Q. If I pause there: does that mean that you're saying, in 2000, not all hospitals did that?

A. I suspect most regional centres did and I suspect most district hospitals would have had some system, but what I was trying to tease out there was: did you just look at those where you thought there had been a problem or all of those? For example, not every child necessarily with a death from meningococcal disease would have their review of management gone into in detail. But increasingly in practice, in 2000, most regional

intensive care units, if not all, were investigating deaths and this was part of the process in hand already before the PICANet was set up.

Q. If I ask you to pause there. Let's be clear on what you mean by "investigating the death". What exactly is the process that you think is involved?

A. Well, the approach to it that was taken by the Royal was to look at every death, whether or not they thought at the time there had been an avoidable factor, and that is to be commended.

Q. Yes.

A. And the use of a national audit database was to log all deaths and record diagnoses and so on and identify therapies in the long-term in being able to see trends.

Q. It may be inappropriate to do so, but I'm trying to see if there is a distinction to be made between looking at this particular individual death and trying to see how that death arose, which might be something you would do in a clinicopathological presentation or correlation exercise to get the pathologist on the one hand meeting with the clinicians to try and see if, in combination, we can identify why this child died. I'm wanting to see if that is a distinct exercise from reviewing all deaths to see if there are trends that we can see, and it may be, for example, that there's trends you can see,

there's bad practice in relation to some particular element, and that is something that we can take through, we can develop guidelines about it and try and reduce the incidence of deaths happening like that. Are those two different exercises?

A. Well, I think that as far as the Royal was concerned they were using the mortality review in that sort of way. Dr Taylor has said that it wasn't an investigation into the death --

Q. Yes.

A. -- but I suspect he meant not a formal structured investigation into the death. What was happening there was, as you described, there would be clinicians -- the intention anyway was that the clinicians treating the patient, in this case Lucy, would be present at a mortality meeting, so would the pathologist if an autopsy had been carried out, and those clinicians would have included the intensivists as well as the specialty clinicians. So in a sense, those mortality meetings appeared to have been a form of, as you call it, clinicopathological discussion.

Q. Why do you believe that that's where that kind of exercise was happening as opposed to -- and if I give you a contrary example -- when Claire's case was going to be discussed, and we don't have any full details of

how it was discussed, but in any event we were being told by the pathologists that there was a thing called a grand round and that the pathologists would prepare a presentation of their slides and so forth, the treating clinicians would be there and they would discuss that and in that discussion would emerge a concluded view as to why the child had died. That was the grand round or a neurological round or, as it happened, because that was a brain only post-mortem. But that was the process which was very definitely geared, in the way they described it, to identifying the actual cause of death.

You, in the way that you have described it, now have the view, I think, that that sort of thing was also happening within a clinical audit or mortality meeting setting and I'm trying to find out why you think that that was the place where that sort of discussion would happen.

A. Well, there wasn't any evidence that there was anything else going on other than, as you described, in the neurological service. So I regarded that that mortality meeting was, in a way, performing that function for all deaths.

Q. And if it was performing that function in the absence of having been told that there was another forum where that

sort of thing -- the neurological round would happen but in a more general setting, in the absence of being told that there was another forum, then what is it that you think should have been happening at these mortality meetings? What should have happened in relation to Lucy, for example?

A. I think a clinical summary of her condition, which had been done in preparation for the meeting, would be part of it, and that would involve a scrupulous review of the case records. In that sort of situation, a review perhaps of the literature, looking at what might have generated cerebral oedema in a child with gastroenteritis, as just part of the process. That could be done either by the consultant or on his behalf by a registrar.

Q. And is the purpose of that to try and identify the cause of death? Because at that stage that would be unclear to her consultant clinician.

A. It would be an attempt to provide as much information as might help to interpret the process of death.

Q. Do you have direct experience of those sorts of meetings?

A. Well, we used to do those in what we called critical incident meetings in our own hospital.

Q. Yes.

A. And all events were reviewed, including resuscitations.
Q. And how long is the discussion, how thorough is it?
A. For each death or event, we would probably have three in a matter of an hour, an hour-and-a-half.
Q. I see. So how then do you move from that kind of scrutiny, which is a specific one to do with that particular death, to teasing out the more general lessons that might be learnt? Is that the exercise you then move into?
A. Well, what is needed is to say, "I've taken the view that the purpose of those meetings was to identify good care when it is present, to encourage people to continue at that level", with perhaps an opportunity to do better and also to identify where care had fallen below standard in order to remedy it -- and by "remedy" I mean additional training, better guidelines or whatever, or to encourage people to use the guidelines, and to identify any failings in terms of lack of equipment or lack of availability of the appropriate staff or delays in getting access, for example, to imaging, which was a problem for out of hours at times.
Q. Yes.
A. So there are a number of strands which could come out, and they were logged, not necessarily linked with the patient's name, but linked with case A, B, C, D or

whatever.
Q. And in Lucy's case, if her death was going to be subject to that kind of exercise, given the features of her care that you have discussed in your report what are the sorts of things that you think should have been addressed at a meeting like that?
A. I think that they would have identified, by going through the case records or should have done, the fluid overload at Erne Hospital. As far as I can see, there were no clinical failures at all in the Belfast hospital in her management or her investigation for that matter, save this issue of the rotavirus encephalopathy. There would have been an opportunity to look at what was put on the death certificate. Dr Taylor has said that the death certificates were not present in those meetings, and I understand that, but in Lucy's case the identified entry into the death certificate was entered into the clinical notes.
Q. That's correct. Dr O'Donoghue recorded what he was going to put on the death certificate in the body of her notes.
A. So there would have been an opportunity there for people to say," That's not logical".
THE CHAIRMAN: Dr Crean put it pretty explicitly. He said he wasn't at any meeting that discussed Lucy's case.

When he was asked what the outcome of the meeting might have been, he said that people would have been jumping up and down at the content of the death certificate --
A. Yes.
THE CHAIRMAN: -- because it wouldn't have made sense to any of them.
A. Yes.
MS ANYADIKE-DANES: So even if the child's care is not one that has been the subject of attention in the Children's Hospital because a child has been transferred from another hospital where almost all the care has taken place, do you still see an important role for these meetings to discuss the care of the child?
A. Yes.
Q. And why is that?
A. Well, two reasons. Firstly, to ensure that what is being done in your own unit is at a high standard and to identify where things might be deficient. And the death certification would be an example there.
Q. Could it, for example, have identified a certain lack of appreciation, if I can put it that way, of the fluid regime which those more familiar with fluids would have considered to be inappropriate? Could it have discussed that?
A. It would have identified that the regime in the Erne had

not been appropriate for Lucy.
Q. And that would have a teaching benefit for those who had not appreciated that within the Children's Hospital?
A. Within the Children's Hospital it would have done. It would have reinforced to junior staff perhaps how important fluid management is.
Q. And any other benefit that there is for looking at the care that happens in a hospital that's not your own?
A. Well, in theory, of course, do you then share that information with the referring hospital?
Q. That's where I was coming to.
A. That is a more difficult issue. I think that nowadays I suspect it would. There were various mechanisms -- and I've alluded in my report, I think, to how intensive care units evolved. Perhaps it's important to say that in the 1990s when the centralisation of paediatric intensive care was put in place, it was not always with the support, in principle, of paediatricians in district hospitals who resented sometimes the care going to the centres. So there was perhaps a little bit of tension when establishing a regional intensive care service and a bit of delicacy and one of the things that you would want to be cautious of was looking as though you're always criticising the management in a district hospital.

If you had identified a deficiency in the care, what I think would have been commendable and advisable would have been somebody to ring the Erne Hospital and say that they thought that the fluid regime had been, number one, wrong, and, number two, could -- if not certainly -- well or likely have contributed to her death. I do think that could have happened by telephone. There might have been a reluctance to do it in writing for the reasons I have just mentioned.

THE CHAIRMAN: Let me tease out one issue with you. The reason we are looking at this limited issue about the aftermath of Lucy's death when her parents have withdrawn from the inquiry is because Mr and Mrs Ferguson, who are here today, must think that if lessons had been learnt from something like the mortality meeting then Raychel would not have died 14 months later.

A. I understand that.

THE CHAIRMAN: So acknowledging the sensitivities about the central hospital in Belfast and not always wanting to be critical of the local hospitals, it's one thing for somebody to contact the Erne by phone and say, "Look, this is what we think happened here", but what about sending out a wider message if there's reason to think that the fluid regime used with Lucy and the

inappropriate use of Solution No. 18 may be a wider issue?

A. Well, a wider issue, as I've stated in my report, may not have become evident at that stage because this was a medication used incorrectly. And any medication used incorrectly can have adverse events, adverse consequences. So in that respect I think that's a debatable point. Dr Steen, I think it was, in relation to Claire Roberts did, in her evidence, give an indication that when something serious had been identified during audit in a district hospital, then there was a mechanism within the Royal for referring it to the medical director at the Royal, who would undertake the responsibility for communicating with the referring hospital. That was how she described it in one way or another. How frequently that was used and how well-known it was, I obviously have no ability to comment.

MS ANYADIKE-DANES: Dr Carson, when he was giving evidence -- I think it was in answer actually to a question from the chairman -- said that he could see some benefit in a medical director to medical director communication like that because it rather took the personalities out of it. It didn't give the uncomfortable time when a colleague's on the phone

telling another colleague, "I think you have made an error here that might have been quite fundamental". It becomes more formal and he thought that might have certain benefits in doing that. So that's on the one hand.

When Dr Crean was giving evidence I asked him about the fact that, in the Children's Hospital, you had this reservoir of expertise and experience concentrated there and probably much greater than any of the district hospitals, and when children were transferred to the paediatric intensive care and they saw what they believed to be the result of perhaps inappropriate care in some way or another, not necessarily intentional, but just through not appreciating, did he not think that there might be an opportunity to communicate in whatever way he felt he could do that and he agreed that he did do that, particularly in relation to -- I think he said he certainly did it in relation to fluids, but he also said he did that generally if he saw that happening in a child that was transferred.

So it's not that people hadn't thought that they could do that, they had thought they could. What I think we're trying to get at is: given how important that might be, is it really something that should be left to the particular inclinations of a clinician in

the Children's Hospital or should that not be something that should be more formalised? And do you really need to wait for a protocol or a practice to see the potential benefits of the paediatric regional care centre doing that for district hospitals who treat children?

A. Well, I suspect they do now and there will have been a sea change in the 2000s.

Q. But in 2000 --

A. But in 2000, what I was trying to say was the intensive care services were evolving and developing, the audit within intensive care was developing and evolving. So one has to look back at the context of the time. I was just reflecting, as I was answering, that this question about, "Do you criticise another doctor? Do you identify and, if you like, whistle-blow and put a red flag up about another clinician's performance?", is an issue which has become obviously very sensitive and quite rightly has been encouraged now as part of the overall practice of openness within the NHS.

If you go back to when I qualified -- I'm trying to remember exactly where I saw it -- but I think we used to be given guidance from the GMC -- and they may well be able to get copies for you -- that you should not criticise another medical practitioner. I think it was

put as strongly as that, but I'm relying on memory. And then when you look at the guidance given in the 1998 Good Medical Practice, there is little attention given there to reporting an error on the part of a colleague. What is reported is:

"If you believe that a colleague and his practice is dangerous to the patients under his care ..."

In other words, it appears to be a style of practice with repeated errors, then you have a responsibility. But it does not specifically address the case of the individual error because everyone and every system has an error in it, an error rate.

So I think that the GMC guidance was not as clear perhaps as it might have been at that time, and this comes to Dr Auterson as well in the Erne about should he have raised a red flag about his colleague. It's against that backdrop of change that we have seen from the late 1990s/early 2000s, and then almost an exponential rise in raising awareness of people's responsibilities to protect patients through error reporting.

Q. You can see, though, doctor, how deeply difficult that might be for parents to accept and understand.

A. I understand.

Q. In the scenario that you painted, the

Children's Hospital, through the mortality meeting, may have come to a fairly clear view that something went awry with the fluid regime in the transferring hospital. They may not appreciate that that practice is inappropriate, but we see it is and yet because of sensitivities -- if that were the case -- in relation to clinicians, we can't find a way of communicating that, not just to them but generally to the greater safety of treatment of children. You can see how that would be a very difficult thing for parents to hear.

A. I agree with that view and I think it would have been incumbent -- I think, had it been identified in the Royal, for at least a telephone call to have been made, clinician to clinician, to say, "Do you not appreciate that Lucy has died and that the regime used in Erne Hospital was likely to have contributed?", because after all, that was the fundamental purpose of the review set up in the Erne Hospital anyway.

Q. Yes.

A. But that would be what I would have expected as an outcome. Whether that process was used in terms of going up to the medical director in the Royal and then doing the medical director -- I don't know how frequently that was used from the Children's Hospital and maybe that could be clarified. But it was obviously

a process in hand in the late 1990s because Dr Steen refers to it.

Q. Because that communication doesn't have to be by way of blaming any particular doctor. It's a sharing of information: we've carried out an investigation, this is what our analysis indicates.

A. Yes.

Q. And it can be done in that way, one doesn't have to get into who's to blame and whether, in fact, anybody is to blame; you're sharing information.

A. Yes, and I think that was done with meningococcal disease when Dr Taylor recognised that management was sub-optimal and he produced guidelines on this. So there was a process in hand, but what struck me about the lack of documentation, which is what I've criticised, is that there didn't seem to be a way of aggregating or identifying repetitive issues.

Q. That was the next point I was going to come to. Because so far you've been talking about the way in which one might have formed a better view as to how Lucy had suffered her fatal cerebral oedema, but then there's another issue that I had asked you about, which is seeing trends which could produce best practice or guidelines, and you referred to meningococcal disease and presumably Dr Taylor had seen a number of these and

was able to distil from that certain tendencies and themes and he could make that the subject of guidelines to improve practice. So where does that kind of activity happen?

A. I guess it happened in the mortality meetings.

Q. And how would you be able to get the kind of information that could be subject to that sort of analysis so that you could see the recurring themes?

A. Meningococcal disease is not all that uncommon so just from general discussion you say, "We've had another and another and another". But a death from gastroenteritis was so exceptionally rare that I would have expected that her whole care process would have been examined in great detail.

THE CHAIRMAN: Could somebody remind me, Mr Uberoi maybe, did the meningococcal guidelines that Dr Taylor prepared go outside the Royal or stay in the Royal? If you don't know now ...

MR McALINDEN: It was delivered to all the hospitals, I think, in Northern Ireland.

THE CHAIRMAN: Right. So they're developed in the Royal on the back of mortality meetings, Dr Taylor recognises an issue, draws up guidelines and then they're circulated through the North?

MR McALINDEN: Yes.

MR UBEROI: And I think there's one more middle staging post, which is they went through the Sick Child Liaison Group as well.

THE CHAIRMAN: Thank you.

MS ANYADIKE-DANES: You may have seen that, Dr MacFaul. That's the group that Dr Taylor was instrumental in establishing.

A. Yes.

Q. It met at the Antrim Hospital if I remember correctly. That became a forum to discuss issues to do with child ill health and how to perhaps take themes forward. So there were fora where that could happen, there were attempts to do it, and what I'm really inviting you to comment on is the extent to which there could have been a more systematic approach to that as opposed to depending on the insight and energy of any given clinician.

A. Well, I was critical of the fact that there wasn't recording so you couldn't find trends, and that would have been in not uncommon diseases like meningococcal disease, but there would be others: diabetic ketoacidosis, for example. What struck me about Lucy is that here was a child who had died from a common condition with a rare, very rare, complication, and knowing that deaths in gastroenteritis are exceptionally

rare, I would have expected that in itself to have generated really quite a lot of discussion and interest at the mortality meeting. And it is a pity it does seem -- I've read the transcripts and evidence, it doesn't seem clear that her case was discussed at the meeting at all.

Q. I think that's right. There's no real evidence that there was such a discussion.

A. No.

Q. Then we move to the case review. The opportunities for discussing Lucy's case and identifying why she died and what lessons might be learnt from it, you have told us where you think that could have happened.

A. Mm.

Q. When you've got the transferring hospital -- so the child actually doesn't die there, but the care that gives rise to the problem happens there -- in 2000, leaving aside the fact that they instituted a case review and went on in another investigation, but in 2000 what's the structure or the fora in the transferring hospital for looking at those sorts of things?

A. Some hospitals had critical incident or major event reviews, not all but some. Some would have reviews of deaths and, in some hospitals -- but I'm not sure how widespread this was -- there would be an attempt to seek

from the regional intensive care unit what they thought about the cases transferred. But then, later on, I think in the 2000s, you would find increasingly the regional centre would report back, if you like, but in the early stages of establishment of regional intensive care units, it was a process of the referring hospital asking.

In the referring hospital itself there should have been, particularly in Lucy's case, but in any death really, a review, at least at the clinical level, to say: well, this child, say, had meningococcal disease, did we do it okay, was there anything deficient in our case, was the drip put up quickly? And so on.

In the Erne Hospital -- and they're to be commended about this -- they recognised that the death was a major event and they set up a review and, in my opinion, the aims of the review were satisfactory. What was deficient was the way in which it was done and the way in which the review report was produced and then what happened afterwards. So there were deficiencies down the stream, but the intention was good.

Q. And so far as you're concerned, who had the responsibility for ensuring that the way of carrying out that review was appropriate? Having got the right aims, who carried the responsibility for how it should be

carried out or implemented?

A. Well, it was devolved from the senior management team. Dr Kelly had been alerted by Dr O'Donohoe and the critical incident form had been raised by the nursing staff, and that is what triggered the review. So there was a responsibility there. To an extent, I share Dr Durkin's view, as he's expressed it, that the lead into a clinical investigation would be that of the medical director, but in the event it's not unreasonable that the, if you like, the nuts and bolts of it would be devolved to Mr Fee and Dr Anderson.

Q. Before we go further down the chain to see how those to whom responsibility or to whom certain actions are devolved, in terms of the overall responsibility for that review, is it your view that that remains with the medical director or somehow passes from him when he sets it up with certain individuals to carry it out?

A. It doesn't pass from him, no; they're doing it on his behalf.

Q. And if it's a poor review then he has responsibility for it being a poor review and if it's a good review then that's down to him as well ultimately?

A. That's my opinion, but as I said earlier on, I have to defer to the views of the medical director in the form of Dr Durkin, but that would be my view and, yes, he was

responsible for the clinical investigation and thereby, in a sense, the quality of it.
Q. Then from your perspective, what do you think that review's remit ought to have been? Was its remit appropriate?
A. I think the remit was okay.
Q. Then in terms of the structure to deliver it, what do you see as any deficiencies there?
A. I think Mr Fee and Dr Anderson were doing it together, but it was mainly Mr Fee, as far as I can see, actually doing it.
Q. Do you criticise those who were going to be charged with carrying it out? Were they the right people to do it?
A. Yes, they were.
Q. So they're the right people and they've got the right remit?
A. Yes.
Q. What about the way it's actually put into effect?
A. Well, the medical element was a bit lacking, somewhat lacking. Mr Fee wrote to the nursing staff and met them and Dr Anderson did not do that. As far as I can see, nor did Mr Fee, but somebody must have asked them to produce reports. But they were not asked in writing, whereas the nursing staff were. So that was one point. The other point was that fluid balance and the fluid

management was central to the concerns which had been raised and that in a way should have been put in a briefing to the doctors in seeking their report, preferably in writing.
Q. Sorry, just so I understand, are you saying that when the statements of the actual treating clinicians are being sought, they should know in writing what the remit of the investigation is --
A. That would be my opinion, yes.
Q. -- so that they can produce relevant statements to that?
A. Yes.
Q. You will know that some of those clinicians felt all that was being asked of them was to produce a fairly narrow factual account of their direct involvement and were not being asked to express a view as to their thoughts, for example, on the appropriateness of the fluid regime. In your view, was that a helpful restriction, an appropriate restriction?
A. No, it's not appropriate. They should have been asked for their opinions.
Q. And why is that?
A. Because you were trying to find out what had gone wrong and what they thought might have gone wrong.
THE CHAIRMAN: So if you're trying to find that out, you don't restrict the information which you receive from

the people who were involved?
A. No.
MS ANYADIKE-DANES: Then you were saying that the doctors should have been told what the remit of the investigation was and be asked for their written statements of their -- that were relevant to that remit. Is there any other aspect of the way in which the review was carried out that you think was inappropriate or could have been improved upon?
A. Well, when the reports were received, it was clear that there was some lack of clarity about the fluid regime and what had been given, and I believe that a more tight chronology should have been drawn up and that a more careful analysis put together of the fluids actually administered. The records, as we know, are difficult to follow and it would have been important at that time to have obtained clarity from the staff who had been involved. The responses that were given were not very satisfactory, so having received an unsatisfactory response, the next step would be to clarify it with the responder.
Q. What do you say about the relationship between the case note review, preliminary or otherwise, that Dr Quinn was carrying out and then this review that, to some extent, built on that or followed it?

A. Well, I saw Dr Quinn's review as part of the review. His case note review formed part of the review process.
Q. And do you have any comment to make about that review itself?
A. Well, Dr Quinn was given, I think, a perfectly clear brief in writing.
Q. Was it an appropriate briefing?
A. Yes, I think so. I know concerns had been raised which have been addressed by Dr Durkin about whether Dr Quinn was an appropriate person to ask. I think for the purposes, my opinion is that for the purposes of that case note review I saw no conflict of interest, although it wasn't documented it was known that Dr Quinn was not working in the Erne Hospital and that he wasn't known personally to the staff there, at least the clinical staff. I saw no conflict there. So I think what he was asked to do was appropriate. The report which he produced was on the case note review. I see no problem with that either. I think he was an appropriate person to ask with his expertise.
Q. In terms of the report itself?
A. The report has a number of problems with it and I have pointed them out. The fluid calculation, I think, was wrong in the statement that he made. The volume he recognised was high, to be fair to Dr Quinn, and he did

draw attention to that. But then he --

Q. Well, did he, in the report itself, or was that left to his conversation with Dr Kelly and Mr Fee?

A. Well, I think in either/or. I would have to look at my notes to see. But it was certainly raised as an issue by him that the volume was high.

Q. And if that was so, is that something that should have been in the report itself in writing?

A. He said, I think, somewhere that it wasn't grossly excessive, but whether that was the verbal or written, I can't remember without looking at the notes.

Q. I can help you with that if we pull up 036a-047-101. You can see in the middle there:

"Fluid replacement 4 hours at 100 ml provided was greater than normal, but not grossly excessive."

This is a page of a note of a meeting that took place between Dr Quinn, Dr Kelly and Mr Fee on 21 June. Why I was asking you that is because, if you look at the report itself -- and maybe we can pull this along the other side, 036a-048-104, this is the second page of Dr Quinn's report -- a number of questions are posed. This is the two related ones:

"Was the child dehydrated on admission?"

And there's a view there that there's an indication there of a degree of dehydration. But if you look under

"Fluids":

"She was treated with Solution No. 18, which would be appropriate."

And then he goes on to talk about the volume of fluids and he's taking it over the seven-hour period, which is the entire period of her admission, as opposed to the period when she was actually receiving the IV fluids. And he reaches his calculation running at 100 ml an hour:

"Calculating the amounts over that period of time therefore would produce 80 ml an hour."

I'm sure you have seen it many times, but there isn't in that report anything to say that the fluids provided were greater than normal, whether grossly or not and that is why I'm asking you, since this is his actual --

MR COUNSELL: That's precisely what it says, with respect. Dr Quinn has indicated that, even if Lucy was 10 per cent dehydrated, the appropriate volume would have been 80 and Lucy was receiving 100.

MS ANYADIKE-DANES: I beg your pardon, Mr Chairman, it's probably the way I've looked at it. I thought he had calculated it out as an average over 80 ml, but in any event ...

THE CHAIRMAN: We can get into this, but in fact Dr Quinn

has accepted that that section of his report, which starts on the bottom right of the screen and goes on to the next page, he cannot stand over because what he has accepted is that if Lucy was so dehydrated as to need somewhere around 80 to 100 ml an hour, she shouldn't have been getting Solution No. 18.

MR COUNSELL: Absolutely, but with respect, Mr Chairman, the suggestion that's being made is nowhere did Dr Quinn indicate that the volumes -- leaving aside the choice of fluid, which he accepted he had wrongly characterised as appropriate -- that Lucy was receiving were excessive when that is exactly what he indicated.

MS ANYADIKE-DANES: Well, Mr Chairman, I don't propose to go back into the evidence. You heard the evidence and you will see the explanation he gave for why he formulated his report, assuming himself to be in the shoes of clinicians who didn't realise that the child was as sick as she probably was. I don't propose to go into that point.

The point I'm raising with you, Dr MacFaul, is if he is saying more specifically or explicitly in the meeting with Dr Kelly and Mr Fee that he believed that the fluids were greater than normal, is that not something that should have been put more clearly in his report?

A. Yes, I think that is a reasonable position.

Q. And once they had received that report and saw that it was really pointing the way to more having to be done -- I'll just pull up that report.

THE CHAIRMAN: 033-102-273.

MS ANYADIKE-DANES: When one gets to the end of the report, which is going to be part of the review process, as you've understood it to be, you get -- I'm looking at the first of those paragraphs:

"During resuscitation, it obviously became apparent that the child's sodium had dropped to 127. I am not certain how much normal saline was run in at that time, but if it was suspected that she was shocked ..."

And then he gives a view on what happened. Then he says he hopes the comments are helpful, but he concludes with:

"I find it difficult to be totally certain as to what occurred to Lucy in and around 3 am ..."

"Which is of course what they're trying to find out:

"... or indeed what the ultimate cause of her cerebral oedema was."

Which is, of course, the other thing they were all trying to find out:

"It is always difficult when simply working from medical and nursing records, and also from not seeing

the child, to get an absolutely clear picture of what was happening."

So he's left it that the main questions that it might have been hoped he could assist with on his case note review, he can't help with. So that's how it comes to those who are going to carry out the full review or conclude the review process. So what do you think should have been the implications for them of seeing that final paragraph?

A. Well, Dr Quinn had raised -- as you've identified, he had no explanation of the cerebral oedema, so that was a warning flag. He had identified that the fluid was more than should have been given, and particularly the saline, he's raised a question about. Where his report was somewhat, if you like, taken to be reassuring was in the choice of fluid. The volume of 400 ml can be debated and if you take from just the time of the intravenous infusion to the time of the arrest, it is arguable that the volume itself was all right. But it should have contained at least 40 per cent of normal saline, so the volume of No. 18 Solution that was given was probably double or nearly double what was indicated, and that was not picked out. So that's when I said that his report was essentially wrong in that respect. But Dr Quinn, for the people receiving this report, had

raised questions. He wasn't able to provide an explanation for the cerebral oedema, he had identified that volumes used were high and he had identified that, in particular, the saline volume was something he wasn't clear on, and it was possible to work out that he had suggested up to 20 ml per kilogram would be given, but that's 180 ml and in fact we know -- and he knew -- that Lucy had been given at least 250 and probably 500. So he could have clarified that a bit further, but he had raised questions about it and bounced that back to the Trust.

So although I have said that his report was misleading, it was in respect of the use of No. 18 Solution; he didn't mislead in respect of raising questions about the fluid regime.

Q. So having raised those questions, how do you think they should have been addressed by those charged with finalising the review?

A. Well, my own view on this is that there was sufficient uncertainty about what had caused Lucy's death. There was concern expressed about the fluid regime initially and it hadn't been settled by Dr Quinn's report and that a further review, as a minimum, could have been undertaken. The argument against that would be, "Well, it's all in the hands of the coroner", but they didn't

find out whether the coroner's inquest was to take place and when, and they did have an interval to fill between the time of the inquest findings and, if you like, now. And during that interval, more children would be admitted to the hospital where an unsafe level of therapy had been used.

My feeling on this is that it would be incumbent upon Dr Kelly to have addressed the safety issue, clinical safety issue, that was raised by setting up a review. He sought opinion and he had an opportunity to get a steer on this from Dr McConnell. I would not expect Dr Kelly to do this on his own, perhaps, but to consult with colleagues to find out how he should do it.

Q. So in other words, you distinguish between trying to close the loop in terms of what had happened to Lucy and why it had happened and so forth, that's one exercise, but there's another issue, and that exercise may actually be resolved through an inquest hearing?

A. Yes.

Q. But there's another issue that Dr Kelly had to address, which was, until all that was known, he potentially had -- there might be a practice that was unsafe in his hospital --

A. Yes.

Q. -- and he would need to satisfy himself about that and

put whatever changes in practice were necessary in the interests of other children.

A. That's my opinion, yes.

MS ANYADIKE-DANES: Mr Chairman, a number of those who were involved directly in the review, some of them have made concessions as to its deficiencies and inadequacies. I don't propose to go through all of that because you've heard the evidence and you'll form your own view about that. I'm really seeking from Dr MacFaul to see what he can add to see how the practice might have improved without going all over that, if that's acceptable.

THE CHAIRMAN: That helps. I think we should say generally, for the purposes of Dr MacFaul's evidence, that his reports are taken as read, that the concessions which have been made are taken as read, and that I don't need all of that territory to be covered again. So what I really want Ms Anyadike-Danes to focus on, with the support of the lawyers in the chamber, is what the outstanding issues are before at the end of his evidence. Dr MacFaul will help us in looking forward to what the current position is in different areas and how things might develop in the future.

So at that point, if this is a convenient time, we'll break now. We'll keep lunch a little bit short and come back at 1.55 because we still have some

territory to cover.

(1.05 pm)

(The Short Adjournment)

(1.55 pm)

MS ANYADIKE-DANES: Good afternoon. Mr Chairman, I wonder, before I just resume the questioning of Dr MacFaul: yesterday counsel for Mr Curtis, Dr James Leonard, very kindly provided me with a judgment which relates to the whole question of the obligations in relation to disclosure to the coroner. It's Worcester County Council & Others v HM Coroner for the County of Worcester and the neutral citation is 2013 EWHC 1711 and we now have it paginated so you can find it at 315-028-001. I'm very grateful for that.

THE CHAIRMAN: Thank you.

MS ANYADIKE-DANES: Dr MacFaul, I'd like now to ask you about three areas that Dr Carson, in his evidence yesterday, commented on towards the end of his evidence. He saw them as particular issues, not just in relation to Lucy's death, but generally in relation to the whole question of governance and carrying out investigations in relation to paediatric deaths. He was really looking at those as issues and also the way forward, perhaps, and maybe even some of the impediments to improving matters.

If I can take you to the first and ask you for your comments. The first relates to the investigations -- one might even call it the quality of investigations into paediatric deaths. I think in your report you referred to the Confidential Enquiry into Maternal and Child Health report, the CEMACH report, and the Child Death Review in 2006, which also involved Northern Ireland as well as Wales and England. Dr Carson didn't mention that, but he talked about the benefit of having or queried whether there wouldn't be some benefit of having all paediatric deaths investigated, and I don't mean by their local hospital, but with some level of independence and being, at a regional level, able to collect the relevant information in relation to them and subject that to analysis to see what trends and lessons there might be learnt from that.

I wonder if you had any comment that you could make about that?

A. Well, at the moment, in England and Wales -- I understand certainly in England this is now a statutory requirement under the Local Children's Safeguarding Boards that every child's death is investigated by a panel and this was introduced under Working Together, a document of the Department of

Children, Schools and Families in 2006, and there was a preliminary period when some Local Authorities took it up voluntarily, but it's become statutory since 2008.

That process involves the reporting of every child's death to the Local Children's Safeguarding Board and they have a Child Death Overview Panel, which is made up of a mixture of different professions, but also laypeople, is my understanding. This goes beyond my retirement day, so I'm speaking from just knowledge of what was put in place, but it may be limited.

As part of that process, there has been a doctor identified and funded in every commissioning area, like a PCT, who is a paediatrician, who is the local designated doctor for the investigation of sudden unexpected death in children. That process has taken over from the CEMACH pilot. CEMACH, when I tried to get it funded -- and eventually it was set up -- started with my recognition that although we were looking at all deaths under the age of 12 months in the CESDI, Confidential Enquiry into Stillbirth and Death in Infancy, there was a need to look, in a structured fashion at all deaths after the age of one as well. I initially proposed this in the department in a particularly narrow frame, which is why I'm going on about this, because I felt that it was possible to look

into every death with an inquiry in terms of resource if you looked at only in hospital deaths because I felt that there were problems in the clinical management of children without these becoming clear.

This was a gut feeling fed by observation of practice and also by my medico-legal work. In the event, the ambition for the department was to look at it in a broader scale and to look at how children came to die, looking at the public health aspects, the social aspects and environmental aspects. For example, when I mentioned in-hospital deaths, that is a subset of half of all deaths because deaths outside hospital are quite common from road accidents and injuries in the house, drowning and so on in the environment. And the ambition, therefore, of CEMACH, which was undertaken by its pilot, was to follow that brief, was to look at all deaths, with a view to identifying avoidable factors, which included such things as traffic management and so on.

I have reservations about that because I felt that it took the focus off what I had felt was important, but I understand why it was done. What has happened in the setting up of the Local Children's Safeguarding Boards -- this is a personal opinion, I must underscore that. When they first set off, they set off under the

umbrella of the Local Authority and therefore they were looking particularly at avoidable deaths from abuse and neglect, social factors, perfectly laudable, and also, as I said, included road traffic accidents and so on. I felt that there was a danger in that -- and I still feel that -- that the clinical aspects of care in hospital, in Accident & Emergency and in general practice have taken a sort of back seat, and the responsibility -- my ambition, which has not come to reality, was that we would have a continuing annual review of all childhood deaths from illness. But the responsibility -- and that was supposed to be CEMACH; the Confidential Enquiry into Maternal and Child Health.

What has happened in the event is that the Local Children's Safeguarding Boards have taken on that responsibility and they work with a data set created with CEMACH, which is a nationally agreed data set, and a process, which has been nationally agreed, and they are including in hospital deaths -- and as the process as evolved from 2008, 2009 and so on, there has been an increasing focus on clinical management and care in the healthcare system, which is to be welcomed. So in the end it's achieving the same end. But I would like to underscore my concerns -- and I hope that they will be allayed if you enquire into modern practice, which I'm

out of touch with -- that the clinical side is being looked at.

And I know that that's the case because there have been concerns that a community paediatrician perhaps was identified as the doctor designated for sudden death whereas actually quite a lot of the involvement in in-hospital deaths would be needing somebody who was used to dealing with acute illness.

So in England and Wales there is now a process and the idea is that they should be aggregated at least at a district and possibly regional and, I think, national level with annual reporting. And that is undertaken. Northern Ireland was initially, in terms of that, I believe, was to set up a safeguarding board for Northern Ireland, SBNI. I am not sufficiently in touch with whether that has started or how well developed it is.

Q. You're right, it was to. I'm looking at the 2008 report, if we pull up 315-029-098. Under paragraph 11.12 at the bottom:

"Northern Ireland: it is proposed that a regional safeguarding board for Northern Ireland will be established by statutory provision to make arrangements to safeguard the welfare of children and young people."

And then it goes on to say what they have in mind.

It goes over the page. If we pull up the next page next to it, you can see that. I'll read to you what it says:

"Safeguarding in the context of the SBNI will go beyond the traditional concept of child protection responsibilities. As part of its remit the SBNI will have a role in analysing information in relation to child deaths in Northern Ireland. Co-operation with regional and national initiatives such as the CEMACH will be a consideration for this area of work. It is anticipated that the SBNI will be established in shadow form at around the time of the publication of this report."

Mr Chairman, I haven't yet been able to identify whether that has been established, but it's something we are investigating, and, if it has, exactly what form it is taking.

But while we are in the report, just so that it's appreciated the sort of benefit or what the report was identifying, we can look at -- I think the particular part in relation to the hospital care perspective, one sees that at internal page 63. I'll try and take you to the relevant page. If we pull up 315-029-074.

You can see there the source. It goes over the page as well. The sort of thing they were identifying, the failure to recognise a sick child, and that in a way is

a comment that Dr Quinn had in relation to the clinicians dealing with Lucy; he felt they hadn't appreciated how sick she was. Then "poor medical care", "failure of the hospital trust services".

Then if we look over the page, we see a couple of particular relevance:

"Failure of the hospital teams to properly respond to the event of a death with respect to correct referral to the coroner's service, information giving to the pathologist, ongoing liaison with the bereaved family, and the conducting of a standard child death review."

Then the last bullet:

"Failing of attending clinicians to correctly complete the medical certificate of the cause of death. This has implications for the Office of National Statistics data, which in turn invalidates national data relating to the children's deaths."

I'm wondering if you can comment on the benefit of it, once you have a system where you can aggregate all the deaths, you begin to see the trends and the sorts of issues that you might be able to subject to further analysis or be susceptible to some form of change in practice that might address those problems. Was that part of the purpose of it?

A. Yes. I have had heated discussions with my public

health colleagues over what are the common causes of childhood death in the United Kingdom? Because cancer and congenital malformation lead the pack, as it were, in terms of numbers. My view, which I was trying to articulate before I retired from this area, was that a significant proportion of those deaths were triggered by infection and infection is, on the whole, treatable and sometimes preventable. What was found by Professor Goldacre in Oxford was that the completion of the medical certificate of death did include cancer, it would include congenital malformation, but he had been able to link the death certificates with the hospital discharge diagnoses in his region and was able to identify that a significant proportion of them truly did have an infection which hadn't been on the certificate. So in public health terms, one can get the wrong impression unless the certificates are properly completed of what is actually the clinical priority to deal with. Infection was regarded as the commonest avoidable cause of death in the CEMACH review.

Q. This final paragraph actually identifies another point that the chairman has made many times, which is that the death of a child is a rare event. They go on to say that because of that learning is often difficult. Because it doesn't very often it is quite difficult in

isolated cases to see what the patterns may be, but if you compile a database of this type, then it becomes easier, using a larger population and a standardised method of collecting the information, to see if there are patterns that you can address. And then they go on to talk about:

"Lastly, effective action in response to identifying avoidable factors can only really come about through local engagement with those immediately involved with the care of the deceased. A bottom-up approach by doctors on the front line has always delivered more than high-handed directives from those several steps removed from the issues and this will be a challenge for the Local Safeguarding Children's Boards."

Are you able to comment on that just from your involvement in the public health arena?

A. Only in the sense as I referred to earlier that I do hope that, under this process, sufficient attention is given to the clinical management which does, in a way, require reviews of every clinical illness that has led to death. And that review would include looking to see whether the practice was up to standard.

Q. Then just so that we understand how it works, if you have got that information being collated in the way you say, in the form a standard data set, who then does

the analysis of it so far as you're aware?

A. Well, CEMACH had the skills to do that and that was in -- the Confidential Enquiry into Stillbirth and Death in Infancy, they had the ability to do the statistical stuff.

Q. And they produced annual reports in relation to what has been analysed from the data set?

A. They did. They produced reviews and they would not look at all deaths, but they would look at subsets. For example, a sudden unexpected death in infancy was a particular project which rolled on a couple of years and was not a regular annual thing. The statistical manipulation under the Local Children's Safeguarding Boards process is opaque to me. I don't know what is being done and I don't know who is responsible. Someone will know.

Q. Thank you. I wonder if I could ask you about another matter that Dr Carson raised. It's something that the chairman has himself alluded to on many occasions. It's the question of culture and the significance of culture and its implications in terms of, firstly, correctly identifying the problem, secondly, dealing with the problem and, thirdly, disseminating the learning from that. Do you have any views yourself?

A. Yes. I think what has happened in the late parts of the

2000s and now is an increasing preparedness of clinicians and nursing staff to report what they see as an adverse event, and that's very helpful.

But firstly, the event has to be recognised as adverse. In other words, an unexpected event which has followed unplanned care or something of that sort. But that requires the continual vigilance of oneself as a clinician and the vigilance of others around you to be prepared to look for sub-optimal care and to be able to report it. I am confident that the future will be better.

On the other hand, there are countervailing pressures or pulls on clinicians, and it is something which does require open debate. That is that there has been, if you admit an error, the vulnerability of the individual clinician or the service, for that matter, but particularly here I want to talk about the individual clinician because there has been increasing resort to litigation and the litigation has resulted in either a court case or negligence or a settlement. That has happened increasingly, but an individual clinician can protect themselves, if you like, from that by insurance, and so can the organisation.

When it comes to the other problems, there has been an increasing resort to report to the General Medical

Council, and there has been an increasing involvement of the police with, perhaps, prosecution for manslaughter. It is not possible for an individual clinician to protect themselves from either of those two events, both of which can lead to the loss of their professional practice for all their lives, apart from all the unpleasantness of it all. And that is a counter-pressure, if you like, which was recognised in the Bristol inquiry into the cardiac deaths and Sir Ian Kennedy wrote some kind of text about it and concluded that there should be a duty of candour. One of the things that he pointed out was perhaps to be considered was some kind of insurance in the NHS for patients so that, if they did suffer an adverse event, somehow or other that could be covered, but it still leaves the individual clinicians vulnerable.

They can be defended and their defence is to maintain good practice, to maintain knowledge and skills, to stay within the realms of their expertise and not stray unnecessarily from that and to document and record well, and to audit their practice and to show that they're auditing their practice and no more can be expected, I think, of clinicians than that. And this is the basis of the surgical outcomes reporting, which is now coming on-stream about which there's been a debate

in the newspapers.

Surgeons are, if you like, more well placed for analysis of data. It is much more difficult to do on paediatricians, a bit easier in neonatal practice and a bit easier in maternal death because there's enough statistics, but I just rehearse that because that's the predicament that is being faced by individuals.

Q. And presumably, that was a matter being faced when you were working and doing your research in the area of public health. So were you able, in the work that you were doing or the work that you observed others were doing, to see the initiatives that might address that concern, the need to change the culture but recognising the pressures that exist that work against change?

A. Well, one of the ways -- yes. I would like to say I'm not a public health researcher. Let me just get that clear. It is research which I did, but I am not putting my hand up and saying I'm a researcher, an academic, but it was with public health colleagues. An amateur, I should think, would be the best way of describing it.

I think that it continues to be an issue and you can see that in relation to the surgical outcomes where the College of Surgeons and the department of being a bit concerned about the ability of surgeons not to declare their results if they don't have confidence in the data.

And that data quality is another issue for large volume work.

The problem in paediatric deaths, which is a good problem really, is that deaths are few, so aggregating statistically meaningful data on an individual clinician or even on a service would be extremely difficult over a short time -- and by short I mean, two, three, five, ten years.

Q. And that issue of candour that you mentioned in relation to the Bristol report, is that something you see again in relation to Mid Staffs where there's discussion of a contractual duty of candour? Do you recall any discussion of that sort when you were still working in this sort of area?

A. Only in the Bristol inquiry where that term was used by Sir Ian Kennedy. It was voiced then, it continues to be voiced now, and it was present in Liam Donaldson's document with Professor Scally, in trying to change the culture to openness, but this openness culture has these constraints placed on it, if you like, counterweights.

Q. Finally there was an issue that Dr Carson raised in relation to training. Whilst he recognised the benefits -- and he was partly responsible or at least charged to bring in good governance into the Royal Trust when he was there as medical director -- there was the

issue of appropriate training for those who are required to carry out the investigations. He said part of the problem might be that there isn't sufficient training, but also that some have better skills in that regard than others, but you're expecting much the same sort of service to be provided, namely that a child's death will be properly and thoroughly investigated, the lessons will be identified in there and they will therefore be able to be disseminated, and his concern was there didn't appear to be much in the way of appropriate training. Is that something you ever had to address?

A. Yes, I don't think there was much training. I think it was gaining experience on -- there were a number of courses in this and, of course, there is increasing attention given to this in terms of root-cause analysis and web-based materials from the National Patient Safety Agency. And around 2000, it was an issue because medical directors were appointed often with limited training and limited support. Clinical directors very often had no training, and very little support in how to do their job, but they would find out through themselves.

If you contrast the amount of training that is required and evaluation to become a consultant in a specialty with clinical responsibilities, with the

amount of training and support given to a person taking up a managerial post at a clinical director level, the two are completely separate.

There's a big gap there. There are courses and I think that from 2000 there has been a step, or possibly several steps, changed for the better.

MS ANYADIKE-DANES: Thank you. Mr Chairman?

THE CHAIRMAN: So when Dr Anderson effectively complained that he was put in as part of the review team in Sperrin Lakeland but he didn't have any training or any experience in doing something like this, it's not enough to say that common sense would tell you what to do because his skill set for his specialty might be rather different to the skill set which is required of somebody who is doing an investigation?

A. Yes, I think that is a very fair position. I would, however, comment on that that perinatal mortality reviews, which are a kind of investigation, have been very well-established, really from probably the late 60s, certainly the early 70s, and that involves the investigation of maternal complications, of stillbirth, of neonatal adverse events such as a hypoxic child or neonatal death. And they were regularly done and they would involve midwife, public health doctor, GP, paediatrician, neonatal nurses. So in obstetrics, there

would be some skill set there. And in the Confidential Enquiry into Stillbirth and Death in Infancy, the panels themselves have acquired over time an expertise because it was a structured approach.

THE CHAIRMAN: Thank you.

A. So there was some expertise around an investigation.

MS ANYADIKE-DANES: Just one final point relating to that. When you mentioned that, and knowing that the Royal Colleges sometimes were called upon to assist in carrying out investigations, could you see a role for the Royal Colleges to assist in transmitting that kind of know-how?

A. Yes, I'm sure, and it may well be that they have done. May I just emphasise that I have been out of practice for six years?

Q. Of course.

A. And it may well be that they have done that. I know that they were conscious of the need to improve the support and training for doctors in all of the roles they may be expected to undertake.

MS ANYADIKE-DANES: Thank you.

THE CHAIRMAN: Okay. Is that the end?

MS ANYADIKE-DANES: Yes.

THE CHAIRMAN: Oh, right. Okay. Any questions from the floor?

Doctor, thank you very much for coming over again to help us. Your contribution is much appreciated. Unless there's anything more you want to add, that brings an end to your evidence.

A. Thank you very much.

THE CHAIRMAN: Thank you very much.

(The witness withdrew)

I understand, Mr McAlinden, that the Trust has been good enough to have Claire's records --

MR McALINDEN: Yes, they are at present in the chamber.

THE CHAIRMAN: I'm going to leave you and those who are directly involved in this to see if you can establish the point that we were considering yesterday, whether you can establish what the lower page is.

MR McALINDEN: Yes.

THE CHAIRMAN: If that can be done, then it might be possible to move forward and, if it can't be done, it raises problems. So unless anyone needs to speak to me about that later today, I'll rise now and -- I think as I said yesterday, with Professor Scally at 9 o'clock on Monday morning. Thank you very much. Sorry, Mr Green?

MR GREEN: In relation to the forensic testing postulated by my learned friend Mr Quinn, I'm unlikely to be back for any other part of this segment of the inquiry. Suffice it to say that my submissions are documented and

I simply stand on them.

THE CHAIRMAN: Thank you very much indeed.

(2.28 pm)

(The hearing adjourned until 9.00 am on Monday 1 July)

I N D E X

DR RODERICK MACFAUL (called) 1
Questions from MS ANYADIKE-DANES 1