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Thursday, 1 November 2012

(9.00 am)

DR ANDREA VOLPRECHT (called)

(The witness appeared via video link)

THE CHAIRMAN: Good morning, doctor. Can you see us in Northern Ireland?

A. Yes, I can see you in Northern Ireland.

THE CHAIRMAN: Can you hear me okay?

A. I can hear you okay, thank you.

THE CHAIRMAN: Thank you very much for joining us this morning. I think you have a Bible at your end; is that right?

A. Yes.

THE CHAIRMAN: I'm going to ask you to take the oath and then your evidence will start through questioning from Mr Reid.

Questions from MR REID

MR REID: Good morning, doctor. As the chairman said, I'll be asking you the questions this morning.

Do you have a copy of your witness statement in front of you?

A. Yes, I do.

Q. That's witness statement 136/1 to the inquiry, dated 3 October 2012; is that correct?

A. That is correct.

1 Q. Would you like to adopt the evidence that you have given  
2 in the witness statement as your evidence before the  
3 inquiry?

4 A. Yes, I would like to adopt that.

5 Q. Thank you, doctor.

6 If I can turn to page 1 of your witness statement,  
7 you have given us a brief summary of your clinical posts  
8 up until October 1996. Would I be correct in saying  
9 that you qualified in November 1993 in Germany and you  
10 were an SHO at the Children's Hospital from May of 1996?

11 A. That is correct.

12 Q. And you were on Allen Ward at the Children's Hospital  
13 in August and September of 1996 before moving on to the  
14 surgical wards in October and November?

15 A. That is right.

16 Q. Can I ask, doctor, what was your awareness of the  
17 dangers of hyponatraemia in October 1996?

18 A. It is very difficult in hindsight to define what exactly  
19 I knew at the time about hyponatraemia. But what I can  
20 certainly say is that I worked in the neonatal units  
21 before and you would have always calculated very  
22 carefully the sodium and the potassium content of IV  
23 infusions for children. So I would say, yes, I had an  
24 awareness of hyponatraemia.

25 Q. As you say, you were aware of the importance in

1 calculating the sodium and potassium levels of IV  
2 fluids.

3 A. Yes.

4 Q. It probably is not a document you have in front of you,  
5 but I'll bring it up for the benefit of those in the  
6 chamber. It's document 302-031-003. This is the rota  
7 of the SHOs for October 1996. That rota shows you as  
8 the night cover, 10 pm to 9 am, on Monday  
9 21 October 1996; would that be correct?

10 A. That would be correct.

11 Q. Would you have done a day shift that day, Monday the  
12 21st October as well?

13 A. Yes, I would have an ordinary day shift. My day would  
14 have begun at 9 am in the morning.

15 Q. You would have finished at 5 o'clock before returning to  
16 the hospital just before 10 o'clock?

17 A. No, I wouldn't have gone home. I would have stayed in  
18 hospital.

19 Q. And during that on-call period, is it correct to say  
20 that you were covering all the general paediatric wards  
21 and all the paediatric surgical wards in the Children's  
22 Hospital during that time?

23 A. Yes, that would have been correct.

24 Q. I think if we can turn to page 3 of Dr Volprecht's  
25 witness statement, 136/1, at 3(a) and (b), you confirm

1 that you would have been present in the hospital in the  
2 infant surgical unit from 9 to 5 and covering all  
3 general paediatric wards and all paediatric surgical  
4 wards overnight.

5 On page 4, if we can turn over to that, just at the  
6 bottom paragraph you state that:

7 "A night shift in the Children's Hospital would have  
8 been very busy with 10 to 15 admissions not being  
9 unusual. I would have been the only doctor during the  
10 night being responsible for all admissions to the  
11 general paediatric and paediatric surgical wards, five  
12 wards in total."

13 That's your evidence; is that correct?

14 A. That is correct. What I meant with that is that if  
15 children would have been admitted to the Children's  
16 Hospital, I would have been the doctor who would have  
17 been called from nursing staff to admit the children,  
18 although sometimes because the medical registrar had to  
19 allow time to be admitted to the wards, they might have  
20 seen the children directly in casualty and some of them  
21 might have admitted the children themselves.

22 Q. And that actually happened in Claire's case, isn't that  
23 right, Dr O'Hare admitted Claire?

24 A. That is right. That is correct.

25 Q. Certainly from the notes, it seems that you had at least

1 two points of contact with Claire. Firstly, prescribing  
2 the fluids and, secondly, recording the biochemistry  
3 results; is that correct?

4 A. That is right.

5 Q. I think you might have suggested in your witness  
6 statement that you may have been present at the midnight  
7 review by Dr O'Hare of Claire. Do you have any  
8 recollection of that?

9 A. You see, my difficulty is that I've actually no  
10 recollection of the night on call. But I think in the  
11 nursing notes it was noted that the doctors were present  
12 and because my writing is in Claire's [inaudible due to  
13 interference] directly after the midnight review  
14 happened, I assume was present at that midnight review.

15 Q. Yes. If we turn to 090-040-140, please. I'm not sure  
16 this is a note you have in front of you, doctor, but if  
17 I can describe it for you. It's one of the nursing  
18 notes, as you say. It's dated 21 October, timed at  
19 10 pm, and the bottom two lines of that entry say:

20 "Seen by doctor and registrar, to be reviewed  
21 following blood results and erection of IV fluids."

22 Given that it says, "Seen by doctor and registrar,  
23 to be reviewed", do you take it from that that you may  
24 have been at the midnight review, which was after the  
25 erection of the IV fluids or do you think you may have

1           been present at the initial admission?

2   A.  No, I actually took from that that I was present after  
3       the erection of the fluids at the midnight review.

4   Q.  Okay.  You stated earlier, you have no direct  
5       recollection of 21/22 October.  You are just trying to  
6       piece together what you know from the notes; is that  
7       correct?

8   A.  Yes, that is correct.

9   Q.  You say at page 3 of your witness statement, if I can  
10      bring that up, at the very bottom paragraph:

11                "According to the clinical notes, there is no  
12      indication of my personal clinical contact with Claire  
13      or her family, therefore I assume I had no direct  
14      contact with Claire or her family."

15                Would you accept that you would have had to attend  
16      Claire to prescribe the fluids though?

17  A.  You see, sometimes what happened, the clinical chart of  
18      the child would have been in the trolley and sometimes  
19      the nursing staff would bring the fluid prescription  
20      sheet in the nursing station to get the fluids  
21      prescribed.  So it might have been that I was not  
22      present in Claire's room when I prescribed the fluids.  
23      It might have been that I prescribed the fluids when the  
24      chart was at the end of the bed, but [inaudible due to  
25      interference] recall where I prescribed the fluids.

1 Q. You just broke up there at the very, very start of that  
2 answer. You said:

3 "You see sometimes what happened the clinical chart  
4 of the child would have been in the ..."

5 And then you said something and then you said that  
6 nursing staff might bring the fluid prescription to the  
7 nursing station. Where did you say the clinical chart  
8 of the child might have been?

9 A. Usually -- right, I know now what you mean. The medical  
10 record would be in a trolley at the nursing station, so  
11 for example to write a result in, you wouldn't have been  
12 present at the side of the bed.

13 Q. Would there be some notes that would be at the bottom of  
14 the patient's bed and some notes that would be kept on  
15 the patient's trolley?

16 A. Usually, the medical records would be all in the trolley  
17 at the nursing station, but there would be ... Um ...  
18 How do you call the word? There would be a hard thing  
19 to have your prescription chart fixed to ...

20 Q. A clipboard or something like that?

21 A. Yes, a clipboard, thank you very much. Usually the  
22 fluid prescription sheet would be on a clipboard and  
23 that clipboard would usually be at the patient's  
24 bedside. But that could be moved to the nursing station  
25 and I might have prescribed it there or at [inaudible

1           due to interference] side.

2    Q.   Sorry, you said that that'd be brought to the nursing  
3           station and you might have prescribed the IV fluids  
4           at the nursing station; is that what you said?

5    A.   Yes, either there or at the patient's bedside and  
6           I would not be able to say where exactly I did that.

7    Q.   And would it have been a common event for you to  
8           prescribe IV fluids having not seen the child and just  
9           having the clipboard brought to you? This is  
10           in October 1996. Would that have been a common event?

11   A.   I would say that in that time it would not have been  
12           unusual. Usually, yes. [Inaudible due to interference]  
13           in the patient, you would make yourself a picture and  
14           prescribe them the fluids, but it would not have been  
15           unusual to get a clipboard brought to you to prescribe  
16           fluids, particularly if fluids have to be written up  
17           before and the bag was empty and a new bag had to be  
18           prescribed.

19   THE CHAIRMAN: Doctor, if I can intervene for  
20           a moment: is that because what you would have been doing  
21           with prescribing the fluids appeared to be a fairly  
22           standard form of treatment, whereas you would go to the  
23           child's bedside if things appeared to be more  
24           complicated?

25   A.   Definitely, yes. That would be the situation.



1 MR REID: And doctor, you're in Germany now, but you spent  
2 quite a number of years in Antrim Area Hospital and  
3 Craigavon Area Hospital over the last decade. Have  
4 practices changed in terms of the prescribing of IV  
5 fluids? Would it still be not unusual for you to be  
6 brought the fluid prescription chart to the nursing  
7 station and you prescribed there? Would that be an  
8 unusual event now? Have things changed?

9 A. I have left Northern Ireland in 2008, so I would be only  
10 commenting up to 2008. Certainly that would not be  
11 possible because a prescription sheet has changed, you  
12 need more information to be able to prescribe fluids  
13 properly, including the last electrolyte result, and for  
14 that you would need to go back to the patient, you would  
15 need to go back to the [inaudible due to interference]  
16 to make all these enquiries because it's hard to be  
17 written up, to be able to do a proper prescription.

18 Q. We're skipping ahead somewhat, but if I can take you to  
19 page 24 of your witness statement. In the large block  
20 of text you say:

21 "During my first specialist registrar year at  
22 Craigavon, I was annoyed that in patients with diabetic  
23 ketoacidosis, the fluid balance chart had no room for  
24 the documentation of the U&E results and blood gases and  
25 no space for urinary output and so on. I created

1 a fluid balance chart where all these important results  
2 and observations were combined. This made it easier for  
3 the medical and nursing staff to see trends in the  
4 condition of the child and to alter the management  
5 accordingly."

6 I believe you did a similar exercise in Antrim Area  
7 Hospital; is that correct?

8 A. Yes, that's right.

9 Q. And you found those new fluid balance charts to be much  
10 more useful?

11 A. Yes, because you could actually see very early the  
12 individual trend where the results were going to because  
13 you had much more room to have [inaudible due to  
14 interference] of the child, results, and the actual  
15 prescription on one large sheet.

16 Q. And do you think that sheets such as that should be  
17 present in every hospital, every ward?

18 A. I think the diagnosis of diabetic ketoacidosis lent  
19 itself to that kind of prescription sheet. I don't  
20 think every child on IV fluids would need such a sheet,  
21 but certainly there should be prescription sheets for  
22 children who are on IV fluids where urinary results  
23 actually [inaudible] with the time when they have been  
24 done in order to adjust fluid management.

25 Q. If I can just bring you to your fluid prescription of

1 the evening of 21 October. Do you have the prescription  
2 chart there in front of you?

3 A. No, I don't have it there, but I recall the sheet.

4 Q. I will describe it to you. It's the intravenous fluid  
5 prescription chart. It's reference 090-038-134. What  
6 it says is: 500 ml of 0.18 per cent NaCl, 4 per cent  
7 dextrose, no additives, at a rate of 64 ml per hour,  
8 prescribed by Dr Volprecht.

9 At the top right of that sheet there's also the  
10 weight, which is 24 kilograms, and then there are small  
11 numbers. It says "10", "10" and "4" on the left column,  
12 and then "40", "20", and "4" on the right column. Would  
13 I be correct in saying that's your fluid calculation?

14 A. That's right, yes.

15 Q. So that's 40 ml per hour for the first 10 kilograms, 20  
16 ml per hour for the second 10 kilograms and one ml per  
17 hour for each kilogram after that?

18 A. Yes, that would be correct.

19 Q. Making a total of 64 ml per hour.

20 A. Yes.

21 Q. You have said in your witness statement that both the  
22 choice of Solution No. 18 and the rate at which you were  
23 prescribing were standard practice at the time; is that  
24 right?

25 A. Yes.

1 Q. And that you took your lead from Dr O'Hare, she had  
2 written IV fluids and hadn't specified any differences  
3 in the IV fluids that should be prescribed; is that  
4 correct?

5 A. That's correct, yes.

6 Q. In 1996, would it only have been in those circumstances  
7 where the registrar had said, "Prescribe these fluids  
8 differently", that you would have deviated from that  
9 standard practice?

10 A. No. For example, if nursing staff would have  
11 highlighted that at the admission of the child and then  
12 be asking to prescribe the fluids, if the clinical  
13 condition obviously of the child had changed, I would  
14 have gone back to re-examine the child and made up my  
15 mind and then decide on what fluid should be prescribed  
16 on the child.

17 Q. So if the clinical condition of the child had changed  
18 since the registrar had seen the child, you would have  
19 contemplated reviewing the IV fluids?

20 A. Yes, for example there are children who are not at all  
21 on IV fluids and if you are informed from the nursing  
22 staff that they now have diarrhoea or they have started  
23 to vomit now, then you would need to prescribe the  
24 fluids for the first time and obviously, in those  
25 circumstances you would need to go back and reassess the

1 situation in order to make up your mind what [inaudible  
2 due to interference] would be appropriate.

3 Q. You would have been aware of Dr O'Hare's differential  
4 diagnosis and her differential diagnosis was viral  
5 illness and she'd also mentioned encephalitis, but  
6 struck that out. You would have known of those  
7 differential diagnoses whenever you prescribed the IV  
8 fluids I presume?

9 A. I wouldn't be able to recall that.

10 Q. If you're prescribing the fluids, you would have had to  
11 look at the medical notes in order to know if this was  
12 a standard case or if this was a non-standard case.

13 A. Yes, obviously.

14 Q. And in those medical notes, Dr O'Hare records her  
15 differential diagnoses. So would you have been aware  
16 then of the diagnoses if you'd been reading the medical  
17 notes.

18 A. Yes. If I would have read the medical notes, I would  
19 have seen the diagnoses.

20 Q. In October 1996, if you had seen mention of  
21 encephalitis, even if struck out, would that have made  
22 you think any differently about the prescription of IV  
23 fluids?

24 A. It's very easy with hindsight now, obviously, in hoping  
25 that it would have changed my management at the time.

1 But to be honest, because I haven't seen Claire  
2 clinically myself, I haven't examined her, the medical  
3 registrar had seen the child. From the way the fluid  
4 prescription was suggested, I don't think that I went  
5 back in detail to think of different fluid regimes.

6 Q. As it was your responsibility as the SHO to follow the  
7 registrar's lead and both prescribe the fluids and take  
8 blood samples; isn't that right?

9 A. That is usually what was done at the time, yes.

10 Q. And also, whenever you sited the cannula for the IV  
11 fluids, would you also have then taken a blood sample  
12 for the electrolytes and biochemistry testing?

13 A. You see, what happened is that I don't have a personal  
14 recollection of the night on call, so I can't say if  
15 I did site an IV line. To be honest, I was under the  
16 impression that I had no direct clinical contact with  
17 Claire, so I assumed that maybe the admitting doctor had  
18 sited the line and taken the bloods. But I can't say  
19 for sure because I don't have recollection. But yes,  
20 usually if you would site an IV line to prescribe IV  
21 fluids, then the [inaudible due to interference] have  
22 been taken through that cannula.

23 Q. So you have no direct recollection, but the usual course  
24 of events would be that you would prescribe the IV  
25 fluids as you did do, then you would insert the cannula

1 and that you would take the blood sample for a blood  
2 count at that stage? That would be the usual course of  
3 events.

4 A. Usually the admitting doctor would site the line and  
5 would take the blood specimens. If that would have been  
6 done and the line would have [inaudible due to  
7 interference], which sometimes happens, then usually the  
8 nursing notes -- there would be a passage "line resited  
9 and bloods drawn". I don't recall that this was stated  
10 in the nursing notes.

11 Q. If you turn to page 4 of your witness statement, 136/1,  
12 in the second bullet point of (b) you state:

13 "My responsibility towards Claire that night was to  
14 prescribe her initial fluid regime and medications and  
15 to chase her blood results."

16 What do you mean by "to chase her blood results"?

17 A. If there had been outstanding bloods of a child who had  
18 been admitted, you would need to make sure that these  
19 blood results get back and get documented on the child's  
20 medical chart.

21 Q. So if you are aware, for example, that a blood sample  
22 had been taken, it'd be your responsibility to check  
23 with the laboratory to see where those results were?

24 A. Exactly.

25 Q. Your second note in the clinical notes is on

1 090-022-052. It comes following Dr O'Hare's admission  
2 note and her note of a review at 12 midnight in which  
3 she stated:

4 "Slightly more responsive, no meningism, observe and  
5 reassess AM."

6 And signs it "B O'Hare".

7 You are familiar with this particular sheet?

8 A. Yes, I'm familiar with that page.

9 Q. Below that then there is the sodium result and the  
10 potassium result and the glucose and so on are stated in  
11 one column. Then on the right-hand side in the right  
12 column, there's then the -- I think it's the haemoglobin  
13 and the PCV and the white cell count.

14 Do you have any knowledge as to who may have  
15 recorded the sodium result on that particular sheet?

16 A. No, I don't know. What I can say is that I wrote down  
17 the full blood picture result and that I added the  
18 arrows in both results, and the white cell count result,  
19 and beside the sodium. I don't know who has written  
20 down the sodium result. I'm not quite sure if the blood  
21 results came back maybe together or coming back  
22 [inaudible due to interference] blood results [inaudible  
23 due to interference] together maybe with the midnight  
24 review because I was asked why did I not time the entry  
25 of the white cell count and I was wondering were they in



1           such close proximity that I only signed for the result I  
2           have written down rather than timed it.

3    Q.    So you think that the biochemistry results might have  
4           come back possibly at a different time than the  
5           electrolyte results?

6    A.    Could you please repeat that question?

7    Q.    You think that the electrolyte results -- sodium,  
8           potassium, and so on -- may have come back at  
9           a different time from the biochemistry results, so  
10           that's why you recorded the biochemistry results at  
11           a later time?

12   A.    I didn't record the biochemistry results at all.

13   Q.    Apologies, what I mean is, you recorded the white cell  
14           count; is that right?

15   A.    That's right.

16   Q.    So you think --

17   A.    You see, I recorded the white cell count on the  
18           right-hand side of the electrolyte results, so I assume  
19           that the first [inaudible due to interference], but  
20           I didn't record them. So I recorded the while cell  
21           count right beside them and I added the two arrows  
22           beside the white cell count and beside the sodium result  
23           and I signed for the white cell count.

24   Q.    You were aware then of the sodium result of 132 because  
25           you wrote the downward arrow besides it; is that

1 correct?

2 A. That's correct.

3 Q. If you had been aware of that sodium result of 132,  
4 would it have changed any actions you were taking or  
5 would you have taken any action as a result in 1996?

6 A. It's always difficult to think with all the knowledge  
7 we have now to recall back what I was thinking at the  
8 time. But certainly, the sodium result was only  
9 slightly lower, not unusual to see it in lots of  
10 children we have admitted to the Children's Hospital  
11 at the time. If I assume that the blood results were  
12 there at the midnight review, we might have discussed  
13 it, I can't personally recall what exactly was the end  
14 of the discussion. Obviously, I didn't change the fluid  
15 prescription after the result was seen. But obviously,  
16 if a child is reviewed at midnight, you would know that  
17 the following morning, there will be a review at the  
18 ward round with, usually, a second U&E result to maybe  
19 then review the situation.

20 Q. If you received a result on admission of sodium 132 now,  
21 for example, would you react in a different way?

22 A. Well, I would have certainly made sure that it's  
23 repeated at least eight hours later.

24 THE CHAIRMAN: Sorry, doctor, you expected that it would be  
25 repeated on the ward round; isn't that right?

1 A. That would have been my usual assumption, yes.

2 THE CHAIRMAN: Because that is what usually happened. If  
3 there is a slightly low sodium count at midnight, then  
4 that would be one of the things to pick up on the ward  
5 round in the morning?

6 A. Yes. That is what I would have expected.

7 THE CHAIRMAN: Right. But if it had been significantly low,  
8 say it was 127 or 128, would that have led you to  
9 arrange for a repeat test at 3 or 4 o'clock?

10 A. That would be definitely a different situation, and yes,  
11 that U&E result would have been repeated a couple of  
12 hours later. Sometimes you would even do it immediately  
13 to make sure that the result was correct.

14 THE CHAIRMAN: Okay, thank you.

15 MR REID: The chairman asked you whether you would have  
16 expected a repeat result at the ward round. Can I bring  
17 you to page 16 of your witness statement, WS136/1? Just  
18 in the very final question on that, (f), you say, as  
19 you have said:

20 "[You] would have considered the sodium level as  
21 only slightly below normal and, therefore, in the  
22 context of Claire's stable condition at midnight,  
23 it would not have warranted being repeated immediately."

24 In the next sentence you say:

25 "My usual practice would have been to arrange

1 a repeat test the following morning, either to do this  
2 myself or to hand it over to the medical day staff."  
3 A. That's correct.  
4 Q. You were going off in and around 9 o'clock the next  
5 morning.  
6 A. Yes. I would have gone back to the surgical ward where  
7 I went until lunchtime.  
8 THE CHAIRMAN: Just pause there, doctor. You would have  
9 stayed in the surgical ward until about midday or  
10 1 o'clock?  
11 A. Yes, that's right.  
12 THE CHAIRMAN: So that's 27 or 28-hour shift?  
13 A. It would be actually 36 hours because I would have been  
14 on -- that's right, yes. It would be 24 hours until  
15 9 o'clock the next morning, and then until lunchtime,  
16 yes, correct.  
17 THE CHAIRMAN: Thank you.  
18 MR REID: If you're on the on call until about 9 o'clock the  
19 next morning and you say that sometimes your usual  
20 practice would have been to arrange a repeat test  
21 yourself the following morning, what time would you  
22 normally have done a sample such as that?  
23 A. If it would be possible, you would try to do it before  
24 the ward round so that the result would have been  
25 available for the ward round.

1 Q. Is that the case, whenever you're the on-call doctor  
2 overnight, and so you're still in and around the ward  
3 at the time of the ward round, or do you think that  
4 would generally be the case, even if you were finishing  
5 at 9 o'clock?

6 A. Let's see. For very deranged blood results, you would  
7 make sure that the result would have been available,  
8 a new result, an actual result, for the ward round. But  
9 obviously, the admissions would still go on, so it would  
10 have been a matter of actually being free to do those  
11 bloods prior to the ward round. If that didn't happen  
12 because of being engaged somewhere else in the hospital,  
13 then nobody would do the bloods and the first person who  
14 could have done the bloods would have been the medical  
15 personnel for that ward arriving at 9 o'clock.

16 Q. Because if I can bring you to page 17 of your witness  
17 statement, over the page, you say:

18 "I cannot give the reasons why the sodium result was  
19 not checked until the evening of 22 October as I do not  
20 recall these events. The normal procedure would have  
21 been for me to have taken another sample prior to  
22 finishing the night shift. However, if there were many  
23 admissions during the early hours of the morning [as  
24 you have just stated], I may have handed over  
25 outstanding blood tests to the day medical staff."

1           Is that correct?

2    A.   That's correct.

3    Q.   So in general, you would try and make sure that there  
4       were electrolyte results available for the ward round  
5       the next day?

6    A.   Yes.

7    Q.   And that would either be by you doing the samples  
8       yourself or by you saying to the senior house officer  
9       who's coming on shift, "I haven't had the time to do  
10      these blood samples, would you make sure they get  
11      done?"; is that correct?

12   A.   Yes.

13   Q.   Well, first of all, do you accept that it seems that you  
14      didn't get the opportunity to take another sample that  
15      morning, that evening, early morning?

16   A.   Yes.

17   Q.   And in those circumstances you say, normally, you would  
18      have handed over the fact that there are outstanding  
19      blood tests to the SHO coming on.

20   A.   Yes.

21   THE CHAIRMAN:  Sorry, doctor, just so that I understand it.  
22       I understand why you might not be able to do it yourself  
23       because there's you and a registrar who are covering, in  
24       effect, the Children's Hospital through the night.  So  
25       the people who have the better chance to do the test are

1 the new doctors coming on, on the Tuesday morning;

2 is that right?

3 A. That's right.

4 THE CHAIRMAN: When you said in your witness statement that

5 you would either arrange the repeat test and do it

6 yourself or you would hand it over to the medical day

7 staff, one way to hand it over to the medical day staff

8 is for you, if you get the chance, to speak to the staff

9 who are coming on and mention this to them directly.

10 That's one way.

11 A. Yes.

12 THE CHAIRMAN: Is another way simply the fact that the

13 slightly low result is in the notes in any event and you

14 expect that that will be picked up by the day staff

15 coming on duty?

16 A. That's correct, yes.

17 THE CHAIRMAN: Right. Thank you.

18 MR REID: Would you ever make a note in the medical notes to

19 say, "Repeat blood tests in the morning", or, "in the

20 AM", for example?

21 A. Yes, I would have done that before, yes.

22 Q. But obviously you accept that that unfortunately wasn't

23 done in this case?

24 A. Yes.

25 Q. Dr O'Hare in her review note wrote, "Observe and

1 reassess AM". And this is her review at midnight.

2 Would you consider that -- and I know you're

3 interpreting Dr O'Hare's note -- to include electrolyte

4 testing?

5 A. It's difficult for me to comment on that. Certainly the

6 sodium result was there and it was marked to be slightly

7 low. [inaudible due to interference] morning ward round

8 would have picked that up and if they had realised that

9 no repeat U&E had been sent, it would have been sent ...

10 THE CHAIRMAN: If they had picked up that there had been no

11 repeat U&E, then they would have sent for that; is that

12 what you said?

13 A. Could you repeat the beginning of your sentence?

14 THE CHAIRMAN: I'm trying to repeat what we think you said,

15 doctor. It's all getting a bit messy. I understood

16 what you had said was that if the morning staff had

17 picked up the fact that there had been no repeat U&E,

18 then they would have arranged for that to be done.

19 A. Yes, that's correct. That's what I said.

20 THE CHAIRMAN: Okay.

21 MR REID: Doctor, you signed at the bottom of the note where

22 the sodium result and the white cell count and so on

23 were noted, even if they weren't noted by you; isn't

24 that right?

25 A. I signed below the white cell count, yes.



1 Q. Unfortunately, there's no time or date beside that  
2 entry. Would you accept that a time or date beside that  
3 entry would have been useful in the circumstances?

4 A. Yes, obviously that would be professionally correct, if  
5 it would have been dated and it would have been signed.  
6 I usually would do that. That is why I said I wondered  
7 if the results came back around midnight and because  
8 they were recorded after the last entry by Dr O'Hare,  
9 I wondered if they had been available at midnight and  
10 maybe that was the reason why I didn't repeat the time  
11 beside them. But yes, they should have been dated and  
12 timed.

13 Q. Do you think there's any possibility that a doctor who's  
14 coming on the next day might look at that entry and  
15 think that those results were from a result that might  
16 have come in that morning, for example?

17 A. I don't know what other doctors might have read in it.  
18 If they weren't sure, then they could contact the  
19 [inaudible due to interference] were sent. On the other  
20 hand, the child was admitted the previous evening. So  
21 if there's only one result available ...

22 Q. You said, "I don't know what other doctors might have  
23 read in it. If they weren't sure, then they could  
24 contact the ..."

25 A. The laboratory.

1 THE CHAIRMAN: Doctor, the reason we have to go back a few  
2 times is there's a slight hiccup in the connection, so  
3 while we're getting nearly everything which you say,  
4 there are some points at which the connection is not  
5 perfect. Do you hear us continuously?

6 A. There are very small interruptions, but they are minor.  
7 So usually I can follow you.

8 THE CHAIRMAN: Okay, thank you.

9 MR REID: You said that sometimes you might take a sample  
10 yourself before the ward round. If a result came back  
11 before the ward round, you would normally time that,  
12 I presume.

13 A. If I would have got a second specimen back, I hope  
14 I would have timed and dated it to make sure that it's  
15 different from the admission blood.

16 Q. Can I ask you just about the handover the next morning?  
17 You can't recall exactly what happened, but can you just  
18 tell us the general nature of handovers after the  
19 evening shift in October 1996?

20 A. There was no formal set out how handovers had been to be  
21 done at the time. Usually, the doctor who was on call  
22 had a page, all the admissions were written down, and  
23 you would have recorded on the admission or beside the  
24 admission what else was outstanding. You would try to  
25 make contact with the day people to hand over what

1           happened in the wards. But because there were five  
2           wards, that takes a wee while, and we wouldn't have seen  
3           everybody. And if you were still in the middle of  
4           admissions, that handover might be slightly delayed.

5   Q.   Would you normally, however, have the opportunity to  
6           explain the condition of the patients, the treatment  
7           they were receiving and any outstanding tests that might  
8           need to be done?

9   A.   Could you please repeat that question?

10   Q.   Not a problem. The handovers weren't formal  
11           in October 1996, but would you have had the opportunity  
12           at some point to say to the doctor coming on the  
13           condition, the treatment and any outstanding tests that  
14           had to be done for each patient?

15   A.   You would try to do that. You would obviously  
16           [inaudible due to interference] the most unwell ones or  
17           the ones which have been recently admitted where the  
18           situation was unclear. I would say that you couldn't  
19           ensure always that you were able to speak to every  
20           medical person about all the details of the night shift  
21           for each ward.

22   THE CHAIRMAN: Sorry, doctor, just to clarify that. For you  
23           to do a handover at 9 am with Dr O'Hare, for you to do  
24           that for each ward that could take some time, couldn't  
25           it, because you were covering five wards?

1 A. That's correct.

2 THE CHAIRMAN: But apart from that, at 9 am on the Tuesday  
3 morning, you were going to resume work on the surgical  
4 ward; is that right?

5 A. That's correct, yes.

6 THE CHAIRMAN: And how urgently are you needed on the  
7 surgical ward at about 9 am?

8 A. If that would have been -- if the ward I would have gone  
9 back to was infant surgical unit, then I would be pretty  
10 much needed there because I would have to do bloods  
11 there prior to the ward round.

12 THE CHAIRMAN: Right. This is an issue about arrangements  
13 and governance within the hospital, but at that time the  
14 prospect of somebody in your position being able to do  
15 a significant handover to the day shift was very, very  
16 limited, wasn't it?

17 A. Let's phrase it that way. There was, for example, no  
18 overlapping time plan, there was not the time plan that,  
19 for example, day staff came half an hour early to get  
20 a ward round. It wasn't formalised like that at the  
21 time. So you're trying to get the most urgent and  
22 important things handed over to the relevant people and  
23 sometimes, yes, they are not handed over because there  
24 was literally not the time to do that. And sometimes  
25 what you would have done is to leave a note in the ward

1 round book or to speak to a member of staff to make sure  
2 they handed it over.

3 THE CHAIRMAN: Thank you.

4 MR REID: If I can turn to page 13 of your witness  
5 statement, please, doctor. Just the very top paragraph:

6 "I had not been informed about the ongoing small  
7 vomits overnight. Otherwise I would have reviewed  
8 Claire and possibly reassessed her fluid prescription.  
9 I was not called back by nursing staff to review Claire  
10 during the rest of my shift."

11 If we can bring up, for those in the room,  
12 090-038-133, which is the fluid balance chart for Claire  
13 for the evening of the 21st into the morning of the  
14 22 October. There it shows that Claire was vomiting at  
15 least, it seems, once every two hours, really. Would  
16 you expected to have been contacted by nursing staff if  
17 a child was vomiting that frequently or would you have  
18 been too busy to look after that?

19 A. I think again it's very difficult to answer that  
20 question in hindsight. Obviously, with the knowledge  
21 we have now, yes, it would have been nice to know the  
22 situation. And on the other hand, yes, it was sometimes  
23 very busy in hospital, you got calls to review children,  
24 but would only be able to see them then an hour later or  
25 one-and-a-half or two hours later because there were

1 more urgent things to be dealt with in the meantime.  
2 And to be honest, I'm not able to say, if the situation  
3 had changed dramatically, if I would have been informed.  
4 It's very difficult to assess. You would hope that  
5 I would have made a different decision.

6 Q. So for example, do you know how you may possibly have  
7 reassessed her fluid prescription? Do you know how you  
8 might have done that?

9 A. There is certainly the possibility that I would have  
10 gone -- if the child was vomiting, I would have gone  
11 back, I would have re-examined her and if that would  
12 have re-examined [inaudible due to interference] I would  
13 have been possibly much more worried about her than  
14 I was during my whole night shift about her because if  
15 I now look back through the notes, I [inaudible due to  
16 interference] and I didn't know that she was that  
17 unwell.

18 Q. If you just repeat the last part of that sentence. You  
19 said, "If you look back through the notes ..."

20 A. What I said is: if nursing staff would have informed me  
21 that they were worried because she continued to vomit,  
22 I would have gone back and would have examined her and  
23 would have maybe come to a different conclusion that she  
24 was more unwell [inaudible due to interference] assumed  
25 having not the knowledge that she was vomiting because

1 I assumed she was stable because I wasn't called back.

2 Q. One last question about the fluids: you had prescribed  
3 a 500 ml bag of Solution No. 18; isn't that correct?

4 A. That's correct.

5 Q. Just before you go off the on-call duty for the night,  
6 in and around 7 am, Claire had received a cumulative  
7 total of 536 ml of Solution No. 18. I presume by that  
8 that a second bag must have been erected in and around  
9 that stage.

10 A. I can't comment on that. Obviously, if 500 ml are only  
11 in a 500 ml bag, so any additional fluids must have been  
12 from a second bag. But I don't think that I prescribed  
13 a second bag.

14 Q. Would it be for a doctor to prescribe a second bag?  
15 A nurse couldn't, for example, put up another bag when  
16 that bag ran empty?

17 A. Usually. I was under the impression that you needed  
18 a prescription from a doctor before you can erect  
19 a second bag.

20 Q. You have no knowledge of whether or not a second bag was  
21 erected at that stage?

22 A. No. I have no recollection.

23 Q. If we turn to the final page of your witness statement,  
24 page 27. This is the section where you're asked to  
25 provide any further points or comments you might wish to

1 make. In the first sentence you said:

2 "I certainly did learn from Claire's case and the  
3 cases of the other children, as I have also pointed out  
4 in my answers to question 37 and 38."

5 When you say "I certainly did learn from Claire's  
6 case", at what point did you become aware of the  
7 learning points in Claire's case?

8 A. Because I did not have any personal recollection of the  
9 night shift, and as part of that was because I didn't  
10 feel that I had a direct clinical contact with her,  
11 these learning points obviously only crystallised during  
12 the years [inaudible due to interference], certainly not  
13 directly kind of in the first years after her case.  
14 Probably only ...

15 THE CHAIRMAN: Can I ask you, doctor: can you remember being  
16 aware in October 1996 that Claire had died?

17 A. You see, I was asking this question myself, because  
18 usually you would remember cases, and certainly when  
19 children died. Certainly, when I first was informed to  
20 do a witness statement, I was wondering why I couldn't  
21 recall the night on call. But I think that was because  
22 I felt I was only marginally involved and I was  
23 wondering, had I been going off on holidays  
24 relatively -- maybe before she died and I was away.  
25 Because I remember that I was away for two or three



1 weeks at the time and I wondered, did I miss all the  
2 tragedy from first-hand, because although I was new in  
3 hospital at the time, I certainly would have been  
4 completely devastated if I thought I had seen a child  
5 and she died only a couple of days later. And I would  
6 have known other cases where I was personally involved  
7 where [inaudible due to interference] recollection of  
8 what I did and what I decided and what I thought at the  
9 time.

10 THE CHAIRMAN: Let's suppose that you're right that you did  
11 go on holidays and then came back at some point  
12 in November. That would take you into November. You  
13 don't remember any discussion in the Children's  
14 Hospital?

15 A. You see, I think I had probably a quite unique situation  
16 at the time. If you remember, I had only started to  
17 work in Northern Ireland in May of that year. So I was  
18 coming from a foreign country, I had slight difficulties  
19 with the language at the time. All the [inaudible due  
20 to interference] consultants' names didn't mean anything  
21 to me at the time, so if you are in a close knit network  
22 where people had studied together, where they knew each  
23 other, I was kind of an outsider of that at the time.  
24 So even if there was discussion, the people which maybe  
25 were involved did meet at the time, something [inaudible

1           due to interference] I wouldn't have known.

2   THE CHAIRMAN: I understand, thank you.

3   MR REID: Just on the last page of your statement, you say  
4           that:

5           "During [your] paediatric training in  
6           Antrim Hospital, [you] joined a group together with  
7           a consultant paediatrician, nursing staff and the ward  
8           pharmacist to create a new sheet for fluid prescription  
9           and monitoring."

10           Which we've spoken about already. And you also:

11           "... participated as a specialist registrar trainee  
12           in the multi-disciplinary group, which was set up to  
13           create a care pathway for fluid management in 2004. As  
14           part of [your] training, you were involved in  
15           undergraduate education and induction programmes for new  
16           doctors at the various hospitals and [you] always use  
17           this opportunity to emphasise the importance of correct  
18           fluid calculation in children and their monitoring  
19           through checks of blood electrolytes."

20           I know you've left Northern Ireland since 2008, but  
21           thinking about what things were like in hospitals in  
22           Northern Ireland in 2008, is there anything in  
23           particular you think could be done better in order to  
24           monitor the dangers of hyponatraemia in hospital  
25           patients? Is there anything in general you think could

1 be done better?

2 A. I think the emphasis has already changed that IV fluids  
3 are seen now as true medication. So I think the first  
4 question that needs to be answered is: does a child need  
5 IV fluids? So I think the trend goes much more now to,  
6 for example, children with gastro-enteritis into the  
7 emphasis of oral re-hydration rather than starting IV  
8 fluids [inaudible due to interference]. That would be  
9 the first point to decide on if IV fluids necessary.

10 And then the second point, if IV fluids are started  
11 then the situation has to be monitored carefully.

12 I think a great change has already happened in the fact  
13 that No.18 Solution is vanished now from the paediatric  
14 departments and probably from most hospitals in  
15 Northern Ireland now. And certainly with the flow  
16 charts in all the treatment rooms up about  
17 hyponatraemia, it's very difficult to prescribe fluids  
18 now to children without acknowledging that that is  
19 a potential risk of erecting IV fluids.

20 Q. Thank you, doctor. I have had one question handed --

21 THE CHAIRMAN: Just while we're on that, how does the  
22 situation, as you left it in Northern Ireland in 2008,  
23 compare to the German system for managing fluids and the  
24 use of Solution No. 18 and so on? Are you working in  
25 Germany in the same area of paediatrics as you were

1           here?

2    A.   No.   You see, I have never worked in a hospital in  
3           Germany after I left Northern Ireland [inaudible due to  
4           interference] in a paediatric practice, which is like  
5           a GP for children --

6    THE CHAIRMAN:   Okay.

7    A.   -- but it's not a private practice, you will just see  
8           all children with different illnesses, but you wouldn't  
9           see them in hospital, so it's difficult for me to  
10          comment on the systems you have in Germany now.

11   THE CHAIRMAN:   Okay, thank you.

12   MR REID:   One question handed up from the floor, doctor.

13                 You have said already that it seems that you didn't  
14                 take a further sample yourself that morning.   In that  
15                 situation, you say that normally you would have handed  
16                 over to the house officer coming on to say to them that  
17                 a blood sample needed to be done; is that correct?

18   A.   That would be correct, but I wouldn't be able to recall  
19           if I did it and to whom I did it.

20   Q.   Yes.   In those situations where you leave it to the day  
21           staff to do an updated electrolyte test, when would you  
22           expect that blood test to be carried out?

23   A.   It really depends on how and where the ward round was  
24           staffed at the day.   So if everybody was present and you  
25           had an SHO to accompany either the consultant or the

1 registrar with the ward round and you had a second SHO,  
2 then I would have expected the bloods to be done  
3 immediately. But if there was only one SHO in the ward,  
4 that might have been difficult.

5 Q. So if there were two SHOs on the ward round, you would  
6 have expected a sample to have been taken at the ward  
7 round?

8 A. Yes.

9 Q. Just another question that has been asked, doctor.

10 If I can bring up for the benefit of those in the  
11 chamber 090-022-052 and 053 beside each other, please.  
12 The notes I'm bringing up on screen, doctor, are the  
13 notes that Dr O'Hare and yourself made and then the note  
14 made by Dr Stevenson of Dr Sands' ward round the  
15 following morning.

16 At that ward round, Dr Stevenson noted:

17 "U&E. Sodium 132. Full blood count. White cell  
18 count, high, 16.4. Glucose 6.6."

19 Was there any -- and I realise this is a long time  
20 ago -- training given to SHOs such as yourself about the  
21 recording of blood results in the medical notes?

22 A. To be honest, other than that, you should always  
23 obviously date and time an entry, I wouldn't be able to  
24 recall any specific training.

25 Q. So for example, if you were on a ward round in and

1           around October 1996, what checks would you make to see  
2           what the blood results were like at the time of the ward  
3           round?

4    A.   You see, I don't -- I can't even recall if we were able  
5           to check the bloods by the computer at that time because  
6           I think either at that time or slightly later, you were  
7           able not just to phone the lab but to just get it via  
8           the ward computer.  Certainly before that, it would have  
9           been quite tedious: you would need to either see an  
10          entry "bloods taken" and the time beside that, or you  
11          were on call yourself and you know exactly when you did  
12          the bloods yourself and you knew what was outstanding.  
13          Apart from that, it would have been very difficult to  
14          find out immediately when which blood result was  
15          received back or was taken.

16   Q.   And just to I understand what you mean, when you say  
17          a ward computer, do you mean a blood gas analyser?

18   A.   No, a computer whereby you can electronically receive  
19          results.

20   Q.   I understand.  A computer where you can call up the  
21          results --

22   A.   That's correct.

23   Q.   -- recorded by the laboratory?

24   A.   Yes.  Because they would have been timed then.

25   MR REID:  I have nothing further, Mr Chairman.

1 THE CHAIRMAN: Doctor, if you wait a moment. Can I ask you  
2 about your reference at page 27 to the training which  
3 you did in Antrim and the group that you were working on  
4 with the consultant paediatrician? Was that Dr Jenkins,  
5 Dr John Jenkins you were working with?

6 A. No. The consultant in the group was actually  
7 Jarlath McAloon at the time, and it was set up  
8 specifically for the ward in Antrim Hospital. It was  
9 for the children's ward in Antrim Hospital.

10 THE CHAIRMAN: I'm sorry, there was a slight hiccup in the  
11 line when you gave us that name? Did you say  
12 Dr McAloon?

13 A. Yes.

14 THE CHAIRMAN: Did you know Dr Jenkins in Antrim?

15 A. Yes.

16 THE CHAIRMAN: Was he a more senior paediatrician?

17 A. At the time [inaudible due to interference] he was  
18 a more senior paediatrician and he was not involved  
19 in that [inaudible due to interference] group. That was  
20 really only on ward level.

21 THE CHAIRMAN: Thank you very much. If you give me one  
22 moment.

23 Is there another question, Mr Reid?

24 MR REID: Yes, Mr Chairman. If I can call up on screen  
25 090-031-099 and 090-032-108, please.

1           Doctor, these are the printed lab results of,  
2           firstly, the sodium, the potassium, the chloride and so  
3           on, and then, on the other page, the haemoglobin, the  
4           erythrocytes, the PCV, white cell count and so on.  
5           Firstly, would be I correct in saying that these forms  
6           would have been sent from the laboratory to the ward and  
7           then would be signed by the SHO receiving them, or  
8           initialled by the SHO receiving them, the following  
9           morning? Was that the practice in October 1996?

10       A. The printed result from the laboratory reached the ward,  
11       but it would never be that this would be your actual  
12       result. Sometimes you would get a big bunch of results  
13       back and they were days and days later. I can't recall  
14       having seen factual printed results at the time when you  
15       really needed to work on that result. Usually, it was  
16       already [inaudible due to interference] on because this  
17       was only the printed result; you would work on what was  
18       verbally, orally or by phone given through.

19       Q. You say sometimes you would get them a few days later,  
20       but occasionally they might be available the next  
21       morning at the ward round. Is that right that, on  
22       occasion, they might be available the next day?

23       A. I would say it is a possibility that they are available  
24       at the ward round, but what you should remember is they  
25       would come in a big bunch and they would be hardly



1 in the [inaudible due to interference] already filed  
2 in the proper space in the medical record of the child.  
3 So you would have like 20, 50 of them. And usually, you  
4 would sign them in the afternoon when there was time.

5 Q. And those results would have the date of the specimen  
6 and the date of the laboratory report on them; isn't  
7 that right?

8 A. That's correct.

9 Q. So if you looked at the report, you would have the  
10 opportunity of seeing when the specimen was taken and  
11 when the laboratory reported, at least in terms of the  
12 date?

13 A. That's correct. If the time was noted on the laboratory  
14 form, which reached the laboratory, then, yes, you could  
15 have that information.

16 Q. But as you say, a lot of the time they were in large  
17 bunches and you maybe didn't look at the printed records  
18 that often?

19 A. You would look at them, but you would certainly not  
20 expect, from a night-time result, the printed result the  
21 following morning.

22 Q. I have promised you "finally" a few times, but hopefully  
23 this is the final point. If I can bring up 090-022-052  
24 and 053 together, please. I said to you that at the  
25 ward round the next day, the blood results effectively

1 repeat the blood results that were recorded during your  
2 shift. Are you surprised to have seen the fact that the  
3 blood test results were simply almost repeated again  
4 in the ward round of Dr Sands, the note of Dr Sands'  
5 ward round, which was taken by Dr Stevenson?

6 MR FORTUNE: That's not correct because if you look  
7 at the --

8 MR REID: I'll come to that in a moment, Mr Fortune.

9 THE CHAIRMAN: They're not identical, but they are very,  
10 very similar indeed. I presume the question we're  
11 coming to is how expected or unexpected is it for them  
12 to be so close to each other.

13 MR REID: Yes.

14 MR QUINN: That's the question.

15 THE CHAIRMAN: Sorry, doctor, let me explain. The test  
16 results from the Monday evening, which you entered the  
17 right column of and somebody else entered the left  
18 column of, and you then put the arrows for sodium and  
19 the white cell count -- okay?

20 A. Yes.

21 THE CHAIRMAN: They are then found again in the notes of the  
22 ward round from the following day.

23 A. Okay.

24 THE CHAIRMAN: The sodium result is the same at 132. The  
25 white cell count, which was 16.5 on your entry, is this

1 time 16.4. But the glucose is the same at 6.6. There  
2 is an issue about whether there was confusion about  
3 whether this was a second set of tests or whether this  
4 was a repetition in writing of the tests from the Monday  
5 night.

6 A. Okay.

7 THE CHAIRMAN: Just to emphasise the point: those results  
8 are almost identical, but they are not quite identical  
9 because the white cell count is fractionally different  
10 at 16.4, whereas on your entry it was 16.5. And the  
11 question we're coming to is: how common or otherwise  
12 would it be to have a second set of tests which gave  
13 results which were so very, very close to an earlier set  
14 of tests? Can you comment on that?

15 A. I couldn't really comment on that because if there are  
16 two tests, then you would have a laboratory information  
17 if there are two samples sent. Were there two samples  
18 sent?

19 THE CHAIRMAN: It appears probable that there were not two  
20 samples sent. But there is a suggestion that the  
21 overnight results from Monday night were misunderstood  
22 later on Tuesday by Dr Webb to be Tuesday morning  
23 results. Partly because they're on the ward round note  
24 for Tuesday morning and perhaps partly because the  
25 results are not absolutely identical, although they are

1 very, very close. Can you comment on that or not?

2 A. I wouldn't really be able to comment on that.

3 THE CHAIRMAN: Okay. Is that everything?

4 MR REID: Unless my friends have anything further. (Pause).

5 No further questions, Mr Chairman.

6 THE CHAIRMAN: Doctor, that brings to an end all the

7 questions we want to ask you from Northern Ireland. I'm

8 very grateful for you taking time out to help the

9 inquiry. Unless there's anything more you want to say,

10 that brings an end to this link-up with you in Germany.

11 A. Okay, thank you very much.

12 THE CHAIRMAN: Thank you again. Ladies and gentlemen, we'll

13 take a break for 15 minutes, thank you.

14 (10.22 am)

15 (A short break)

16 (10.40 am)

17 THE CHAIRMAN: Ladies and gentlemen, the position now

18 is that Professor Neville has come over from England to

19 give his evidence as an expert engaged by the inquiry to

20 provide an opinion on certain areas relating to Claire's

21 treatment. He has to leave here today about 4.15.

22 I hope that will be sufficient time for his evidence to

23 be taken. If it is not, then we will arrange perhaps

24 for a video link for his evidence to be completed at

25 some further date if that is required. But let's do

1 everything we can to finish it by 4.15 today to let the  
2 professor away. And at that point, I will then arrange  
3 for Mr and Mrs Roberts to complete their evidence from  
4 yesterday. I don't want them to go into this weekend  
5 with the prospect of giving evidence next week hanging  
6 over them.

7 Professor Neville, please.

8 PROFESSOR BRIAN NEVILLE (called)

9 Questions from MS ANYADIKE-DANES

10 MS ANYADIKE-DANES: Good morning, professor.

11 A. Good morning.

12 Q. Professor, do you have there your curriculum vitae?

13 A. I have my curriculum vitae here.

14 Q. Thank you. Just so that we can confirm it, you produced  
15 one report for the inquiry; is that correct? And  
16 do you have it there?

17 A. Yes, I do.

18 Q. Thank you very much indeed. For the purposes of  
19 referencing, your curriculum vitae is at 311-032-001.  
20 If we go to 002, which is the first substantive page of  
21 it, we see your that your present appointment is  
22 professor of childhood epilepsy at the Institute of  
23 Child Health. And prior to that, you were professor of  
24 childhood epilepsy, and also professor of paediatric  
25 neurology and a consultant paediatric neurologist.

1           If one goes to the page after that, 003, and looks  
2           at your present professional work, we see that there is  
3           a heavy emphasis, not surprising from your appointment,  
4           on epilepsy. Has that been an interest of yours for  
5           some time?

6   A. Yes, it has. I am now emeritus professor --

7   Q. I understand.

8   A. -- but I continue working on research.

9   Q. It is a lengthy CV, I'm not proposing to go through it,  
10       I simply wanted to establish what your area of expertise  
11       was, what your particular interest is.

12           We see that in terms of consultancy -- did you first  
13       become a consultant in 1973?

14   A. Yes, I did.

15   Q. And we see that from 003. You retained that position  
16       and become a professor also. So would it be fair to say  
17       that you would be familiar with paediatric neurology in  
18       1996, which is the relevant period for us in this case?

19   A. Yes, it would.

20   Q. Thank you. I would like now to try and move through the  
21       assistance you have provided us, roughly  
22       chronologically, with what was happening to Claire.  
23       There may be, from time to time, periods where we have  
24       to deviate from that because it helps to explain  
25       matters, but that's what I'm intending to do.

1 I would like to start first with the initial  
2 assessment and treatment. Claire comes in at about  
3 7 o'clock on the Monday, 21 October in 1996. You  
4 provide in your report at 232-002-003 -- and if we can  
5 pull up 004 as well. There you are talking about what  
6 the differential diagnoses might be if a competent  
7 examination is carried out.

8 A. Yes.

9 Q. If we see that there, maybe you can explain why you  
10 consider those should have been the differential  
11 diagnoses that a reasonably competent paediatric  
12 registrar would have made on the basis of the  
13 information that could have been available to such  
14 a person.

15 A. Yes. They were a sort of inflammation of the brain,  
16 which was not more specifically defined. They could  
17 include overwhelming infection as a differential  
18 diagnosis with a sort of collapse, say, though I don't  
19 think she was in that state. There are a number of  
20 metabolic disorders, which include hyponatraemia, with  
21 cerebral oedema as a possibility, occurring.  
22 Intracranial haemorrhage is obviously important.  
23 Hydrocephalus is probably much less important because  
24 she had previously had a CT scan.

25 I think that poisoning was something which could be

1 probably deferred to a later time when they'd looked  
2 at the other evidence. And non-convulsive  
3 status epilepticus is also on that list. But it seemed  
4 to me that hydrocephalus and non-convulsive  
5 status epilepticus were probably rather less likely to  
6 be within the registrar's sort of competence.

7 Q. Yes. What is it that you think, having examined  
8 Claire -- and one can only know from the records that  
9 have been taken of what was found, but assuming that's  
10 what there was and knowing what else one might look for,  
11 why do you have that list? In other words, what's the  
12 basis of you having formulated such a list?

13 A. Well, it's a list of the possible diagnoses which  
14 I think are likely to have occurred.

15 Q. That arise out of what evidence?

16 A. Well, out of the evidence of having been previously  
17 a child who had somewhat slow development, who had had  
18 epilepsy, but that appeared to have passed or been in  
19 remission, so that she was already damaged and therefore  
20 these were a group of problems which arose in somebody  
21 who probably was just or seemed just somewhat unwell and  
22 with a stomach upset, but actually was not talking. So  
23 she was actually rather sicker than that, and so  
24 I thought that that set of problems really fitted the  
25 likely causes.



1 Q. There has been an issue raised as to whether there isn't  
2 a slight inconsistency within your report in the list  
3 that you have formulated and considered that a competent  
4 paediatric registrar could have arrived at. So if one  
5 bears in mind that list you have there and if we just  
6 highlight the paragraph that starts "the differential  
7 diagnosis would have included". You'll see there are  
8 seven items there. Starting with "encephalitis" and  
9 culminating in "non-convulsive status epilepticus".

10 Then if we go and pull up next to that page a little  
11 bit further on in your report, which is at 006. If you  
12 look right at the top there's paragraph 4:

13 "Hyponatraemia/cerebral oedema ..."

14 Then if you look down at the bottom just below 8,  
15 there's an asterisk, and it says:

16 "These are the diagnoses [that is the asterisked  
17 ones] that I think should have been within the  
18 competence of a paediatric registrar."

19 A. Yes.

20 Q. And if you compare the two, you can see that you have,  
21 on your page 3, included item 3, which is "metabolic  
22 disorders, including acute liver  
23 failure/hyponatraemia/cerebral oedema" as something that  
24 you think a competent or a paediatric registrar could  
25 have suggested. But when you get to your page 6, that

1 particular item isn't asterisked. It might help  
2 if we removed your page 3 and put alongside your page 5,  
3 which starts the list, if I can put it that way. That  
4 might assist.

5 THE CHAIRMAN: 5 and 6, please.

6 MS ANYADIKE-DANES: Yes. You can see that your list starts  
7 at 1, "encephalitis", and goes on, and now there are  
8 eight items as opposed to seven. But the issue is: is  
9 there a reason, and if so what is it, why, when you're  
10 dealing with it at page 6, you don't include  
11 hyponatraemia as something that a competent paediatric  
12 registrar might have arrived at, but you do when you're  
13 discussing it in page 3?

14 A. Yes. I think that the reason that I did this was that  
15 "hyponatraemia/cerebral oedema" was within a group  
16 called "metabolic disorders" beforehand. And then  
17 I split it off and I'm afraid I failed to put it in as  
18 something which was appropriate. I think it is an  
19 appropriate thing for somebody at a registrar level to  
20 know.

21 THE CHAIRMAN: So rather than take it out from the admitting  
22 registrar's list of identifiable differential diagnoses,  
23 you want to add it to the list for the ward round the  
24 following morning?

25 A. Yes, I would.

1 THE CHAIRMAN: Okay.

2 MS ANYADIKE-DANES: Just so that we're clear, that means it  
3 should have been something that both the admitting  
4 registrar and a registrar taking the ward round should  
5 have considered?

6 A. Sure.

7 Q. And there is not intended to be anything made of the  
8 difference between the two pages?

9 A. No.

10 Q. Thank you. If we look at that list, Dr O'Hare, who was  
11 the admitting registrar, gave evidence and addressed  
12 those matters. I don't know whether you have had an  
13 opportunity to look at the transcript where she does do  
14 that.

15 A. Yes, I had a look through that, yes.

16 Q. It is on 18 October, it starts at page 135. It goes on  
17 to about 147, but if we try and pull out the main points  
18 of it.

19 A. Yes.

20 Q. It starts really at line 21 and says that the first is  
21 a serum calcium. That's a test that could have been  
22 done. She's going through a series of tests to see  
23 whether she would have or could have or should have  
24 arrived at any of those differential diagnoses that  
25 you have suggested.

1 Her view is that:

2 "Calcium can be high or low. It's very unusual for  
3 it to be associated with seizures in a child of this  
4 age."

5 Over the page, essentially she comes to the  
6 conclusion that she wouldn't have thought of doing it  
7 serum calcium on Claire at that stage. Do you have any  
8 observations to make about that?

9 A. Yes, it's not really so much a matter of causing  
10 seizures, it's just so relatively commonly performed  
11 that I don't see why you don't do it. I agree that when  
12 you argue it in more detail, you might wish not to do  
13 it, but it's so usually part of an examination that  
14 you'd normally do it.

15 Q. You mean it's a usual part of a set of blood tests?

16 A. Yes, sure, yes.

17 Q. So just so that I understand you, are you saying that  
18 what you're really advocating is that a set of blood  
19 tests be done and you're not really distinguishing each  
20 and every one, just so that you have a comprehensive set  
21 of blood work?

22 A. That's right.

23 THE CHAIRMAN: Professor, do I understand this to come back  
24 to the point which I have taken from your report, and  
25 you'll correct me if I'm wrong, that your view is that

1 Dr O'Hare did carry out a competent examination, but  
2 that she should have required more tests to be carried  
3 out than she actually did?

4 A. Yes, I think she should.

5 MS ANYADIKE-DANES: Following on from that question from the  
6 chairman, is that because you think, had she carried out  
7 more tests, either she would have been in a better  
8 position to have expanded the differential diagnoses, or  
9 she would have provided a basis for the doctors coming  
10 the next day to have expanded a set of differential  
11 diagnoses?

12 A. Yes, that's right. You could do tests one at a time,  
13 but it isn't really efficient when you have a child who  
14 is unwell.

15 Q. Thank you. Then if we go over the page at 136, she goes  
16 on to consider whether or not it would have been helpful  
17 or appropriate to have carried out a serum glucose. She  
18 says:

19 "That was done as a routine part of the U&E."

20 And she says it's recorded.

21 Then she goes on to say, if we think about whether  
22 we should have done a liver function test, and although  
23 she goes through it, ultimately she does conclude that  
24 a liver function test would have been a test that she  
25 could have done. I want to take you through her

1 reasoning because, by the way, she addresses the issue  
2 of Reye's syndrome.

3 She starts at line 19:

4 "I think the question mark was whether she should  
5 have checked her liver function, might she have had  
6 encephalopathy, for example, resulting in abnormal CNS  
7 findings."

8 She addresses that and she says she has never seen  
9 that particular condition in a child without jaundice or  
10 without a big liver.

11 And then over the page she says:

12 "Let's think about more unusual conditions,  
13 something like Reye's syndrome."

14 And she refers to having seen reference to it in  
15 different witness statements. And she says that:

16 "Reye's syndrome is a sort of catch-all thing which  
17 [I'm at page 137] describes a child who has abnormal  
18 liver function and encephalopathy."

19 She also says that it's:

20 "... a diagnosis that was often made in the 70s and  
21 80s and hasn't been made in the recent past because  
22 there we have much better diagnostics."

23 Would you accept that?

24 A. I think there's less treatment with aspirin, which is  
25 helpful in that context. But it is still a possibility.

1 A liver function test is very simple to do,  
2 a transaminase, so I would do it.

3 Q. When you say there's less administration of aspirin,  
4 is that because the use of aspirin is particularly  
5 connected with the development of Reye's syndrome?

6 A. Yes.

7 Q. So that might have been a reason why they tested for it  
8 more frequently?

9 A. Yes.

10 Q. But does it happen independently of an overuse of  
11 aspirin?

12 A. Yes, it does happen as well.

13 Q. Is that therefore a reason for looking for it if you're  
14 doing a broad base of tests?

15 A. Yes, it would be.

16 Q. Just so that we understand, is your canvassing for  
17 a broad base of tests because Claire came in with fairly  
18 generalised and non-specific symptoms, which didn't  
19 immediately point to any particular condition?

20 A. That's exactly right. And that she had somewhat more  
21 than just being a bit off the boil, if you like, because  
22 she was not talking and she was ataxic, so my reading  
23 is that she required somewhat more investigation. These  
24 are not huge investigations; these are just really  
25 a fairly basic set of tests.

1 Q. While you're helping us in that way, we're pausing there  
2 and thinking about 1996, just so that we don't judge  
3 1996 by today's standards. Is this a set of tests that  
4 you consider would have been appropriate, standard,  
5 common, in a comparable situation in 1996?

6 A. Yes.

7 Q. Thank you. Then she carries on on that page to talk  
8 about whether we thought there was an inborn error of  
9 metabolism. She says that she doesn't actually know  
10 whether she thought about that, but anyway she didn't do  
11 anything to test for that.

12 A. I have got sympathy for that. I mean, that is much more  
13 complex as a problem and I would await further thoughts  
14 on this. I would have deferred that until --

15 Q. What would that have involved if you were going to do  
16 that?

17 A. It's a whole range of potential problems, including  
18 searching for mitochondrial disease and the like, which  
19 really requires a lot of money and is a major  
20 investment, really.

21 Q. Is it more invasive?

22 A. Pardon?

23 Q. Is it more invasive?

24 A. No, you just do simple tests, but you send them to  
25 a laboratory that would do it.



1 Q. In any event, I think what you're saying is that you  
2 wouldn't have expected --

3 A. No.

4 Q. Although you would have expected them to keep that on  
5 their range as a possibility, you wouldn't have expected  
6 them to have tested for that at that stage?

7 A. Yes. The reason I would have just kept it in mind is  
8 because there was, I think, no previous explanation for  
9 her original illness. And so I think it required just  
10 a bit of thought as to why she had developed that  
11 illness before with epilepsy and --

12 Q. When you say "her original illness", you mean when she  
13 was a baby --

14 A. Yes.

15 Q. -- and came under the care of Elaine Hicks as  
16 a consultant neurologist?

17 A. That's right.

18 Q. Because that wasn't resolved, you would have that in  
19 your mind as --

20 A. Yes.

21 Q. I understand. Then I think on this page she does go on  
22 to consider that she would have done a liver function  
23 test with hindsight. Possibly because she might have  
24 had in mind hepatitis A, for example. Would you agree  
25 with that?

1 A. Yes.

2 Q. Then she deals with your suggestion of a toxic screen  
3 and she says that history from the family didn't give  
4 her any note that Claire had taken anything that could  
5 have given rise to that. So based on that, she wouldn't  
6 have pursued that line.

7 A. No, I wouldn't, I think, in the first instance either.

8 Q. But you would have maintained it as a possibility?

9 A. Yes.

10 Q. So then do you have a range of possibilities, breaking  
11 down to a number of tests, some of which are in higher  
12 order of importance than others?

13 A. Yes.

14 Q. And you await the results of those first line tests, if  
15 I can put it that way, to see whether they indicate that  
16 these other tests ought to be carried out or can be  
17 discounted.

18 A. Yes.

19 Q. It's a bit like detective work.

20 A. Yes.

21 Q. Then over the page at 139, she talks about urine  
22 osmolality. She said she wouldn't have done it at that  
23 time, partly because she didn't have the urea and  
24 electrolyte results, so it wouldn't have occurred to her  
25 to do that kind of urine test at that stage. She goes

1 on to say or at least cite the Patient Safety Alert,  
2 which refers to how urine chemistry may be helpful in  
3 a small number of high-risk cases. And I think the  
4 upshot of it is that she did not regard Claire, at that  
5 stage, as being a sufficiently high-risk case. Can you  
6 comment on her reasoning?

7 A. I think that it was probably right not to look at the  
8 urine osmolality initially. I think it was right to do  
9 the ordinary blood tests and then to decide afterwards  
10 what were the appropriate further investigations.

11 Q. Thank you. Then if we continue. Having looked at those  
12 results and given her answers in that way, she then  
13 starts to look in detail at the differential diagnoses  
14 that you suggest and we ask her to consider just a few  
15 because, in a way, in having provided that evidence,  
16 she's already covered some of them.

17 One of the ones that we wish her to deal with in  
18 particular is the metabolic disorders, including the  
19 acute liver failure, hyponatraemia.

20 She specifically is asked -- this is at page 140,  
21 line 14 -- whether she considers that she should have  
22 suggested that as a possible differential diagnosis.  
23 I'm trying to see where her answer to that comes because  
24 we get diverted slightly. (Pause).

25 I think we go off to deal with that difficulty or

1 potential inconsistency in your report that I mentioned.  
2 If you bear with me a minute, I'll try to get to the  
3 place where she finally deals with that point.  
4 THE CHAIRMAN: Let's bring up 142 and 143, I think.  
5 MS ANYADIKE-DANES: Yes. Then I think she starts really at  
6 19 where it's being put to her. (Pause).  
7 A. Can I say that there should be a registrar and  
8 a consultant who are also available to discuss the  
9 investigations, both before and after they've been done?  
10 Q. Sorry, just before we get to it, it gets taken slightly  
11 out of order. We go to deal with the intracranial  
12 haemorrhage first, which is at 144. She discounts that  
13 because there was no headache and no history of her  
14 having a bleeding disorder. Would you accept that as  
15 discounting it?  
16 A. No.  
17 Q. Right at the outset without doing anything further?  
18 A. No. You can have intracranial haemorrhage without --  
19 I think it's unlikely in the context of her other  
20 illness, but it is still a possibility and a CT scan  
21 would eliminate that.  
22 Q. Then she goes on to deal with hydrocephalus.  
23 A. Yes, I think she said that hydrocephalus would not be  
24 something that would occur from birth, and of course  
25 she's wrong about that.

1 Q. Why do you say she's wrong about that?

2 A. You can have hydrocephalus from early life, which only  
3 presents later, and that would be something that she  
4 would perhaps not know.

5 Q. Does that mean that Claire could have had undiagnosed  
6 hydrocephalus from early life, which was presenting  
7 itself in this way --

8 A. Yes.

9 Q. -- now, much later on?

10 A. She could do, but it's unlikely because of the previous  
11 CT scan.

12 Q. And then she has addressed --

13 THE CHAIRMAN: Despite the fact that you say she's wrong  
14 about that, this is something which you say she might  
15 not be expected to know?

16 A. Yes.

17 THE CHAIRMAN: Right. So if she might not be expected to  
18 know it --

19 A. No.

20 THE CHAIRMAN: -- it's really not a criticism of her not to  
21 include it as a differential diagnosis.

22 A. Not at all. Absolutely not.

23 MS ANYADIKE-DANES: So she wouldn't be a person who could  
24 include it. What might happen is that somebody else who  
25 was more experienced and knowledgeable perhaps ought to

1           have put it on the list --

2    A.   Yes.

3    Q.   -- if only to be ruled out by further consideration.

4    A.   Yes.

5    Q.   But it's not something that you're expecting she should  
6           have included in her list of the differential diagnoses?

7    A.   Sure.  And she points out also that it is possible that  
8           a tumour might have occurred, and therefore it could  
9           have been presenting in that way.

10   Q.   Yes.  Then if we finally go on to the hyponatraemia,  
11           which she gets to at page 147 of the transcript.  She  
12           poses rhetorically at line 11:

13                 "Why did I not consider hyponatraemia in this child?  
14                 I didn't have her urea and electrolyte results at 8 pm  
15                 that evening.  She was coming in from home, she would  
16                 not have been on IV fluids.  I wouldn't have considered  
17                 it for a child at that time."

18                 Why would you have thought, at that stage,  
19                 hyponatraemia was an appropriate differential diagnosis  
20                 for her to have had?

21   A.   Well, it remains a possibility because she had been  
22           vomiting, she was, I think, getting short of fluid, and  
23           it is quite likely that what would happen is that she  
24           would have intravenous fluids given to her, so therefore  
25           it is something you should be thinking of because you

1           would want to repeat that test, in my view, really quite  
2           early.

3    Q.   There might be two things.  She examines her first at  
4           about 8 pm, or at least what that's when she records her  
5           note.  So there's what she sees at that stage on  
6           presentation.

7    A.   Yes.

8    Q.   Then there are blood tests carried out subsequently and  
9           she starts her on IV fluids and she makes a note that  
10          she should be reassessed afterwards and she comes back  
11          at midnight to do that.  Somewhere in about then the  
12          blood results are recorded and one can see that there is  
13          a slightly low test or result --

14   A.   Yes.

15   Q.   -- for her sodium.  So that would be another opportunity  
16          to review presumably her differential diagnoses and to  
17          see whether anything that's happened in the intervening  
18          period requires her to modify them in any way.

19   A.   Yes.

20   Q.   If we start with the first set, are you saying that as  
21          Claire came in and was examined and whatever she saw or  
22          could reasonably have seen at 8 pm with the history is  
23          something that should have led her to include  
24          hyponatraemia in her list of differential diagnoses?

25   A.   I think it's something you would be conscious of, but

1           you'd be doing the test in order to discover exactly  
2           that fact so that she -- yes, she should have been  
3           conscious of that possibility.

4   Q.   What particularly should make her conscious of that at  
5           8 o'clock when she's examining her, bearing in mind this  
6           is 1996?

7   A.   Yes.   She would be aware that this is a risk for  
8           children with neurological problems, particularly, so  
9           that if you have a child with epilepsy and learning  
10          disorder, you would have a relatively high risk of that  
11          possibly occurring if this child did not rapidly  
12          improve.

13   Q.   Just so that we're clear, does that mean that it may not  
14          be something that is causing her presentation, but it's  
15          a risk in the way in which you might require to treat  
16          her?

17   A.   Yes.

18   Q.   So you should be mindful of that?

19   A.   Yes, indeed.   I think it's highly likely that she had  
20          two disorders, one of an intercurrent infection and the  
21          other being hyponatraemia.

22   Q.   Even as she came in, some of that was present?

23   A.   I think the problem about the -- well, if we're going to  
24          judge the current levels of 132, that could well have  
25          been a rapid drop down from 140.



1 Q. I see.

2 A. And you would have not known that fact, you would have  
3 just ... You just would realise that ... And it's the  
4 speed at which you're dropping, which is as important,  
5 I think.

6 Q. So is the point then, you would not have known at that  
7 stage when she was within the normal reference --

8 A. No.

9 Q. -- and, therefore, how quickly she had moved from the  
10 normal reference to 132?

11 A. Yes.

12 Q. Although there was no way of Dr O'Hare knowing or any  
13 registrar at that stage knowing, at 8 pm, that she was  
14 132.

15 A. No.

16 Q. So that's what I'm trying to distinguish, where the  
17 hyponatraemia comes in for you. Is it something that  
18 you're thinking is part of the cause of her presentation  
19 and/or is it something that you're thinking is a risk  
20 in the way you might be treating her and we should just  
21 be mindful of that, which are potentially two different  
22 things?

23 A. Yes. I find it difficult to separate the two, really,  
24 as she presents.

25 Q. So whichever way, you would have had hyponatraemia there

1 as something to be mindful of?

2 A. Yes.

3 Q. Then Dr O'Hare goes on to think about the hyponatraemia.

4 From her point of view, when she saw the 132 serum

5 sodium result, that's not something that would have

6 caused her to be concerned in particular, it's just

7 below the reference, nor anything that would have led

8 her to think in terms of developing cerebral oedema. So

9 if we just pause there for the minute, and bearing in

10 mind that she's a paediatric registrar and this is 1996,

11 what would you have expected her to have concluded about

12 a serum sodium level of 132 at that stage? I should

13 say, although she would have been seeing that round

14 about midnight, it's probably coming from a blood

15 test -- I'm not entirely sure -- taken at 9/9.30 in the

16 evening, something of that sort.

17 A. I think what you would have thought about that at that

18 stage is: this is low, it's not very low, and there is

19 a danger of giving a great deal of solute, of giving

20 fluids to this child without being carefully monitored.

21 We have argued, I think in our notes, as to whether this

22 should have been given as more normal saline. In other

23 words, whether it should have been a higher

24 concentration of saline or not and whether it should

25 have been two-thirds of the amount rather than ...

1 I think that it's really quite difficult to be sure of  
2 that fact.

3 What I think is --

4 THE CHAIRMAN: That's why I understand you not to be really  
5 critical of the fact that Claire did get the Solution  
6 No. 18 --

7 A. Yes.

8 THE CHAIRMAN: -- or the volume at which she started to  
9 receive it. Your criticism really comes a bit further  
10 along in the course of her treatment, that that was  
11 maintained; is that right?

12 A. Yes, I think that's right. You could argue that either  
13 way.

14 MR GREEN: Forgive me. It would be helpful if the professor  
15 could be asked to clarify what he meant when he said  
16 a moment ago:

17 "We have argued in our notes about whether this is  
18 normal saline."

19 It was the phrase:

20 "We have argued, I think, in our notes."

21 I would be helped by some clarity as to what was  
22 meant by that.

23 THE CHAIRMAN: I think it's a debate between the experts.

24 When you said, "We have argued in our notes",  
25 professor, is that a reference to the other experts who

1           have given reports?

2    A.   Yes.

3    THE CHAIRMAN:   And you have seen what Dr Scott-Jupp has  
4           said, for example, which is not identical to your own  
5           view; is that right?

6    A.   Yes.

7    MS ANYADIKE-DANES:   To follow on from where the chairman was  
8           asking you, I think you said that it's a difficult call  
9           as to whether she should have been on the Solution No.  
10          18 or something more restricted or at least a greater  
11          concentration of sodium at the outset.

12   A.   Yes.

13   Q.   I'm not sure that you've particularly been concerned  
14          about the amount.   And then you have a view as to if you  
15          were going to review that, what you would have done.   In  
16          your report, you expressed a view -- and I just give it  
17          for reference purposes, it's 232-002-004.   Your view, on  
18          balance, I think, is that given that you've got a drowsy  
19          child, you would have had an urgent review, but you  
20          might not have ...   I think, on balance, your view  
21          is that it might have been more appropriate to have even  
22          started with a more restricted fluid because you are  
23          dealing with a drowsy child.

24   A.   Yes.

25   Q.   Can you help expand on what you mean by that and why

1           that makes a difference?

2    A.   Because she was showing signs already of having  
3           a problem and drowsiness and lack of speech were already  
4           part of it, I would be really careful about giving  
5           a great deal of fluid.  In fact, she had rather more  
6           fluid than was actually intended, I think.

7    Q.   But if we stick with the position of the paediatric  
8           registrar in the evening that she came in.  She's going  
9           to put her on IV fluids.  You don't demur from the fact  
10           that that might have been an entirely appropriate thing  
11           to put her on IV fluids?

12   A.   Yes, that's okay.

13   Q.   There's not a problem with that.  You're not concerned  
14           about the rate or amount of IV fluids that she was  
15           started on in particular?

16   A.   Not at that stage, no.

17   Q.   Where you're slightly equivocal is whether in all the  
18           circumstances it wouldn't have been better, given her  
19           drowsy nature and not being entirely clear what's  
20           causing that, to have had her on a slightly higher  
21           concentration fluid of sodium; is that where you are?

22   A.   Yes, that's what I think we'd normally be doing.

23   Q.   At that stage, which is when she's being started off and  
24           indeed continued with that at midnight, how significant  
25           a factor is it then as opposed to later on, where you

1           might have a different view as to what they should have  
2           done about her fluids?

3    A.   I think you could argue the case either way.

4    Q.   Thank you.  The CT scan is another one of those tests or  
5           procedures that you thought could and should have been  
6           put in place.  Dr O'Hare addresses that at page 181 of  
7           her transcript.  Essentially, at line 21, she really  
8           says that you have to think about why you do one.

9           I think her view is that there is more information now  
10          leading to doing one and she didn't think that it was  
11          necessary or appropriate at that stage.

12   A.   Yes, I assume that what she would have been thinking of  
13          doing is planning a CT scan for the following morning,  
14          presuming that the child had not already begun to show  
15          major improvement.  So that's what I was assuming.  And  
16          if that was the case, that would be entirely  
17          appropriate.

18   Q.   To have planned to have one carried out on Tuesday  
19          morning?

20   A.   Yes.

21   Q.   How important do you think that would have been as  
22          a direction, the arrangements for it to have been  
23          carried out on Tuesday morning?  How important do you  
24          think that would have been?

25   A.   I think it's very likely that it would have shown the

1 earlier signs of raised intracranial pressure. But  
2 it would also have shown, potentially, a demonstrable  
3 other lesion that was causing problems as well.

4 Q. In order for her to have put that in train, to have  
5 ordered it, if I can put it that way, so that that  
6 happened on Tuesday morning, she would have had to see  
7 things, examine Claire, get results, something that  
8 would have led her to believe that that was something  
9 that should actually be ordered. So what I'm trying to  
10 find from you is what is it in Claire's presentation or  
11 the results that she would have received almost at any  
12 stage, whether it was at 8 o'clock or midnight, that  
13 should have triggered a response in a paediatric  
14 registrar to have said, "What we really need is to  
15 ensure that Claire has a CT scan tomorrow morning"?

16 A. I think that would have been her not having -- oh, her  
17 having shown a considerable improvement in her level of  
18 consciousness.

19 Q. Sorry, I have misunderstood you. Is that why she would  
20 have thought that she should do a CT scan?

21 A. No, that would be the reason for not doing it.

22 Q. When Dr O'Hare examined Claire at midnight, she thought  
23 that she seemed a little brighter. She had made a note  
24 to herself "re-examine after fluids", she came back, she  
25 did re-examine her and she thought Claire seemed

1 a little brighter. If that was her view at the time, do  
2 you still say that she should have ordered a CT scan for  
3 the next morning?

4 A. I think that it is reasonable to wait until the  
5 following morning on the basis of the state that she was  
6 in and then review the situation first thing in the  
7 morning, and if she hasn't shown improvement in speech  
8 and in her dysarthria, then I think she would then  
9 deserve to be scanned.

10 Q. I think the actual term that Dr O'Hare uses is that she  
11 was slightly more responsive at midnight.

12 A. Yes, which is a little bit uncertain, but I am not  
13 doubting the situation at 12 o'clock. I'm asking about  
14 the problem from 8 o'clock in the morning really.

15 THE CHAIRMAN: Unless I misunderstand your report,  
16 professor, your criticisms of what happened overnight  
17 are limited.

18 A. Yes.

19 THE CHAIRMAN: And to the extent that you make some of those  
20 criticisms, you acknowledge explicitly in the report  
21 that others might take a different view.

22 A. Yes, I think that's fair.

23 THE CHAIRMAN: But your real concern about Claire's  
24 treatment is what happened from the Tuesday morning  
25 onwards.



1 A. It is.

2 THE CHAIRMAN: To put it maybe far too simply, there was  
3 nothing done on the Monday overnight which could not  
4 have been remedied or corrected if steps which you think  
5 should have been taken on Tuesday had been taken?

6 A. Yes, I think that's right.

7 THE CHAIRMAN: Thank you.

8 MS ANYADIKE-DANES: Can I just ask you to clarify that point  
9 as to your view? It's very difficult because, obviously  
10 not having examined the child, your view is constrained  
11 by the records of the tests that actually were taken.

12 Insofar as you can do it -- and please say if you  
13 can't -- how ill do you think Claire was by the time  
14 anybody would have seen her in the morning of the 22nd?

15 A. Well, she was persistently, as I've said, not speaking.  
16 I gather she was unsteady. She was pale, she had been  
17 vomiting and I think she was still retching. So I think  
18 she was quite ill. It wasn't just a simple neurological  
19 illness. I think she had some neurological signs which  
20 were in addition, and I think that they've been argued  
21 about as to how many of the signs, the pyramidal signs,  
22 were already there or not there. But it seems to me  
23 that she was unwell at that time and really --

24 Q. Maybe you can help us with this: if her serum sodium was  
25 132 at 9/9.30, or thereabouts, representing where she

1           was at that time on the evening of the 21st, I think  
2           your view is -- and nobody will know it -- that that  
3           serum sodium level could have been continuing to  
4           deteriorate or reduce --

5   A.   Yes.

6   Q.   -- over time until you get to the next test, which may  
7           have been more or less 24 hours later on, the following  
8           evening, and then by that time it's 121, although nobody  
9           knows that until about 11.30. There's no way of knowing  
10          whether that actually is what was happening to her serum  
11          sodium, but if that was deteriorating, is your view of  
12          that affected at all by the fact that Dr O'Hare, the  
13          paediatrician, can regard her as appearing slightly  
14          brighter at midnight? Sorry, slightly more responsive.

15   A.   Yes. I think this particular state does show  
16          fluctuations, and it depends also on sleep as well.  
17          It's really -- it's not that much of a variation to  
18          matter, I think.

19   THE CHAIRMAN: Just to complete that note, the note which  
20          says, "Slightly more responsive", then says, "Observe  
21          and reassess AM" --

22   A.   Which is fair.

23   MS ANYADIKE-DANES: Thank you. So then if I just ask you  
24          about the electrolyte testing.

25                 The result would have come through at midnight that

1 she's 132. Can you just explain to us how significant  
2 you would regard it that those tests are repeated and,  
3 if so, when you think they should have been repeated?

4 A. I think it's absolutely clear they should have been  
5 repeated the following morning, early, not waiting for  
6 the ward round, but get on with doing it.

7 THE CHAIRMAN: Who instigates that? This is complicated by  
8 the [OVERSPEAKING] --

9 A. -- it should be important that it's done.

10 THE CHAIRMAN: So the onus for that is on the registrar  
11 coming on at about 9 o'clock or a little bit before 9 --

12 A. Sure.

13 THE CHAIRMAN: -- to take that step?

14 A. Yes.

15 MS ANYADIKE-DANES: How common might it be that a child  
16 presenting like Claire could have had a serum sodium  
17 level of 132 and that not indicate particularly anything  
18 of concern?

19 A. I think it is quite possible that that could be  
20 transient so that it does require checking to make sure  
21 that it is dropping or not dropping.

22 Q. Or just a blip of some sort?

23 A. Yes.

24 Q. Not exactly an artefact, but to do with something that  
25 doesn't contribute to anything of concern in her

1 condition?

2 A. Yes.

3 Q. If that is at one end of the spectrum, at the other end  
4 of the spectrum, could it indicate something more  
5 serious?

6 A. Yes.

7 Q. Even at that level?

8 A. Yes, it could indicate the beginning of inappropriate  
9 ADH secretion, so that she will be on the way down with  
10 her sodium so that she could be developing a really very  
11 severe disorder.

12 Q. If she were developing that condition, would the effect  
13 of that mean that she was not retaining sodium in the  
14 way that she would otherwise have been, and that would  
15 mean the level the of sodium in her system were low and  
16 could be reducing progressively?

17 A. Yes.

18 Q. And that would be serious?

19 A. Yes.

20 Q. Leaving aside whatever was being done about her fluid  
21 regime --

22 A. Yes.

23 Q. -- is there any way of telling whether you're on one end  
24 of the spectrum or the other?

25 A. By testing.

1 Q. Sorry?

2 A. By testing.

3 Q. Just by testing?

4 A. Yes.

5 Q. Is that one of the reasons you do it, just to make sure?

6 A. Yes, that's simple sodium testing.

7 THE CHAIRMAN: Professor, you almost looked there as if this

8 is depressingly simple and obvious. Is that --

9 A. Yes. Well, I think it is very surprising that it wasn't  
10 done that morning. I'm astonished really that it didn't  
11 occur.

12 MS ANYADIKE-DANES: If we go to the ward round, the ward  
13 round is conducted by Dr Sands, who's a paediatric  
14 registrar. He, at first pass, has non-convulsive  
15 status epilepticus as his working view and he feels that  
16 if Claire's in that state, really he needs a  
17 neurological opinion from an expert or a consultant, in  
18 any event.

19 You in your report -- and for reference purposes  
20 it's 232-002-005 to 006, so perhaps if we pull the two  
21 up together -- you have to some extent criticised that  
22 diagnostic assessment by Dr Sands and set out what you  
23 think -- and this was a thing that you were discussing  
24 before and assisting the chairman with -- what you think  
25 he should have reached at that stage. And you have

1 included there the hyponatraemia/cerebral oedema.

2 The evidence has been that although Dr O'Hare  
3 thought she seemed slightly more responsive -- and  
4 I think even the nurses themselves thought she seemed  
5 a little bit brighter -- by the time the ward round  
6 happens, by the time it gets to Claire -- that's about  
7 11 o'clock -- by that time, the parents, who arrive in  
8 the hospital at 9.30 -- that's their evidence -- they  
9 don't think she looks at all better than when they left  
10 her the previous evening and, if anything, she might  
11 look marginally worse, but in any event certainly not  
12 any better.

13 A. Yes.

14 Q. I think Dr Sands said when he examined her, he would  
15 agree, and I think also, Nurse Field thinks that she  
16 looks or recollected her looking pale and lethargic. So  
17 whatever may have been the slight improvement that  
18 people have recorded previously, by the time it gets to  
19 this stage she doesn't appear to be in that state any  
20 more.

21 A. No.

22 Q. And this stage, we're not sure how soon before the  
23 parents see her at 9.30 she might have been in that  
24 state, but certainly by then she seems pale and  
25 lethargic and no better. If that's the case, then at

1           what point do you think that Dr Sands himself should  
2           have started to think about the risks of SIADH if he's  
3           got that information, leaving aside his own examination?

4   A.   I think he should have been thinking about it and  
5           should, of course, have consulted both of the  
6           consultants concerned, Dr Steen and Dr Webb.   But  
7           I think he did consult Dr Webb in that circumstance.

8   Q.   Yes.

9   A.   So I think he shared that decision with Dr Webb.

10   Q.   Yes.

11   THE CHAIRMAN:   Let me take you back for one moment.   When  
12           I asked you a few minutes ago who the obligation lay on  
13           to instigate the tests even without waiting for the ward  
14           round, you said the onus lay on the registrar.   Do I  
15           understand you to be saying the registrar rather than  
16           a senior house officer and rather than the consultant?  
17           Or is it specifically on the registrar that this  
18           obligation falls?

19   A.   The tests can be requested by anybody.   The problem is,  
20           it should be done early --

21   THE CHAIRMAN:   Yes.   So it's not --

22   A.   -- before the 11 o'clock.

23   THE CHAIRMAN:   Is that a collective failure?   I know there's  
24           an issue about where Dr Steen was or if she was there,  
25           but assuming in the normal course of events a consultant

1           would be there, a registrar would be there and at least  
2           a couple of house officers --

3   A.   Yes.

4   THE CHAIRMAN:  -- is that a collective responsibility to get  
5           the tests done?

6   A.   I think so, yes.

7   THE CHAIRMAN:  Thank you.

8   MS ANYADIKE-DANES:  And apart from SIADH, should or could he  
9           reasonably also have been thinking that there was  
10          a developing cerebral oedema?

11  A.   Yes.

12  Q.   Why do you say that?

13  A.   Of course, I don't have the sodium levels in order to  
14          back that up, and it's done partly by looking at the  
15          profile of what was occurring and of her certainly not  
16          improving and not showing major improvement even when  
17          treated for epilepsy.

18  Q.   She wouldn't have been treated at that stage for  
19          epilepsy.

20  A.   No.

21  Q.   We're at the ward round now.

22  A.   Okay.  At the ward round stage, no.  She's just not  
23          improved, really, and you would have expected, if she  
24          had -- she would be already beginning to develop  
25          cerebral oedema in a mild form.



1 Q. Just so that I'm clear, are you saying that that is  
2 a possibility that he should have retained, that that  
3 might be what's happening?

4 A. Yes.

5 Q. It would need to be confirmed, but he should have had  
6 that as a possibility?

7 A. Sure.

8 Q. Even as a registrar?

9 A. Yes.

10 Q. And in 1996?

11 A. Yes.

12 Q. Thank you. His SHO, who would have been accompanying  
13 him on the ward round, had the medical notes and  
14 records. I just want to take you to a comparison  
15 between the two sets of results to see whether there is  
16 any significance in these. If we pull up 090-022-052,  
17 and have alongside that 090-022-053. The left-hand  
18 side, those are the notes taken at midnight. We're not  
19 entirely sure -- we might be now. At the time when  
20 I was last looking at the evidence, we weren't entirely  
21 sure whose hand that serum sodium result is in, but in  
22 any event, that's the result that he would have seen or  
23 his SHO would have seen looking at the notes.

24 You see the sodium level there at 132.

25 A. Yes.

1 Q. Slightly to the right of that, you see the white cell  
2 count at 16.5. Slightly elevated, I think that arrow  
3 means. Do you see that there, professor?

4 A. Yes.

5 Q. And then if one looks over to the page, these are part  
6 of the notes taken by --

7 THE CHAIRMAN: Sorry, and the glucose at this point is 6.6.  
8 That's the third entry.

9 MS ANYADIKE-DANES: Yes, I beg your pardon. The glucose is  
10 6.6. If we have those three highlighted.

11 If one looks to the right-hand side, this is the  
12 note taken by Dr Stevenson, who accompanied Dr Sands on  
13 the ward round. You can see, as highlighted there,  
14 that's the serum sodium level there of 132. That's the  
15 white cell count, 16.4, and then the glucose is 6.6.  
16 The only difference is in that white cell count.  
17 Instead of being 16.5, as was recorded at midnight, it's  
18 16.4. We don't exactly know when this note was written  
19 up, but the ward round, when it gets to Claire, seems to  
20 have been at about 11 o'clock.

21 Insofar as you can, would you have interpreted those  
22 as representing two different sets of results because of  
23 that difference in the white cell count, or derived from  
24 the same result or the same test, if I can put it that  
25 way?

1 A. I think it's much more likely that these are the same  
2 results because the -- I think it's very likely that the  
3 sodium level would have dropped between the two. I take  
4 the white count to be an error --

5 Q. Thank you.

6 A. -- one way or the other.

7 THE CHAIRMAN: Well, can I ask you it in another way: to put  
8 it rather crudely, what are the odds of tests which were  
9 performed at about 9 or 10 o'clock on Monday night in  
10 these three respects being so very, very close to tests  
11 which are done, say, 12 hours later? Could that happen  
12 quite easily?

13 A. I don't think so, no. I think this looks like the same  
14 set of results.

15 THE CHAIRMAN: That's as far as you can put it?

16 A. As I can see, yes.

17 MS ANYADIKE-DANES: If we are then at the ward round, you're  
18 saying that you think that Dr Sands should have had  
19 SIADH, and also should have had the possibilities that  
20 she was developing cerebral oedema. Should any  
21 significance have been attached to the fact that her  
22 white cell count is slightly raised, irrespective of the  
23 slight difference between 16.4 and 16.5?

24 A. Yes, there's argument about whether a differential was  
25 performed on that and whether it was lost.

1 Q. Sorry, what does that mean, professor?

2 A. I don't think we know the differential for the white  
3 count on that.

4 Q. Could you explain that?

5 A. The polymorphs and lymphocytes are not clear.

6 Q. Sorry, professor, just for the benefit of those who may  
7 not have appreciated what that means or its  
8 significance, could you explain that?

9 A. It has some significance in terms of what sort of  
10 organism is likely to be causing the disease. I take  
11 these to mean that she was infected and that that  
12 infection could be sort of almost anything, really, but  
13 probably a gut infection.

14 Q. What tests would have to be performed? You said the  
15 differential and the white cell count. What tests would  
16 actually have to be performed to have provided  
17 some better insight into what was causing that?

18 A. At the very least a differential of the polymorphs and  
19 lymphocytes within that spectrum --

20 Q. How standard is that?

21 A. Very.

22 Q. Thank you. If she did have some sort of gut infection,  
23 although as you say you couldn't be precise about that  
24 because of the tests that hadn't been carried out at  
25 that stage, is that the sort of thing that could have

1           been responsible for her presentation?

2   A.   Yes, it could.  It could have both produced the primary  
3       problem and the beginnings of the degree of cerebral  
4       oedema, which was then going to build up.

5   Q.   So just trying to understand, does that mean that what  
6       you're dealing with is that there could be things which  
7       are the underlying cause and those same things could  
8       also be the result of other things --

9   A.   Yes.

10  Q.   -- and it's trying to find out what is the cause and  
11       what is the effect?

12  A.   That's right.  Yes, it is, but of course the most  
13       important thing in that situation is you can't do an  
14       enormous amount about dealing with the infection except  
15       for the two manoeuvres which were used.  What you can do  
16       is to manage the sodium level if you've got it.

17  Q.   Yes.  And also to try and see what are the range of  
18       things, whatever might be cause or effect, but what the  
19       current state of what's happening in her brain is?

20  A.   Yes.

21  Q.   Let's go back to what you were telling the chairman  
22       about the CT scan.  As she presented there at the ward  
23       round, what are your views as to what should have  
24       happened about a CT scan then?

25  A.   I think she should have had a CT scan performed then

1 because you really didn't know what was wrong with her.

2 Q. And what could that CT scan have revealed?

3 A. Well, it could have revealed a haemorrhage, it could  
4 have revealed an area which looked suspicious of being  
5 inflammatory and it could have revealed early cerebral  
6 oedema.

7 Q. And you've also, I think, suggested that she should have  
8 had an EEG.

9 A. Yes, indeed.

10 Q. How important did you regard it that she should have had  
11 a CT scan and should have had an EEG at that stage?

12 A. They're both of considerable importance. The EEG  
13 situation seems to be that she was given one dose of  
14 diazepam, which I think was reasonable, just to see  
15 whether she showed marked improvement or not. But then  
16 she was on a regime of receiving a total of four drugs  
17 in different forms. That seems to me to be quite  
18 inexcusable without having an EEG performed.

19 Q. We've moved on a little bit.

20 THE CHAIRMAN: Sorry, just because you think that those  
21 drugs were administered on, I think, almost  
22 a speculative basis.

23 A. Yes, they were.

24 THE CHAIRMAN: The evidence that Claire had a condition  
25 which required those drugs to be given was not firm

1           enough for them to be administered; is that right?

2   A.  No, it wasn't firm enough when there's apparently a very  
3       simple test which can be performed or which will  
4       demonstrate the point immediately.

5   MS ANYADIKE-DANES:  Because you moved on to talk about the  
6       diazepam, which is something that happens later in the  
7       day --

8   A.  Sorry.

9   Q.  No, no, it's fine.  At this point, I think one's trying  
10      to sort out what could and should have been done right  
11      at the outset, which might have been quite significant  
12      for what happens later in the day.

13  A.  Okay.

14  Q.  So the outset that I'm discussing or seeking to raise  
15      with you is 11 o'clock or thereabouts in the ward round.

16  A.  Yes.

17  Q.  So I think you have said that at that ward round,  
18      whoever was conducting it, with the information that was  
19      available, should have had some consideration to the  
20      possibilities of SIADH --

21  A.  Yes.

22  Q.  -- should have had some consideration to the  
23      possibilities that there was a developing cerebral  
24      oedema and should have organised a CT scan and/or an  
25      EEG.

1 A. Yes.

2 Q. Would that sum up what you've been telling us?

3 A. Yes.

4 THE CHAIRMAN: Mr Fortune?

5 MR FORTUNE: Sir, with these differential diagnoses in mind,  
6 could Professor Neville help us with two matters?

7 Firstly, as to the significance, if any, he would attach  
8 to Dr Stevenson repeating the glucose measurement of 6.6  
9 and, secondly, what that measurement might mean, bearing  
10 in mind it's within the parameters of normal. Does it  
11 indicate, for instance, any metabolic disorder and, if  
12 it doesn't, is that by way of any reassurance?

13 A. I think the level is normal. It's not one that would  
14 provoke seizures, nor is it high enough to cause any  
15 other concern about diabetic situations. So I think  
16 it's a form of reassurance, really.

17 MS ANYADIKE-DANES: I think the point may be more: if you  
18 perform such a test and got a normal result back, how  
19 does that help you with any concern you might have  
20 started off with about the possibility of developing  
21 cerebral oedema or SIADH? Does that assist?

22 A. Not in the least.

23 Q. Why?

24 A. Well, they're not modified by the glucose.

25 Q. So irrespective of that, are you saying that he should



1           have retained the concern that you originally said he  
2           should have had?

3   A.   Oh yes, absolutely.

4   Q.   Thank you.  You had indicated that that slightly  
5           elevated white cell count might have suggested that  
6           there was, I think, something that the parents thought  
7           she might have had, which was a tummy bug.

8   A.   Yes.

9   Q.   Would that be a layman's way of capturing that?

10  A.   Yes.

11  Q.   And that might have been part of her presentation when  
12           they brought her to the hospital in the first place.

13  A.   Yes.

14  Q.   If that's the case and they are to be seen from those  
15           results, is that something which you think could have  
16           been treated or treatment for it started earlier?

17  A.   I think that giving fluids by IV and waiting for other  
18           results would be entirely reasonable.  I think that was  
19           appropriate.

20  Q.   If it had been higher, would that have indicated that  
21           something in relation to that specific result should  
22           have been commenced earlier?

23  A.   Well, there is a question of whether a lumbar puncture  
24           should have been performed in this situation, and it's  
25           variously argued as to -- it's an argument about whether

1           it should or should not be performed. My conclusion  
2           about this is that it would be perhaps not worth doing  
3           perhaps on the night before when this child was  
4           originally seen, but by the following morning I would  
5           have thought it was worth doing.

6    Q.   And why do you say that?

7    A.   Because you want to know if there is any form of  
8           bacterial or virus infection. You get the most direct  
9           clue that you can from a CSF being taken.

10   Q.   If I may pick that up and ask you two things about it.  
11           Firstly, the possibility of meningitis is something that  
12           had concerned the parents. That was one of the things  
13           they wanted to know and were seeking comfort that she  
14           didn't have that. I think their evidence would be that  
15           they expressly asked about that and were told that they  
16           needn't worry about that. I think they were told that  
17           both when she was admitted and when they were present  
18           during the ward round. It was also something that  
19           concerned the child's grandparents and they specifically  
20           raised that -- well, their evidence is that they  
21           specifically raised that with Dr Webb when he came to  
22           examine the child at 2 o'clock on that Tuesday  
23           afternoon. The parents weren't there at that time.

24           On all those occasions both the parents and the  
25           grandparents were told that, no, that wasn't there. In

1 fact, I think the grandparents' view -- and this is  
2 simply their recollection of it -- was that meningitis  
3 had been ruled out. Can I ask you what, at that stage,  
4 would have been the examination or the results of tests  
5 that would have allowed the clinicians to have ruled out  
6 the possibility of meningitis?

7 A. Well, if that a lumbar puncture was not performed,  
8 there's only the blood test results to go on. I don't  
9 think that a severe bacterial meningitis is at all  
10 likely in this child. I think it's much more likely  
11 that it could be a sort of meningoencephalitis, a sort  
12 of virus infection that is affecting the brain in  
13 a somewhat slower fashion. Having not really got  
14 anywhere in the first night, it would have been worth  
15 doing it just to find out what the results were.

16 Q. And could you have ruled out the possibility of the  
17 presence of it or it developing in the absence of  
18 a lumbar puncture?

19 A. No.

20 THE CHAIRMAN: Well, the only thing that strikes me -- and  
21 maybe you can help me on this -- does that mean then  
22 that on the Tuesday morning what you would have been  
23 putting in place, if you were there, was a CT scan, the  
24 EEG and the lumbar puncture?

25 A. But above all a sodium level. I think you might well

1           have been pushed in the direction of ... But I think  
2           you'd have to be clear that you were likely to be  
3           dealing with dual pathologies. One was the sodium level  
4           and the cerebral oedema and the other would be the  
5           intercurrent infection, and you wouldn't know  
6           necessarily the extent of that.

7    Q. I think in fairness, Dr Webb's evidence is that he was  
8           considering a lumbar puncture, I think, the following  
9           day. I think one sees that in his first witness  
10           statement, which is 138/1, page 27. One sees it just  
11           under (i):

12                 "Explain why you didn't deem it necessary to conduct  
13                 a CT scan on Claire and were willing to wait."

14                 He said:

15                 "[He] didn't think Claire had a neurosurgical  
16                 emergency. If she had a meningoencephalitis, then a CT  
17                 scan was unlikely to have been helpful and could be  
18                 arranged for the following day to facilitate lumbar  
19                 puncture."

20                 And then he goes on later on to explain at page 84,  
21                 at (e), round down at the bottom, when he's being asked  
22                 about any test for the diagnosis of meningitis, and he  
23                 says:

24                 "I recommended viral cultures of stool, urine and  
25                 blood and a throat swab to look for possible viral

1 agents that might be causing meningoencephalitis. I did  
2 not request a lumbar puncture, but would have planned  
3 this for the following day if Claire had improved and  
4 after a CT scan if there were still concerns about her  
5 level of awareness."

6 So by the sound of it, he was thinking that that  
7 might happen on the Wednesday, if I can put it that way,  
8 but by the Wednesday, they were overtaken by events.  
9 Would that have been reasonable to have waited that  
10 long?

11 A. I don't see why he didn't get on and do it on Tuesday  
12 morning, really.

13 Q. I think the chairman had suggested that the treatment  
14 plan that he had in terms of the anticonvulsant therapy  
15 and so forth was in fact treating a condition that  
16 hadn't really been tested for, if I can put it that way.

17 A. Yes.

18 Q. If he had performed such a test, would that have  
19 assisted him in targeting or better formulating his  
20 treatment plan?

21 A. Yes, it would, but the two arms of this are going on  
22 separately. There's the cerebral oedema/hyponatraemia  
23 part of it and there's the infective part. They are  
24 going on together. It doesn't remove the problem of  
25 hyponatraemia.

1 Q. So you should be tested for both?

2 A. Yes indeed.

3 THE CHAIRMAN: Okay. We need to take a break. The  
4 stenographers have been going since soon after  
5 9 o'clock. We'll start again at 12.10 and finish at  
6 some time around 1 o'clock for lunch.

7 (12.02 pm)

8 (A short break)

9 (12.15 pm)

10 MS ANYADIKE-DANES: Professor, just a few points that I've  
11 been asked to cover with you at this stage rather than  
12 coming back later on, now that you're dealing with them.

13 The first point is a point of clarification, really.  
14 It goes back to that question as to what 132 should have  
15 prompted, this is her serum sodium level, in terms of  
16 further blood tests or any other consideration. If one  
17 goes to Nelson, which is the textbook on paediatrics,  
18 which they certainly had at the Children's Hospital  
19 then -- they may also have had Forfar & Arneil -- but in  
20 any event, in Nelson it's the 15th edition. We have  
21 taken some sections out of that and put them into our  
22 system. The relevant part of it is to be found at  
23 311-018-005.

24 If you see right down at the bottom under  
25 "hyponatraemia". Hyponatraemia is being defined there

1 as less than 130. Then it goes on to talk about the  
2 conditions that it is caused by and so on. But the  
3 particular part that I'm wanting to ask you about is,  
4 given that the serum sodium level was 132, why should  
5 that have caused a concern and prompted, so far as  
6 you're concerned, further blood testing in the morning?

7 A. Because it was a trend, potentially, in the direction  
8 down and there's no way of knowing at that stage, so  
9 it's important that it is repeated six to eight hours  
10 later.

11 Q. And what do you regard as the normal parameters for  
12 serum sodium?

13 A. It's normally 135 to 150.

14 Q. So below that is something that you start thinking  
15 about?

16 A. You start thinking about. And they've taken it as less  
17 than 130 and left 132 in the middle. So that's the way  
18 they've read that, you know.

19 Q. But irrespective of how they've taken the definition of  
20 hyponatraemia, if I can put it that way, leaving aside  
21 whether it's to be defined as hyponatraemia or not, does  
22 a reading below the reference level, the 135 to 150,  
23 have significance as far as you are concerned in a child  
24 like Claire?

25 A. Yes, it does. It mean that she's relatively at high-ish

1 risk of it dropping further.

2 Q. And then that is something that I wanted to ask you  
3 because you had talked about what might be called  
4 a predisposition or a vulnerability to hyponatraemia or  
5 any sort of central nervous system disorder perhaps  
6 because of her previous experience and by that I think  
7 you were referring to the epilepsy or the slightly  
8 unresolved cause of her problems, her neurological  
9 problems, when she was a baby.

10 A. Yes.

11 Q. What is your evidence for suggesting that that aspect of  
12 Claire could have made her vulnerable in the way that  
13 you've been saying?

14 A. Well, there's a whole group of disorders from head  
15 injuries and other sort of invasions of the nervous  
16 system, which can produce this disorder. So it's not  
17 a particularly focused list of problems, really. But  
18 any of them can make it more likely that they will go  
19 down that route and develop oedema.

20 Q. Yes. I think what the issue is is how, having taken her  
21 history and learning that she had had epilepsy when she  
22 was a baby, she'd had one incidence of a seizure when  
23 she was 4, nothing since, why in 1996 would a registrar  
24 in 1996 have appreciated that she had a vulnerability  
25 that he or she ought to be aware of?



1 A. Well, she was cognitively impaired to, I think,  
2 a significant degree, and that cognitive impairment long  
3 antedated the events which we're now seeing. And  
4 I think they were probably there at the beginning. She  
5 also had a form of epilepsy at that early stage, which  
6 was called probably infantile spasms, which is really  
7 quite a severe form of epilepsy, which can in fact slow  
8 your development further. So she had more than a mild  
9 problem. So I think she's therefore at significant  
10 risk, really.

11 Q. As it happens, epilepsy is a particular area of interest  
12 for you and focus of your work, certainly latterly.

13 A. Latterly, yes.

14 Q. If we are going back to 1996 and standing in the shoes  
15 of a paediatric registrar, would they have had the  
16 knowledge to have, if not described it in the terms that  
17 you've described it in, made some sort of connection or  
18 allowed them to have some awareness that she might be  
19 a child that they should be careful of in the respects  
20 that you've mentioned?

21 A. Yes, and I think if you start off with a sodium that is  
22 already a little bit slow, it is entirely reasonable to  
23 repeat the level, and be quite clear whether you are  
24 going up or down.

25 Q. Leaving aside that bit, I think this was being targeted

1 at your view as to the characteristics of her own  
2 history, if I can put it that way. Does a paediatric  
3 registrar in 1996 appreciate that?

4 A. I would hope, between the registrar and the consultant,  
5 you'd get a view that that was a potential problem, yes.

6 THE CHAIRMAN: Does this illustrate the problem that  
7 Claire's case features, which is the fact that Dr Sands  
8 seems to have been working without reference to  
9 a paediatric consultant for whatever reason?

10 A. Yes.

11 THE CHAIRMAN: You've acknowledged that he did the right  
12 thing in going to Dr Webb, but he still didn't have  
13 a consultant paediatrician as he would normally be  
14 expected to have.

15 A. Yes, but I think the paediatric neurologist should know  
16 something along those lines.

17 MS ANYADIKE-DANES: Maybe a slightly different way, I think,  
18 if he had had access to his consultant at the time of  
19 the ward round or at least been able to --

20 A. Oh yes.

21 Q. -- telephone and make contact with his consultant. We  
22 know that he went off to find the consultant  
23 neurologist, but that would be some time perhaps before  
24 he could be sure of doing that. If he had had his  
25 consultant with him or been able to phone that

1 consultant up, I think that's the point. Could he have  
2 been assisted, if he hadn't formed those views himself,  
3 been guided in informing them by that kind of contact?

4 A. I think, absolutely, he should have been able to talk  
5 with his consultant paediatrician and get a combined  
6 view, yes.

7 Q. Thank you. I think where I had been asking you before  
8 was in relation to the tests that you think should have  
9 been carried out, and I think you had expressed the view  
10 that there should have been, so far as you're  
11 concerned -- we're now talking about at the ward round  
12 or ordered as a result of the ward round, there should  
13 have been the repeat U&E tests, there should have been a  
14 CT scan ordered and/or an EEG and some consideration  
15 should have been given to a lumbar puncture; would that  
16 summarise it?

17 A. Yes. It's not and/or, really.

18 Q. It's and CT scan and EEG?

19 A. Yes.

20 Q. If we focus then on the EEG element of it. So far as  
21 you're concerned, at that stage, and on the basis of the  
22 information that you have that's recorded about Claire,  
23 how important was it to have the EEG?

24 A. Well, I think it was crucial to have it if you were  
25 going to be managing this child as having non-convulsive

1 status epilepticus. So in that circumstance, it was  
2 absolutely required. If of course you already had the  
3 sodium level at an earlier stage, then you'd have had  
4 something else to treat and get on it, and you may well  
5 have deferred the situation until you saw if you got  
6 improvement. And I think if you ... You would have  
7 facilitated getting that EEG, I think.

8 Q. Yes. Can I ask you in this way: if you'd had the serum  
9 sodium result, a repeat one, and the result back and the  
10 result had shown a further fall -- you can't know  
11 because that didn't happen, but let's say that that was  
12 the result of that -- and that had been treated. How  
13 would you say that that should have been treated?

14 A. That would have been treated by fluid restriction, by,  
15 I believe, a higher level of salt, either half normal or  
16 normal. And if the child was not improving, a diuresis  
17 being induced by mannitol and, if still not improving,  
18 by ventilation of the child to take the PCO<sub>2</sub> down to  
19 a lower level.

20 Q. So that's something, certainly the latter thing that  
21 you have referred to, is something that you would do if  
22 you had quite a significantly low result?

23 A. Yes.

24 Q. So if we are talking about some repeat blood tests that  
25 might have been done first thing in the morning, maybe

1 even before -- well, would you have thought it could  
2 even have been done before the ward round?

3 A. Yes. Certainly, yes.

4 Q. Let's say that is done and you have your result at some  
5 time during the ward round or just afterwards and you  
6 see a continuing -- not a continuing because you didn't  
7 know where it started, but a further fall and you had  
8 treated it in the way that you suggested, which was to  
9 restrict the fluids and change the concentration of  
10 saline in the fluids, and you'd approached it in that  
11 way, is it possible for appropriate treatment of that  
12 sort to actually have affected matters so that you  
13 didn't end up having to persist with or even commence an  
14 anticonvulsant therapy?

15 A. Yes. But it would be nevertheless helpful to know.

16 Q. Yes. And do you say that because it's possible that the  
17 seizure activity or the episodes were as a result of  
18 falling serum sodium as opposed to any other independent  
19 cause?

20 A. Yes. A drop in sodium is a very potent cause of seizure  
21 activity. But I think you also have to remember that  
22 some of the episodes this child was having could well be  
23 episodes of extension rigidity, which are not seizures  
24 at all. The chattering of the teeth, I think that need  
25 not be a seizure at all.

1 Q. If it's not a seizure, what would be causing that?

2 A. It's the form of extensor attack that happens during --

3 you have episodes when you extend, when your teeth

4 chatter and there's no cause in the brain at all, it's

5 just a lower motor neurone sort of problem.

6 Q. So that we are clear, what brings that about?

7 A. Having a high pressure.

8 Q. You mean a high intracranial pressure?

9 A. Yes.

10 Q. And what brings a high intracranial pressure about?

11 A. Cerebral oedema.

12 Q. Potentially from the serum sodium?

13 A. Yes. That's right.

14 Q. So does that mean that these episodes could actually

15 have been a product of the low sodium, which set in

16 train a series of symptoms, as opposed to seizures from

17 some sort of independent cause?

18 A. I think some of them could have been. I think that the

19 episode of jerking on one side that was noted was

20 a proper seizure. But again, it could have been

21 provoked by hyponatraemia.

22 Q. If that's possible, that those episodes or even the

23 seizure could have been provoked by hyponatraemia, is

24 there any way of distinguishing between whether what

25 we're looking at is a response to a gradually worsening

1 situation caused by ever lower levels of sodium in her  
2 system, or caused by some independent neurological  
3 condition? Is there is any way of telling the  
4 difference?

5 A. I think by doing an EEG, you'll be able to tell the  
6 difference between a localised area or a more  
7 generalised area of brain that is firing continuously,  
8 and the occasional episode that's happening, which may  
9 be the result of hyponatraemia.

10 Q. So if you don't do the EEG and don't do the repeat  
11 sodium tests, if I'm understanding you, you actually  
12 can't properly attribute a cause to those things --

13 A. No.

14 Q. -- and therefore can't treat them appropriately?

15 A. No, that's right.

16 THE CHAIRMAN: Or to put it another way, you are just  
17 working in the dark?

18 A. Yes.

19 MS ANYADIKE-DANES: Dr Webb has produced a statement which  
20 addresses this question of the CT scan and EEG. It's  
21 his third statement, it's produced this  
22 year, October 2012, and it's 138/3 at page 2, is where  
23 he talks about the CT scan.

24 If we can bring up page 3, that's where he talks  
25 about the EEG.

1 A. Yes.

2 Q. You have seen this before. Oh, sorry, page 3 is a bit  
3 fuzzy, I think we've retyped it. It's exactly the same  
4 thing, but just for ease of reading. If we remove  
5 page 3 and replace it with page 4. It's exactly the  
6 same thing, it's just clearer to read.

7 If we look at the bottom on page 2, that's the  
8 explanation. He says that:

9 "I have no doubt that if a CT scan had been  
10 available down the corridor in the Children's Hospital  
11 in 1996, I would have arranged it for that Tuesday  
12 afternoon. However, this was not the case and to  
13 arrange a CT scan for Claire involved sending her by  
14 ambulance to the adult hospital. There was a potential  
15 for this procedure to be delayed particularly if there  
16 was a backlog of adult cases ..."

17 And:

18 "I was also aware of the published concern about  
19 sending children to an adult facility for emergency  
20 investigations. I felt that Claire was in  
21 non-convulsive status epilepticus at the time, which we  
22 needed to treat and did not think this was a wise  
23 option."

24 Just before I ask you about that, another thing to  
25 bear in mind is that when Dr Webb first saw Claire,



1 he was under the impression that that serum sodium  
2 result of 132 actually resulted from a test that had  
3 been done that morning as opposed to a test that had  
4 been done the previous evening. So he was under perhaps  
5 a misapprehension as to where her serum sodium results  
6 might be. And in fairness to him, he might have taken  
7 other steps -- in fact, I think he indicates that he  
8 would have done -- if he had realised that that was  
9 a test from the previous evening.

10           Anyway, if we focus on what he says here about a CT  
11 scan and see if you can help us. Assuming that he had  
12 the constraints that he describes, if you're in that  
13 situation, is her condition still of the level of  
14 concern that would have nonetheless had you require a CT  
15 scan?

16 A. Yes. The brain is an interesting organ in that it  
17 slowly fills with fluid and the pressure doesn't really  
18 go up very much until a certain point when it goes up  
19 dramatically. So you're really trying to deal with the  
20 central part of it when you've got time on your hands  
21 and you can actually deal with it. By the time you get  
22 to the point of it having dramatically risen, you've  
23 basically nearly had it. So there's no reason for him  
24 waiting until the following day. It's obviously up to  
25 him to try to negotiate how to fit this in and what the

1 timing of it would be, but I think it's really -- he  
2 should have done so.

3 Q. The tipping point, I think, as you were describing it,  
4 is that because there is a certain space between the  
5 brain and the skull?

6 A. That's right.

7 Q. And is there any reliable way of knowing how much of  
8 that space you've used up? In other words, how much  
9 time you have left before you have to do something  
10 really quite dramatic?

11 A. By a CT scan.

12 Q. So absent a CT scan, then you don't know how much of  
13 that space has already been --

14 A. No.

15 Q. -- used up by the brain having been swollen through  
16 oedema?

17 A. No.

18 Q. In other words, you don't know where you are along the  
19 way of cerebral oedema?

20 A. That's right.

21 Q. If you think the child may be developing cerebral  
22 oedema, is what I understand you to say that, even on  
23 a precautionary basis -- because you don't know where  
24 you might be along the way -- then you have a test,  
25 which tells you where you are?

1 A. Yes. If you're going to do it the following day, why  
2 not do it today?

3 MS O'ROURKE: I'm not sure if, in fact, counsel's about to  
4 do that, but since we have the page up, whether the  
5 professor should therefore be put the next paragraph of  
6 Dr Webb's statement.

7 MS ANYADIKE-DANES: I'm going to get there.

8 MR FORTUNE: Before we get to the next paragraph, could  
9 Professor Neville help us as to what "the published  
10 concerns are about sending children to an adult facility  
11 for emergency investigations" are? Is that a brake on  
12 the necessity for a CT scan at this stage?

13 MS O'ROURKE: Could I just add to that question,  
14 particularly because the professor said, "If you think  
15 you're developing cerebral oedema". In fact, what  
16 Dr Webb has said in the previous paragraph is:

17 "I didn't think that was the case, I thought this  
18 was non-convulsive status epilepticus."

19 So if he has reached that view and the published  
20 concerns and what he says in the next paragraph --

21 MS ANYADIKE-DANES: I'm coming to that. I was coming to  
22 that.

23 Can we start though with the first point, which  
24 is: so far as you are aware, are there published  
25 concerns about sending children to adult facilities for

1 emergency investigations?

2 A. No, I don't know of such -- it must be very dependent  
3 upon the local situation here.

4 THE CHAIRMAN: Sorry, just to explain it for the record.

5 The adult facility is in the same Royal Hospital site.

6 The Royal Children's Hospital was at that time part of

7 the Royal Group of Hospitals, part of the Eastern Board

8 at that time. In any event, we're talking about a large

9 site. But it is all one site. It's not as if Claire

10 would have to have been driven across Belfast.

11 A. No. It sounds like a situation whereby you just move

12 the child across at a stage at which they are not as bad

13 as they might be much later, as it was the following

14 day.

15 MS ANYADIKE-DANES: If I can perhaps also put this: I think

16 at that time, the only place where a child could have

17 a CT scan was in the adult facility, so it is an issue

18 that would have to be considered in every case if you

19 wanted a child to have a CT scan.

20 A. Yes.

21 Q. And I think the issue is if there is a concern

22 ordinarily about sending children to adult facilities

23 for emergency investigations, would you have considered,

24 even if there were such material, that that kind of

25 concern was nonetheless outweighed by Claire's own

1 condition or the need to be certain about her condition?

2 A. Yes, I would. I would have pushed for that  
3 investigation to be performed.

4 Q. I think we might, in due course, ask Dr Webb to identify  
5 the publications that he's referring to. In any event,  
6 from your point of view --

7 THE CHAIRMAN: That raises another issue entirely about  
8 Dr Webb.

9 MS ANYADIKE-DANES: In any event, from your point of view,  
10 irrespective of whether she's going to be taken by  
11 ambulance from one side of the site to another, given  
12 how she was presenting, given the concerns that you  
13 think there should have been about her, that was  
14 nonetheless something that should have been done?

15 A. Yes, absolutely.

16 Q. Then if we go now --

17 MR FORTUNE: Leaving aside Dr Webb, surely then it's  
18 a matter for the Trust to assist you as to any concerns  
19 that had been published at that time. That would be  
20 another appropriate route of investigation.

21 MS ANYADIKE-DANES: Yes, we might seek that, certainly  
22 in relation to this facility, because this is something  
23 that would have been considered for each and every child  
24 for whom they wished to have a CT scan done.

25 MR FORTUNE: Because as I understand Professor Neville, he's

1           saying: take your opportune moment, put the child in an  
2           ambulance and take the child to the adult hospital  
3           because it's necessary to have a CT scan performed.

4   THE CHAIRMAN:  Sorry, let's put this in perspective.  The  
5           Children's Hospital is the regional centre in  
6           Northern Ireland for the treatment of children.  Whether  
7           there are published concerns or not about sending  
8           children to an adult facility, if that is where children  
9           have to go to get a CT scan, how much of an ordeal or  
10          trial is it to put a child in an ambulance and move her  
11          within the Royal site?  Because if this is an  
12          explanation for Claire not getting a CT scan, then  
13          presumably it would have applied at the time to all the  
14          children in the Children's Hospital.

15  MR FORTUNE:  Sir, that may well be right, but at the moment,  
16          speaking for myself --

17  THE CHAIRMAN:  Sorry, Mr Fortune.  It cannot be an  
18          explanation for a failure to get a CT scan that we're  
19          not going to move a child from one part of the Royal to  
20          another.  What's the point in having a regional centre?

21  MS O'ROURKE:  Since it's Dr Webb that's putting it forward  
22          and it's his statement, it's not given as an  
23          explanation; it's given as an explanation as to why not  
24          that afternoon, when his strong belief was that this was  
25          not cerebral oedema, but was in fact non-convulsive

1 status epilepticus. And I think that is why I  
2 highlighted the next paragraph. It is not that he is  
3 not saying that he wouldn't do it and that published  
4 guidelines don't do it -- and, sir, your point is very  
5 well made, this is the regional centre, this is where it  
6 will happen -- the point is made, he didn't jump to it  
7 at 2 o'clock. He doesn't disagree that it may well have  
8 reached a point where it was appropriate and the next  
9 day was then.

10 MS ANYADIKE-DANES: Yes. I was coming to that point.

11 Firstly, I wanted to address the question of the  
12 movement from one part of the hospital to another.

13 The next point, of course, is the point that my  
14 learned friend has just mentioned, which is that he felt  
15 that Claire was in non-convulsive status epilepticus  
16 at the time and that they should be getting on and  
17 treating that.

18 Can you help with how he could have been certain  
19 about that, or at least sufficiently certain about that  
20 so as not to have sought to have a CT scan done?

21 A. Sorry, we're talking about status epilepticus?

22 Q. Yes. If you look down at the very last sentence, which  
23 is a part sentence of page 2, moving on to the top of  
24 the next page:

25 "I felt that Claire was in non-convulsive

1 status epilepticus at the time, which we needed to  
2 treat, and did not think this was a wise option."

3 In other words: we didn't need to be waiting for  
4 a CT scan, we should be getting on and treating the  
5 non-convulsive status epilepticus because that's what  
6 I felt she had. So the point that I'm asking you  
7 is: what, so far as you are concerned, is the evidence  
8 that she had that, which is sufficiently strong to have  
9 meant that he did not need to pursue the CT scan, which  
10 you think was necessary?

11 A. I think that convulsive status epilepticus is relatively  
12 low on the list of possibilities, it's not impossible,  
13 but it's not high on the list.

14 Q. And why is that?

15 THE CHAIRMAN: Is this not the evidence that the professor  
16 gave earlier this morning?

17 MS ANYADIKE-DANES: I'm not sure he's exactly said why it  
18 was low on the list of priorities.

19 Why is that?

20 A. Sorry?

21 Q. Why do you it's relatively low on the list of priorities  
22 in relation to a child like Claire?

23 A. Well, her epilepsy had ceased, she was at significantly  
24 higher risk of developing epilepsy again, but the form  
25 of epilepsy that she had before, which was as



1 I understand it, likely to be infantile spasms, is one  
2 which tends to have an end point to it, around 2, 3,  
3 4-ish, and then to either go away or persist almost  
4 continuously with a different sort of epilepsy. So  
5 I think that the chances of it just starting in the  
6 middle of something which would be 3 or 4 years away is  
7 unlikely.

8 Q. Was there any evidence that would enable him to be  
9 pretty clear that it was convulsive status epilepticus  
10 and that was available to him at that time?

11 A. I don't think that the attacks that were occurring were  
12 sufficient.

13 Q. Sorry, at that time, when he was examining her, it would  
14 have been 2 o'clock.

15 A. Yes.

16 Q. And there hadn't been any attacks at that time at  
17 2 o'clock.

18 A. Sorry, I thought ...

19 Q. I can pull it up and show you the attacks.

20 THE CHAIRMAN: The first attack is at 3.25.

21 A. Sorry.

22 MS ANYADIKE-DANES: So when he was forming the view that she  
23 was in non-convulsive status epilepticus, which is at 2,  
24 there wouldn't have been any record of attacks.

25 A. No. I don't ... Anyway, I don't see any reason why he

1           would have specifically chosen that disorder.

2    Q.   If you wanted to be sure about it, he says that he  
3           didn't think it was necessary to do a CT scan.  If you  
4           wanted to be sure about whether she was in  
5           non-convulsive status epilepticus, how would you be  
6           sure, what could you do?

7    A.   You'd do an EEG.

8    Q.   So it comes back to that?

9    A.   Yes.  And that's how the study that was done -- which is  
10           in what he's also quoted -- what they did was to scan  
11           each child, to do an EEG on each child just to be sure  
12           that they'd been in status for ...

13   Q.   Just for the record, it's 090-042-144.  We'll pull it  
14           up.  There we are.  So the first one, the mother sees,  
15           and she's timed that at 3.25.  Her evidence yesterday  
16           was she was pretty sure it was 3.25.  That's what she  
17           describes as a "strong seizure".

18           Then the rest follow on at the times that you see.  
19           But in any event, none of that would have happened and  
20           there were no recorded episodes of that sort before  
21           Dr Webb had seen her the first time round.

22   A.   Sure.  Yes.  So there's even less thought that that  
23           would be the case.

24   Q.   Yes.  So then let's go in and deal with the next  
25           paragraph.  He says:

1            "I also felt that her presentation had been  
2 triggered by infection, probably a viral illness."

3            Pausing there, the test for that might be a lumbar  
4 puncture. Was there any other test that could have been  
5 done to fortify him or confirm him in that view?

6 A. Liver function tests would be somewhat more generally  
7 helpful than just showing the high transaminases of  
8 Reye's syndrome. And a CT scan would be helpful if it  
9 had shown some form of invasion of the brain.

10 Q. I suppose if they had done another full blood workup,  
11 you could see whether the white blood cells had  
12 continued to rise.

13 A. Yes, you could.

14 Q. And even if you had done the differential, you might  
15 have some view, if that was the case, as to what was  
16 causing that.

17 A. Sure.

18 Q. So he had a view that her presentation was triggered by  
19 infection, but am I understanding you to say that there  
20 hadn't been any tests that would have provided the  
21 evidence for that --

22 A. No.

23 Q. -- other than the test that was done the previous  
24 evening showing a slightly raised white cell count?

25 A. Yes.

1 Q. Then he says:

2 "The yield from a CT scan in children with infection  
3 related to encephalopathy is low in the early stages of  
4 their illness."

5 And he cites some material for that.

6 A. David Mellor, yes.

7 Q. That's why he thought it might be better to do it the  
8 following day. Leaving what he says about cerebral  
9 oedema for the minute, can you comment on that  
10 assertion?

11 A. It depends what "the following day" is, really, doesn't  
12 it?

13 Q. Not the assertion about the following day, the assertion  
14 that the yield from a CT scan in children --

15 THE CHAIRMAN: Sorry, that was the professor's point. Is  
16 the following day Tuesday because she was admitted on  
17 Monday? That's what the professor's point was.

18 A. Yes.

19 THE CHAIRMAN: If Claire's admitted on Monday and she's  
20 unwell, then [OVERSPEAKING] --

21 A. -- the following day is Tuesday.

22 MS ANYADIKE-DANES: I appreciate that.

23 The particular question I wanted to put to you,  
24 professor, and I didn't frame it well, was: when he says  
25 that:

1           "The yield from CT brain in children with infection  
2           related to encephalopathy is low in the early stages of  
3           their illness."

4           And he cites an article in support of that, do you  
5           agree with that?

6    A.   Yes, it always has been that ...

7    MS O'ROURKE:   Some of us have lost our screens.  (Pause).

8    A.   It is low.  I think that in that he's not thinking  
9           really about cerebral oedema, he's therefore attaching  
10          more importance to this point of waiting until it is  
11          better so that he can get a better view.  But of course,  
12          cerebral oedema can, as we know, be over only too  
13          quickly, so that he has to choose the right time, and  
14          I think the following day was, that is the Tuesday, the  
15          correct time.

16   MS ANYADIKE-DANES:  I see.  I think maybe it's this way:  
17          that if he's using the CT scan as a diagnostic tool for  
18          the encephalopathy, then his point is that you need to  
19          see a slightly greater development of that before you  
20          get the best image of it.  Whereas if, as you're saying,  
21          you could be using it or should be using it for two  
22          things which you should be worried about, one is the  
23          developing cerebral oedema, you would be able to see  
24          that, and if it's developing, there's certainly no point  
25          in waiting for it to develop further.

1 A. Yes.

2 Q. In addition, you might also be able to see something to  
3 assist you with your diagnosis of encephalopathy.

4 A. Yes, indeed.

5 Q. He does then go on to say that a CT scan might have  
6 detected evidence of cerebral oedema. And then he says:  
7 "But it is also possible for the CT scan to appear  
8 normal in the early stages of cerebral oedema."

9 A. Yes, that is possible, but I think unlikely in the  
10 course of what you're now seeing from the evolution of  
11 this condition.

12 Q. If we put aside the benefit of our hindsight, it depends  
13 what you mean by "the early stages of the cerebral  
14 oedema" and the extent to which you're able to be  
15 confident that, if there is a cerebral oedema, you are  
16 only in the early stages of it.

17 A. Yes. Well, I think because you're in the hands of not  
18 having done the sodium level and not therefore having  
19 something ... You could perfectly well, if you see  
20 a low sodium at that stage -- you'd get on with  
21 treatment and see how the child did. So it isn't to say  
22 that a CT is essential, it's in this particular  
23 circumstance they seem to have developed the feeling  
24 that there's a need for it. But of course, it could  
25 have been obviated possibly by having a low sodium which

1           you could then get on and treat.

2   THE CHAIRMAN:  This is your concern that he went too quickly  
3           and too strongly in favour of one diagnosis --

4   A.  Yes, indeed.

5   THE CHAIRMAN:  -- and missed what you think was a more  
6           likely diagnosis?

7   A.  Sure.  I don't deny that he worked hard at it and came  
8           back to see the child and did that sort of thing, but it  
9           was in the wrong direction.

10  MS ANYADIKE-DANES:  If I could pull up two parts of the  
11           medical notes and records side by side.  It's  
12           090-022-053 and the next page, 054.  This is Dr Webb's  
13           first examination of Claire.  It's wrongly dated and  
14           wrongly timed, but I think the evidence is now that  
15           it is his first examination, it took place on the  
16           Tuesday the 22nd at about 2 o'clock.

17  A.  Yes.

18  Q.  So at this time, Dr Webb's evidence was that he had seen  
19           that -- do you see there above it -- Dr Stevenson's note  
20           of the ward round where it says the sodium levels of  
21           132?

22  A.  Yes.

23  Q.  He had become aware of that and he believed, as I had  
24           said before, that that derived from a test that had been  
25           taken that morning.  In other words, her serum sodium

1 result was 132 that morning. And then if you see over  
2 the page where he continues on, he does his examination,  
3 his results, the important factors. He doesn't know  
4 about her history sufficiently well enough. And then he  
5 gives a suggestion, and there are three elements of that  
6 suggestion. If we go to the third one:

7 "CT tomorrow if she doesn't wake up."

8 That seems to have been predicated on the fact that  
9 he thought that was her serum sodium level that morning.

10 A. Yes.

11 Q. If it had been her serum sodium level that morning,  
12 would that have been a fair enough thing to do, wait and  
13 do your CT scan the next day?

14 A. No, I think he should have done an EEG, but the CT --  
15 well, no, he didn't have any reason for suggesting that  
16 this child was recovering. So I think he should have  
17 done it then as well.

18 Q. I understand. So irrespective of whether he'd made that  
19 error --

20 A. Yes.

21 Q. -- they should still done the CT scan? Although the  
22 error suggests potentially that if you thought you were  
23 applying the same margin of timing, if he'd thought it  
24 was the previous evening, maybe he would have been in  
25 agreement about a CT scan. But that's another matter.



1           You're saying it doesn't really matter, so far as you're  
2           concerned, whether he thought that that serum sodium  
3           result came from the previous evening or came from that  
4           morning, he really should have been doing a CT scan.

5   A.   Yes.

6   Q.   Thank you.  If we just go to the point about the EEG,  
7           which he also deals with.  If we go back to 138/3, and  
8           I think it was page 4 which gave us our clearest  
9           picture.  I think he also deals with EEG at 138/2 at  
10          page 8.  If we can bring that alongside.  If we go to  
11          his first explanation about it, which is to set out the  
12          service, if I can put it that way.  He says in terms of  
13          an emergency EEG -- now, before we get into that, how  
14          would you have characterised, as at the 22nd -- so the  
15          Tuesday -- the need to have an EEG for Claire or the  
16          need for Claire to have an EEG, rather?

17  A.   Certainly crucial if you're treating as non-convulsive  
18          status epilepticus.

19  Q.   So if you're going to do that, it was crucial?

20  A.   Yes.

21  Q.   Irrespective of whether you were going to do that and  
22          you needed to know where you stood with her to have  
23          a better plan for her treatment, would you have regarded  
24          an EEG as an emergency EEG, urgent, or just a good idea  
25          to do it if it can be done that day?

1 A. It depends on whether you know that ... Whether  
2 you have the sodium level or not in the beginning. But  
3 in that you have a disorder which you don't understand,  
4 then I think an EEG anyway would be extremely helpful,  
5 is probably the way I can put it.

6 Q. And do you think it should have been done before you  
7 started treating her for non-convulsive  
8 status epilepticus or any of the other conditions for  
9 which they were treating her with anticonvulsant  
10 medication?

11 A. As I've said, I think she could have had the first dose  
12 of diazepam without it being tried, but after that she  
13 would have needed an EEG.

14 Q. Before you did anything further?

15 A. Before you did anything else.

16 Q. And if you really felt the situation was such that you  
17 needed to be doing something, then how do you regard the  
18 need for an EEG? Is it urgent, is it an emergency, how  
19 do you categorise it?

20 A. I think it's critical that it's done.

21 Q. Okay. Then we can see now what the service was, if I  
22 can put it that way. The beginning of the description  
23 of it is to the right on page 8, it says he regards  
24 "emergency" as a same-day service. Are you talking  
25 about an EEG that day?

1 A. Yes.

2 Q. Okay. So it doesn't really matter whether you call it  
3 emergency or not, you mean one that day?

4 A. Yes.

5 Q. And he said that wasn't feasible because of the level of  
6 technical staff available to carry them out. He says:

7 "[He] would not have gone to our technician on an  
8 afternoon and expected her to provide an EEG that  
9 afternoon. That kind of service was not discussed and  
10 was not available. [He] might have discussed  
11 undertaking an EEG the following day, but that would  
12 have depended on the technician's workload."

13 Then if we go to what he says in his most recent  
14 statement, he says at (b):

15 "I must have felt when I saw Claire first at 2 pm  
16 that I had sufficient evidence to treat her for  
17 non-convulsive status epilepticus."

18 And I think you've commented on that in the sense  
19 that you didn't think he did, as I understand it. Just  
20 in fairness to him, looking there at what he identifies  
21 as the evidence, which is her background history of  
22 risk, the description of her presentation and the  
23 subsequent behaviour and her response to diazepam, which  
24 he noted a slight improvement, albeit her parents didn't  
25 necessarily see that. But in any event he noted

1 a slight improvement.

2 Assuming those things are correct, does that provide  
3 him, in your view, with sufficient evidence to carry on  
4 treating her for non-convulsive status epilepticus in  
5 the absence of the tests that you've referred to,  
6 particularly the EEG?

7 A. I fear it doesn't, really. He hasn't demonstrated the  
8 abnormality in the brain and the child is -- although  
9 there was a bit of improvement, perhaps, the child  
10 remained unwell during that afternoon. So I think this  
11 should have been done and I can't see why they couldn't  
12 remove one patient who was non-urgent in order to do it.

13 Q. He comes on to deal with that. Leaving aside the timing  
14 points, and there may be an issue about his second visit  
15 at 3 pm, leaving aside that, he said at 5 pm:

16 "I believed I was beginning to feel that  
17 encephalitis was higher on the differential than a  
18 recurrence of Claire's underlying episode, hence the  
19 decision to start acyclovir and cefotaxime. If Claire  
20 had encephalitis, she was very likely to have seizures  
21 as part of this presentation and it made sense to  
22 continue to treat her for seizures."

23 So that's his explanation for that. Then says:

24 "It was my belief at the time that the standard  
25 practice in small units in particular was to treat the

1 child and arrange an EEG for the next working day."

2 THE CHAIRMAN: What does he mean by "smaller units"? Is the  
3 Regional Paediatric Centre in Northern Ireland a smaller  
4 unit?

5 MS ANYADIKE-DANES: I don't know, Mr Chairman. That's one  
6 of the questions I would like to ask him, amongst many.

7 In any event, that is how he categorises it.

8 If we pause there. Is that a correct assertion that  
9 there is some sort of standard practice that if you're  
10 in a small unit and you have a child who you might  
11 otherwise in a larger unit have an EEG, you don't do it  
12 until the next day?

13 A. Well, you do it as soon as you possibly can in this  
14 situation. He is treating this child with repeated  
15 doses of relatively high levels of drugs, really without  
16 knowing what he's treating.

17 Q. Can I put it this way. So far as you are aware, is  
18 there any such standard practice?

19 A. No, I don't know that there is. But people may find  
20 themselves quite unable to do an EEG in a small unit  
21 because they haven't actually got an EEG department, so  
22 they may need to send the child to a place that has.

23 Q. Yes, but assuming that you have available to you an EEG,  
24 it's a matter of rostering, if I can put it that way, or  
25 establishing priorities. I'm not wishing to minimise

1 the inconvenience and difficulty to a person who thought  
2 they were having such a test and finds that they can't.  
3 But assuming that you literally have the facility, if I  
4 can put it that way, is there any standard practice, so  
5 far as you've heard of --

6 A. No.

7 Q. -- which would lead to that kind of decision?

8 A. No, I don't know of that.

9 Q. So then if I'm understanding you, so far as it can be  
10 done, what drives the timing of having an EEG is the  
11 needs of the child.

12 A. Yes.

13 Q. So then if we continue on down, he says he thinks that  
14 he did give consideration to requesting the EEG on the  
15 Tuesday afternoon -- so he has thought about it for the  
16 Tuesday afternoon:

17 "But I would have been very conscious of the  
18 workload of the EEG department, particularly in the  
19 absence of a second technician on maternity leave."

20 And:

21 "The single technician was providing an EEG service  
22 to the entire province and dealing with children and  
23 families who had waited weeks and longer for an EEG."

24 If that's the case, does that mean those are booked  
25 appointments and not necessarily emergencies?

1 A. Yes.

2 Q. Then he says that if he asked her to bump a child off  
3 her list at such short notice, that would inevitably put  
4 her in a conflict situation.

5 He goes on to talk about the benefit of hindsight,  
6 which is not to be denied, and he says:

7 "Finally, EEG technicians were and are a very  
8 valuable resource and experienced technicians are and  
9 were very scarce. I had just completed my first year  
10 at the Children's Hospital and certainly did not want to  
11 jeopardise my relationship with our only technician  
12 at the time."

13 A. I think that the technician's position is well  
14 understood and I think we can sympathise to a degree  
15 with that. But it seems to me that if you are managing  
16 this child in a way which requires repeated doses of  
17 anticonvulsants, you should be able to make out a strong  
18 case as to why this child should be treated and another  
19 deferred.

20 Q. So is it then for the neurologist to make the case on  
21 priorities?

22 A. Yes.

23 Q. Or the radiologist?

24 A. Yes.

25 Q. I understand.

1 MR FORTUNE: Following on from that, do we know whether or  
2 not any enquiry has been made of the department as to  
3 whether there was and still is a list of booked  
4 appointments for that afternoon and any slots available  
5 for emergency EEGs?

6 MS ANYADIKE-DANES: The short answer -- and not wishing to  
7 give evidence from where I stand -- is we have made  
8 those enquiries, we know how many slots were booked, and  
9 we don't know what character they were. We've been  
10 trying to find out an outpatients list for the EEG  
11 service, but we know that there was a service being  
12 carried out in the morning and in the afternoon for  
13 EEGs.

14 MR FORTUNE: And out of hours?

15 MS ANYADIKE-DANES: Well, we're trying to get some  
16 information on that, but that's where we are at the  
17 moment with what we've received. So the issue would be  
18 one of priorities.

19 A. Yes.

20 Q. There were children booked, if I can put it that way, to  
21 have EEGs in the morning and in the afternoon and, as  
22 I understand you to say, it's a matter for the  
23 neurologist to assess the patient he has, how important  
24 he thinks it is that an EEG is performed, and to make  
25 that case to the radiologist, the technician?



1 A. That's how I understand the working of this department,  
2 yes.

3 Q. If you're in the neurologist's position and you feel  
4 you have no option but to want to treat what you see as  
5 seizure activity, if I can put it that way, how strong  
6 a case would you feel that you could make for Claire?

7 A. Very strong.

8 THE CHAIRMAN: Isn't that where the real difference is  
9 between you and Dr Webb?

10 A. Pardon?

11 THE CHAIRMAN: Is that not where the real difference is  
12 between you and Dr Webb? Dr Webb does not appear from  
13 his statement to have regarded it as urgent and as  
14 important as you do in your evidence.

15 A. Yes.

16 THE CHAIRMAN: So, in a sense, the debate about resources  
17 and priorities and bumping people out who have been  
18 waiting for some time, that is all a relevant issue and  
19 it's all a factor to bear in mind, but the more  
20 fundamental point is that you say Claire should not have  
21 been started on these various treatments and this  
22 diagnosis should not have been made with the degree of  
23 confidence which Dr Webb seems to have made it on the  
24 basis of the information which was available to him?

25 A. Exactly, sir.

1 THE CHAIRMAN: Okay. We'll take a break for lunch and come  
2 back at 2.10.

3 (1.15 pm)

4 (The Short Adjournment)

5 (2.10 pm)

6 (Delay in proceedings)

7 (2.23 pm)

8 THE CHAIRMAN: Just before you start, we had better announce  
9 what we've managed to arrange over lunchtime.

10 Professor Neville has made himself available to come  
11 back here on Monday, so he will be here and available  
12 until Monday lunchtime. I think we might start at 9.30  
13 on Monday to make sure there are no hiccups because the  
14 professor has to leave at lunchtime and we can't bring  
15 him back another time.

16 That means that Dr Joanne Hughes will give evidence  
17 after Professor Neville on Monday. She also has to  
18 finish and I'm afraid we've messed her about a few times  
19 with late notice cancellations.

20 You had two witnesses on your list for Monday, who  
21 I don't think at this stage you know anything about. We  
22 don't yet have witness statements from them. So in  
23 a way, it's not difficult to put them back for a little  
24 time. Their evidence, we expect, will shed some light  
25 on what might have been going on in the Children's

1 Hospital on the morning of Tuesday 22nd, which may  
2 explain something about the whereabouts of doctors.  
3 We'll come to that in due course. We were notified  
4 after the first week's hearing of clinical evidence that  
5 somebody had remembered some information about what was  
6 going on and we're trying to pin down how that stands up  
7 to scrutiny.

8 But Professor Neville will continue until shortly  
9 before 4 o'clock, he'll leave, we'll take a short break  
10 and Mr and Mrs Roberts will finish before the weekend.

11 MS ANYADIKE-DANES: Thank you very much indeed.

12 Professor Neville, it's probably right that  
13 I clarify some things with you in terms of what you were  
14 able to read before you came to give your evidence.

15 I understand from you that you were able to read all the  
16 relevant witness statements for the purposes of giving  
17 your evidence.

18 A. Yes, I was.

19 Q. And the reports?

20 A. Yes.

21 Q. Then although many witnesses are fairly consistent as  
22 between their witness statements and the oral hearing,  
23 there are nonetheless some differences. I understand  
24 that you haven't been able to read all the transcripts  
25 of all the evidence of the witnesses that may bear on

1           what happened in the morning and in the evening.

2    A.  No.

3    Q.  Given that you are good enough to come back to provide  
4           us with more evidence on Monday, what I'm going to ask  
5           you to do is to read the transcripts that relate to the  
6           evidence of: the admitting registrar, which would be  
7           Dr O'Hare; the registrar who take the ward round, which  
8           is Dr Sands; and the registrar in the evening, which is  
9           Dr Bartholome; and also the evidence of Dr Steen, who's  
10          the consultant paediatrician, even though she wasn't  
11          actually there seeing the child, nonetheless she  
12          expresses some views on diagnostics and how things might  
13          have been conducted.

14                 So I think it would be very helpful if you could do  
15                 that and then, when you provide us with your answers,  
16                 people will appreciate that those are in the context of  
17                 the most up-to-date evidence from the witnesses where  
18                 that evidence may have changed.

19   A.  I don't actually have Dr Bartholome.

20   Q.  Yes.  We can provide you with the transcripts.

21   A.  Okay, thanks.

22   MR GREEN:  [Inaudible: no microphone] provide Dr Stevenson's  
23                 transcript as well.  It would be very helpful if --

24   MS ANYADIKE-DANES:  Of course.

25                 Then if we continue with where we were, which was

1 the consideration of what are the tests that could have  
2 been carried out and how significant an omission they  
3 are. Professor, there are some differences between you  
4 and Dr Scott-Jupp, who's one of the two paediatricians  
5 who has provided expert evidence for the inquiry, on  
6 some of these issues, particularly one that we are going  
7 to consider now, which is the electrolyte testing.

8 I think you acknowledge that --

9 A. Yes.

10 Q. -- between you in your reports and how you would treat  
11 the low sodium that one sees later on. As we go  
12 through, I may take you to some of those sections and  
13 ask you to explain why nonetheless you have the view  
14 that you do, even though a paediatrician might have  
15 a slightly different view.

16 A. Okay.

17 Q. But before we move on, is there anything further you  
18 want to say about EEGs and CT scans from where we left  
19 it?

20 A. No.

21 Q. Before we move on to the next thing which I wanted to  
22 ask you about, which was the electrolyte testing,  
23 I would like to ask you some questions that have been  
24 submitted for your consideration.

25 The first is that Dr Harding -- I think you have

1           seen his report also --

2    A.   Yes.

3    Q.   -- he suggests that the encephalopathy in Claire's case  
4           was due solely to hyponatraemia.  But -- and this is how  
5           the issue arises -- Claire seems only to have been  
6           borderline hyponatraemic on admission, and it's arguable  
7           whether on admission she was suffering from symptomatic  
8           hyponatraemia, but she was showing signs of neurological  
9           impairment.

10                 The question is how, so far as you are concerned,  
11           does one account for that?  If she's got the signs of  
12           neurological impairment, but her serum sodium levels  
13           don't seem sufficiently low on admission to indicate  
14           symptomatic hyponatraemia, how does one subsequently  
15           ascribe the encephalopathy to hyponatraemia?

16   A.   So we're basing this on the notion that she has previous  
17           damage?

18   Q.   Mm-hm.

19   A.   There are various things about the sodium level.  The  
20           first is that it may, as I've said before, have dropped  
21           quite significantly and still remained in the upper end  
22           of the range of abnormality.  So it may have dropped  
23           really quite a long way and thus be symptomatic.

24   Q.   I understand.

25   A.   In terms of brain damage, I'm not quite sure

1 I understand the purpose of the question.

2 Q. The purpose of the question is whether you think that,  
3 on the information available, one can properly attribute  
4 Claire's encephalopathy to hyponatraemia.

5 A. I think you'd have to say that a major part of it was  
6 that. But I couldn't say that all of it was and that  
7 there wasn't an additional problem.

8 Q. If the sorts of tests that you were discussing with us  
9 earlier today in your evidence had been carried out,  
10 would anybody have been in a better position to answer  
11 that question, or would you have been in a better  
12 position to answer that question?

13 A. I'm not certain that we would have been. I think it  
14 just is not known. I really couldn't be sure.

15 Q. So that is assuming that matters carry on on their path  
16 and one ends up with the result that one did end up  
17 with, which is that, unfortunately, Claire died. If the  
18 tests that you suggest were carried out had been carried  
19 out and those tests had indicated, as I had put to you  
20 earlier this morning, a lowering yet further in her  
21 serum sodium levels, and that had been addressed, is  
22 there a chance that you would never have got to the  
23 stage of encephalopathy?

24 A. No, that's exactly what you would have expected.

25 Q. Thank you. I think you might have answered this, but

1           since somebody wants to draw particular attention to it,  
2           forgive me if you have. Dr Scott-Jupp and you agree  
3           that Claire's electrolytes should have been tested by  
4           the time of the ward round.

5   A. Yes.

6   Q. The issue is how important do you think that was?

7   A. I think it's crucial.

8   Q. Thank you.

9           I want to turn to the referral to Dr Webb.  
10          Dr Scott-Jupp's position is that he finds it concerning  
11          that there's no record that Dr Sands discussed the case  
12          with Dr Steen, and if, as he says, she was unavailable,  
13          then he considered that to be unacceptable. Your view  
14          is -- and one finds that at 232-002-007 -- that the  
15          consultant paediatrician should have been involved as  
16          the cause of Claire's brain illness was unexplained,  
17          although you say that that could have been the  
18          responsibility of Dr Sands or Dr Webb or both, depending  
19          on the local practice as to how the consultant  
20          paediatrician is kept involved, if I can put it that  
21          way.

22          I think that goes back to something that you were  
23          answering in a question of the chairman, which is the  
24          availability and how important it was that Dr Sands had  
25          access to the consultant paediatrician. I think that's



1 where I would like to start with you.

2 How important was it that when Dr Sands first saw  
3 Claire, given her presentation, that he was able to  
4 discuss matters with the consultant paediatrician?

5 A. Well, it would normally be a matter of course, really,  
6 that he would expect to discuss the problem. But what  
7 I don't know is whether Dr Steen's absence was such that  
8 the consultant paediatric neurologist felt he had to  
9 just get on with dealing with the problem without  
10 reference further to the consultant.

11 Q. I'm going to come to this later on, but just as you  
12 raise it now: Dr Webb has never thought that the  
13 responsibility for Claire's care and treatment rested  
14 with him. Somebody will correct me if I'm wrong. He  
15 regarded himself as essentially providing an expert  
16 opinion on matters that came within his experience and  
17 expertise as a paediatric neurologist. That's what he  
18 thought he was doing.

19 A. Yes. And I agreed with that in my statement, so far as  
20 I could see the way it went.

21 Q. The question that I've put to you is slightly different.  
22 Assuming that he was able to, how important is it that  
23 the registrar makes contact with his consultant  
24 paediatrician and is able to discuss and liaise with  
25 her, outside maybe whatever his referral has been to

1 Dr Webb?

2 A. Well, it's normal and mandatory that you do that if  
3 you're providing consultant care and, if you don't have  
4 the right person available, that you nominate another  
5 person.

6 Q. Yes. I think Dr Sands did consider that Claire was  
7 actually very sick indeed and he has felt that her  
8 problems were neurological in origin, or at least  
9 a substantial part of them were, which is why he went to  
10 try and get an opinion from Dr Webb. I think this goes  
11 back to something that the chairman was raising with  
12 you. It may be that he did not have the experience or  
13 the expertise to be able to think more laterally or in  
14 a broader way about what her presentation might imply  
15 about other differential diagnoses. He's got  
16 a neurological thing, he understands that there's  
17 something like that happening, but he may not have had  
18 the experience to be able to think about the range of  
19 things that might be causing that.

20 What I'm putting to you is: in that situation, was  
21 it sufficient for him just to go with the neurological  
22 presentation and seek assistance from Dr Webb, or should  
23 he really have been able to and have access to his  
24 consultant paediatrician to make sure that there wasn't  
25 something significant that he had missed?

1 A. Well, I think both are true. In other words, he should  
2 have had proper access to his paediatric consultant  
3 colleague and he also needed to make direct contact with  
4 the paediatric neurologist by whatever means. And  
5 I think there is an issue about whether the paediatric  
6 neurologist is in fact -- whether he realises that a low  
7 sodium is really an important problem. I know he says  
8 he's got nothing to do with fluid management, but he  
9 really, I think, can't easily get away from the notion  
10 that a drop in sodium has got to be associated with  
11 worsening neurological disease.

12 Q. Just so that I follow up on that: even though he might  
13 have been approached to give his view as to what this  
14 presentation that is described to him that Claire has,  
15 what that might mean, even though that's how he may be  
16 brought into the case, are you saying that he cannot  
17 ignore the other question of low sodium --

18 A. No.

19 Q. -- and the implications of that for her condition?

20 A. No. No, that's right. He might well have wanted  
21 somebody at consultant level to talk to, to try to work  
22 out what was going on.

23 Q. I was going to ask you that as well. So if we have got  
24 that, it would have been helpful, as I think you have  
25 indicated, for Dr Sands to be able to discuss matters

1 through with his consultant paediatrician. Do you think  
2 it would have assisted in the management of Claire and  
3 her treatment if Dr Webb had been able to, as it were,  
4 consultant to consultant, have discussions with Claire's  
5 consultant paediatrician?

6 MR GREEN: Forgive me for interrupting, but you will recall,  
7 sir, that Dr Sands' evidence was that he did contact  
8 Dr Steen. The reference on the transcript -- I'm not  
9 asking that it be called up now -- is the transcript of  
10 19 October, page 182, lines 3 to 10, then lines 19 to  
11 22, then on page 183, lines 5 to 9, and lines 16 to 18.  
12 His recollection, if I can just summarise it very  
13 briefly, was that he did contact Dr Steen, he's not sure  
14 what time in the afternoon, although he thinks it was  
15 early-ish in the afternoon, and he's not sure whether he  
16 first rang her, failed to get her and she rang back, or  
17 if he got through to her first time.

18 MS ANYADIKE-DANES: Thank you very much indeed. That's  
19 exactly the point that I was getting on to. I'm at the  
20 level or the stage, if I can put it that way, of the  
21 ward round and the immediate aftermath. And that's when  
22 I'm suggesting to Professor Neville that it might have  
23 been helpful if Dr Sands had been able to discuss  
24 matters through when, if you like, the differential  
25 diagnoses are being formed at the start of the day.

1 A. Yes.

2 Q. I do entirely take your point that Dr Sands attempted to  
3 speak to Dr Steen and believes he did do so, but that  
4 was in the afternoon. I'm in the morning still.

5 A. I think she might have been able to assist in whether  
6 the blood electrolytes had been re-done in the morning  
7 or not.

8 Q. Yes.

9 A. It was her firm, after all, who was doing it -- or not.

10 Q. What other assistance and guidance do you think that she  
11 might have brought to it if he'd been able to make use  
12 of her experience in the morning?

13 A. Well, I suppose the view that occasionally a drop in  
14 sodium level is associated with this group of disorders.

15 Q. So if I understand you correctly, then he might have  
16 been assisted to see the whole other side that you've  
17 been at pains to point out --

18 A. Yes.

19 Q. -- which is the implications of low sodium --

20 A. Yes.

21 Q. -- and how you might go about treating that, once you  
22 had tested it and found that to be the issue or  
23 an issue.

24 A. Yes.

25 THE CHAIRMAN: Apart from the fact that that opens up

1 another avenue, which you say should always have been  
2 open about what was wrong with Claire, does that also  
3 tie into decisions which are made later about what drugs  
4 Claire is given? Because at least some of them affect  
5 adversely her level of consciousness, which in turn may  
6 have an impact on things like the Glasgow Coma Scale and  
7 why it's going down.

8 A. Yes. I mean, particularly midazolam.

9 MS ANYADIKE-DANES: Thank you. So then I think where  
10 we were before we started to think about what Dr Steen  
11 might have brought to it is that you'd expressed a view  
12 that it might have been helpful for Dr Webb to have been  
13 able to discuss matters with Dr Steen --

14 A. Yes.

15 Q. -- and brought their combined experience and disciplines  
16 to bear, if I can put it that way, on trying to see why  
17 Claire is the way she is and has remained like that for  
18 these hours.

19 Given that it falls to Dr Sands to make,  
20 effectively, that referral to Dr Webb, because it seems  
21 that Dr Steen is not available to do that, what do you  
22 think are the things that Dr Sands should have been  
23 highlighting to Dr Webb?

24 A. Well, I suppose he should have, if he knew, highlighted  
25 the fact that the sodium had not been repeated that

1 morning, if that was the case. He should be pointing  
2 out that this child is not really showing any recovery.  
3 There may have been blips up and down, but actually  
4 there wasn't any significant change, and thus she was  
5 remaining really quite ill. I suppose he would have run  
6 through what sort of problems he might be thinking of in  
7 terms of the neurological condition and have been trying  
8 each of those out in discussion.

9 Q. Testing them?

10 A. Yes.

11 Q. Then if we have got there, it would appear from his  
12 evidence that the sort of thing that he would have  
13 raised was obviously the non-fitting status epilepticus,  
14 and he would have raised, it would appear, the  
15 encephalitis -- at least, that's his evidence -- that he  
16 would have raised that because that was something --  
17 although it wasn't recorded as part of the ward round  
18 note -- he says he had in mind. So those are the two  
19 things that he says he had in mind. He hadn't thought  
20 about the encephalopathy; that seemed to be something  
21 that Dr Webb contributed.

22 So he would have been raising those two things. And  
23 what do you think that he could have reasonably expected  
24 Dr Webb to have done at that stage? So it's not  
25 entirely clear when he managed to make contact with

1 Dr Webb, but it might have been round about noon time --

2 A. Yes.

3 Q. -- or maybe 12.30 or thereabouts. It's not entirely

4 clear. But assuming that he has managed to reach him

5 after the ward round and some time before lunchtime,

6 what is it that he might be expecting in all the

7 circumstances for Dr Webb to do?

8 A. Well, obviously to examine the child and to then attempt

9 to separate the fixed from the short one side then the

10 other type problems.

11 Q. Pause with "examine the child". How quickly do you

12 think, all things being equal, that Dr Webb ought to

13 have responded to that and actually seen Claire?

14 A. He seems to have got there at 2 o'clock.

15 Q. Yes.

16 A. And it sounds as though he was acquainted with this

17 problem, because there's one account, I think, of it

18 being at 1.30 that he happened to catch the doctor --

19 Q. I think that might be Dr Webb's account. I think

20 Dr Sands is of the view that we might have seen him

21 rather earlier than that. In his evidence -- and when

22 you see the transcript, you'll see -- his view was

23 he was rather expecting Dr Webb to come a little

24 earlier. That's one of the reasons why I'm asking you.

25 Assuming he described matters as you would have



1           considered an appropriate way to describe them in the  
2           circumstances to Dr Webb, how urgently do you think  
3           Dr Webb should have responded to that and come and  
4           examined Claire?

5   A.   He needed to look at the child pretty quickly.  And  
6           I suppose the reason for that was so that appropriate  
7           investigations could be got under way and they're,  
8           of course, the same investigations that we've discussed  
9           previously.

10  THE CHAIRMAN:  Professor, with your own experience as being  
11           a paediatric neurologist, all other things being equal,  
12           you will go to another patient urgently.  But presumably  
13           Dr Webb wasn't just hanging around chatting or gossiping  
14           on the ward.

15  A.   No.

16  THE CHAIRMAN:  Presumably he was looking after the patients  
17           that he was assigned to.

18  A.   Sure.

19  THE CHAIRMAN:  So it might be a bit harsh to infer that he  
20           somehow dilly-dallied on his way to Claire.

21  A.   No, no, I didn't suggest that really.

22  THE CHAIRMAN:  I just want to get --

23  A.   I was just saying that I thought that was probably  
24           reasonable sort of speed, perhaps a bit slow, but  
25           I don't know, in the circumstances.

1 THE CHAIRMAN: What Dr Sands said was that he agreed when he  
2 saw Claire that there was something significantly wrong  
3 and, for instance, he thought he needed to get  
4 information from the Ulster Hospital, where she'd been  
5 treated before. So that's a sign of the urgency which  
6 he felt the situation had. He also knew that the blood  
7 tests were not from that morning, but that they were  
8 from the previous night.

9 A. Yes.

10 THE CHAIRMAN: But he says then that he was surprised that  
11 the blood tests were not re-done on foot of his ward  
12 round, though it's not specifically noted that they were  
13 going to be done on foot of the ward round. So then you  
14 move on. Dr Webb is contacted, he comes, in the absence  
15 of evidence to the contrary I'll assume that he comes as  
16 quickly as he could, which may not have been quite as  
17 quickly as, in an ideal world, he might have been  
18 available to come; yes?

19 A. Yes, I think that's probably right.

20 MS O'ROURKE: Sir, I wonder if we could just throw into the  
21 mix, since we're looking at that timing. Dr Webb's  
22 evidence in his witness statement is that he learns of  
23 it from Dr Sands at a lunchtime meeting. It's not  
24 a formal referral, but they're at the same meeting and  
25 he, when he does come, is with Claire between 15 and

1 25 minutes, which bearing in mind the evidence of the  
2 parents -- that they're back at about 2.10 pm -- would  
3 suggest that Dr Webb has not arrived at 2 o'clock, but  
4 2 o'clock is the time he's writing the note up having  
5 carried out his history taking, which would therefore  
6 suggest he may have arrived at 1.30, and if it was  
7 a lunchtime meeting and the rectal diazepam was an  
8 immediate response to being given the information, and  
9 we know that's recorded at 12.30, it would suggest that  
10 he has in fact attended within an hour and no more. And  
11 I wonder if the professor might be asked if that's  
12 reasonable timing, bearing in mind he doesn't get  
13 a formal referral by a phone call or whatever; he has it  
14 raised with him when he's at a meeting.

15 MS ANYADIKE-DANES: I'm more than happy to put it that way,  
16 except to say that Dr Sands has a slightly different  
17 view of the time.

18 THE CHAIRMAN: He does. Dr Sands does have an earlier view  
19 of the time than Dr Webb remembers. There's a degree of  
20 uncertainty about this, which frankly we're never going  
21 to be able to resolve many years after the event.

22 A. No.

23 THE CHAIRMAN: If he did find out about Claire for the first  
24 time at about 1.30 and the note is written up at about  
25 2 o'clock, that's a very prompt response.

1 A. Mm. Yes. I'm not sure what an informal, as distinct  
2 from a formal, referral actually means. It seems if  
3 you're asked for an opinion, that's what you give.

4 THE CHAIRMAN: Okay.

5 MS O'ROURKE: Sir, if I may make it clear: I'm not saying  
6 that, I'm saying in the sense that sometimes the  
7 professor will be aware, you get a written referral or  
8 sometimes you get a telephone call, which is direct to  
9 the consultant in question as opposed to running into  
10 him in the corridor or at a meeting. So I was using  
11 informality in that sense. In other words, it's not  
12 a direct bleeping, there's no note in the notes that  
13 there was a bleep happened or in fact that something of  
14 that sort was organised.

15 MS ANYADIKE-DANES: In terms of response, does it make any  
16 difference how you're asked for an opinion?

17 A. Pardon?

18 Q. In terms of how quickly you respond, does it make any  
19 difference how you are asked for your opinion?

20 A. I think it depends upon the urgency with which you are  
21 asked.

22 Q. Dr Sands has described Claire's condition, when he  
23 examined her during the ward round, as he thought she  
24 had a major neurological problem. I think that's the  
25 expression that he used. And that's a view he formed at

1 the ward round. If he formed that view and communicated  
2 it to Dr Webb, what I'm trying to find out -- and I'm  
3 sure we're not going to be able to resolve it in terms  
4 of the actual times, it may be more, all things being  
5 equal, which they may not --

6 THE CHAIRMAN: Isn't that the problem? We have no idea at  
7 all whether all things are equal.

8 MS ANYADIKE-DANES: I wasn't going to put it quite like  
9 that. I was going to say: if you didn't have  
10 a constraint, what sort of speed of response, if you're  
11 being told that the registrar who can't make contact  
12 with his paediatric consultant, considers that he has  
13 a child who has a major neurological. I wondered if you  
14 might help in that way.

15 A. It would depend on the urgency and what you were already  
16 doing, but you'd expect to achieve that, hopefully,  
17 within half an hour if that's what was being suggested.

18 Q. Of course that rather depends whether he could  
19 physically do that, given his other commitments.

20 A. Yes.

21 Q. That's why I said all things being equal. When Dr Webb  
22 comes to examine the child, how significant is it that  
23 there appears to be, at that time, no other doctor who  
24 is able to -- well, no other doctor there, and therefore  
25 no other doctor who's able to describe anything about

1           how Claire has been over the day? How significant  
2           is that?

3    A. That's very surprising, really. You would expect there  
4           to be a doctor who has gained experience of this patient  
5           and is able to fill in the gaps for Dr Webb.

6    Q. So that means that when Dr Webb examined Claire, whether  
7           he did it at 1.30 or 2 o'clock, whenever it was, what  
8           he had available to him was the medical notes and  
9           records that you have seen and the results of his own  
10          examination and the history that he would have taken of  
11          the grandparents?

12   A. Yes.

13   Q. How helpful --

14   THE CHAIRMAN: No, no, I think he must have more than that  
15          because he must have available to him what Dr Sands had  
16          told him and Dr Sands' views to the extent that he  
17          conveyed them when he asked him to become involved in  
18          Claire's case at all.

19   A. Yes.

20   THE CHAIRMAN: It would clearly be better if, when Dr Webb  
21          arrives to see Claire, that Dr Sands is there or  
22          Dr Stevenson is there, who had been on the round with  
23          Dr Sands, or better again, if Dr Steen had been there.  
24          But let's suppose that for some good reason none of them  
25          were available, Dr Webb would have the records, but

1           would also know what Dr Sands' concerns had been.

2    A.    Surely, yes.

3    MS ANYADIKE-DANES:   Sorry, yes, I should have said that.

4           What.

5           I was thinking of is: whatever changes that there  
6           may have been in anybody observing her between whenever  
7           he had that conversation with Dr Webb after the ward  
8           round and when Dr Webb arrives, that might be something  
9           that might have been helpful and that's what I wanted to  
10          ask you about.

11          Is that significant at all that there isn't anybody  
12          who can discuss with him the comparator, this is how she  
13          was when she was being discussed with you by Dr Sands,  
14          this is what's happened over the next couple of hours;  
15          is that relevant at all?

16    A.    Well, it's a very much more satisfactory way of doing  
17          business, of putting a point of view which you have and  
18          asking the person who has been more regularly involved  
19          of how this seems to that person or are there problems  
20          that might be involved in thinking about that.  So it is  
21          more satisfactory to have somebody there.

22    THE CHAIRMAN:   It must help.

23    A.    Yes.

24    THE CHAIRMAN:   The person who it helps most must be Claire.

25    A.    Mm.

1 THE CHAIRMAN: If Dr Webb comes along, he's engaged because  
2 there is a significant level of concern. It would be  
3 far better if Dr Sands, or at least another doctor, was  
4 there to discuss with him.

5 A. Yes.

6 THE CHAIRMAN: Because (a) to help them both form a better  
7 idea, discuss the various options and then to make sure,  
8 for instance, when Dr Webb leaves that the  
9 paediatricians know the extent of Dr Webb concern.

10 A. Yes, and can actually articulate whether Dr Webb is as  
11 concerned as the other person or not, and, if not so, to  
12 say why not.

13 THE CHAIRMAN: Yes.

14 MS ANYADIKE-DANES: Thank you. You have discussed Dr Webb's  
15 examination at 2 o'clock, which you thought was  
16 competent.

17 A. Mm.

18 Q. But you have also drawn attention to three things that  
19 you nonetheless feel were failings, if I can put it that  
20 way. This is from 232-002-008 of your report, but  
21 I don't think we need to pull it up. The first is to  
22 include the possibility of rising intracranial pressure  
23 to explain Claire's reduced consciousness level and  
24 motor signs.

25 I can pull up a schedule that we had prepared to



1 show the Glasgow Coma Scale which she had. It's  
2 310-011-001. Assuming that Dr Webb was examining Claire  
3 around about 2, that red entry under 2 pm comes from  
4 Dr Webb's own assessment of her Glasgow Coma Scale score  
5 at the time he made the examination.

6 Assuming that, there had only been one previous  
7 examination -- because these observations didn't start  
8 until 1 pm -- and assuming he's seeing her at 2, or, if  
9 he saw her earlier, then there's a little bit of  
10 a change at an even shorter interval than one hour.

11 A. Yes.

12 Q. And that's all he's got in terms of these sorts of  
13 observations other than the actual description of her  
14 presentation. So when you were saying Dr Webb should  
15 have included the possibility of a rising intracranial  
16 pressure as a means of explaining Claire's reduced  
17 consciousness level and motor signs, what exactly is the  
18 evidence that you are basing that on? What's the  
19 evidence of the reduced consciousness level?

20 A. She had reduced consciousness level because on either  
21 scale, it was lower than it should have been.

22 Q. Yes.

23 A. But at the level of 8/9, it's at a sort of marginal  
24 level for urgent action, as you might say, but it then  
25 rapidly drops.

1 Q. If we stay with what he saw, take it in stages and  
2 confine ourselves to his examination at 2. He has the  
3 description of her presentation, both on admission and  
4 during the ward round.

5 A. Yes.

6 Q. He has that and other descriptions he might glean from  
7 the notes and records. And then he has the fact that  
8 when she's started on his hourly observations, she  
9 starts at a 9 or 10, as the case may be -- I'm going to  
10 ask you about this in a minute -- and then when he is  
11 himself assessing it, he puts her at 8 or 9 --

12 A. Yes.

13 Q. -- which, if his counsel's argument is correct, might be  
14 that within half an hour she had dropped from 10 to 9 to  
15 8 to 9. Or if the note timed is actually when he  
16 conducted it, she had dropped by one point in an hour.

17 A. Yes. The drop from obeying commands to localising pain  
18 could be seen as quite significant. So I think that is  
19 a drop, but ... Yes.

20 Q. So is that, therefore, where you gained the evidence  
21 that says that with that kind of information,  
22 in addition to the other material that he has in the  
23 medical notes and records and what Dr Sands has said to  
24 him, and the history that he has taken from the  
25 grandparents, that he should have, on the basis of all

1 of that, been considering the possibility of a rising  
2 intracranial pressure?

3 A. Yes, I think so, because it really is that you're not  
4 improving, if anything. In a situation where you're not  
5 improving, then you have to explain that. And one of  
6 the reasons is cerebral oedema. Another one may be  
7 non-convulsive status, but ...

8 Q. And then your other query is something that you have  
9 already dealt with before, which is that he failed to  
10 require an urgent sodium level test as part of his  
11 assessment at that stage.

12 A. Yes.

13 Q. And I think you have already explained why you thought  
14 that was important. Then you say he should have been  
15 aware of that because there is a possibility of  
16 inappropriate secretion of ADH in acute brain illness,  
17 Claire's sodium levels/conscious level and fluid balance  
18 should be monitored and should have directed that that  
19 be done. When you say "monitored", what do you mean by  
20 that?

21 A. Really by doing plasma sodium levels and then watching  
22 the process of doing it at least every six hours,  
23 initially, if there was a low level, just to be clear  
24 that you were aiming in the right direction.

25 Q. So if that were the case, he should have been requiring

1 another one, say, or one to be done at, say,

2 8 o'clock --

3 A. Yes.

4 Q. -- in the evening. And what urgency should be attached  
5 to getting those results back? Because that would be an  
6 out-of-hours test.

7 A. Oh, they need to be returned rapidly because it's  
8 life-threatening.

9 Q. I'm going to ask you this now because the Glasgow Coma  
10 Scale results are something that will become  
11 increasingly significant over the passage of that  
12 afternoon and evening. What is the difference, if you  
13 can explain it to us, between the one point that Dr Webb  
14 has by way of an increase to the level?

15 A. Sorry?

16 Q. If you look along the bottom, you see that there are  
17 scores and then next to them there are scores in  
18 brackets.

19 A. I took it that 9, which is on the scale you've got  
20 there, is the modified coma score, and that -- no, that  
21 9 is the coma score from the Glasgow Coma Scale straight  
22 and 8 is the lowered one, which allows for children,  
23 young children.

24 Q. The one in the brackets is the one that Dr Webb  
25 indicates should be for children.

1 A. Is that right?

2 Q. Sorry, I think that might be the other way round.

3 A. I think it's the other way round.

4 Q. Sorry, it's the other way round. The lower number is  
5 the modified version --

6 A. Yes, because it has a smaller number of components to  
7 it.

8 Q. And I think Dr Webb's argument is that because it has  
9 got a smaller number of components, you should bear in  
10 mind that in reality it should be one higher, if I can  
11 put it that way. But in any event, what is the  
12 significance, so far as you can help us, with the actual  
13 level of those scores?

14 A. I think the drop from obeying commands to localising  
15 pain is significant. And then a further drop down to  
16 flexion to pain at a much later stage at 9 o'clock  
17 becomes highly significant. What I'm not completely  
18 sure about is, if you look at the "no verbal responses",  
19 they plough along at a particular level of 1 until  
20 6 o'clock when they suddenly jump to 2. I'm not  
21 completely sure whether those are correct or not, in  
22 other words "inconsolable, agitated" from "no vocal  
23 response", as to how separate those two were. It just  
24 looks like somebody coming on and learning to do it  
25 properly, if you like.

1 THE CHAIRMAN: In a sense, does that look the wrong way  
2 round --

3 A. Yes.

4 THE CHAIRMAN: -- that that middle section is going  
5 marginally up, whereas the top and bottom sections are  
6 going down?

7 A. Yes, it does.

8 THE CHAIRMAN: Does that reflect sometimes, professor, the  
9 fact that there's no absolute perfect cut-off between  
10 a 2 and a 1 and a 3 and a 2 and someone who comes on  
11 might have a slightly different take on it?

12 A. Well, I think that certainly in separating whether  
13 somebody is making incomprehensible sounds or no verbal  
14 response, you could -- that's an error you could make.

15 THE CHAIRMAN: Yes, okay.

16 MS ANYADIKE-DANES: Whether one takes the paediatric Glasgow  
17 Coma Scale or the Glasgow Coma Scale, at the levels they  
18 are, what is the significance of those now that we have  
19 this up?

20 THE CHAIRMAN: Sorry, I think you said that at the level of  
21 8 to 9 it's marginal for urgent action.

22 A. Yes, and that at 7/8 you really do need to be doing  
23 something. But it's in the context of the child not  
24 getting better, and in fact getting marginally worse.

25 MS ANYADIKE-DANES: Yes. Is there any significance, so far

1 as you can see, to the fact that having -- gradually,  
2 point by point ... and then levelled off at 6 or 7, as  
3 the case may be, creeps up a point or two and then goes  
4 down? Is there any significance in that?

5 A. I think the last point of 9 o'clock is a very clear  
6 change.

7 Q. Yes.

8 A. So that flexion to pain only is really quite obvious and  
9 is a reason for doing something.

10 Q. Is that because of the fall from 8 to 6 or 9 to 7, as  
11 the case may be, or because of the absolute number?  
12 Because that absolute number is also recorded  
13 in relation to 4 o'clock and 5 o'clock in the afternoon.

14 A. Yes, but it's recorded in a different form by no eye  
15 opening. So that's the reason for that occurring. No,  
16 I think that these were fluctuating as well so that --  
17 they were all at a level which, after the 8/9, which  
18 required action and -- although there was one blip up at  
19 8 o'clock.

20 THE CHAIRMAN: But even at their best point, is it too  
21 simplistic for me to take the view that, on these  
22 readings, Claire's in trouble?

23 A. Yes.

24 THE CHAIRMAN: Sorry, is that too simplistic?

25 A. No, no, that's fine. That's exactly right.

1 MS ANYADIKE-DANES: So you have made those three sets of  
2 criticisms, if I can put it that way, of the examination  
3 that Dr Webb carried out or at least the conclusions  
4 that he reached as a result of it. And from your point  
5 of view, what should have happened after he had carried  
6 out that examination?

7 A. I think he should have investigated the problem in more  
8 detail by the tests which we've already discussed.

9 Q. So all you're saying is that which you have hoped or  
10 would have liked to have done earlier, it certainly  
11 should have happened now?

12 A. Yes.

13 Q. And can we turn to the fluid management point? Because  
14 at this stage Claire has been on IV fluids, the same  
15 type of fluid, the same rate of administration --

16 A. Yes.

17 Q. -- since about 8 or so of the previous evening. And so  
18 far as we can understand it from the evidence, there has  
19 been no actual review of that. What has happened  
20 is that they have simply carried on what had been  
21 initially prescribed on the evening of the 21st. Do you  
22 think that in amongst the other things that you are  
23 suggesting that Dr Webb could or should have done after  
24 this first examination, that he should have reviewed her  
25 fluids?



1 A. I think he should have been aware of the potential  
2 problem of low-solute fluids in this situation. It's  
3 difficult for me to be sure, reading his account, as to  
4 whether this had passed him by or whether it had been  
5 something that he was sort of aware of vaguely, but not  
6 really very sure of.

7 Q. And if he was to provide any guidance, what is it that  
8 that would involve? For example, if we pull up the  
9 concluding part of his note, which is his suggestions,  
10 that's at 090-022-054. So you see the suggestion to  
11 start on IV phenytoin, and he has the prescription for  
12 that to be calculated by the SHO. Then he says:

13 "Hourly neurological observations."

14 Then he says:

15 "CT scan if she doesn't wake up tomorrow."

16 Leaving aside the fact that you said there should  
17 have been an EEG, there should have been a CT scan, and  
18 that her electrolytes should have been tested, but if  
19 one focuses on her fluid management, as he is now making  
20 suggestions for what people should, do you think there  
21 is any guidance that he could have given or any  
22 suggestion he could or should have made in relation to  
23 her fluid management?

24 A. Well, yes, he could have reduced the amount of fluid  
25 that was going in, he could have raised the level of

1 sodium, but really the primary test of doing the sodium  
2 level is paramount, really.

3 THE CHAIRMAN: Which emphasises the need for a blood test?

4 A. Yes, it's as simple as that.

5 MS ANYADIKE-DANES: I think you have suggested that he  
6 should have prescribed a blood test and, in fact,  
7 I think you think that should have happened first thing  
8 in the morning. But in terms of alerting, as  
9 a neurologist, people to the potential dangers that  
10 there might be if her fluid management wasn't paid very  
11 careful attention to, is that something that he should  
12 have reflected in his suggestions list? Speaking as  
13 a neurologist, I mean.

14 A. Well, yes, he should have alerted people to the need not  
15 to give anticonvulsants, which were what were planned,  
16 until he'd satisfied himself as to where he was, and it  
17 should be within his field to at least know about the  
18 dangers of low sodium levels and to have some method of  
19 managing them.

20 Q. It may be that that kind of alerting people to the  
21 potential dangers or to what you should keep an eye out  
22 for may be better done if you have actually got somebody  
23 there to have that discussion. Leaving aside that,  
24 because it doesn't seem as if he did have that, how  
25 important do you think it might have been that he

1 included some sort of warning note about it?

2 A. I think he does later sort of mention about this in his  
3 account of the -- I think it's his witness statement.  
4 So he obviously is partly aware of this, but it doesn't,  
5 I think, appear here.

6 Q. Do you think that it was part of his role and  
7 responsibility to provide that cautionary note or  
8 warning even though his view is that he was simply being  
9 brought in to give some discrete neurological opinion?

10 A. Yes, I do think he has that responsibility because this  
11 is a particular feature of neurological conditions, and  
12 therefore if you don't know about it, then you can't be  
13 sure that anybody else will.

14 Q. And if you, as the paediatric neurologist brought in to  
15 give that opinion were aware that the child's consultant  
16 paediatrician wasn't about -- you may not have known  
17 that she couldn't have been contacted, but certainly  
18 wasn't there -- and hadn't seen the child, does it  
19 change at all what you think your responsibilities are  
20 when you examine the child and make suggestions for  
21 their treatment?

22 A. Well, yes, but I think you'd be, I'm afraid, just doing  
23 the same set of things that you've been trying to do and  
24 failing to do, and that is the three tests which we  
25 think were necessary.

1 Q. So the fact that the child's consultant paediatrician  
2 doesn't seem to be readily available, if I understand  
3 you correctly, doesn't actually change what you think  
4 the consultant neurologist's responsibilities and  
5 obligations are in that situation?

6 A. No, not exactly, but it does mean that the paediatrician  
7 who's in charge of this patient, that she's not there  
8 for discussion and for putting the alternative points of  
9 view that may exist.

10 Q. And if you were aware of the fact that the paediatric  
11 registrar wasn't there during the afternoon and so the  
12 only doctors who were there were relatively junior SHOs,  
13 what's the implication of that?

14 A. I think Dr Sands' view of the severity of the condition  
15 really required that this was either properly handled in  
16 terms of being found to be a serious problem to get on  
17 with, or that it could be relieved relatively easily,  
18 which of course it wasn't.

19 Q. Do you think that a stage had been reached where  
20 a decision or a transfer to paediatric intensive care  
21 could have been considered?

22 A. I think it's quite likely that a transfer to paediatric  
23 intensive care should have occurred earlier.

24 Q. Sorry, what do you mean by "earlier"?

25 A. Pardon?

1 Q. What do you mean by earlier? Before 2 o'clock in the  
2 afternoon?

3 A. No, no, I don't mean that, no. I think after that time  
4 if, of course, she hadn't had an appropriate response to  
5 treatment with the drugs that she needed. You see, the  
6 problem is that the most potent method of reducing  
7 intracranial pressure in children rapidly is to  
8 hyperventilate them, and that takes their pressure down  
9 usually very readily. And that doesn't require that you  
10 have abnormally high levels, although hers were a bit  
11 high, it requires that you're actually taking it down  
12 physically in order to do that.

13 THE CHAIRMAN: Does that require you to be in intensive  
14 care?

15 A. Yes, ventilation requires intensive care.

16 MS ANYADIKE-DANES: If -- sorry.

17 A. It's not always that intensive care doctors understand  
18 this point.

19 Q. When you said if you thought or should at least have  
20 been considering that she had raised intracranial  
21 pressure and that could be addressed by  
22 hyperventilation, is that really to change the balance  
23 between the gases in her system?

24 A. That's right. You'd do it after you'd reduced the  
25 fluids and you'd given a diuretic. So you would do it

1 in a particular order.

2 THE CHAIRMAN: I think the initial question here was about  
3 considering moving Claire into intensive care. Do I  
4 understand your answer to be that that should have  
5 occurred earlier than it did, but you're not saying that  
6 it should have occurred at 2 pm when Dr Webb saw her?

7 A. No, I think she could have been managed probably in the  
8 ordinary ward if she'd been given the right treatment.  
9 Then she might have required going to intensive care or  
10 not, depending on how she was.

11 MS ANYADIKE-DANES: If she were going to be managed on the  
12 ordinary ward, is there any specific instruction that  
13 would have to be given to the junior doctors or the  
14 nurses? Is there any better level of understanding they  
15 might have had to have about the condition or its  
16 implications?

17 A. They were then doing hourly Glasgow Coma Scale scores  
18 and they were, I think, observing her. The problem was  
19 they were looking for sort of seizure activity or  
20 near-seizure activity rather than trying to manage  
21 raised pressure.

22 Q. And if they were trying to manage raised pressure,  
23 because that's what Dr Webb might have thought was the  
24 problem, how do you do that?

25 A. Well, you're looking for signs of the extensor attacks

1 and the eyes rolling up for features which might suggest  
2 that. Because everything doesn't always work according  
3 to plan, and sometimes the child will get a bit worse  
4 before they get a bit better.

5 Q. And does that mean that it would have to be explained to  
6 the junior doctor and particularly the nurses who were  
7 carrying out the hourly observations that that's what  
8 they should be looking for?

9 A. That's right, yes.

10 Q. And who should have had the responsibility to do that?

11 A. Oh, I think it would be a combination of nurse and  
12 either consultant or registrar, depending on who was  
13 available.

14 Q. I meant: who should have had the responsibility of  
15 making sure that the nurses understood that's what they  
16 should have been looking for?

17 A. I think it should be a consultant or a registrar.

18 Q. And if the only consultant about is Dr Webb, does that  
19 mean that even though he's not the child's named  
20 consultant, it would fall to him to explain that to the  
21 nurses?

22 A. I fear it would.

23 Q. If that's what, as you say, he should have done or  
24 somebody should have done, is that something that should  
25 have been recorded in her medical notes and records?

1 A. Yes, indeed.

2 THE CHAIRMAN: It all becomes a very unhappy mess during  
3 that Tuesday afternoon, professor, doesn't it?

4 A. Yes, it does.

5 THE CHAIRMAN: Dr Webb comes along, you say he's doing the  
6 right thing, he comes back more than once, he's doing  
7 the best he can, but you think he's on the wrong track?

8 A. Yes.

9 THE CHAIRMAN: Dr Sands, the registrar, has been there,  
10 there's a major question mark about whether he's back  
11 during the afternoon and a major question mark about  
12 whether the nurses and the junior doctors really  
13 understand what's going on.

14 A. I think it's very difficult for them because they've not  
15 had a lead, really.

16 THE CHAIRMAN: As the afternoon goes on, Claire's condition  
17 only gets worse.

18 A. Yes.

19 THE CHAIRMAN: And it's not picked up, it's not really  
20 picked up by anybody who's there, and Dr Webb is clearly  
21 working hard, doing the best he can, but on an approach  
22 which you think is flawed, and the drug administration,  
23 to some degree, actually makes it a bit worse.

24 A. It's possible, yes, quite possible. The main point  
25 being that it's diverted your attention whilst it's all



1           being done on to some other line of action rather than  
2           thinking about --

3   THE CHAIRMAN:   To the exclusion --

4   A.   That's right.   That's the way these things tend to get  
5           managed and if you're really concentrating on one thing,  
6           you're tending to put the other on one side.

7   THE CHAIRMAN:   Okay.

8   MS ANYADIKE-DANES:   Thank you.

9           There is an administration of the rectal diazepam.  
10          That happens that afternoon, 12 noon, I mean.   That's  
11          something that Dr Sands has thought might be  
12          appropriate.   In fact, even before that, there was some  
13          indication that if there were seizures, that that would  
14          be appropriate.   So it would appear from the discussion  
15          between Dr Sands and Dr Webb that Dr Webb agrees it's  
16          appropriate, and so it's administered.

17          When Dr Webb sees her, he is under the impression  
18          that there has been some improvement, if I can put it  
19          that way, as a result of the administration of rectal  
20          diazepam.   What is the significance of that in terms of  
21          trying to work out what is wrong with Claire and how  
22          best to treat her?

23   A.   Well, I would say it wasn't dramatic.   In other words,  
24          she didn't drop off to sleep and wake up and was talking  
25          again.   So it wasn't as clear as that.   I think it was

1           just an improvement in a sort of level of  
2           responsiveness, which I think means that it didn't  
3           really help a whole lot.

4    Q.   I think Dr Webb interpreted that as indicating that he  
5           might be on the right tracks with anticonvulsants.  It  
6           will be a matter for him to give his evidence, but  
7           that's what I thought he was saying in his witness  
8           statements, as a result of which further anticonvulsants  
9           were given.  If that's what he thought, would that be  
10          a valid conclusion to reach so far as you're concerned?

11   A.   Not, I think, in the context of having a sodium that's  
12          not been done that morning, you're almost ready for  
13          another sodium to be done in the afternoon, and no EEG  
14          or CT scan.  I think that's the problem.  It's in that  
15          context.  It doesn't really make sense.

16   Q.   There's no evidence that she was bradycardic, is there?

17   A.   No.

18   Q.   Is that significant?

19   A.   It's a very lateish stage, very often, in cerebral  
20          oedema.

21   Q.   How would that manifest itself if she had been?

22   A.   By her heart slowing.

23   Q.   Can you have quite significant cerebral oedema in the  
24          absence of that?

25   A.   Yes, you can.

1 Q. Potentially life-threatening cerebral oedema in the  
2 absence of that?

3 A. Yes, you can. And she did.

4 Q. One of the things that both doctors wanted to see, both  
5 Dr Sands and Dr Webb, were Claire's Ulster Hospital  
6 notes. It seems that they were faxed through at about  
7 3.15 on the Tuesday afternoon.

8 A. Yes.

9 Q. They were the two most recent letters in relation to her  
10 treatment. Have you seen those?

11 A. Yes, I think I have.

12 Q. Well, let's just get them.

13 A. The ones about her talking and walking, but having  
14 a somewhat asymmetric gait.

15 Q. There are two of them. The earliest is 30 May 1996. We  
16 don't need to pull it up, but just for reference's sake  
17 it's 090-013-018, and the second is 1 August 1996, which  
18 relates to a clinic she attended, and that's  
19 090-013-016. It's really dealing with her learning  
20 disabilities and her attentional disabilities. Have you  
21 seen those?

22 A. Yes, I have.

23 Q. If you got those -- and that seems to be all that he  
24 received at that stage -- what would that add to the  
25 diagnosis that was developing or the diagnosis that you

1           might have developed?

2    A.   Well, I think it makes it clear that she had speech,  
3           that she was walking, that she had some favouring,  
4           I think, of the left side so that she was not walking  
5           quite so well on the right, and pointed out that she was  
6           somewhat hyperactive and difficult to manage in those  
7           terms.  So it gave a reasonable sort of picture of her  
8           really not being in quite the state that she finished up  
9           here, in this acute illness.

10   Q.   And so if you had been in Dr Webb's position and  
11           received that, which he would have got some time after  
12           your first examination and before your examination at  
13           5 o'clock, what difference would that have made to  
14           anything that you think Dr Webb should have been doing?

15   A.   I think it would have indicated that she had an acute  
16           neurological condition, which was in addition to her  
17           previous problems, and that required explanation.

18   Q.   Does that mean she might have something completely  
19           independent of her previous problems?

20   A.   Indeed.  Because it's hard to see what would actually  
21           follow that three years later or more.

22   Q.   Yes.  Over that afternoon, as the chairman has  
23           indicated, she did receive different anticonvulsants, if  
24           I can put it that way.

25   A.   Yes, indeed.

1 Q. If I can pull this timeline up, for no other reason that  
2 they're all there and one can see all the observations  
3 in a snapshot. 310-001-001. Firstly, you can see the  
4 rectal diazepam. There's a time series along the  
5 bottom. You can see the phenytoin is then administered  
6 in response to Dr Webb's examination at 2 o'clock.  
7 We'll come to that in a minute. Then you see, a bit  
8 after 3 o'clock -- in fact it's at 3.25 or  
9 thereabouts -- that the midazolam is administered. I'm  
10 just looking at all the things that happen just before  
11 he comes back at 5 o'clock for a re-examination. Those  
12 are the three sets of medication that are administered.  
13 You can see that blue line going up, creeping up towards  
14 "9" on the far right-hand side, that's the fluids. And  
15 you can see the Glasgow Coma Scales there indicated,  
16 both modified and as Dr Webb has indicated.

17 A. Yes.

18 Q. You can also see the seizure there marked at the same  
19 time that the midazolam was administered. Then I think  
20 there's one episode of teeth tightening because that  
21 happened at 4.30. So that's what has happened.  
22 In addition, I think there's been the IV midazolam  
23 infusion. That's what's happened before Dr Webb comes  
24 back at 5 o'clock to see her.

25 I want to ask you first about the phenytoin. So far

1 as we can see from all the evidence, none of the tests  
2 that you have suggested are carried out and the  
3 phenytoin is therefore administered, it's 635, which was  
4 an error. Just on the matter of incorrect arithmetic,  
5 it should have been 432 --

6 A. Yes.

7 Q. -- which in itself might be towards the top end of the  
8 amount, but anyway, it was significantly more than  
9 Dr Webb had intended it should be.

10 A. Yes.

11 Q. And then there is the midazolam.

12 THE CHAIRMAN: If you want to ask first about the phenytoin,  
13 let's ask about the phenytoin and stick to that.

14 You've given your view on this, professor, at page 9  
15 of your statement.

16 A. Yes.

17 THE CHAIRMAN: 232-002-009.

18 A. Yes.

19 MS ANYADIKE-DANES: I think your view is that you didn't  
20 think it was a huge overdose or that it was likely to  
21 have materially altered the outcome or have a major  
22 effect on the diagnosis or management. But I think you  
23 do conclude or note that it would have reduced her level  
24 of consciousness temporarily.

25 A. Yes.

1 Q. The inquiry has engaged Dr Aronson to talk about the  
2 medication specifically, but from your point of view --  
3 specifically because this is Dr Webb prescribing this  
4 medication and would therefore be interpreting, if I can  
5 put it that way, the results or Claire's presentation as  
6 a result of it. So, so far as you're aware, what do you  
7 think would be the effect of giving this, as you put it,  
8 not a very large or not a huge overdose on top of the  
9 diazepam, the effects of which may still be in her  
10 system?

11 A. I don't think that it will probably make a major  
12 difference. The levels at which you tend to go off the  
13 scale on this drug are not linear so that it will have  
14 a higher ... At the end, it will actually rise quite  
15 sharply, but it seems to have been tolerated reasonably.  
16 So probably not much effect.

17 Q. Just so that we're clear, what is the phenytoin for?

18 A. It's an anticonvulsant.

19 Q. Why not give more diazepam?

20 A. Well, phenytoin is what was then certainly -- and still  
21 probably is -- the most regularly used drug for giving  
22 continuously.

23 Q. For giving continuously?

24 A. Yes, so it's very -- thought to be very effective.

25 Q. I think your view is that it shouldn't have been given

1 at all before the tests that you have indicated were  
2 carried out.

3 A. Yes.

4 Q. Then after the phenytoin, the midazolam is given --

5 MR COUNSELL: I wonder if Professor Neville could be asked  
6 to explain what he meant when he just now said that "it  
7 seems to have been tolerated reasonably" and what the  
8 evidence to support that is.

9 THE CHAIRMAN: Thank you. Did you hear the question?

10 A. Yes, I did. There wasn't a major cardiac side effect to  
11 this, and there can, of course, be significant cardiac  
12 effects. That means, I think, that she was able to  
13 manage that dose satisfactorily.

14 MS ANYADIKE-DANES: But could it have been having an effect  
15 short of producing a major cardiac effect?

16 A. No, I think you either produce an effect or you don't.

17 Q. I understand. Then the midazolam is given at 3.25.

18 A. Yes.

19 Q. The record of seizure attacks shows that she had the  
20 seizure that the mother witnessed at 3.25. The mother's  
21 evidence is that she's pretty clear that it was that  
22 time. Is it possible for the combined effect of the  
23 rectal diazepam, the phenytoin and the midazolam to have  
24 in any way contributed to that seizure?

25 A. It is possible particularly that midazolam can excite



1 seizures of a different sort. I think it's much more  
2 likely that these were due to low sodium levels or they  
3 were the effect of hyperextension attacks, which were  
4 not seizures.

5 Q. Just so that we put it up as we're talking about it,  
6 it's 090-042-144, that's the record of attacks. It's  
7 the first entry. The mother described it as something  
8 that she hadn't seen before in connection with Claire  
9 or, for that matter, anybody else. She says it lasted  
10 about five minutes, was very strong, and she described  
11 how Claire's body went in relation to it and that she  
12 was sleepy afterwards.

13 A. Yes.

14 Q. It may be that we can never know to what extent --

15 A. I think that's right.

16 Q. -- any of these combinations of things could have given  
17 rise to it.

18 A. That's right.

19 Q. But is it possible it played a part?

20 A. Is it possible to?

21 Q. That the combined effect of all that medication together  
22 with potentially, although we don't know, a falling  
23 sodium level -- is it possible that all those things  
24 combined --

25 A. With the whole lot, I think it's very likely that some

1           seizures would occur particularly with a drop in sodium.

2   THE CHAIRMAN:  Sorry, your focus on this for the seizures is

3           the drop in sodium --

4   A.  Yes.

5   THE CHAIRMAN:  -- it's not these drugs?

6   A.  It's much more likely to be the drop in sodium.

7   THE CHAIRMAN:  Thank you.

8   MS ANYADIKE-DANES:  Sorry to press you, but I want to be

9           clear on it because we're going to put some of your

10          evidence to others.  Is it possible that the combined

11          effect of these three medications that I've told you

12          in the amount that they were -- is it possible that they

13          themselves contributed to --

14  A.  Yes, it is possible.

15  MR COUNSELL:  Again, I'm sorry to interrupt.  I wonder if

16          Professor Neville could be asked to deal with timing.

17          Because as I understand it, the evidence is that the

18          seizure is recorded as being at 3.25 and the

19          prescription for midazolam is at the same time, 3.25.

20          I wonder whether Professor Neville is able to give

21          a view as to how long it would be before a dose of

22          midazolam could have any effect at all.

23  THE CHAIRMAN:  Could it have an instant effect?

24  MR COUNSELL:  Exactly.

25  A.  Well, what are we being told now?  That the ...

1 THE CHAIRMAN: Insofar as we can rely on the timings in the  
2 notes, midazolam is recorded as being given at 3.25 and  
3 there's a seizure at about 3.25 --

4 A. -- 3.10 and 3.25 [OVERSPEAKING] --

5 THE CHAIRMAN: I think for that first attack or seizure,  
6 however it's described, Mrs Roberts said it was 3.25.  
7 She has written "3.25", that is her writing. The 3.10  
8 is not her writing. The question from Mr Counsell  
9 was: in that scenario, if that was at the same time as  
10 Claire got a dose of midazolam, what is the likelihood  
11 of that having provoked an instant response by way of  
12 a seizure?

13 A. Remembering that I think it's more likely that it's  
14 caused by the sodium and that ... I think it is  
15 possible that that could have happened in a quarter of  
16 an hour, but not, I think, terribly likely.

17 THE CHAIRMAN: Okay. Mr Fortune? What's your scenario?

18 MR FORTUNE: Insofar as the stat dose of midazolam is  
19 concerned, on which figure is Professor Neville basing  
20 his answer? 12 milligrams or 120?

21 A. Oh, 12.

22 THE CHAIRMAN: Your report at page 10 makes it clear you  
23 don't believe for a --

24 A. I don't think it's likely she would have been given  
25 that, otherwise she would have been much more rapidly

1           into intensive care.

2   THE CHAIRMAN:  Yes, there would have been a different, but  
3           far quicker, disastrous outcome?

4   A.  Yes.

5   MS ANYADIKE-DANES:  Just for the sake of completeness, and  
6           I accept that you don't think that she was given that  
7           for one minute but, if she were, in terms of a seizure,  
8           what might be the likely effect?

9   A.  If she was given 120?

10  Q.  Yes.

11  A.  She would have become deeply unconscious and stopped  
12       breathing, I suspect.

13  Q.  And how quickly would that have happened?

14  A.  I think within about 15 minutes, 10 to 15 minutes.

15  Q.  If we leave the 120 out of it and concern ourselves with  
16       the 12, does it make any difference to the response, the  
17       drugs that she may already have in her system, or have  
18       you answered simply for how quickly she might have  
19       responded to the midazolam on its own?

20  A.  I'm answering on midazolam on its own.

21  Q.  If you take into consideration whatever might be the  
22       effects of the diazepam, which might still be in her  
23       system, and the phenytoin, which she received at 2.45 or  
24       thereabouts -- so she's got her diazepam at 12.35, her  
25       phenytoin at 2.45.  If she then got the 12 milligrams of

1 midazolam at 3.25, if you're looking at the cumulative  
2 effect, does that change your view as to how quickly she  
3 might have responded to the midazolam?

4 A. Not how fast. She might have ... I don't think it's  
5 likely that she would have changed very much in those  
6 terms. I think she probably would have become rather  
7 sleepy anyway in an ordinary sort of way.

8 MR QUINN: Mr Chairman, before we leave this point, and time  
9 is moving on, perhaps you'd be kind enough to pull up  
10 232-002-016, which is page 16 of the professor's report.  
11 It's paragraph xx, "The overdose of 12 milligrams IV  
12 stat". Mr and Mrs Roberts would certainly like that  
13 paragraph explained, particularly the middle section  
14 about:

15 "It likely reduced her conscious level and therefore  
16 reduced her breathing and increased her PCO2."

17 That would seem to be the main issue of the  
18 midazolam in this expert witness's report and perhaps  
19 that could be dealt with for a few moments.

20 THE CHAIRMAN: Sure.

21 MR FORTUNE: Whilst Professor Neville is bearing that in  
22 mind, my learned friend keeps referring to "if there was  
23 any diazepam still in her system". Diazepam, of course,  
24 has a long half-life, as Professor Neville will no doubt  
25 explain, and it can remain in the system for certainly

1 up to one to two days. The source for that is  
2 Dr Aronson's report 237-002-008 at paragraph 2(c).

3 THE CHAIRMAN: Thank you.

4 MS ANYADIKE-DANES: That's correct.

5 MR GREEN: Sorry to throw my tuppence worth in: I note that  
6 the time of the administration of the rectal diazepam  
7 has been variously described as 12 noon, 12.35 and  
8 12.30. It's actually 12.15 in the notes. The reference  
9 is 090-026-075.

10 THE CHAIRMAN: Thank you.

11 MS ANYADIKE-DANES: Thank you very much.

12 THE CHAIRMAN: Professor, we're going to have to finish your  
13 evidence for this afternoon in the next few minutes, but  
14 where Mr Quinn took us to on page 16 -- the point about  
15 the midazolam -- you say clearly at page 10 in your  
16 report that you don't believe that Claire got  
17 120 milligrams, but you do say at page 16 what you think  
18 the effect of getting 12 milligrams would have been in  
19 contributing to the fall and the readings in the Glasgow  
20 Coma Scale, that it was still a dose that -- you don't  
21 think that she needed this dose at all, that it was  
22 a big dose and it probably reduced her conscious level,  
23 reduced her breathing and increased her PCO2 and  
24 therefore exacerbated her condition.

25 I think you've indicated that you don't think that

1 the phenytoin is likely to have made a major difference.  
2 Do we read this paragraph as indicating that you do  
3 think that the midazolam did make some difference and it  
4 was a difference for the worse?

5 A. Yes, I think it could have done because it's a much more  
6 sedative drug.

7 MS ANYADIKE-DANES: Can I just ask you about the increase in  
8 her PCO<sub>2</sub>? Is that an increase that can have any bearing  
9 on her intracranial pressure?

10 A. Indeed. So if it rises to, say, 70 to 80 micromoles per  
11 litre, then it will have a consummate increase in  
12 intracranial pressure. If you then hyperventilate,  
13 you will bring it down.

14 Q. So it may have been that Claire's intracranial pressure  
15 could have been affected by falling serum sodium levels?

16 A. Yes.

17 Q. Because that could have been prompted a developing  
18 cerebral oedema?

19 A. Yes.

20 Q. And if at the same time she's received an overdose in  
21 terms of 12 milligrams of the stat dose of midazolam and  
22 then has gone on to an IV midazolam, so she's continuing  
23 to have midazolam in her system, if I can put it that  
24 way, that of itself could have increased her PCO<sub>2</sub>, which  
25 also has an effect on her intracranial pressure?

1 A. Yes.

2 Q. So the combined effect might have been to hasten the  
3 rise in intracranial pressure that could have arisen  
4 from her falling serum sodium levels?

5 A. Yes, that's right.

6 Q. Thank you.

7 THE CHAIRMAN: Is that a point to stop?

8 MS ANYADIKE-DANES: I think we might.

9 THE CHAIRMAN: Professor, we're going to have to stop there  
10 to allow you to catch your plane. We're very grateful  
11 to you for coming today and for coming back again on  
12 Monday. In order to make sure the professor's evidence  
13 finishes on Monday morning, I emphasise the need for any  
14 additional questions or issues to be raised with  
15 Ms Anyadike-Danes, preferably over the next 24 hours if  
16 that's at all possible.

17 We'll now take a break for 10 minutes and resume  
18 with Mr and Mrs Roberts at 4.05.

19 (3.55 pm)

20 (A short break)

21 (4.05 pm)

22 MR ALAN ROBERTS (continued)

23 MRS MARGARET JENNIFER ROBERTS (continued)

24 Questions from MS ANYADIKE-DANES (continued)

25 MS ANYADIKE-DANES: Good afternoon.



1           I have been asked to take you back to one point  
2           before we go back to actually where we were. The one  
3           point I want to take you back to -- and I am sorry to  
4           have to do it -- is when you were leaving. Mrs Roberts,  
5           you said you were the one who went to the nurses'  
6           station, popped your head around to say she seems to be  
7           settled and sleeping now, we're off.

8   MRS ROBERTS: I did, yes.

9   Q. When you were doing that, can you remember if it was  
10          a nurses' handover in the sense that there were a lot of  
11          nurses there or not?

12   MRS ROBERTS: I wouldn't have been sure what was going on,  
13          but there was more than two, possibly three nurses.

14   Q. It will be for others to say what that means, but that's  
15          what you remember?

16   MRS ROBERTS: Yes.

17   Q. Thank you very much indeed.

18                 Where I left it with you was, I know, a distressing  
19                 place, but you were describing to me the conversation  
20                 that you were having principally with Dr Steen, I think  
21                 you said. Dr Webb you knew was there. I don't think  
22                 either of you particularly remember his contribution to  
23                 that, but you knew he was there and you weren't really  
24                 sure whether there was a nurse there. I think that  
25                 really wasn't what you were taking on at the time. So

1           you were trying to absorb what Dr Steen was telling you,  
2           is that fair enough, in the counselling room?

3   MRS ROBERTS:   Yes.

4   MR ROBERTS:   Yes.

5   Q.   I think we had got as far -- somebody will correct me if  
6           I'm wrong -- she had told you about the build-up of  
7           fluid, she had told you it was a viral thing, and you  
8           think she mentioned an enterovirus that had gone into  
9           her brain and that had had been the reason why her brain  
10          had swollen in that way and really there was nothing  
11          that could be done.

12   MRS ROBERTS:   That's right.

13   Q.   You, I think, Mr Roberts, had asked her whether there  
14          was anything that could be done about the build-up of  
15          fluid and I think I put to you, "Maybe drain it off or  
16          something; is that the sort of thing you had in mind?",  
17          and I think you had said that was the sort of thing you  
18          had in mind: if there's too much, is there not a way of  
19          getting rid of it?

20                You had been told, no, there wasn't anything that  
21          could be done at that stage and what's more, everything  
22          that could have been done for Claire had been done.  And  
23          then I think you were saying that there was an  
24          explanation of what the brainstem tests would be, and  
25          that that was the next stage that they would go to.

1           Is that roughly, as you recall, where we had left  
2           matters?

3   MR ROBERTS:   Yes, that's correct.

4   Q.   And did she explain to you what the brainstem test was?

5   MR ROBERTS:   No, I don't think in any great detail.  I think  
6           it was just explained that a series of tests had to be  
7           carried out.

8   Q.   Just that they had to do that?

9   MR ROBERTS:   Yes, and they would be repeated 12 hours later.

10  Q.   Did she give you her expectation in relation to what the  
11       results of those might be?

12  MR ROBERTS:   No, it was just they had to carry out the test  
13       at that time.

14  Q.   Were you present when they did that?  I think the first  
15       one was done at 6 o'clock in the morning.

16  MR ROBERTS:   Oh yes, we were in PICU at that time.

17  Q.   Did you stay throughout that time?

18  MR ROBERTS:   Yes.

19  MRS ROBERTS:   Yes.

20  Q.   I think the second one was done at about 6.25 in the  
21       evening.

22  MR ROBERTS:   Yes.

23  Q.   When that happened and she gave you the results, can you  
24       remember any discussion about the coroner or  
25       a post-mortem or anything like that?

1 MR ROBERTS: Well, what happened after that was --

2 THE CHAIRMAN: Sorry, are we talking then about the

3 Wednesday morning after 6 or the Wednesday night after

4 6.30?

5 MR ROBERTS: We're talking Wednesday evening, around 6.30.

6 THE CHAIRMAN: Thank you.

7 MS ANYADIKE-DANES: That's my fault, I should have said.

8 Did anything happen between the 6 o'clock and the 6.30,

9 6 am and 6.30 pm? Did anything happen apart from --

10 MR ROBERTS: Discussions you mean?

11 Q. Apart from you being with Claire.

12 MR ROBERTS: We stayed with Claire and then we contacted her

13 family and the rest of the family came up. Then we all

14 spent time with Claire.

15 Q. I should have asked you: did any other doctor come and

16 talk to you during that time that you can remember?

17 MR ROBERTS: No, I don't recall a doctor speaking to us at

18 that time.

19 Q. Did any nurse come to talk to you?

20 MR ROBERTS: We would have spoken to the nurse in PICU.

21 I think there were two nurses on in PICU, so we

22 definitely had a conversation with the nurse in PICU.

23 Claire at that time was moved into a side cubicle,

24 a separate area, and the family obviously were around.

25 THE CHAIRMAN: Let's move on to where you were at 6.30 pm

1           when you did have the next conversation, I think.

2   MS ANYADIKE-DANES:  Sorry, just so that I'm clear about it:

3           does that mean that although you may have spoken to the

4           PICU nurses, that there was no further explanation of

5           what had happened to Claire, how she had come to the

6           stage that she was?

7   MR ROBERTS:  No, no.

8   Q.  Thank you.  Then if we move to 6.25.  The second one has

9           been completed and what happens after that?

10  MR ROBERTS:  At 6.30, it was explained that the second

11          brainstem test had been completed.  And then obviously

12          we had to make a decision to discontinue Claire's life

13          support.

14  Q.  Who is speaking to you at that stage in terms of doctor?

15  MR ROBERTS:  That's Dr Steen.

16  Q.  What does she say that you can remember?

17  MR ROBERTS:  Just basically what I've said there, that the

18          second brainstem test has been carried out.  The

19          ventilator is keeping Claire alive, keeping her

20          breathing, and there was really nothing more that anyone

21          could do.  We had to make a decision then to disconnect

22          the life support.

23  Q.  Yes.  At what stage do you remember, if you do, there

24          being a discussion about a post-mortem, an inquest,

25          anything of that sort?

1 MR ROBERTS: We were brought in, it must have been around  
2 6.30, and we were with Claire for, say, 10 or 15  
3 minutes, and the life support was discontinued then. So  
4 that was around 6.45. And following that, then Dr Steen  
5 brought my wife and myself into a separate room within  
6 PICU. That's where we had another discussion with  
7 Dr Steen.

8 THE CHAIRMAN: Just the three of you, as far as you  
9 remember?

10 MR ROBERTS: Just the three of us, yes.

11 MS ANYADIKE-DANES: And what's said?

12 MR ROBERTS: Dr Steen explained to us -- well, obviously,  
13 offered her condolences and discussed what had happened  
14 and we then discussed what the next process was.  
15 We were asking Dr Steen what had to be done, where do we  
16 go from here, what do we do?

17 Q. And how did she answer you?

18 MR ROBERTS: Dr Steen advised us that there would be no need  
19 for an inquest, but the hospital would need to carry out  
20 a limited post-mortem on Claire's brain. The intention  
21 behind that was to try to identify the virus that had  
22 been explained to us previously, the virus that had  
23 caused Claire's brain to swell.

24 Q. When you asked her about what happens now, who raised  
25 the issue, if you can remember, about any kind of

1 investigation to find out about an inquest? Was that  
2 you or was that her coming back and telling you that  
3 that wouldn't be necessary?

4 MR ROBERTS: No, we obviously were looking for guidance and  
5 advice and we depended on Dr Steen for that.

6 Q. So it came from her that that wasn't something that  
7 would be the next step, that the next step was to carry  
8 out a brain-only autopsy to find out, if they could,  
9 what that virus was?

10 MR ROBERTS: Yes.

11 MRS ROBERTS: Yes.

12 MR ROBERTS: And we agreed to that because that was  
13 obviously -- we needed that information. We just  
14 couldn't leave it there. That was the cause of death as  
15 explained to us. So it was important for us to identify  
16 the virus responsible.

17 Q. Yes.

18 MR ROBERTS: I have to say at that time, obviously, there  
19 was no talk about fluid management or hyponatraemia. It  
20 was solely centred around the cause, the cause was  
21 a virus, and the next stage then was a brain-only  
22 post-mortem to identify the virus.

23 Q. Forgive me if I've asked this already before, but  
24 because it was something that Dr Steen said -- Dr Steen  
25 says she can't actually remember any of this, but she

1 was giving her evidence as to what she would have  
2 thought she would have done or what she would have  
3 wanted to have done, if I can put it in those terms.  
4 And her view was that another benefit, if I can put it  
5 that way, to carrying out a brain-only autopsy was that  
6 you might be able to have some understanding as to what  
7 had caused Claire's learning difficulties, that that  
8 might shine some light on that.

9 Do you remember anything like that?

10 MR ROBERTS: No, there was no discussion around that. The  
11 discussion was around identifying the virus responsible  
12 for the brain swelling.

13 Q. When you say there was no discussion about that, if she  
14 had raised that with you, is that something you think  
15 you would remember?

16 MRS ROBERTS: Yes.

17 MR ROBERTS: Yes, I do believe so. I did draft out a letter  
18 later through the process of events, and that was one of  
19 the sort of outstanding issues that I did have, that now  
20 that we had the post-mortem results through, we still  
21 were unable to identify a virus, and we got, I think it  
22 was a letter from Dr Webb, and then the letter from  
23 Dr Webb did identify the sort of subject that you're  
24 referring to. That sort of refreshed questions in my  
25 mind that maybe it was an area we could explore, but it



1           certainly wasn't done on 23 October.

2   Q.   I think that's sort of a draft letter that you might  
3           have appended to one of your witness statements.

4   MR ROBERTS:   That's correct, yes.

5   Q.   I will see if I can find that now that you mention it.  
6           I think it's your first witness statement and I think it  
7           goes along with the diary.

8   THE CHAIRMAN:   253/1, page 20 and 21.

9   MS ANYADIKE-DANES:   Perhaps we can pull those two pages up.  
10           Then if we see down, on this first page, you have (a),  
11           (b), (c), and (d), and then you see at (d):

12                    "Is it possible to know more about Claire's  
13           developmental brain, ie when this ..."

14   MR ROBERTS:   "Brain abnormality" above that.

15   Q.   Can you read for us what goes above that?

16   MR ROBERTS:   I was saying sort of ... Foetus 4 to 6 months,  
17           what the causes could be, what Claire's learning  
18           potential was, and that was it, really.

19   Q.   And then, significantly for you, at (f):

20                    "How big a factor was Claire's brain abnormality in  
21           her ability to fight the infection?"

22                    That's what you were told she had.

23   MR ROBERTS:   Yes.

24   Q.   You're wanting to know if that in any way compromised  
25           her ability to deal with that infection.

1 MR ROBERTS: Yes, yes.

2 Q. So if that had been mentioned, do you think that this  
3 letter might have been drafted slightly differently?

4 MR ROBERTS: I was only starting to raise the possibility  
5 there. That's when I received the letter from Dr Webb.  
6 And that's what raised my views on it and the  
7 possibility that that was an area that could be explored  
8 for at least some sort of answers for us.

9 THE CHAIRMAN: I think perhaps just one query is whether,  
10 when you asked that question at (d), "Is it possible to  
11 know more about Claire's developmental brain  
12 abnormality?", and so on, could that possibly have come  
13 about because that's what Dr Steen had suggested to you  
14 in October might be one side outcome or one extra  
15 outcome of the brain autopsy?

16 MR ROBERTS: No, I think I got -- I can't remember exactly  
17 the phrasing within Dr Webb's letter, but I would have  
18 got that possibly from Dr Webb's letter.

19 THE CHAIRMAN: Okay.

20 MS ANYADIKE-DANES: We can pull that up. It's 090-001-001.  
21 This is Dr Webb's letter to Mr and Mrs Roberts,  
22 21 March 1997. This is summarising the findings of the  
23 swelling of the brain with evidence of a developmental  
24 brain abnormality. Do you think that's where you got  
25 your expression "brain abnormality" from?

1 MR ROBERTS: Yes, that's similar to the wording I've used  
2 there, the developmental brain abnormality.

3 Q. After it talks about the clinical history and so on, it  
4 goes on to the last sentence to say:

5 "No other structural abnormality in the brain has  
6 been identified."

7 Is that therefore what's prompting your letter?

8 MR ROBERTS: Yes. I think that letter was dated 21 March.

9 Q. Yes.

10 MR ROBERTS: And I drafted my letter on 28 March.

11 Q. Yes. What I was asking you and what I think you were  
12 helping us with is that this comes in response to the  
13 letter that Dr Webb sends you, not following on, so far  
14 as you can help us, with any conversation that Dr Steen  
15 might have had with you. And if she had had that  
16 conversation indicating to you that the brain-only  
17 autopsy could have helped you with this, then you would  
18 have remembered that because it's clearly something you  
19 want to find out about, and maybe your correspondence  
20 might be framed slightly differently.

21 MR FORTUNE: In fact, can we have a look at the first page  
22 of the letter? Because the first paragraph reads in  
23 this way towards the end of it:

24 "We were grateful for the discussion we had with  
25 Dr Steen and yourself at the Royal on [query] Monday

1           3 March [query]. However, we find we are still asking  
2           ourselves questions, which I have noted below. We would  
3           be grateful for any further explanation."

4           And then we have (a), (b), et cetera. So it looks  
5           as though it's a combination of what was discussed and  
6           what is set out in Dr Webb's letter of 21 March 1997.

7           Maybe Mr and Mrs Roberts can help us there.

8   MR ROBERTS: Well, we would have had a discussion -- I think  
9           the original question was around on 23 October. Was it  
10          discussed with Dr Steen? This letter is drafted out  
11          after a meeting on 3 March 1997. So my letter's drafted  
12          on receiving Dr Webb's.

13   THE CHAIRMAN: What I was asking you was whether part of  
14          that letter might have been because inevitably you're  
15          thinking over everything that happened and might it have  
16          been that you asked the question at (d) because that's  
17          one of the things that Dr Steen had said might come out  
18          of Claire's brain being examined?

19   MR ROBERTS: Not on 23 October.

20   THE CHAIRMAN: Okay.

21   MS ANYADIKE-DANES: Just for the sake of completeness,  
22          Dr Webb writes to you, and I think Dr Steen writes to  
23          your GP. That letter is typed on 6 March, so maybe  
24          shortly after that it goes out. It's to be found at  
25          090-002-002. This is after the post-mortem results are

1 available and there you see in the second sentence:

2 "The cerebral tissue showed abnormal neuronal  
3 migration, a problem that occurs usually during the  
4 second trimester of pregnancy and would explain Claire's  
5 learning difficulties. Other changes are in keeping  
6 with a viral encephalomyelitis meningitis."

7 And then there's a reference to Dr Webb and herself  
8 having seen you.

9 So that's what comes out of it. The only issue  
10 really is whether that kind of information is something  
11 that was discussed with you as a benefit, if I can put  
12 it that way, of having such an autopsy carried out, that  
13 you might learn that kind of information. I think your  
14 evidence is you certainly don't remember that happening  
15 and I think your evidence further is that, if it had  
16 been said in that way, you would have remembered it.

17 MR ROBERTS: Yes.

18 MRS ROBERTS: Yes.

19 THE CHAIRMAN: Well, I understand from you both that you  
20 don't remember this being raised as a reason for the  
21 examination of Claire's brain. But do you remember it  
22 then being discussed at the meeting which you appear to  
23 have had in early March? Because there is a letter  
24 which apparently went to your GP, which does give some  
25 information about when Claire's difficulties might have

1           started. Did you know that before you got the papers  
2           for the inquiry?

3   MR ROBERTS:   Sorry?

4   THE CHAIRMAN: Did you know that this explanation had been  
5           given to your GP before you got the papers from the  
6           inquiry?

7   MR ROBERTS:   No, no.

8   THE CHAIRMAN: So while Dr Steen may have written that to  
9           your GP, that wasn't something which then went on to  
10          discuss with you?

11   MR ROBERTS:  No. The first time we saw that letter to the  
12          GP was through the inquiry's paperwork.

13   MRS ROBERTS:  Yes.

14   THE CHAIRMAN: Does that also mean then that you're as sure  
15          as you can be that it was not discussed at the meeting  
16          in early March, maybe 3 March?

17   MR ROBERTS:  I couldn't be 100 per cent sure on that date,  
18          but what I'm saying is that it wasn't discussed on the  
19          evening of 23 October.

20   THE CHAIRMAN: I understand that. I understand you're clear  
21          about that.

22   MR ROBERTS:  Mm-hm.

23   THE CHAIRMAN: Do you know whether it was then discussed --  
24          whatever the date was, let's not worry about the precise  
25          date -- in March?

1 MR ROBERTS: Yes, I couldn't be sure of that.

2 THE CHAIRMAN: Okay, thank you.

3 MR QUINN: Sir, the point here is that when Dr Steen  
4 discussed this on 23 October, she gave the Roberts that  
5 as a reason why she should do a brain autopsy, whereas  
6 it's a different point now being made on 3 March,  
7 whatever date the question mark is, it is not a reason  
8 because Dr Steen then knows the result and she frames  
9 the letter to the GP a few days after that. There's  
10 a difference in what's happening here. Dr Steen in her  
11 evidence said she asked them to consent to it being an  
12 autopsy because they might find a reason for Claire's  
13 problems.

14 THE CHAIRMAN: I understand that. What's then  
15 disappointing, even if Dr Steen's evidence was right  
16 about that being a reason for the autopsy, and  
17 explaining to Mr and Mrs Roberts that that might be  
18 a secondary effect of it, is that when that information  
19 did come through, Mr and Mrs Roberts weren't told,  
20 despite the fact that they appear to have met  
21 Dr Steen --

22 MR QUINN: Perhaps on Monday the 3rd.

23 THE CHAIRMAN: And despite the fact that that letter went to  
24 their GP.

25 MR QUINN: That's the point. Right.

1 MS ANYADIKE-DANES: Mr Chairman, I think it's further the  
2 point that there are two different letters written.  
3 I think this is what my learned friend was pointing  
4 out: the information that's contained in the letter that  
5 Dr Steen sends to the GP is not the same as the  
6 information that's contained in the letter that Dr Webb  
7 sends to the Roberts.

8 THE CHAIRMAN: That's why I asked the Roberts did they know  
9 about, but their answer is that they didn't know about  
10 it at all until the inquiry came.

11 MR QUINN: I'm obliged, Mr Chairman. I think also the point  
12 is that they never got a copy of the --

13 MS ANYADIKE-DANES: I'm just about to ask that.

14 Before the inquiry started, did you ever get a copy  
15 of the autopsy report?

16 MR ROBERTS: No, we didn't. We didn't ask for one. On the  
17 meeting of 3 March, Dr Steen did go through the autopsy  
18 report. I do recall asking Dr Steen for a more -- well,  
19 a breakdown of that, a more concise version of that, and  
20 I think that's what then prompted the letter from  
21 Dr Webb.

22 Q. Can I just put to you a couple of other points that you  
23 made in your evidence about the limited brain-only  
24 autopsy? I think it's in the witness statement 253/1,  
25 at page 16, where it says:



1           "Dr Steen advised us that it was important that  
2           doctors learned from Claire's death and the reasons for  
3           her death, which may help prevent similar tragedies in  
4           the future."

5           How important was that for you?

6 MR ROBERTS: Well, that was very important. Dr Steen  
7           explained that the death of any child is a tragedy, and  
8           it's important for doctors to learn from the death of  
9           a child. That was one of the reasons she gave for doing  
10          the brain only post-mortem, that lessons could be learnt  
11          and potentially educate doctors and help children in the  
12          future.

13 Q. We will come in another part of the hearing to deal with  
14          this in more detail, but just now that you mention it,  
15          having given you that indication of how a brain-only  
16          autopsy might help not just you to understand something,  
17          but actually might form a learning role or learning  
18          purpose, if I can put it that way, for other doctors,  
19          did she ever tell you after the autopsy had been carried  
20          out that they had now, as a result of that autopsy,  
21          learnt something that could help other doctors  
22          afterwards?

23 MR ROBERTS: No, there was no discussion around that.

24 THE CHAIRMAN: Just to make sure I understand the sequence  
25          after: you agreed to the limited autopsy on the evening

1 of 23 October, between that and around about 3 March,  
2 did you have any discussions with Dr Steen or Dr Webb or  
3 anybody else?

4 MR ROBERTS: We did go back to the hospital on  
5 11 November 1996, which was a few weeks after Claire's  
6 death. That was -- we did that on our own, really. I'm  
7 not sure whether my wife maybe telephoned the ward  
8 before we went to the hospital or whether we just  
9 arrived in the hospital. We met with Dr Sands and had  
10 a conversation with Dr Sands. The purpose of that  
11 really was just to go back to Allen Ward and speak to  
12 people on Allen Ward and enquire about the post-mortem,  
13 what stage the post-mortem was at, how long it would  
14 take, when were we likely to get a response or some  
15 answers, and again emphasised the importance of trying  
16 to identify the virus and the cause of the virus.

17 MS ANYADIKE-DANES: I think we can see that at 090-022-061.  
18 Right down at the bottom, 11 November 1996, 3.35 pm.  
19 Perhaps we can pull that up. This is a note of  
20 Dr Sands. Do you remember it was Dr Sands that you  
21 spoke to?

22 MR ROBERTS: Yes, it was Dr Sands.

23 Q. "Spoke at length with Mr and Mrs Roberts earlier today.  
24 They are naturally still trying to come to terms with  
25 what happened to Claire. I talked through the events

1 before her death and also talked generally with them.  
2 They are naturally anxious to discuss the post-mortem  
3 results with someone. I will pass this on to Dr Steen  
4 ASAP."

5 While we're there, when he says he talked through  
6 the events before Claire's death, can you remember what  
7 he said?

8 MRS ROBERTS: I can't, no.

9 MR ROBERTS: It was very general, it was just that it was  
10 a terrible shock, a tragedy, just general chat about  
11 losing a child. There was nothing more specific about  
12 Claire's treatment.

13 Q. If I can put it that way, did you learn anything more  
14 about what had happened -- well, not what had happened,  
15 but why it had happened as a result of that discussion?

16 MR ROBERTS: No, my recollection of my conversation with  
17 Dr Sands was really just to discuss Claire. We talked  
18 a little about Claire and how sudden it had been from  
19 going into the hospital on the Monday evening to losing  
20 her on the early hours of the Wednesday morning.

21 Q. Did that talk with him take place either in the ward or  
22 in some room off the ward?

23 MR ROBERTS: I don't remember being in a room speaking to  
24 Dr Sands. I think it was more likely to happen or it  
25 did happen out either on the ward or on the corridor

1           somewhere.

2   Q.   Do you know if the senior nurse Angela Pollock was  
3           there?

4   MR ROBERTS:   During that conversation?

5   Q.   Yes.

6   MR ROBERTS:   No, the conversation was purely with Dr Sands.

7   Q.   Do you ever recollect meeting Angela Pollock at any  
8           time?

9   MR ROBERTS:   No.

10  Q.   Thank you.

11           There are some other questions around what happened  
12           afterwards, but I'm going to ask them in relation to the  
13           governance section and not here.  So it doesn't mean  
14           that we don't want to have the further evidence that you  
15           have about that, it's just that I think it's probably  
16           better addressed then.  However, I do want to ask you  
17           about the autopsy request form.

18           I wonder if we can pull that up, 090-054-183.  It's  
19           very short so can we pull up the next page 184 alongside  
20           it.

21           This, as I'm sure you know by now, is the request  
22           form that Dr Steen sent for the purposes of Claire's  
23           autopsy.  I want to ask you about some of the  
24           information in it.  If we go to "History of the present  
25           illness", you'll see:

1           "Well until 72 hours before admission."

2           There may be an issue as to exactly what that means.  
3           But one way of interpreting it is that from about three  
4           days before her admission, she was unwell all that time,  
5           if I can put it that way. That is one way of  
6           interpreting it. In other words, she started being  
7           unwell in and around Saturday and continued to be unwell  
8           throughout the weekend and you brought her unwell on  
9           Monday, would be one way of interpreting that.

10           Did you say anything to any of the doctors to  
11           suggest that Claire had been unwell like that?

12   MRS ROBERTS: No. 72 hours before admission?

13   Q. Yes.

14   MRS ROBERTS: No.

15   MR ROBERTS: No.

16   Q. Claire's grandparents, who also met doctors and gave  
17           them, to some extent, a history -- I know that you say  
18           you've spoken to them since, is it likely that any of  
19           them could have indicated that?

20   MR FORTUNE: Before there is any answer, how is a question  
21           like that going to assist you, sir? It's highly  
22           speculative and, indeed, questions about the contents of  
23           this form, albeit my learned friend wants to put them to  
24           Mr and Mrs Roberts, are more to do with Dr Steen and not  
25           Mr and Mrs Roberts. Once again, I pose the

1 question: how are you going to be assisted?

2 THE CHAIRMAN: I'm just looking back on Dr Steen's evidence  
3 on this issue to see where Dr Steen says she got this  
4 information. Because you know that there's a specific  
5 concern about a number of apparent inaccuracies about  
6 the information which is contained in this form.

7 MR FORTUNE: Yes. And Dr Steen's addressed those matters.

8 MS ANYADIKE-DANES: Mr Chairman, I simply want to establish  
9 whether, if there are any inaccuracies in it, which it  
10 seems that there are, any of that information could have  
11 come from Mr and Mrs Roberts.

12 MRS ROBERTS: Could I also say that this is our daughter  
13 we're talking about and if she had been unwell 72 hours  
14 before admission, she would have been brought to the  
15 hospital. The GP would have been contacted.

16 THE CHAIRMAN: She wouldn't have been at school or Monday.

17 MRS ROBERTS: Definitely not.

18 MS ANYADIKE-DANES: Or at church on Sunday?

19 MRS ROBERTS: No.

20 MR ROBERTS: Or playing with her cousins on the Saturday.

21 MRS ROBERTS: Claire had a very active and happy weekend.

22 Q. I understand. My only purpose, Mr Chairman, is simply  
23 excluding the source of information as being Mr and  
24 Mrs Roberts.

25 MRS ROBERTS: Thank you.

1 Q. I think, given Dr Steen's inability to have any  
2 independent recollection of matters, it might be a fair  
3 enough question to ask.

4 THE CHAIRMAN: Well, did Dr Steen, when you first met her on  
5 the Wednesday morning at about 4 o'clock, or later on on  
6 the Wednesday evening at about 6.30, did she take  
7 a history from you of Claire's illness, whether it was  
8 72, 48 or 24 hours before? Did she go through the  
9 history of Claire with you?

10 MR ROBERTS: No.

11 MRS ROBERTS: No.

12 THE CHAIRMAN: In a sense, is that a short way through it?  
13 Because if she didn't take a history from Mr and  
14 Mrs Roberts, the information which is in this form did  
15 not come from Mr and Mrs Roberts, or at least from  
16 anything Mr and Mrs Roberts said to Dr Steen. We know  
17 that there are some inaccuracies or something gets  
18 into -- we now know that when something goes into a  
19 hospital record, it tends to be repeated through further  
20 records. But this is not something which was taken from  
21 you at any time on 23 October?

22 MRS ROBERTS: No.

23 MR ROBERTS: No, no.

24 MS ANYADIKE-DANES: Mr Chairman, that is a very short way  
25 through it, but it's also a little bit different to that

1           because in her evidence, if I remember correctly,  
2           Dr Steen said that in order to form a view as to what  
3           had happened, she looked at the medical notes and  
4           records and she discussed with the nursing staff to try  
5           and get a sense of what was happening. So I simply want  
6           to rule out the Roberts as a source of this information,  
7           whether it got into the medical records, whether it was  
8           something that the nurses thought, or whatever it was,  
9           did or did not come from them. That's what I'm seeking  
10          to do.

11   MR FORTUNE: My learned friend has just had the answer from  
12          Mr and Mrs Roberts at your intervention, sir.

13   THE CHAIRMAN: Mr and Mrs Roberts confirmed that this  
14          information did not come from them to Dr Steen. The  
15          only outstanding issue is whether that information was  
16          given by you to any of the nurses and doctors who were  
17          involved in Claire's treatment who you spoke to on the  
18          night of the 21st or during the day of the 22nd.

19   MS ANYADIKE-DANES: I can go through it very quickly. There  
20          are some very discrete assertions that I can go through  
21          very, very quickly and I'm sure that Mr and Mrs Roberts  
22          will be able to say whether they recall giving that  
23          piece of information to anybody at any time after their  
24          daughter was admitted.

25   THE CHAIRMAN: If you pick out the specific --



1 MS ANYADIKE-DANES: I can indeed:  
2 "She had a few loose stools."  
3 Is that something that you could have provided in  
4 terms of information?  
5 MRS ROBERTS: Well, it has been said that loose motions --  
6 and then I have said nothing, no constant bowel movement  
7 and possibly just "smelly poos".  
8 Q. Yes. Then, "24 hours before admission". So one way of  
9 interpreting that is on the Sunday, that she started to  
10 vomit. Is that information that you were likely to have  
11 given?  
12 MRS ROBERTS: No.  
13 MR ROBERTS: We wouldn't have given that because it's  
14 incorrect.  
15 THE CHAIRMAN: If it said, "within 24 hours prior to  
16 admission", that would be correct because it started on  
17 the Monday afternoon after school.  
18 MRS ROBERTS: Yes, 3.30.  
19 MR ROBERTS: Well, no, admission was at 7 pm Monday.  
20 THE CHAIRMAN: That would be within 24 hours prior to  
21 admission.  
22 MR ROBERTS: Oh, within.  
23 THE CHAIRMAN: It doesn't say that. Let's not  
24 overcomplicate it. It's my fault.  
25 MS ANYADIKE-DANES: I think that's it, but I would simply

1           like to ask them to confirm something that I think they  
2           already have done, but just for completeness. Just  
3           a bit after that where it says:

4                   "Felt to have subclinical seizures, treated with  
5           rectal diazepam, IV phenytoin, IV valproate, acyclovir  
6           and cefotaxime cover given."

7                   Were you given any of that information? I'm not  
8           saying that you now were the source of it, obviously,  
9           but were you given any of that information?

10   MRS ROBERTS: No, not on the morning of the 23rd.

11   Q. Then if one goes right down to the bottom to the  
12           clinical diagnosis, were any of these terms used to you  
13           or Claire described in this way: cerebral oedema,  
14           status epilepticus, underlying encephalitis?

15   MRS ROBERTS: Not on the 23rd.

16   MR ROBERTS: No. Cerebral oedema may have been mentioned at  
17           that -- that is something that may have been talked  
18           about because it was a cerebral oedema that was  
19           obviously the issue, the problem, and it was the cause  
20           of the cerebral oedema that was the issue.

21   Q. In terms of the status epilepticus, underlying  
22           encephalitis, were those expressions used to you?

23   MR ROBERTS: No, the first time I saw status epilepticus,  
24           I think, was on Claire's death certificate.

25   Q. Then finally, in that middle text there of the "History

1 of presenting illness" where it says:

2 "The serum sodium dropped to 121."

3 And there's a date and time given for it. Did  
4 anybody ever tell you that her sodium levels had  
5 dropped?

6 MR ROBERTS: No.

7 MRS ROBERTS: No, sodium wasn't mentioned.

8 MR ROBERTS: We were never aware of Claire's sodium levels,  
9 whether it was 121 or 132 or whatever. We were never  
10 informed of a figure for Claire's sodium levels.

11 Q. Or of the significance of them?

12 MR ROBERTS: Or of the significance of them.

13 Q. One question I wonder if you might help us with, and  
14 that is the medical certificate for the cause of death.

15 I'm going to pull up a specimen of it, which is  
16 139-033-001. Perhaps if I can turn that around.

17 When Dr Steen was giving her evidence, the main part  
18 of it is headed up "Medical certificate of cause of  
19 death", that is filled in and handed in and that is  
20 part, as we understand it, part of what you take to  
21 register and get the death certificate. I think she  
22 referred to the counterfoil as a stub, that's something  
23 that the hospital retains. We haven't been able to find  
24 this certificate. Can you help as to what actually  
25 happened to it so far as you're aware?

1 MR ROBERTS: No, I didn't receive that. I think that was  
2 handed over to my brother, I believe.

3 Q. Yes. Actually, if we pull up 091-012-077. If we look  
4 at the "qualification of the informant", if I can put it  
5 that way, "uncle". That's your brother who takes it to  
6 register?

7 MR ROBERTS: Yes, that's T Roberts.

8 Q. Can we understand it's taken to register and left at the  
9 registry?

10 MR ROBERTS: I presume so.

11 Q. You have never seen it?

12 MR ROBERTS: I've seen it on ...

13 Q. Sorry, I don't mean the certificate, but you've never  
14 seen the "medical certificate of cause of death"?

15 MR ROBERTS: No, no.

16 Q. And that means you don't believe you've retained it or  
17 anybody's retained it?

18 MR ROBERTS: I never received it initially. I know it was  
19 my brother who did the paperwork side of things, so I've  
20 no idea where it went or what happened to it.

21 Q. Thank you very much indeed.

22 There were just a few other matters that I think  
23 you, Mr Roberts, wished to deal with. Maybe the better  
24 way is to ask you if there's anything else that you want  
25 to say rather than me frame questions for you.

1 MR ROBERTS: Well, I did have quite a few questions lined up  
2 this morning, but having listened to Professor Neville,  
3 I think a lot of those issues have been addressed. The  
4 only sort of follow-up to Professor Neville's  
5 evidence -- there was some discussion around midazolam  
6 and we're still very concerned about the midazolam, when  
7 it was given. There was discussion that it was given at  
8 3.25 and Claire had the seizure at 3.25. I listened to  
9 the evidence of Professor Neville. Just the issue  
10 I would have around that is the actual rate that the  
11 midazolam was administered at. If that could be maybe  
12 put on note and raised with Professor Neville for next  
13 Monday. The rate of midazolam. We know Claire got  
14 whatever, a 330 per cent overdose of midazolam. But  
15 what we're concerned about is the actual rate and how  
16 quickly that midazolam was given.

17 Q. You mean whether it was a slow push or not as the case  
18 may be?

19 MR ROBERTS: Yes. Even if the midazolam is administered as  
20 a slow push, the doctor giving it would have assumed  
21 he was giving the correct dose. And he would have then  
22 worked off his recommendation, which would have been  
23 maybe a 1 to 2-minute slow push. But if he gave, say,  
24 12 milligrams over a 1-minute push, what impact would  
25 that have?

1 Q. I understand.

2 MR ROBERTS: I think there was one other issue just with  
3 possibly Dr Sands. It's to do with the management plan.  
4 Maybe if we can call it up. It's Dr Webb's management  
5 plan for 5 pm.

6 Q. Yes. 090-022-055, I think.

7 MR ROBERTS: That's correct, yes.

8 Q. Right down there at the bottom. We'll highlight that.

9 MR ROBERTS: There are three stages for Dr Webb's management  
10 plan. We've listened to Dr Sands giving evidence,  
11 saying Claire was the sickest child on Allen Ward. He  
12 considered Claire had a neurological -- a major  
13 neurological condition. He considered Claire to have  
14 encephalitis. He has that in his medical note from  
15 around 11 am. And Dr Sands was coming back on to the  
16 ward at around 5/5.15. I presume he has read the  
17 management plan of Dr Webb and he has implemented part 3  
18 of the management plan, which is to administer the  
19 sodium valproate.

20 My concern is: why did Dr Sands not consider part 1  
21 of the plan, which is the acyclovir, to tackle the  
22 encephalitis, which he has in from his 11 o'clock note,  
23 which is now verging on six hours earlier?

24 Q. Yes. Just so that we're clear, you mean why doesn't he  
25 find out whether that's been administered and, if it

1           hasn't been, seen to it?

2   MR ROBERTS:   Well, Dr Sands has said that he felt Claire had  
3           encephalitis and a major neurological problem.

4           Especially the encephalitis side I find difficult to fit  
5           in because Dr Sands has the opportunity.  Prior to this  
6           plan there was no plan to treat the encephalitis.

7           Dr Webb has devised a plan to cover Claire for  
8           encephalitis, albeit that he puts in a note saying,  
9           "I don't think meningoencephalitis is likely".  So that  
10          was Dr Webb's view.  But Dr Sands is coming along and he  
11          has already identified to us, supposedly identified to  
12          us, that Claire has a brain infection at 11, and she may  
13          have encephalitis.  And here he has an opportunity to  
14          approach and tackle that potential and yet he doesn't do  
15          that.  He carries on with his initial thoughts of  
16          non-fitting status and administers the sodium valproate.

17   Q.   You're referring to the addition he makes to the ward  
18          note, which can be found at 090-022-053, when, in  
19          addition to "non-fitting status", he adds "encephalitis"  
20          and "encephalopathy"?

21   MR ROBERTS:   Yes.

22   THE CHAIRMAN:  Who adds that in?

23   MS ANYADIKE-DANES:  Dr Sands.

24   MR ROBERTS:   I think in Dr Sands' evidence during the ward  
25          round he had discussed encephalitis and a brain

1 infection with us during the ward round. So it takes it  
2 not only back to the addition of the note at around 1,  
3 it takes it back to 11 am when Dr Sands supposedly  
4 discussed with us encephalitis.

5 Q. And your point is: why didn't he do anything to address  
6 that if he'd formed that view?

7 MR ROBERTS: Yes.

8 Q. Apparently he had it confirmed when he spoke to Dr Webb  
9 and, even if he didn't do it then, why didn't he  
10 activate it when he came back on the ward some time  
11 after 5 pm and saw Dr Webb's plan?

12 MR ROBERTS: Exactly. The plan was there so why did he not  
13 approach it? In fact, we now know the acyclovir wasn't  
14 actually administered until 9.30, which is verging on  
15 10, 11 hours after Dr Sands had initially -- well,  
16 supposedly identified it to us on the ward round.

17 Q. I understand. Anything else?

18 MRS ROBERTS: Nothing, no.

19 MR ROBERTS: That's us.

20 THE CHAIRMAN: Thank you very much. I think we'll almost  
21 certainly ask you to give some evidence at the  
22 governance stage in a couple of weeks' time.

23 MRS ROBERTS: Can we just say that we loved Claire and told  
24 her so every day?

25 THE CHAIRMAN: Okay. Ladies and gentlemen, we'll finish and



1           we'll resume at 9.30 on Monday morning. Thank you.

2           (5.00 pm)

3           (The hearing adjourned until 9.30 am on Monday 5 November)

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