Monday, 10 September 2012

(10.00 am)

(Delay in proceedings)

(10.09 am)

THE CHAIRMAN: Good morning.

MR PATRICK KEANE (continued)

Questions from MS ANYADIKE-DANES (continued)

MS ANYADIKE-DANES: Good morning, Mr Keane. There are just a few points that I would like to clarify with you and then deal with a statement that Dr Taylor made. The first of those few points arises out of the note that was taken at the inquest. You may recall the same notetaker who took a note of the consultation also took a note at the inquest, and we looked at some of that note on Friday.

I would like to pull up 122-044-030. If you see almost halfway down, this is counsel for the family questioning you, Mrs Higgins. You'll see it says:

"Mr K: would have been ludicrous to go in at 2 am. The procedure took 4 hours. Off table at about 11.30/11.40."

And:

"Some time after surgery before anaesthetic over."

That's your evidence to the coroner as it's recorded there. What did you mean by Adam presumably being off

table about 11.30/1140? In fact, does that refer to Adam?

A. Well, I assume it does.

Q. So what did that mean?

A. My recollection of it is that I left at 11ish. That would take about -- I would have said it would have taken about a half hour to finish, close the wound and wake him up. I don't remember this 11.40 and that note looks slightly different writing.

Q. Yes.

A. But anyway, if I left at 11, I would have said Adam would have been off the table at 11.30 would be a reasonable ... If I had left, as I said I'd left, with wound closure, various things, it would take about a half hour.

Q. You didn't have a way of knowing or, did you, when Adam was actually off the table?

A. No, no. No. I don't even know how that comes to be there. If somebody -- somebody must have asked me, "What time do you think he came off the table?".

Q. Yes. So that couldn't be you saying that because that's when you know it happened --

A. Absolutely not.

Q. -- just what you surmise out of your experience is likely to be the case?

A. Correct.
Q. Thank you. During your evidence on Friday, I took you to 122 --
THE CHAIRMAN: Sorry, before you go anywhere else.
Mr Keane, the first line there, "Would have been ludicrous to go in at 2 am". In the spring evidence, we heard that there was a debate about what time the operation should start at and the advantages and disadvantages of waiting until you and Dr Taylor and others might be fresher at 6, 7, 8 o'clock than you were at 2 am. That seems to be putting it rather more strongly in that line, which is attributed to you there, that it would have been ludicrous to go in at 2 am.
A. I don't remember the word "ludicrous", but that wouldn't have been far off the mark. If you look at the studies done on psychomotor retardation and sleep deprivation, the feeling is -- and the train accident -- the issue is that you'll probably or are estimated to have ... For that type of surgery, you would probably be safer with three pints of beer in you than starting at 3 or 4 in the morning.
THE CHAIRMAN: Because --
A. Unless --
THE CHAIRMAN: Is that our lowest physical point?
A. It's your lowest physical point. You're up, you're

doing an urgent quasi-elective operation. It's different if somebody's bleeding to death and you have to go in. That's an absolute emergency. But to do a planned, if you like, procedure on somebody at -- to start ... Cross-match through at 1, child asleep at 2, 2.30 at the earliest, I would have thought to try and level of surgery at 2 o'clock in the morning would have been -- not ludicrous, dangerous, in my opinion.

THE CHAIRMAN: Okay, thank you.

MS ANYADIKE-DANES: I think your evidence was that you might have to think about that if the only other option was that the kidney, when you would prefer to do it, which was later on in the morning, would no longer be viable for transplant purposes.

A. Yes, but I mean, the whole point about that was that we were on the 18-36 and Adam was nowhere near 36. He was never going to be near 36 and there was never a possibility of transplanting Adam under 18.

Q. Understood. So you had a choice and, with that choice, not to take it, as I understand your evidence, would have been ludicrous in those circumstances.

A. In those circumstances.

Q. Thank you. I wonder if we could then go to 122-044-043, which is another part of the evidence here. You should see where it says:

"When the kidney did not function, the team discussed fluid and concluded that we had underestimated and needed to give a bolus of fluid acting on the evidence before us."

Do you see that? That's almost in the middle. We did look at that on Friday.

A. But that's not me now.

Q. Sorry?

A. That's not me, is it?

Q. No, that's the evidence of Dr Taylor. We looked at it on Friday. I wonder if I could ask you two things about that. One is, do you recall having a discussion about whether there ought to be fluid given round about that time of 9.30 because there was a concern as to, if I can try and put it neutrally, the look of the kidney?

A. At 9.30, not, but it would be standard to discuss at clamps-off whether or not you needed to give more fluid. You'd need to know what the CVP was as you started the anastomosis because that is the last time an anaesthetist has time to catch up. Because you're going to be finished say in 20-25 minutes. So if he's behind, he's got 25 minutes to give the bolus of fluid. For obvious reasons, you'd have to discuss again before you took the clamp off, were you there --

Q. I understand the logic of it. What I'm trying to ask

you is, firstly, this is a discussion that is being related to 9.30/9.32. But secondly, is it something that you actually recall?

A. No.

Q. Then to the point that you were making, do you recall a discussion at all prior to the release of clamps of more fluids being required because of any kind of observation about the look of the kidney, if I can put it that way?

A. No.

Q. So this, as far as you're concerned, if this evidence was given, it's just plain wrong?

A. I would say it's plain wrong. I have no recall of ever asking for more fluid.

Q. Or a discussion about it?

A. Well, we would have a discussion about where we were in terms of did we need to give fluid --

THE CHAIRMAN: Yes. So --

A. -- but not to ask for more.

THE CHAIRMAN: It would not be at all unexpected if there was a discussion about giving more fluid?

A. I think -- yes.

THE CHAIRMAN: That's stage 1. Stage 2 is: you don't remember any such discussion in Adam's case, but it would not be unexpected if there was such

a discussion?

A. You would have to have a discussion about where we're going.

THE CHAIRMAN: Then, thirdly, am I to understand you to be saying that you would not ask for more fluid, but that that would be a decision for the anaesthetist?

A. No, I did not ask for more fluid. That is basically a surgical issue, really. You have to know what the CVP is as you start the anastomosis and you have to know what the CVP is before you take the clamp off otherwise you might get a catastrophic fall in blood pressure. So if you then take the clamps off and you don't think you're perfusing because of low blood pressure, you ask for more fluids. But if the CVP and blood pressure are fine -- and in Adam there was never a twitch in his blood pressure during the entire procedure; in fact it was going up -- then you wouldn't ask for more fluids. But it would be negligent for a surgeon not to consider -- you could not take the clamp off on a transplant without knowing what the CVP was and discuss whether or not you were behind in the CVP management.

MS ANYADIKE-DANES: The reason for asking you these questions is to see if there another way of trying to get at actual timings by relating to things that

happened. It's not a perfect system, but it's just a way of trying to see if we can achieve that. And the reason is we do have this time of 9.32.

A. Mm-hm.

Q. And we do know, at least in the medical notes of records anyway, that certain things appear to be happening at 9.32. And then it's just a question of why were those things happening and what's the consequence and implications of them. If you see a little further down in that note:

"9.32. Confirmed O2 okay [oxygen, presumably]. Accident base. Balance OK. Body prepared to accept kidney."

Then it says:

"As haematocrit level low, gave packed cells, gave HPPF."

And this is the point I would like to ask you about:

"Gave both for blood replacement plus extra fluid for perfusion of kidney."

The reason I ask you that is because that seems to indicate that somebody thought that, if this evidence is correct, that at least Dr Taylor thought that something had to be given for the perfusion of the kidney, which may link up with other evidence that the chairman has heard that people were a little bit concerned about the

perfusion of kidney at some stage. Do you recall any of this?

A. No, and as on Friday, it's -- I do not think it was possible that this was going on at 9.32.

Q. Let's pull up 058-003-005. That is the anaesthetic record and one can see the HPPF. There's that line there. We can see the packed cells further down. There's that line there. And then along with the bottom just by "time". Let's highlight that to give a bit of a help. So you can see -- not all these things are absolutely precisely on the time, but one can see "9.00", "9.15", "9.30". And certainly it seems to record that packed cells were given at 9.30 and Dr Taylor's evidence is that the HPPF was given at about 9.15.

A. That's right. The outstanding issue on that chart is that before 9 o'clock, Adam had had a litre of saline, he had another 500 in progress, he had 500 of Hartmann's, 400 of HPPF before 9 o'clock. There's absolutely no evidence that a bolus of anything was given. In fact, they were slowing the fluids down after 9. In the total amount of fluid given, there's over 3 litres or something. He's got a litre of Solution No. 18 plus maybe 100 more, so that's 1100. 400 of Hartmann's -- 500 of Hartmann's and 400 of HPPF. So

before 9 o'clock, he had already had 2 litres in. I would have say that is evidence that there was no bolus being given --

Q. But there are packed cells being given at 250.

A. Packed cells given over an hour.

Q. Could the packed cells given at that time, at 9.30, be related to any concern, as seems to be indicated in this note of Dr Taylor's evidence, of concern over perfusion?

A. You could give blood to -- for perfusion, but you'd be more likely to be giving HPPF or Hartmann's for perfusion, I would have thought.

Q. HPPF has actually been given, according to this, at 9.15 and that seems to be Dr Taylor's evidence. And then it seems to be followed up by packed cells at 9.30. What I'm trying to ask you is: could a purpose of giving HPPF and packed cells be to try and improve the perfusion?

A. That could be a purpose, yes.

Q. Thank you.

MS WOODS: Sir, I hesitate to interrupt -- I could be wrong about this and I can't find the reference -- but it had been my understanding that the haemoglobin had been measured around 9.30 and that was very low. And without giving evidence, sir, that may well explain the provision of packed cells around that time.

MS ANYADIKE-DANES: Ms Woods is absolutely right and that's

why I read out the last part of the note. It refers to both the packed cells and the HPPF:

"Gave both for fluid replacement and extra fluid for perfusion of kidney."

And just above there it says:

"Haematocrit level was low."

That's exactly right. But what I'm inviting this witness to comment on is whether or not the HPPF and the packed cells could be a response to any concern about perfusion of the kidney, and I think he's given his evidence about that.

And then I think in --

MR MILLAR: Just before you leave that point, sir, I acknowledge entirely what the note of the inquest evidence says, but I think when Dr Taylor was asked about this on Thursday, I think he indicated to you that having looked back over the charts that at 9.30 he felt what he had given was the packed cells in a response to the low haematocrit rather than extra fluid. I think that was his evidence on Thursday. I appreciate that that's not what it says in the transcript or the note that's been taken of the evidence at the inquest, but it's another one of those areas where there are differences.

THE CHAIRMAN: Yes, but the problem, Mr Millar, as you'll

appreciate, is trying to make any coherent sense of the combination of notes and records at the time and the inquest evidence.

MR MILLAR: I appreciate that, sir. It's probably an obvious point to make, but clearly the note that was made of the evidence at the inquest, while I have no doubt that it's a good note made by somebody who's well educated, it would be a very bold person who could claim that their note of an inquest is accurate in every respect. We all know the inherent fallibilities of our own notes.

A. Blood -- packed cells in particular are viscous and if you're into bolus administration, you tend to give clear fluid or HPPF because you can get it in quicker if you're in trouble. But in answer to your question, it could have.

THE CHAIRMAN: Okay.

MR FORTUNE: Sir, can I now contribute to this discussion? When the sodium was tested and the result printed in respect of 9.32, the estimated haemoglobin level was 6.1 grams per decilitre. So it was a very low haemoglobin that needed to be built up.

THE CHAIRMAN: Thank you.

A. Could I make one further comment on that? Adam ended up with a haemoglobin of 14 or 12, 24 hours later. He

needed at most one unit of blood in that operation and if he was being done in 2012, I doubt very much that he would have been transfused at all.

MS ANYADIKE-DANES: Thank you, Mr Keane. I wonder if we can now turn to an issue of the closure of the wound. That's an issue which some have found not entirely clear in terms of, not just when it was done, but who was doing it and, given that we know that there were three stages, who was doing what stage.

I wonder if we might start with what gave rise to it. I think it is the transcript of 1 May, page 120, line 25. I think this is an intervention from Mr Brown's counsel.

What's being discussed is the significance of the closure of that first layer because of the implications it might have on the placement of the kidney and the effect of the reliable blood supply to the kidney.

THE CHAIRMAN: Sorry, this is the evidence of 1 May of which witness?

MS ANYADIKE-DANES: This is Mr Brown's evidence. He's answering about that and he says at line 22 -- the question is from my learned friend Ms Comerton:

"Question: You carried out all of the closure of the wound?

"Answer: So I'm told."

And then Ms Woods interjects:

"I'm not sure that was entirely Mr Keane's evidence. I'm not sure whether -- I think was very confused on this. I understood him at one point to be suggesting that he may have done the first complicated layer. But as I say, I think Mr Keane's evidence on this particular issue was particularly confused."

So this is an opportunity, I think, to clarify that because you had already given your evidence, obviously, and you haven't had an opportunity to respond and clarify exactly what was happening, if I can put it that way.

A. Okay. Well first of all, I was asked about this 10 years after Adam's -- I had never considered it and I know it's difficult for people to understand, but in prospect, as we did Adam, we thought we had finished a successful -- or at least a technically successful -- transplant. I wouldn't have, as a matter of courtesy and, if I had any doubt that we could get the wound closure done, I wouldn't have left before the first layer was closed because then it becomes, to a surgeon, simply a matter of a repetitive stitching action, which a consultant surgeon -- I know people look at wounds and they think that the skin closure -- they look at that side of things and think "How many sutures went in?".

But to a surgeon in prospect, it just doesn't even register, provided there isn't an issue about the closure.

So I know that you can't remember closing the wounds, I couldn't remember -- I don't remember wound closure. It's just a routine, basic task.

THE CHAIRMAN: But you're saying that you would not have left without closing the first layer?

A. Well, the first layer, once the wound comes together in the first layer, it's so easy then to do it. But you wouldn't ... The first layer generally needs an assist, but I couldn't ... I don't have specific memory because wound closure to a surgeon -- uncomplicated wound closure to a surgeon is ... It just isn't something that registers.

MS ANYADIKE-DANES: I understand that. All I'm simply asking is: is it your belief, understanding or recollection that you closed the first layer?

A. My understanding is.

Q. And you would do that because of any of the layers that are going to potentially be a bit ticklish, that's the one?

A. That's the one.

Q. So if that's your understanding, can I take you to the transcript of your evidence, which is 26 April 2012,

page 141? I think it's line 13. This arises in the middle of evidence to do with -- you remember you were giving evidence about you had to leave to the Belfast City Hospital and then you gave evidence about why did you write two notes, and you took a call, you went out, you came back, checked that everything was all right with the kidney before leaving, and then you wrote your other note, saying that it perfused satisfactorily.

And the point that was being put to you was if you literally left the room like that and came back to have a look at the kidney to make sure everything was all right, that you were not sterile. And I think you accepted you wouldn't be sterile.

A. Absolutely.

Q. So the point is, if you had done that, looked at the kidney, satisfied yourself that it seemed all right at that stage, recognised you were unsterile, how did you close the wound or any part of it?

A. That's true, I mean, I'm -- as I said to you, I was recalling at 10 years remove. All I can say is that when I finished the transplant procedure, the kidney was all right and we closed. I may have closed and left or I may have come back in. I don't have recall of it. I would suggest that what I did, or my best understanding of what I did, was that we looked, we were

happy, and we closed the first layer and I left then, and I would have come back in to say, "Is everything stable?", for the one last time, and then leave.

Q. That's actually not your evidence, that you went out --

A. Yes.

Q. -- you took your call, or whatever it was you were doing, came back and recognised you were unsterile. Because if you look further down at page 142, when you come back in, right at line 20, recognising that you were not sterile at that stage, you say:

"A surgical assistant moved out of the way, pulled whatever part of the wound I wanted to look at so I could see the kidney in a satisfactory manner. I looked at the kidney for about a minute to be absolutely finally ..."

And so on.

A. Yes.

Q. So --

A. I see where the confusion is and I see where I'm being inconsistent there. But all I can tell ... My evidence was that I was asked about this 10 years after the event. I didn't recall it, but to the best of my knowledge, I didn't close the wound completely.

Q. But you did close some part of it?

A. As a professional courtesy to another surgeon, I'm

almost certain I would have stayed or closed the first layer so that it would be easy for him to do. It's not that Mr Brown would not be technically capable of closing the entire wound, but just to help.

Q. Yes.

THE CHAIRMAN: Can I take it on this basis then, Mr Keane, that it would have been your intention to close the first layer because that is normally what you do?

A. Yes.

THE CHAIRMAN: It is possible that because a call came through from the City Hospital that you didn't in fact do that in this case, but your best guess is that you did do it in this case?

A. It's a best guess, yes.

MS ANYADIKE-DANES: Thank you.

MR FORTUNE: Sir --

MS ANYADIKE-DANES: Sorry, if you bear with me. I think I'm just about to do that.

Is it possible that you maybe didn't close it yourself because you weren't sterile but -- supervise is the wrong word -- were there, watching Mr Brown do it?

A. That's possible as well, yes. That's possible.

Q. Thank you.

MR FORTUNE: Sir, while we're dealing with possibilities, can we go in that transcript to page 123? At the bottom

of the page, line 22, and this is the start of the part of Mr Keane's evidence that deals with the leaving. It goes on over two pages. And if we go get certainly page 124 up, then we can see the lengthy answer that Mr Keane gives.

THE CHAIRMAN: Okay.

MS ANYADIKE-DANES: It's 124, starting at line 2, I think, which is where I was going to take you to when you said it's possible that you did that. Because I think that may fit with this earlier evidence that you gave, which is, in other words, it's easier for Mr Brown if I just wait for him to close the first layer and then he continues the procedure as I'm now gone.

A. Yes. That would be ...

THE CHAIRMAN: It's an option?

A. Yes. Realistically, if you're happy with the kidney and the first layer is closed, as I said to you, the procedure is over. What I was trying to help the police with when they asked me, I was trying to recall how something had happened 10 years ago. I know that it's become a big issue, but surgeons do not have specific recall of wound closure as distinct from the critical points of operation.

THE CHAIRMAN: Okay.

MS ANYADIKE-DANES: I understand.

I would like to take you to something different now, which is to do with the CVP. On Friday, when you were giving your evidence, I think you gave evidence in relation to the CVP being 12. I think if we go to the transcript for 7 September at page 77. It starts at line 11, I think. Yes:

"I think this is my recall of the operation, that he actually had a CVP of 12. And as I described it in detail, if you're at 12, that's it, keep it there, you're fully loaded up for a transplant."

Then just a final sentence in that paragraph:

"His CVP was 12, it was at the target range."

Your evidence on 26 April -- and you'll see it in answer to questions that Mr Hunter for Adam's family put -- was that you didn't really want it to be at 12, if I understood you to be correct. If you'll just give me a moment, I'll take you to that. (Pause).

26 April, page 184, line 23. Mr Hunter is trying to actually extract an actual figure that you may have either sought or heard as opposed to a range or being told whether there was a problem or not. And ultimately, he asks at line 23:

"Okay. Then can I ask you what figure you would be concerned at."

Then you respond to that:

"Anything over 12."

If we go over the page there. Then the question is:

"Can I assume from that then that the figure he must have given you must have been under 12?"

And you said "yes". I'm just trying to understand how that fits with your evidence that you thought he was at about 12.

A. Sorry, I assumed less than or equal to 12. The target range we would have is 12.

Q. Yes.

A. Now --

Q. But not at the start of the procedure, Mr Keane?

A. It would be a surprise to get a CVP reading of 12. The physiological range is between 3 and 7.

Q. Exactly.

A. Right. If you're at 12, then you're -- well, not overloaded, you're loaded to capacity, if you want to put it that way, as distinct from being overloaded and, if you're under 3, you are underloaded.

Q. I understand that. Sorry, if I just help you with this. The reason why I'm asking you this question is that when one looks at the consultation note -- and this all arose because you were being asked about things in that consultation note. The consultation note is quite clear that the CVP starts at 17 and, if you like, is adjusted

by way of gradient, that is Dr Taylor's argument, down to 12. So it's starting at 12. I was asking you about that and you seemed not to be expressing the concern on Friday that you had expressed earlier in your evidence, if you had been told that the CVP was actually starting at 12.

A. If you start at 12, it would be a concern because, obviously, as I tried to describe it, you're looking at, if you like, a series of numbers or a monotone, you're listening to the figures. You would have started at 12 but expected everything to be flat at 12, you wouldn't want it to go up from 12. I can't or don't recall the specific numbers, I just ... When I saw the thing 17 adjusted to 12, either for the effective ventilation ... That's vaguely correct to me.

Q. Well, let's go to the evidence of Friday, which was the 7th, at page 78. It starts at line 15, which is pretty much what you've just been saying about the physiological range. Then you say at line 17:

"But if you started at 12, I'd be happy just to keep going."

That's precisely what you said you wouldn't be happy to do at on 26 April.

A. No, I think what I -- I'm open to correction. I don't know, but I think we would have had a conversation with

Dr Savage, is what I said.

Q. Sorry?

A. We would have had a conversation with Dr Savage. I think is what I said in evidence. I'm not sure.

THE CHAIRMAN: About?

A. About the CVP. Because he's up at the very top. I think what I said in evidence in April was if I had known the CVP was 12, I would have asked Dr Savage what he thought about that.

MS ANYADIKE-DANES: Yes, so you would have been concerned about it?

A. Mm.

Q. Then you wouldn't just have been happy to keep going at 12?

A. Keep going at 12. 12 is the top of the range. Anything over 12 --

Q. This is starting. Sorry to be pressing. As I understand it, your evidence was essentially on two issues. One, there's a starting figure --

A. Mm-hm.

Q. -- and you want to know what that starting figure is because you want it to be in a certain sort of range and you certainly don't want to be higher than a certain sort of figure. That's one. Secondly, just before you're going to release the clamps, you want to know

what it's going to be because you want it to be at a certain level because you want a certain kind of pressure having built up, if I can put it that way. Those are the two occasions where you were being asked in quite some detail in your evidence about the CVP figure.

As I had understood your evidence, you would not have wanted it to be 12 at the beginning -- and maybe what you're saying now is, had you known that then, you would have sought some guidance from Dr Savage. You would, though, have been prepared for it to be round about that territory before the clamps were released.

A. Yes.

Q. And the point that I was putting to you is it seemed a little inconsistent in your evidence on Friday to be saying that you'd be happy with it starting at 12 and just keeping going, unless of course you add that qualification, provided of course that Adam's nephrologist had said that that was safe for him.

A. Yes.

Q. But that's not in your evidence.

A. No, that's true, but I think -- I'm not sure what I said exactly in April, but I think what I said is if it was 12, he was fully loaded -- or over 12 -- and that we would have a discussion with the nephrologist. When

I say I'm happy to keep going, I wouldn't have cancelled the transplant because his CVP was 12. That's it.

Q. In other words, your evidence would be, if you had known that the start was 17, adjusted down to 12, then you would have needed to have some sort of conversation with Dr Savage to satisfy yourself that it was safe for Adam to carry on with a CVP at that level?

A. Yes, and that I would personally be happy to keep going at 12.

Q. Thank you. I think you've already given evidence to the fact that you saw Adam's notes and records, albeit I think you said you didn't think you saw his anaesthetic record, but you saw his medical notes --

A. Mm-hm.

Q. -- and you were able, from looking at them, to express your own concern about the quantity of fluid --

A. Yes.

Q. -- and the type of fluid that he had received. In fact, you discussed that with Dr Savage and the two of you were rather at one about your views about that. That's what I understand your evidence to be.

A. That's right. Although we didn't know the timings of the fluid administration.

Q. But you knew the quantity --

A. The quantity.

Q. -- and the period over which it had happened, if I can put it that way.
A. Yes.
Q. And the type. Can you help by why, if you were looking at Adam's medical notes and records, you wouldn't have seen the anaesthetic record?
A. There's a note there on the 18th that they were inserted later. They weren't in the notes when I was there.
Q. Well, Dr Savage's evidence was that he saw the anaesthetic record when Adam was in PICU. That's his evidence on 18 April, page 104, line 10. We can go there:

"The first time I saw that document [and 'that document' is a reference to the anaesthetic record] was obviously when Adam was in intensive care."

A. Well, if you look at the clinical notes for the 18th, you'll see that Dr Savage or Dr Taylor inserted the anaesthetic record and CVP readings on the 18th. They weren't in the notes when I was there.
Q. So --
MR MILLAR: I think a reference might be helpful to my learned friend, sir. 059-006-020. You'll see just about a third of the way down that page, after the 28 November, there's handwritten note:

"Anaesthetic record and printout of monitor included

in notes."

I'm not sure whether that's what Mr Keane's referring to.

MS ANYADIKE-DANES: Mr Keane, are you saying that means that up until the time of that note, that the anaesthetic record and printout of the monitor were not in Adam's medical notes and records?

A. The note is not timed.

Q. Yes.

A. What I'm saying is when I looked at the notes, I didn't see the anaesthetic record or the CVP.

Q. Maybe help us with this then: when did you look at the notes?

A. I went over in the morning, but I can't tell you what time. It was whatever time Mrs Strain was -- it was during the time that Mrs Strain was discussing donation. But I couldn't -- I don't know the time. I know that I had work on Tuesday morning and I ... Best guess is later morning.

Q. Well then, if that's the case, this note is inserted or at least this note is recorded between two timed recordings. One is at 7.45 and the other is at 9.10.

A. I see that, yes.

Q. But in any event, you say you didn't see the anaesthetic record.

A. No, I --
Q. But you saw his medical notes and records, just not the anaesthetic record --
A. I didn't see them.
Q. -- and the printout?
A. No.
Q. Let's look at 058-035-135. This is a note that is recording 12.05 on the day of Adam's surgery. Then you see there:

"CVP about 30. Was 17 at start of procedure. Uncertain if this was accurate as multiple venous access before and jugular vessels tied off."

That was in his note. In fact, if you had looked at the notes just to check your own record, that was immediately below your record.

A. Mm-hm.
Q. So you'd have seen that?
A. Um, I see his CVP was 30 going into PICU.
Q. Yes.
A. And was 17 at the start of the procedure.
Q. Yes.
A. The 17 is -- I don't remember numbers, but that's vaguely what I remember, 17 minus 5.
Q. You remember Dr Taylor telling you 17?
A. No. I have no specific recall of it, but the 17 is what

I -- is what I think happened. It was 17 minus 5. The starting CVP as told to me was 12, is my best guess of the recollection.

THE CHAIRMAN: Well, let's be very, very careful because there has been a lot of evidence given. I know that you have given some of that evidence and I'm sure that you have followed other evidence which has been given by other witnesses.

A. Mm-hm.

THE CHAIRMAN: I don't want you to fall into the trap of basing answers which you're now giving on things that you don't recall or aren't clear about, but which you're doing your best to assist by feeding into me what you have picked up from the records.

A. Yes that's true. I don't have a specific number.

THE CHAIRMAN: If you were told at the start of the procedure that the CVP reading was 17, you would necessarily have done something about that?

A. Yes, absolutely. A true 17 is well outside the physiological parameters of the operation.

THE CHAIRMAN: And I suggest --

A. True 17.

THE CHAIRMAN: It suggests something is very wrong at the start.

A. Absolutely.

THE CHAIRMAN: So if you were told that at the start of the procedure, then there must have been a discussion with Dr Taylor and that would almost certainly have involved bringing Professor Savage back to the theatre --

A. Yes.

THE CHAIRMAN: -- for him to be party to that discussion.

A. Yes.

THE CHAIRMAN: Do you remember that the starting point for the CVP was 17 and that is something which you had to get some reassurance or clarification on before the operation proceeded?

A. No, I don't have the numbers. I was never aware of this 17 business. And I think Dr Savage wasn't either. He went out at 9.30 to tell Mrs Strain that everything was going along slowly, but steadily.

THE CHAIRMAN: Well, if you're now saying -- are you now saying that you do have a recollection of 17 or is this just something which you're picking up from the other evidence which has been given?

A. I've given in evidence that I don't have a specific number.

THE CHAIRMAN: Right. I think Ms Anyadike-Danes' point is that this isn't just evidence which has been picked up over the last two or three months when we have been here in Banbridge, but this is something in Adam's

medical notes and records; right? So if it's on medical records and it's stated there that it was "17 at the start of the procedure, uncertain if this was accurate", that suggests that there must have been a discussion about the accuracy of the reading.

A. I have no recall of there being an accuracy discussion. We had a CVP -- that we had an unreliable CVP.

MS ANYADIKE-DANES: But what did you do when you saw this in his records?

A. When I read through the notes, I don't specifically recall ... The thing I specifically recall about that morning was reading the over 3 litres going in -- with 1,500 of Solution No. 18 going in, in a child who has known cerebral oedema and a sodium of 119. I don't specifically remember this. As I said, I went round and talked to Dr Savage.

THE CHAIRMAN: But would that not have jumped out at you?

A. That his CVP was 30?

THE CHAIRMAN: Not that the CVP was 30 in PICU, but that the CVP was 17 at the start of the operation.

A. As I've tried to explain to you, a gross CVP reading of 17 is adjusted downwards normally for ventilation purposes.

MS ANYADIKE-DANES: Sorry, Mr Keane, so we're clear about this. Nobody had started discussing, at this stage,

adjusting by 5 for gradient.

A. No, not for gradient.

MR MILLAR: I think they are at cross-purposes. This is not an adjustment down for this issue that had been raised by Dr Taylor about the gradient. This is adjusting down for ventilation. It's quite a different thing that my learned friend is talking about and I think my learned friend's not quite picking up on that.

A. You would normally take off 5 because of the ventilation. It increases your intrathoracic pressure and puts your CVP up. It's generally accepted, on positive ventilation, that the CVP is altered 5 up.

MS ANYADIKE-DANES: I understand. The point that I am still trying to get your help with -- I think where the chairman was -- is that if you looked at his medical notes and records at all, even to refresh your memory as to what you had noted in his medical notes and records, you could not fail to see this entry at 12.05 because it's immediately after your note.

A. Mm-hm.

Q. If you saw the entry at 12.05, CVP is a thing that's important to you, the first thing I would assume that would leap to your mind or eye was a CVP of 30, which is an extremely high reading.

A. Very high.

Q. As soon as you saw that, you would see what was in parentheses, which was that it was at 17. At that stage, as written in the notes, nobody knows whether that's adjusted for gradient, whether it's adjusted for ventilation, what it adjusted for. All it has in there is "CVP at start of procedure" and then some concern about how accurate that was because of the reasons stated there.

The point that I'm putting to you is: had you read that in his notes -- and you say you read his notes -- would that not have prompted, by you, given your earlier evidence, some investigation, some query, as to what had happened about the CVP?

A. Well, what struck me was the CVP of 30.

Q. Yes.

A. Yes, and there was obviously a problem of fluid overload. I'm not sure ... I went to talk to Dr Savage about the volume of fluid that had been given.

Q. But he doesn't know about the CVP because he wasn't in the operating theatre. So the question that I'm putting to you is you gave a lot of evidence about how important, how significant the CVP was, and spent quite some time explaining to us the significance. You are now faced with a note of the CVP in Adam's medical notes and records. So quite apart from the issue of fluids,

this is your territory, CVP. So that's why I'm asking you, when you saw that, did you not at least want to satisfy yourself what had gone on? Because on your evidence, none of that sort of problem or issue had been brought to your attention.

A. That's right.

Q. Right. So now you see it. There seems to be a problem with the CVP, which certainly you hadn't been alerted to during the operation. So isn't it a normal thing for you to go and find out? And the only person who help with you that, frankly, is Dr Taylor.

A. That's true. I personally -- as I said to you, I didn't particularly want to go to see Dr Taylor on that day, and as I said to you, I was expecting that there would be a full medical review of this, that there would be an in-depth medical, non-legal review, a clinical review, of the case.

THE CHAIRMAN: Let me pick up on this note because when I asked you about it a few minutes ago there was an issue about whether the 17 being read down to 12 was because of ventilation or a gradient.

A. Mm-hm.

THE CHAIRMAN: If it was ventilation, then the part of the note which says, "Uncertain if this was accurate as multiple venous access before and jugular vessels tied

off", that wouldn't be there, sure it wouldn't. If the reading was 17 and you read it down by 5 to 12 for ventilation, there would be nothing about uncertainty if this was accurate because it would be accurate. Adam's at 17, but that's because of ventilation, so you read down 17 to 12, you take 5 off; correct? But that isn't what this note is saying.

A. No, that's true.

THE CHAIRMAN: This note isn't saying anything about ventilation because, as I understand your evidence, ventilation is a standard variable --

A. Yes.

THE CHAIRMAN: -- which you've come across before and leads you to say CVP is 17, but in real terms that's only 12 because he's ventilated. This note isn't talking about ventilation at all. This note is saying that the uncertainty about whether the reading was accurate for the two reasons which are given there.

A. Yes.

THE CHAIRMAN: So when you looked at that note, written in those terms, it would be evident to you that this is not a ventilation issue; this is a more serious issue about whether the reading is reliable. Let me now tie that in to what you said. Ms Anyadike-Danes took you to your answers to Mr Hunter in April. You said:

"I need to know if I'm in the range on CVP. Dr Taylor tells me either an acceptable figure or else I'm fine. I did ask Dr Taylor was the figure was. He gave me a figure and I had no cause for concern. Anything over 17 would cause me concern. He must have told me less than 12."

I think you have qualified "less than 12" to mean "12 or less".

A. 12 or less.

THE CHAIRMAN: So let's take that. There is a clear difference between you and Dr Taylor on this. Dr Taylor is saying that you knew that there was an issue about the accuracy and reliability of the CVP, from him.

MR MILLAR: Sir, I'm not sure that's right. I'm not sure that I have any recall of Dr Taylor ever having said he told Mr Keane --

THE CHAIRMAN: Sorry, maybe I'll put it a slightly different way. Dr Taylor, I think, has said that he gave Mr Keane the numbers.

MR MILLAR: I don't think he says that.

THE CHAIRMAN: He does say that.

MR MILLAR: I don't think he does say that. What he says is he has no recollection whatsoever of the communications between him and Mr Keane during the course of the operation. That's the first thing. He has no

recollection.

THE CHAIRMAN: Who has no recollection?

MR MILLAR: Dr Taylor. He says he has no recollection of any communication whatsoever between him and Mr Keane during the operation and that is confirmed in his most recent statement. He then goes on to say that if he gave Mr Keane a number, it would have been an accurate number, but he has absolutely no recollection of giving him any number.

THE CHAIRMAN: Accurate number in the sense of what the reading was?

MR MILLAR: He's saying that if he did give him a number, it would have been the number displayed on the monitor. I think that's what he says in his most recent statement. But he's very clear he has no recollection of any communication and certainly no recollection of giving any number to Mr Keane or discussing any perceived problem or difficulty with the CVP. Nothing whatsoever.

MR UBEROI: I think that's right, sir. The situation from Dr Taylor's point of view was he has no recollection of specific numbers being discussed in the same way that this witness has no recollection of specific numbers being discussed. But he has informed the inquiry what his standard practice would be and he's certainly

informed the inquiry that, were there to be a discussion, he would not have misled as to what the number was.

A. Could I make one comment on that? Neither Mr Brown nor Dr Savage, as I'm aware, were aware that there were any issues with the CVP at 9.30 when Dr Savage went out to tell Mrs Strain that everything was proceeding slowly, tediously, but well.

MR UBEROI: Sorry to rise, but just to complete the picture from that point of view. There's also a relevance to the evidence of Dr O'Connor which is that she was in and she was informed in precisely the way Dr Taylor alluded to about the CVP, Dr Taylor's thought process.

THE CHAIRMAN: Yes.

MS ANYADIKE-DANES: Yes, sorry. Just before that intervention, Mr Keane, you had said something about who didn't know about problems with the CVP.

A. I'm unaware now that Mr Brown, myself or Dr Savage were aware at 9.30 that there were any issues about the CVP.

Q. I understand. Just so that we conclude what your evidence is on this. Why didn't you respond to the note in Adam's medical notes and records?

A. This note?

Q. Yes.

A. As I explained in evidence, I would have expected a full

clinical, non-legal investigation of this, with no lawyers, just either a formal -- or be invited to an audit meeting to discuss Adam's case in specifics.

Q. Can I ask you this? I understand that point and you have said that in a different way before. If you had seen this note, would it have given you some concern or some need to discover further what was behind it?

A. To the highlighted paragraph?

Q. Yes.

A. Yes, I suppose you could say that. I expected that there would be a formal investigation.

Q. And the reason for that is, is it not, because it calls into question what the CVP reading actually was, and if the CVP reading was too high, then that's an issue?

A. That's an issue. That's right.

Q. When you were asked by Dr Murnaghan, I think it was, to respond with whether there were any strengths or weaknesses in the case or any matters of concern or that sort of thing, your response back was simply, that from the surgical point of view, everything was all right. But at that time when you were writing that letter, you had seen Adam's medical notes and records. Would it not have been appropriate to say, "Look, you're obviously going to have some sort of investigation into things, I don't know where it's all going to go, but there is

a reference in Adam's medical notes and records to the CVP reading, which is something that possibly ought to be pursued"?

A. Well, the issue on that letter was I was being asked about a strength or weakness. There certainly wasn't any strength. I didn't think Adam's case became any weaker because the volume and type of solution issue was upfront and in front of the coroner. The Royal didn't appear that they were going to have a formal clinical review and that they were going to rely on the coroner.

Q. Well, might not a weakness be that "In a way that I never was advised, it seems that we commenced Adam's surgery when he might have had an unduly high CVP reading. I don't know that because I don't know what lies behind the record in the medical notes and records, but it's something that ought to be looked at"? Is that not something that would have been appropriate to say in that letter?

A. Um ... I accept what you're saying, but actually what jumped out at me was that the CVP was 30.

Q. Exactly, but there's the bit in parentheses as well and is that not something worthy of noting, "Somebody ought to look at that. There may be nothing in it, but I think somebody ought to look at that"?

A. I accept what you are saying, but you have to recall

that I looked at these notes on the day after Adam died and the letter I wrote was six months later, without access to the notes.

Q. You could have had access to the notes, couldn't you, if you'd wanted to, for the purposes of writing that letter?

A. I'm not actually sure whether the notes were sequestered by the coroner at that time. I am not sure where the notes were.

Q. Well, let's ...

THE CHAIRMAN: I've got the point.

MS ANYADIKE-DANES: Thank you very much indeed.

Then I wonder if I can take you to -- and I think that's where some of my learned friends were assisting. It's Dr Taylor's witness statement of 008-08, which he makes on 22 May 2012. On page 2 of that, he deals with CVP levels.

What he is being asked to do is to comment on your evidence. And your evidence in relation to CVP levels are at those references cited there on those two days, 23rd and 26th. We've gone to some of them and I'm sure that you'll have looked at them yourself having seen -- maybe I will ask you. Have you seen them?

A. I read them a week ago, yes.

Q. So you know what you're saying there and what Dr Taylor

was asked is what does he have to say about that since that effectively involves exchanges between you and he about CVP levels and the implications of that.

Then having been referred to that, he's asked the extent to which he accepts your evidence on those exchanges. He says that he can't recall the specific conversations with Mr Keane. Then he's asked for his own account of what happened in relation to any parts of that evidence. And maybe we can bring up the next page so we have it side by side.

Please don't trouble about the re-zeroing part. It's really just this paragraph, he starts with:

"I can't ever remember a surgeon asking me for a CVP reading on 10 to 20 occasions. I cannot recall Mr Keane asking me if Adam was all right. I cannot remember what CVP readings Mr Keane asked for or what numbers I told him. I would not have misled Mr Keane about the CVP. If a surgeon asked for a specific number, it would be my usual practice to give it and I cannot accept that I would have deviated from that practice. If asked for a number, I would give the number that was displayed on the monitor and offer an explanation, as was the case with Dr O'Connor."

So if we just pause there because that is one sort of block of the evidence. How do you comment on that?

A. The comment I make is that we agreed that we had a CVP reading at the beginning of the operation. During the operation, I ask either for the number or "Are you stable?" If somebody says to you, we start, "How are you?", "We're stable", then I take that his pulse, blood pressure and CVP are remaining stable. And I'm listening to that trend. And at one stage, I would ask for the number beforehand and certainly, on two other occasions, absolutely you would have to know what the number was at the start of the anastomosis because this is his last chance, and if you don't ask, it's not a crime, but you're possibly going to be left sitting, waiting for an anaesthetist to catch up for 20 minutes, maybe --

Q. Yes.

A. -- which would be -- I can assure you it is not how I practice surgery, and you need to know what the number is prior to the time you take the clamp off. In between times, depending on -- I didn't say -- what I said was I bobbed up and down, I don't know how many times I bobbed up and down, but each time I would have asked, "How are you doing?", and if he said, "I'm stable", I would take that to mean it's stable, that the CVP hasn't altered, it hasn't dropped -- I'm not asking him whether it is going up -- and that he knows where we're

going.

I cannot say how many times I did that. Adam's -- there was an hour and a half of Adam's surgery which was incredibly difficult to do. It's trying to take out a tiny blood vessel out of concrete in which, if I spill it, I have a major vascular emergency on my hands. You could have let a bomb off beside me when I was doing it and I would come up and say, "Are you stable? How are you doing?" and he says, "I'm okay". That actually means something. It means your CVP, pulse and blood pressure are --

Q. I understand that, Mr Keane. What I'm trying to see is the extent that one has a real difference between your evidence and Dr Taylor's evidence. Perhaps the short route to it is to go to the transcript of 26 April, page 184, starting at line 16.

THE CHAIRMAN: I think we'll need 184 and 185 together, won't we?

MS ANYADIKE-DANES: You're absolutely right, Mr Chairman, we do.

Starting at line 16:

"You said that you have asked him for a figure. You have said that he gave you a figure."

And you agree with that:

"So obviously the figure he gave you did not give

you any cause for concern."

And you agree with that:

"Question: Can I ask you what figure you would be concerned at?

"Answer: Anything over 12.

"Question: Can I assume from that then that the figure he must have given you must have been under 12?

"Answer: Yes."

The difficulty about that is that Dr Taylor's evidence is that if you had asked him for an actual figure, he would have told you what was on the monitor screen. That's what he does and he's absolutely sure that is what he had done. If that's what happened, if one looks at the monitor, even with deductions of 5 and so forth, one doesn't have, other than at the start of it, any time when it's at a figure that wouldn't cause you concern. In fact, we can pull up the monitor. Sorry, let's get the monitor.

THE CHAIRMAN: I don't think we need to. It must be taken -- surely it must be taken by now -- that the monitor shows consistently high CVP readings. Or do you want to see the monitor?

A. I can't ... He tells me the figure that's on the monitor, I can't see the monitor? Right? So I'm actually relying on him to tell me a figure. I didn't

know that he was re-zeroing several times during that operation. But he's re-zeroing to a number -- my understanding of his evidence was that he recalibrated it down to 12 at the beginning in that letter to Brangam Bagnall and then that he expanded from there.

MS ANYADIKE-DANES: Sorry, Mr Keane --

A. So I don't know what figure he told me, but it must have been something that kept --

Q. You've given your evidence. He could not and did not give you a figure of anything over 12.

A. Yes, he didn't.

Q. And the reason you know he couldn't possibly have done that is because of the effect it would have had on you had you heard that figure?

A. Yes.

Q. In fact, that monitor is 094-037-211.

A. I can't see the monitor.

Q. I'm just going to bring it up for you. CVP is along the bottom. The halfway dotted line is 20. So you can see that it does start roughly at about 17. Do you see that at 8?

A. Mm-hm.

Q. If one was to draw a line straight from that point at 8 right across where the CVP -- right across there, a straight line right across, you can see that in fact,

leaving aside the re-zeroings, it doesn't get anywhere near approaching its start figure until you get past 11 am. In fact, what it's more consistently doing is bobbling around at about 20.

A. Yes.

Q. And even if you deduct your 5, that's 15.

A. Yes.

Q. In answer to a question from Mr Hunter, you said, had you been told anything over 12, that would have been a problem.

A. Yes.

Q. So if Dr Taylor is doing what he said he would have done, which is, "I would have told him what was on the monitor, I told Dr O'Connor that and explained to her". So if he's doing that, you must have heard a figure that was over the figure that you had said in evidence would give you concern; isn't that right?

A. That's right.

Q. So what happened?

A. I didn't hear. Neither Mr Brown nor I heard at any time -- and I don't think the ... I understand that Dr O'Connor discussed this with her, but she was reassured, was her evidence, that everything was all right. That I think is her evidence.

Q. That's not the issue. The issue is the figure she was

told. The issue on that point, as I understand the point that Dr Taylor is making is: if I had wanted to shield the high figure, then I wouldn't have been so open in telling Dr O'Connor that I had a figure of 30 and then explaining how we got there.

MR MILLAR: With respect, sir, that's not a fair way to put it to the witness. Dr Taylor noticed the figure, raised it with Dr Taylor --

THE CHAIRMAN: Sorry, Dr O'Connor noticed the figure. [OVERSPEAKING]. She says she asked Dr Taylor for an explanation and she was given an explanation and she accepted that. Mr Keane's evidence is he never saw the monitor, therefore he didn't ask for an explanation.

MR MILLAR: He was never aware of an unduly high figure, nor was Mr Brown, so neither of them asked for an explanation.

THE CHAIRMAN: The two reasons for not asking for an explanation are that, number 1, they didn't see the monitor, and, number 2, they were not, on that case, alerted to any problem by Dr Taylor.

MR MILLAR: That's correct.

THE CHAIRMAN: Okay.

MS ANYADIKE-DANES: So there is a real difference between you and Dr Taylor as to what it amounts to.

A. That's what it amounts to.

Q. Thank you. Then, just in fairness, if we go through the second paragraph of that part of Dr Taylor's evidence, which is 008/8, page 3. In your evidence, you said that you inspected the nappy or the --

A. Mm-hm.

Q. -- catheter.

A. Yes.

Q. I'm just a few lines down starting:

"I cannot remember."

A. Yes.

Q. Because you had said you went over to the monitors and you had a discussion at the monitors right at the start.

A. Mm-hm.

Q. Dr Taylor says he can't remember that, and he can't remember you inspecting the nappy or the catheter and can't remember confirming with Mr Keane that the CVP was reliable. Then he reiterates that he wouldn't have misled you and that it is his usual practice to ensure that the surgeon has a clear view of the anaesthetic monitor, which would have been turned towards the surgeon before the start of the surgery; is that right?

A. Well, not in my experience. The anaesthetists generally turn it towards themselves. Why would they turn it towards a surgeon?

Q. I trust that's a rhetorical question. I'm asking you to

comment on the evidence that's put.

THE CHAIRMAN: He has.

MS ANYADIKE-DANES: Thank you.

Is there any other comment that you want to make about the evidence there that Dr Taylor has given about your evidence, if I can put it that way?

A. Well, he just doesn't remember, but as I said to you, I had years' paediatric surgery. We always set the babies up on the table to make sure they weren't lying -- or that they weren't going to get a pressure sore or something. And it's my invariable practice before I start an operation to check with the anaesthetist that we're all systems go. If I didn't, it would be a strange -- or if a surgeon didn't say, "Are we ready to go?" -- I mean, you couldn't make an incision on somebody without saying to an anaesthetist, "Are we ready to go here?". It's just ...

MR UBEROI: Can I rise at this point to say, in fairness to this witness and to Dr Taylor, a bit that was moved over in the extract quoted was from Mr Keane's previous evidence where he stated he remembered checking the catheter. And as has been pointed out in that extract, Adam wasn't catheterised. So I wonder if the witness shouldn't be given an opportunity to speak to that area of his previous evidence as well.

MS ANYADIKE-DANES: Thank you very much. We did sort of slide over that. Thank you very much indeed.

A. Did I say that I checked a catheter?

Q. We can have a look at it. Page 96, lines 7 to 12 of 23 April. I'm not sure there's a reference to a catheter there. It may well be in 10 to 14.

A. If I did mention a catheter, it's incorrect, obviously.

Q. I'm not quite sure of the reference -- 15 to 21 maybe. There we are.

A. That's incorrect.

Q. "I would have attended ... Made sure of the things I described to you ... Little things like the nappy, the catheter, and I would have gone over to the anaesthetist."

A. Yes.

Q. And then it goes on.

A. I would have -- sorry.

Q. So the question is: at that stage, Adam didn't have a catheter, that's one of the issues.

A. No, I understand. I would have attended -- in my mind, whether he needed a catheter or not, and I looked at him on the table, looking at him, making sure he was on the table safely, I would have thought about the catheter, do I need to put a catheter. The answer was no. Personally, as I said to you, I didn't think he required

a urethral catheter.

Q. I understand.

A. I mean, it's a thing I would have considered. It's not that I didn't consider putting a catheter into Adam. I positively decided not to.

Q. You remember that?

A. Personally? Yes.

Q. You remember that?

A. I remember looking at him and thinking, "Does this 4-year-old child who's going to have a suprapubic catheter in him and a ureteric catheter in require a catheter?", and I said no.

Q. Did you communicate that to Dr Taylor?

A. No.

MS ANYADIKE-DANES: Thank you. Thank you very much, Mr Chairman.

THE CHAIRMAN: Okay. I think that finishes Mr Keane's evidence unless something has come up this morning, which needs to be developed.

Mr Keane, thank you very much for coming back again. You're free to leave.

(The witness withdrew)

We'll take a break for 15 minutes for the stenographer and resume with Professor Savage.

(11.22 am)

(A short break)

(11.40 am)

PROFESSOR MAURICE SAVAGE (called)

Questions from MS ANYADIKE-DANES

MS ANYADIKE-DANES: Good morning, Professor Savage. As you know, we're looking at this note of the consultation of 14 June. But before we actually look at the detail of that, I want to ask you how many meetings you recall having to discuss the events that happened in that operating theatre, and for that matter, its immediate aftermath, in relation to the forthcoming inquest, if I can put it that way?

A. At the most, two or three, but I don't remember exactly. I think I've said that before.

Q. I can help you with your transcript, if I may.

MR FORTUNE: Can I assist because Professor Savage has looked at the correspondence and made a note for himself, and if he's allowed to refresh his memory, albeit it's a note for me, it may be that --

THE CHAIRMAN: That would help, thank you.

MR FORTUNE: Thank you.

MS ANYADIKE-DANES: Yes.

A. So what I wrote down when I looked at the material you gave to us recently -- my conclusion was that a meeting was arranged for 17 April.

Q. Yes.
A. 095-043-098. However, I have not been able to locate a record or minute to confirm if it occurred or if I was present, unless you have been able to do so.
THE CHAIRMAN: I think there's a note which refers back to that.
MS ANYADIKE-DANES: Yes.
A. There is.
THE CHAIRMAN: So we think that, so far as we can piece things together, that meeting was arranged for 17 April and then there's a subsequent letter which refers back to 17 April. So it did go ahead.
A. Right. The next conclusion I made was --
MS ANYADIKE-DANES: I beg your pardon, just to assist, I think it's Mr Brangam who refers to a consultation with the clinicians. It's actually his note on 17 April, and the reference is 059-036-069. And in the light of that, there's a comment that you might feel it necessary to meet again with Dr Taylor.
So it happened. I suppose the issue for you, professor, is whether you attended it.
A. Well, I don't remember it.
Q. Thank you.
MR FORTUNE: And indeed, if you look at that letter, sir, there is no CC or "for the attention of", and then the

clinicians to be known.

THE CHAIRMAN: No.

MS ANYADIKE-DANES: So it was arranged, it took place, but you can't remember actually attending it even though --

A. No.

Q. -- it was intended that you would and your availability was checked. So then do you remember any other consultation?

A. Well, I have noted that a meeting did take place on 28 May, 059-027-058, at which I was present. And the letter in relation to this draws attention to a clinical note which I'm said to have made on 27/11/95.

Q. Perhaps we'll pull that up. I think it's 059-027-058. There's a handwritten version of it, but this I think is a typed version. The first sentence:

"Following the consultation with Doctors Taylor and Savage this morning (28 May) ..."

So that's going from Dr Murnaghan to Mr Brangam. And you were referring, professor --

A. It says:

"Additionally, your attention is drawn to Dr Savage's note dated 27 November."

Q. Yes.

A. I don't know what that note is. I assumed they meant a clinical note, but looking at the clinical notes, it's

difficult to know what would be of particular significance that I wrote on that date.

Q. Might it be the note, which I think actually is dated 28 November, that you originally made that became part of your deposition --

A. It's possible, yes.

Q. -- which is 059-066-153? That's your note. And when you were asked about that in your evidence, you said you were doing that note to provide a factual account of your involvement or what you knew about what had happened in relation to Adam.

A. Yes.

Q. And if you go to the following page, you see where that's dated.

A. I agree.

Q. There you are. It's dated the 28th. That might be what that is referring to; would that be fair enough? Thank you.

So there's a consultation on 28 May.

THE CHAIRMAN: And the next, professor?

A. I noted from the documents you gave us that a meeting took place on 31 May, at which I was not present. That's 059-024-051.

MS ANYADIKE-DANES: Yes, but I think what we're asking for your assistance with is the ones where you were present.

THE CHAIRMAN: Don't worry. This doesn't do me any harm to get the professor's helpful tracking of it.

A. I thought it was important to me, that meeting, because there's a letter on the day before that meeting, which mentioned my concerns, and it's clear from the penultimate paragraph in that letter that my view that Adam had received excessive fluids in theatre and was quite clearly -- already quite clearly stated 059-024-047.

MS ANYADIKE-DANES: Yes. 059-024-047.

A. I think you have referred to that previously.

Q. I think the citation's wrong. 059-042 ...

THE CHAIRMAN: Sorry, pause a moment. Professor, what's your reference for this note?

A. 059-024-047.

MS ANYADIKE-DANES: Which is the second page of that 30 May letter that we were just looking at.

A. Yes. I only mention it because, whether or not I was present, it's clear that my view regarding the excessive fluids was known to the Trust and the legal team.

THE CHAIRMAN: Right. Okay. Then after 31 May?

A. Well, again, I know you're interested in the meetings that I was at. However, there was a meeting held on 5 June, attended by Dr Murnaghan, Dr Taylor and Dr Gaston, with Mr Brangam, and I was not invited, as

far as I know. 059-017-043.

You'll see it's not copied to me either.

THE CHAIRMAN: Right. Okay. The next?

A. The next letter that you provided to me recently was one written on 7 June. 059-014-040, I think.

MR FORTUNE: Go back to 038, which may be the start.

A. Sorry, it starts at 038. You're correct. That refers to that meeting.

THE CHAIRMAN: Yes.

A. At which I wasn't present.

THE CHAIRMAN: So it's a follow-up by the solicitor to the meeting on 5 June?

A. Yes, and it seems that that meeting centred on Dr Taylor's position and his divergent view from those of myself, Dr Sumner and Dr Alexander.

THE CHAIRMAN: Okay. If you can keep going, please.

A. And then, on 10 June, 059-014-038, that document was not initially copied to me, but was subsequently faxed to me. And we know that because I responded on 10/06. I don't have a number for that response, I don't think.

Then the final meeting that I've noted is, of course, the one that has been the subject --

MS ANYADIKE-DANES: I beg your pardon for interrupting, professor, just to understand what you're saying. That lengthy letter going to Dr Murnaghan from

Brangam Bagnall dated 7 June, the first page of which is 059-014-038, are you saying that although it wasn't addressed to you, you did actually receive it and that's what the memo of 059-009-027 is doing?

A. I think I subsequently had something faxed to me; isn't that right?

Q. Yes:

"Attached is a copy of a lengthy fax recently received from George Brangam ..."

A. I think so.

Q. And then you see it is circulated and you're one of the people that it's circulated to.

A. Yes, and I then responded to that.

Q. You responded by your 059-003-005, which is your letter of 7 June.

A. Right. That's correct.

Q. Any other meetings, Professor Savage?

A. Well, the last meeting is the meeting that we received a note of.

Q. 14 June?

A. 14 June, with which I have considerable difficulty, as does the chairman.

Q. So prior to the 14 June meeting, if we are clear, you had received that lengthy note from Brangam Bagnall, setting out concerns that they saw, you had seen the

autopsy report, you had seen the report from Dr Sumner, the report from Dr Alexander -- because some of these reports were actually being sent to you so you could help interpret them, if I can put it that way, to Adam's mother. And you had yourself at least a meeting on 28 May; isn't that right?

A. I think so, yes.

Q. Obviously, you had looked at Adam's medical notes and records, including his anaesthetic record, and you had written your letter in February to Adam's mother --

A. Yes.

Q. -- which refers to your conclusion which you have held to as to what had happened in relation to his fluids.

A. Yes. And I think that both Dr Murnaghan and Mr Brangam were aware that I agreed with the conclusions of the autopsy and those of Dr Sumner.

Q. Yes. I hadn't given you the reference, but that letter to Adam's mother is 306-090-001.

So that's what you have going in, and you know something of what the concerns are, at least so far as have been identified by the solicitor, to the Trust, also going into that meeting. Can we now pull up the note itself of the meeting?

THE CHAIRMAN: 122-001-001.

MS ANYADIKE-DANES: Thank you.

Can I ask you, Professor Savage, firstly, as I have asked everybody, have you discussed this consultation note with anybody since your legal team received it before the summer?

A. Extremely briefly. I spoke to Mr Brown and I encountered Patrick Keane at a concert we were both attending and spoke to him even more briefly in passing. On both occasions, I have to say I asked them if there was any possibility to the truth of the statement that a needle had been put in a kidney and they both were quite clear to me that it had not happened. And I was anxious to know that because that statement disturbed me greatly and I felt it was untrue.

THE CHAIRMAN: Untrue in the sense of being unthinkable?

A. Well, I had never heard it before and having read this and having been said to have been present for much of the meeting, I have no recollection of ever hearing such a statement before. And it has exercised my mind considerably since as to how that statement could have been included in this minute, as it has the chairman's. My only thought about it that I would suggest is that it's an erroneous note, somehow, which has been transcribed incorrectly. My thinking is that here was a note taken by a clerk, in handwriting, which was then put together piecemeal. I think we were told that

various parts of the discussion were put together into themes, although I can't really detect any themes. And in doing that, a dictation was then made, which was typed by someone else.

The note ultimately, we were told, was not checked by anyone, either in the law firm or in the Trust, or circulated to any of those present. In my long experience of important meetings, they are initially checked by the person chairing the meeting for accuracy and then circulated to be sure that they are a true and accurate record. And that's why I wonder -- if we could put up the wording of that crucial paragraph.

THE CHAIRMAN: 005, thank you.

A. I'm not saying this is the case, but it's the only thing I can think of, because it's so contentious, that people were querying the situation. And did someone not just query about the proper perfusion of the kidney, but did someone query, could a needle not have been put into the kidney to check that there was blood in the artery? And in being transcribed, that has come to be a fact, whereas perhaps it was a question. I don't know because I have no memory whatsoever of that discussion, nor indeed of the majority of the discussion.

THE CHAIRMAN: That helps, professor, in the sense of trying to work out how it could possibly have come into this --

because I don't believe ... I mean, I accept what you say about Mrs Neill. She's clearly a very educated woman, but she did not represent herself to be a medical expert. And there are other bits and pieces in the note which are clearly not entirely accurate. For instance, the hypernatraemia references instead of the hyponatraemia.

But it seems to me, subject to any submissions or further evidence, that something must have been said about a needle because it's hard to imagine how this could possibly have been so completely misunderstood or misconstrued or wrongly transcribed as to end up -- unless there was some reference to a needle. And I understand why you're, I think, struggling to help me with the suggestion about where this could have come from.

A. I completely understand why you're concerned about the statement. But I'm also concerned that perhaps it's totally inaccurate.

THE CHAIRMAN: Yes, and one of the things I have been thinking about is, if this was floated as a somewhat curious question about, "Could they have happened?", who would have floated it? It's unlikely to come from the lawyers. It's unlikely to come from Mr Brangam or Mrs Neill, which leaves four people.

A. And two of them have no knowledge of renal transplants.
THE CHAIRMAN: Yes.
A. And they may be the ones who made the suggestion. However, I don't know. But another thing I would say about this note is that it seems to be a note, really, of a meeting where Dr Taylor's position was discussed in depth and how the legal team would manage it, shall we say, at the inquest. For instance, I think there are some 16 references to Dr Taylor. There's one reference to me and there are perhaps two, or maybe three, to Dr Gaston and to Mr Brangam. There are no quotations from Dr Murnaghan, who must have had a major interest in this discussion. And it seems unlikely that he never said a word. So I think it's an incomplete record. And although much has been made that it is probably taken by a very competent person, I don't think the competency is an issue, I think it's the completeness. Because there are many statements in at as well -- for instance, the colander statement -- where there doesn't seem to have been any rebuttal or questioning of contentious statements. They're missing.
MS ANYADIKE-DANES: Professor Savage --
A. Or perhaps no one --
Q. That exactly is one of the issues. I was going to take you to the substance of it in a while. But one of the

things maybe you might bear in mind is that there had been a previous meeting and Mr Keane refers to it. In fact, he was there as a surgeon. He refers to that as a "regional meeting". And that meeting seems to be the one that happened on 17 April. Mr Brown, Mr Keane, a number of the clinicians were invited to that meeting. You say that you don't recall being there. Do you positively know that you weren't there?

A. No.

Q. Is it simply that you don't remember being there?

A. I don't remember being there.

Q. In any event, some of these matters may have been discussed there, which is why one may see the discussion being approached in a certain way if you've already gone over certain things. I don't know. I just offer that to you to consider that, that this may not be the first time that some of these points that are recorded in this note have been mentioned amongst people.

A. If that was the case, you would have thought there might have been an agenda and that someone might have been identified as the chairman to work through the agenda and that doesn't seem to have been the case either.

Q. Can I ask you, was a note taken of the meeting that you do recall attending or at least you are referred to as having attended?

A. I don't know.
Q. You don't know whether a minute was made of that meeting?
A. No.
Q. Do you know who attended it other than is referred to in the documents?
A. I assume the people referred to in the document, but I don't remember specifically. I don't remember Mr Keane being there for instance, but apparently he was. This is a long time ago.
Q. I understand that. Everyone has been asked a rather similarly structured question, which has caused some, more or less, difficulty, which is: if you leave aside the paragraph that you've just been looking at, is there anything apart from that paragraph that you regard as inaccurate, that just can't be right?
A. It's difficult to distinguish between inaccurate and contentious, but if you just look at the very top paragraph that you have up on the screen at the minute. Oh, it's gone. (Pause).
Q. If you go back to that page, just to identify which paragraph it is.
THE CHAIRMAN: Could you give us the whole of page 5 again, please?
MS ANYADIKE-DANES: We have item number 4. Which paragraph

are you taking us to?

A. The third paragraph.

Q. "If one has lost ..."; is that the one?

A. Yes:

"If one has lost 10 per cent of blood volume, then you could provide a drip of platelets and fluid. If 15 to 20 per cent of blood volume was lost, then one [would need to] give blood."

I don't know whether that is an accurate statement of what someone said or not, but it is a very strange statement. Because if someone lost 10 per cent of blood volume, you would not give a drip of platelets and fluid and there's a very simple reason for that. Platelets, once they're separated from a blood pack, only keep for a very short period of time and you would not have platelets available to give. Platelets are given because they contain clotting factors which are used to control a haemorrhage issue. So that is a strange statement to me.

Now, I'm not saying -- I think you asked me if there are inaccurate statements.

Q. Mm-hm.

A. It's a contentious statement.

Q. Understood.

A. It's confused. I think this is an example of why

I think this note is not a particularly good note. And there are other examples of that. If you want to go through them, I can go through them for you. There are many of them.

THE CHAIRMAN: I think, for the record, we should go through the main ones. We'll go back to page 1 for that, professor, just to have this on the record.

A. Okay. I think in paragraph 6, for instance.

THE CHAIRMAN: That's "Dr Taylor explained"?

A. Yes:

"He pointed out that saline and dextrose together is an isotonic solution."

From what we've heard from Dr Taylor, I think he probably said that this normal saline and dextrose is an isotonic solution. So that's been missed, or perhaps he said saline and dextrose together is an isotonic solution, but that's not a solution that's commonly used. So it's not a good minute. And I think these small inconsistencies are something, that if someone had checked the minute, would have been picked up.

And then in the next paragraph, it says:

"During the procedure, the child received 1,500 ml of the saline solution in three 500 ml bags."

And again, that should be fifth normal saline. So I can see that someone without a medical background will

make these sorts of small errors. And I don't think it's a big issue, but really all I'm saying is it's not a particularly good minute, really.

If you go to page 2 where there's that box of the fluids, I think it was Dr O'Connor who said -- it says "60 ml per hour for metabolism", and that's not a phrase that we use. And as well as that, it doesn't make sense because if actually what it means is insensible loss, then it would only be 10 ml an hour, so there seems to be an error in that.

I know that the other question you had was: why does it say 100 ml an hour for urinary output, when Dr Taylor had on occasions thought it was 200 ml an hour, and myself and other experts thought it was more like 60 to 70 ml an hour. And these sort of contentious statements do make me worry about the whole minute.

Again, on that box it says:

"Less 10 to 20 ml per hour for the urine output of a normal child."

And it's incomprehensible why you would be taking that off in any fluid calculation because it's completely irrelevant. So again, I think that's been a misunderstanding in the minute, but I don't know because I don't remember this detail. There are things --

THE CHAIRMAN: I take it, professor, there must have been a discussion about these issues?

A. Oh yes.

THE CHAIRMAN: And one of the concerns I have is, since you were present for all but the first 15 minutes or so, if this had been going on around you, you would surely have said, "Stop, this doesn't make any sense".

A. That's the point I was making about the entire minute. Very rarely in this long minute is there any point where anyone says, "Wait a minute, that's not right". There are no negative reports in this entire minute, which seems very unlikely in a situation where there were two clinicians with diametrically opposed views, one of which was supported by external experts.

It also seems very strange that Dr Murnaghan, who obviously had a major interest in sorting this problem out, apparently never spoke at all. And if any of us know Dr Murnaghan --

THE CHAIRMAN: He does.

A. It'd be very unlikely.

MS ANYADIKE-DANES: Well, Professor Savage, firstly, the things that you had identified in relation to Dr Taylor. Dr Taylor -- well, you probably were here and heard his evidence.

A. Yes judge.

Q. And he hasn't taken issue with those things so far as I understand it, and you mentioned the analogy of a colander. But we know in the evidence which he has said that he just can't explain how he could have given that evidence to the police, although he didn't use the expression "colander", he used something rather similar.
A. Similar, yes.
Q. An issue is not just whether you criticise these things and worry about how they could be said because at least Dr Taylor has not said, "I don't think I said that". So the issue really is, if this is a reasonably accurate note and these sorts of things were being said, what did people do about them? And I wanted to take you to the parts of it where I think you might be able to assist us with that.
MR FORTUNE: Sir, my learned friend has asked Professor Savage the question that has been asked of the other witnesses so far: would you take us through this document pointing out matters that highlight inaccuracies or inconsistencies --
THE CHAIRMAN: I'm going to let him finish that before we go on to the next question.
MR FORTUNE: -- because there is still something to be said about the final line about the contents of that box.
THE CHAIRMAN: And there's another three pages to cover

before we go on to specific issues.

A. 150 ml per hour is suggested as the total fluid requirement. If we multiply that by 24 -- it's much easier to multiply it by 12 and then 2 if you've my standard of mental arithmetic -- I think it comes out at 3,600 ml per hour.

MR FORTUNE: Per day.

A. Sorry, per day, yes. Whereas there has never been any contention that Adam received 2,100 ml per day. But again, my point -- of course, there's another reason why there may be no rebuttal of some of these things, and that is that I wasn't there. It says I was late by 10 to 15 minutes, but it seems to me that the first two to three pages must be a presentation or some record of a presentation by Dr Taylor and perhaps I wasn't there for most of it and therefore didn't challenge some of the things. But again, that calls into question the accuracy of the minute. When did I arrive and when did I leave?

THE CHAIRMAN: Let's suppose that the notetaker's right about you running 10 or 15 minutes late or they start 10 to 15 minutes early, or whatever. This is a note of over five pages.

A. Yes.

THE CHAIRMAN: And it's a bit hard to think they would have

got halfway through that in 10 or 15 minutes, isn't it?
A. It is, except if you remember, Mrs Neill said from her notes she extracted similar themes, put them together and stroked them out as she went. So it may not even be chronological --
THE CHAIRMAN: Yes.
A. -- which is not the way I would record any meeting.
THE CHAIRMAN: It depends what the purpose of this note was.
A. Yes.
THE CHAIRMAN: Okay. Have you finished with that box?
A. Yes.
THE CHAIRMAN: Page 3, please.
A. Well, again, there's a problem for me, physiologically, on page 3, where Dr Taylor talks about how if someone is getting a high calorie feed every night and you didn't given it to them one night, that then their blood sugar would drop dramatically because their body would be automatically producing high insulin levels every night. This is not a sound argument because that would suggest that if you had chocolate pudding every evening with your dinner, that every night your body would produce extra insulin and if you didn't get it one night, your blood sugar would drop dramatically because somehow or other your pancreas would be expecting chocolate pudding and producing insulin. In fact, what actually happens

is that if you take a high-calorie meal, you produce the insulin commensurate with the meal. If you don't take a meal or take a low-calorie meal, then your body does not produce the insulin.

So again it's one of those contentious statements.

THE CHAIRMAN: This is paragraph number 2, is it?

A. Paragraph number 1. Numbered 1. I'm not saying that wasn't said. I'm saying that it's surprising that it was said and no one clinically qualified said, "Wait a minute, that is a bit of a strange statement".

THE CHAIRMAN: Okay. Let's go on through.

A. Well, I think on page 4 we come to that key paragraph that everyone has been asked about.

THE CHAIRMAN: No, that's page 5.

A. I think we can go on to page 5, probably.

MR FORTUNE: There is a question at the top of page 4 as to the opening of the bladder. Does Professor Savage wish to make any comment?

A. Well, except that I don't think the bladder was opened early on, but I wasn't in theatre. I was at this meeting. But again, no one seems to have challenged the statement. It's halfway down this page that you first see a statement from me. This is a very long time into -- if this was chronological, we're now on page 4, yet I was supposed to be there after 10 minutes. At

this point, I'm obviously saying, "Wait a minute, we can't argue against the point that Adam had hyponatraemic fluid overload", and then the second half of that sentence doesn't fit. It says:

"Although there was correct logic in how the fluid calculations were made ..."

And I suspect it's more likely that I would have said whether or not there was correct logic or I said there was incorrect logic. It's a difficult sentence for me to square with the way I was thinking at the time.

THE CHAIRMAN: If he was overloaded as severely as he was, then there wasn't correct logic, was there?

A. No. So that's, again -- these are the problems I have with this whole minute.

THE CHAIRMAN: Okay.

A. Then on the next page, I think we've mentioned the thing in paragraph 3 about the platelets, which wouldn't be appropriate. And then in paragraph 4, it says:

"It was commented that some people would bleed down to 30 per cent prior to surgery."

Well, it's a completely nonsensical sentence. I mean, you couldn't bleed before you had the surgery. So there's something wrong with that minute. It possibly was said that some people would allow a patient

to lose 30 per cent of their blood during surgery, although I hope they're not operating on me. But again, it's a questionable statement. It's an incorrect statement. It has been incorrectly transcribed somehow or other. But it's not particularly relevant to what we're worried about.

THE CHAIRMAN: It's relevant to me because I need to get a feel for the overall accuracy of the note in order to help me focus on the reliability of the most controversial paragraph, which you're about to come to.

A. Yes. Well, I don't know if you want me to deal with that.

THE CHAIRMAN: Let's go on to it. I presume you do want to say something about "a query was also raised".

A. Yes, we've discussed whether there was good perfusion or intermittently good perfusion many times, but obviously that was discussed, and I think that's fair enough. And then we're into the difficulty of understanding the difference between perfusion and performance and so on. But I wasn't present in theatre so I might not have said too much about this. But again, as I say, the idea that I would have been present and someone said there was a needle put into the artery, that I wouldn't have said, "My God, are you serious?", or, "I've never heard this before", or something along those lines ... It's just

missing. And that's why I'm suggesting that perhaps it was something that was suggested rather than it being a fact. And I don't know, but I thought it was -- I thought about this a long time over the weekend and I thought -- in all my evidence, I've said I don't want to speculate, I never want to speculate. But this is so important that I think you have to speculate. How did this get into the note if it wasn't correct?

I don't for a minute believe that Mr Brown or Mr Keane or Mary O'Connor, who were present, would have known this and not remembered it. It's just not conceivable. In other words, I believe them, not this note. But the note is there.

THE CHAIRMAN: Yes.

A. And then the other question that has come up is whether someone said, "Well, it doesn't really matter because the kidney's no longer relevant at this stage". And again, that is a very difficult statement to accept. And I suspect that people were saying, "Well, I suppose that perfusion and so on -- looking at this from this distance, it was no longer relevant because the real risk to Adam's life was the cerebral oedema. But again, I don't know because I don't remember this discussion. But I don't think it's correct. And that's my honest opinion. I accept that it is opinion and it is, to some

extent, speculative, but I think it's fair.

THE CHAIRMAN: Okay. Just before Ms Anyadike-Danes asks you any more specific questions, is there anything on the rest of page 5 or into page 6 which you want to draw to my attention?

A. I think it says somewhere on page 5 that someone said -- yes, four paragraphs up or five:

"It was felt Dr Alexander had somewhat muddied the waters and it was felt that the article by Arieff was not particularly relevant."

Well, it was extremely relevant. So I think that may have been an opinion that was put forward by someone, but it wouldn't have been one that we all agreed about.

THE CHAIRMAN: What about Dr Alexander muddying the waters?

A. I don't understand why they said that at all. The other thing that I would say about this page is that, again in terms of the quality of the minute, it starts now saying "the doctors pointed out", "the doctors were concerned", "the doctors" ... So the person taking the minute seems to have lost memory or forgotten to note who actually said these things. So it has been reverted -- I mean, I don't know why, again it's my concern that we have this situation where Dr Taylor's frequently quoted, Dr Murnaghan's never quoted, the doctors are

occasionally identified, as are Mr Brangam and some of the others. But I just ...

THE CHAIRMAN: Okay. Do you have anything more?

A. No, I think they're probably the main things. As you can imagine, I've read this half a dozen times and tried to think my way through it.

MR FORTUNE: Can we go to page 006, sir? Perhaps we could ask Professor Savage about the contents of paragraph 4, and, although no one is named as the person pointing out the matter referred to, who it was likely to have been.

THE CHAIRMAN: Yes.

A. Well, that's obviously something that I've said. And as you know, subsequently to that, I wrote to the transplant service and to the transplant Audit Committee, asking them to look at that.

THE CHAIRMAN: So that part is accurate, that paragraph?

A. Yes.

MR FORTUNE: Sir, you'll note that it refers to "the doctors".

A. Does it?

THE CHAIRMAN: Yes, the second line:

"Nine children have died with hyponatraemia following renal transplant and the doctors would wish to propose that UK nephrologists should look into this matter".

MS ANYADIKE-DANES: Might that not be correct, might they not all have wanted this to be looked into?
A. It's possible, but I certainly would have wanted to do so --
THE CHAIRMAN: But if you said you wanted it looked in to and the others at the meeting agreed, would it then not be accurate to say that the doctors wished to propose that the nephrologists should look into it?
A. Yes.
THE CHAIRMAN: So that might be an example of you leading a contribution on some specific point and the others agreeing with you, and the note is to the effect that there was agreement between the doctors present.
A. Yes. I'm not saying it's incorrect to use the phrase "the doctors".
THE CHAIRMAN: It feeds back into earlier parts of the note where it says, "the doctors". Because if that's an example of the note being accurate, then it leaves me with something to put into the -- a factor to take account of when I'm looking at other points where "the doctors" have said things or agreed things.
A. Perhaps we should look at that.
MS ANYADIKE-DANES: Perhaps while we're on that page, the very last sentence refers to something from Dr Coppel.
A. Mm.

Q. And I think we had heard some evidence, I believe from Dr Taylor, that he had gone to see Dr Coppel or communicated with Dr Coppel and, in fact, one of the things that was disclosed to us, along with this note and the notes of the inquest, was a letter that Dr Coppel had written to Dr Taylor, which is at 122-048-001.

MR UBEROI: If I might rise for completeness, you'll remember the evidence of Dr Gaston who stated that Dr Taylor went to see him, and I believe Dr Gaston's evidence was that he suggested that Dr Taylor may wish to contact either one other clinician or this clinician, Dr Coppel.

THE CHAIRMAN: Yes.

MS ANYADIKE-DANES: Thank you. So this is what Dr Taylor receives back. The first one I wanted to ask you about is: did you know that Dr Taylor had been to see Dr Coppel and Dr Coppel had responded?

A. I don't know. I don't think I've seen this letter before. I'm just reading it. Well, you've obviously read it. Does it say that Dr Coppel would give a litre of dextrose prior to surgery? I don't see it.

Q. I don't see that it says that in terms. So I don't know whether this is what is being referred to in that note. What I'm pulling it up to show is that there is a record

of a Dr Coppel's views being sought over and above the evidence that Dr Gaston gave and Dr Taylor gave. I don't know whether this is the only time that he communicated his views, but here certainly we have a signed letter from him, which shows that he is involved in some way.

A. Dr Coppel was the senior anaesthetist in the Royal Hospital at that time.

Q. Yes.

A. And he's obviously saying to Bob Taylor "I don't think you've done anything negligent and I will support you as best I can".

THE CHAIRMAN: It's curious then if you look at the first page at the second paragraph up, which starts "as a non-expert". Do you see that?

A. Yes.

THE CHAIRMAN: "As a non-expert, I have to explain why Adam developed hyponatraemia and cerebral oedema!!"

The exclamation marks are highly suggestive, aren't they?

A. Suggestive of?

THE CHAIRMAN: Well, that he is exclaiming or he's taken aback by having to explain why Adam developed hyponatraemia and cerebral oedema. He ends that paragraph by saying:

"His maintenance requirement may not have been high as expected."

"As expected" surely must mean here "as expected by Dr Taylor"? Because it's Dr Taylor who was working out maintenance requirements for the operation.

MS ANYADIKE-DANES: Yes, Mr Chairman. If you look at the second page also, the first paragraph:

"Nevertheless [so after all that having been said], we still have to explain the hyponatraemia and possible interstitial pulmonary oedema."

And then the question:

"Was Adam puffy?"

Of course, your evidence is not only was he puffy, but he was very bloated.

A. Mm. And so is [inaudible]. However, I think it's fair to say, on behalf of Dr Coppel, that he does say, "I have had no experience of fluid management of children since I was in Dallas in 1969". So that was a long time before.

THE CHAIRMAN: Yes, it was.

A. And, "I have no experience of kidney transplants ".

MS ANYADIKE-DANES: Irrespective of the 1,000 ml -- and we don't really know when Dr Coppel may or may not have said that -- but it is the chairman's concern to see what benchmarks can you make to show that something ties

in. Certainly, we have some evidence of Dr Coppel's views being sought and actually providing some views. Whether or not these are the views that are being referred to in that consultation note, but Dr Coppel had provided views.

A. Yes.

Q. Thank you.

THE CHAIRMAN: Okay. Let's leave that behind.

MS ANYADIKE-DANES: Yes. As you were going through this consultation note, it was a very helpful exercise because you were pointing out things where you said, "That just can't be right", or at least, "I can't see how that could be being said", irrespective of whether it actually was being said. Before I ask you a little bit about that, can I ask you first, do you actually recall the consultation of 14 June?

A. Not in detail. I know that we met before the coroner's inquest, but I don't remember the detail of it. Reading this minute it seems to me that the entire meeting virtually was constructed around the fact that both Dr Murnaghan and Mr Brangam were aware of Sumner's report, were aware of Alexander's report, were aware of the post-mortem conclusion and my view, and they were aware that Bob Taylor was having difficulty understanding how that had happened and trying to defend

his actions. And therefore the meeting was to sit down and go through it with Dr Taylor.

Q. Yes.

A. And I think at the very end somewhere it says: what you have to do at the inquest is say what you did and why you did it. Something along those lines.

Q. Well, it wasn't just Dr Taylor, was it? Because it seems that his position -- and we'll go to it if we have to -- was getting some support from Dr Gaston.

Anyway, the point I wanted to put to you is your letter of 7 June, which is 059-003-005. So you've received the fax from Brangam Bagnall, so you have seen what they think are issues and the points raised by Dr Sumner's report, and you write this letter.

If we just go through what you are discussing here. The first is about the measuring of urine. You express your views about that. That's the first paragraph.

Then in that same first paragraph, you express your views about his urine output per hour is likely to have been around 75 ml. Then you say in that same paragraph, the penultimate sentence:

"This means that he would have been some 600 ml behind compared to normal. In calculating his maintenance fluids, one would therefore take this deficit into account."

So that's your position on that. Then you say:

"Assuming the normal urine for Adam was approximately 70 ml per hour, his maintenance fluids during surgery should have taken into account the overnight fluid deficit and the infusion rate per hour would then vary on how quickly one wished to catch up this deficit."

Are you indicating there, so that Dr Murnaghan would understand it, that Dr Taylor may actually have sought to catch that deficit up, amongst other things, too quickly?

A. Well, there are several things about this. It says this means he would have been some 600 ml behind compared to normal. If you look at the anaesthetic record, you will see that after discussion with Dr Taylor, he had decided he would use 300 ml as a deficit. It's written at the top of the anaesthetic sheet in the clinical notes, "fluid deficit, 300 ml". What I'm doing here is saying the most it could have been would have been 600 ml and if we look at the fluid that he got and look what the Dr Sumner's saying -- because I think this comes on the back of Dr Taylor at some point saying, "But Sumner didn't take into account the fact that he was in deficit". And I'm saying here, yes, well, even if we say he was 600 ml in deficit, and we give him that

fluid, it would only have accounted for 250 ml over the period of time of the surgery, and therefore that could not have given rise to the hyponatraemia. It was the vast volume of fifth normal saline that he got, although I agree I haven't been particularly explicit on that.

Q. That's what I was going to ask you. Because actually you, in your evidence, were very clear in your mind of what had happened. When you gave your evidence about the view you formed when you were discussing with Dr O'Connor, just prior to going to see Adam's mother, you couldn't have been clearer in your evidence. It's all quite straightforward to you what had happened at that stage and you're pretty clear in the letter that you write to Adam's mother in February of the following year. What I wanted to ask you is: why didn't you just spell it out for Dr Murnaghan?

A. Because he already knew.

Q. But you're in the territory of explaining something. So it would be quite easy to have summarised it in just exactly the way that you have to the chairman now.

A. Well, it says:

"The difference between the two figures of 50 ml per hour would only have accounted for 250 over the period of the operation and I doubt if this difference could have given rise to hyponatraemia."

I'm saying that in the context that Dr Murnaghan knows that I believe the dilutional hyponatraemia was because he got excessive fifth normal saline and dextrose. I agree I haven't said that, but that's probably because I'm well aware of what Dr Murnaghan and others understand of my position. I was interested to read Mrs Weir's transcript.

THE CHAIRMAN: Mrs Neill.

A. Mrs Neill, sorry. It's much more explicit in her record than coroner's record of my views. In other words, the coroner hasn't recorded it in detail, but she has. I don't have any doubt that I made it quite clear to everyone involved where I stood, but I agree it's not spelt out particularly in this --

MS ANYADIKE-DANES: Then you go on to deal with the electrolytes being repeated and the theatre and so forth.

You say that you have said that Adam's electrolytes should have been repeated before going to the theatre and then you talk about difficulty in getting venous access and so forth. And then you say it would have been possible to check, and then you end up with:

"I am not sure whether these comments are particularly helpful and obviously we will need to discuss them further."

A. Yes.
Q. What did you mean by that?
A. Well, I assume that I expected we would all meet before the inquest.
Q. Well, obviously you would need to discuss those things further and, presumably, the other things that are in the Brangam Bagnall fax.
A. Yes.
Q. So although there was an agenda, that's what you wanted another meeting to discuss, and then there actually was a meeting on 14 June.
A. Correct.
Q. When you were going through and saying that you had issues about various things, the difficulty about that is -- and you had, I think, alluded to some of that difficulty at the beginning -- whether you're being asked your view about what's difficult for you to take without being in a position to say for sure that that wasn't actually said, albeit erroneous if it had been said. Because we have got some support for some of what is in this document.

If we go to 122-001-002, you took us to that box and you made a number of comments about that box. Then you ended up at the 150 ml per hour and you said that that couldn't be right because if that was so, it would gross

up at a far higher figure than anybody had ever thought that Adam was getting daily.

But in Dr Taylor's own deposition at 011-014-099, I think he says that 150 ml an hour was for ongoing requirements.

THE CHAIRMAN: The very bottom of the page.

MS ANYADIKE-DANES: I'm trying to see where it actually comes.

MR FORTUNE: Five lines up from the bottom.

THE CHAIRMAN: "However, he would normally receive a sugar solution at 150 ml per hour. Thus, I gave him the deficit of fluid, 300 to 500 ml, plus his ongoing requirements, 150 ml per hour."

MS ANYADIKE-DANES: It looks as if he was trying to achieve, one way or another, 150 ml an hour. Is that not how one would interpret that?

A. I think so, yes.

THE CHAIRMAN: The point is that the number --

A. The number in the box is the number he used in the inquest.

THE CHAIRMAN: Yes. However inaccurate and wrong Dr Taylor's calculation is, the typed statement here is what was already submitted to the coroner, isn't that right, in advance?

MS ANYADIKE-DANES: Yes.

THE CHAIRMAN: So that statement had already gone to the coroner and what is in the box on page 2 of the consultation note is a breakdown of how Dr Taylor calculated that.

MS ANYADIKE-DANES: In fact, it's even clearer if one goes to 101.

THE CHAIRMAN: 011-014-101.

MS ANYADIKE-DANES: Thank you, Mr Chairman. I think it's right at the bottom right-hand side.

THE CHAIRMAN: "Supply maintenance 150 ml per hour --

MS ANYADIKE-DANES: -- in view of the polyuria [and so on]."

So whether or not you think that was a sensible way of calculating matters, that seems to be what Dr Taylor has said, and what this note is seeking to do is seeking to record what people said. So it could have been something said that he said.

A. It could have been.

THE CHAIRMAN: In fact, it's more than that, isn't it, professor? It's almost certainly what he said because it's entirely consistent with his evidence to the coroner.

A. I was merely saying that the numbers in it don't seem to make sense.

THE CHAIRMAN: With all due respect to Dr Taylor, that's always been the problem. His numbers don't make sense.

What he was doing in what became his statement to the coroner was to set out what he thought was the supply maintenance for Adam. You have consistently thought that was wrong, but when you see the detail of how he reaches that figure in the box on page 2, you become even more entrenched in your view that, unfortunately, Dr Taylor just got this wrong on a number of fronts.

A. Well, if that's what he said. Of course, it's worth saying that if he only gave 150 ml an hour for four hours, it's 600 ml. Adam got 3.5 litres.

THE CHAIRMAN: Yes. So in fact, none of this makes sense, unfortunately.

MS ANYADIKE-DANES: And if we take the issue that you had over the bladder being open, you have already prefaced that with the fact that you weren't there. You accept that. You didn't at any stage see a bladder being opened like that, but you were giving that as an example to the chairman of something that you just don't think sounds right at all. But in that letter from Brangam Bagnall that you received of 7 June, if one looks at 059-014-039, right down at the bottom:

"Finally, at this stage ..."

Rightly or wrongly, what the solicitors are saying is that Dr Gaston has said that Dr Taylor didn't have an opportunity of accurately measuring the urinary output

due to the fact that the bladder had been opened early on and so that's an issue. If this whole document and the issues raised in it are going to be discussed, that is an issue that's going to be discussed. And it's raised and then, in fact, if one looks at the evidence that Dr Taylor gives to the coroner at 122-044-048, one sees that when he is asked by -- I think it's at the top. It's actually quite difficult to read in that version. If you give me one moment.

A. I think it must be earlier than that.

Q. Yes, it's right at the top:

"At start of procedure ..."

So he's being asked by the solicitor at this stage, and he says that the issue that is being recorded in that note and also is put in Brangam Bagnall's letter, "The bladder was open, created difficulties, affected my calculations".

So I think that is why we're -- apart from all the obvious ones -- trying to explore this note with those who were present because, whether or not you think these things are correct or not, they seem to have echoes in other bits of evidence, if I can put it that way.

A. I accept that.

Q. So the issue that we're left with, which is where I started that with, is to try and find out what those

who were present, if they did indeed hear these things being said, said or how reacted to them.

A. We'll never know. I mean, the fact is, there should have been a surgeon present, the minutes should have been circulated for accuracy and various other things like that, and it didn't happen. It makes it very difficult for the chairman. I realise that.

THE CHAIRMAN: Before we come to the needle in the artery, there are two big points. One is the calculation in the box on page 2, which you and others think really makes no sense at all. But it is confirmed by Dr Taylor in his evidence in terms as being his analysis of Adam's needs. And there is the issue about the bladder being open, which everyone says just didn't happen, and Dr Taylor says it didn't happen. He said to the coroner that it did happen.

Have you ever known a bladder to be deliberately, as opposed to inadvertently, opened at the start of a renal transplant operation?

A. No, but I suppose in terms of the surgery, if there was a contentious issue, as there is here, it would be the surgeon that I would expect to say, "No, no, no, that's not what we do". And Mr Keane did give evidence at the coroner's inquest as well.

THE CHAIRMAN: Yes.

MS ANYADIKE-DANES: Can I ask you this, following on from what the chairman has said -- in fact, if we can pull up that 059-014-039, this is the clearest indication of what people thought they were going into the meeting to discuss, quite apart from the particular matters you had raised in your own letter of 7 June.

So one sees under that numbered paragraph 1, for example, five lines up from the bottom of that:

"Again, turning to page 6 of Dr Sumner's report, it would appear that Dr Sumner suggests, on the basis of Dr Taylor's calculation, the deficit was somewhere in the region of 150 ml an hour for maintenance, whereas Dr Taylor has indicated that a figure around 120 is more likely. Further clarification on this point will be required."

So that's something that, in this letter, is suggested should be discussed, as is the question of the bladder being opened, as is, if one goes over the page --

A. Can I interrupt you?

Q. If I could just finish this question.

A. I need to answer the questions as you ask them.

Q. I haven't asked one yet.

A. Would you like to ask one?

Q. I'm just going to. So as is the point put at the top --

A. I can't remember now because you've gone through several things. If we could deal with paragraph 1.
Q. Let's deal with paragraph 1, yes.
THE CHAIRMAN: What did you think you were being asked, Professor Savage?
A. I was going to say: that was the substance of the letter that I wrote, that that difference of 120 to 150 would not have been the cause of the hyponatraemia.
THE CHAIRMAN: Yes.
MS ANYADIKE-DANES: Yes, so then when you saw the issue of the bladder, which is something that is going to be addressed, did you feel that "we need to find out whether that was the case"?
A. This is at the bottom of 039? No, I don't remember that I got involved in that discussion.
Q. Sorry, it's a slightly different point. All the clinicians, with the exception of the surgeons, are being invited to attend a meeting, which is only going to be a few days before the inquest hearing.
A. Yes.
Q. These are issues of concern, where, not to put too fine a point on it, the Trust solicitors have formed a view that the Trust may be a little bit exposed to criticism or the position is not entirely clear, so we need to sort these things out. So a number of you are being

invited to a consultation for the purposes of discussing that.

So when you read this, if there are matters in there that you disagree with or you feel very strongly ought to be resolved, is that not something that you would address and say, "Yes, we need to deal with that, I'm going to make sure that we discuss that", or something of that sort?

A. Your question is?

Q. Is that not how it struck you, that you ought to make sure that things, when you read this, that didn't seem quite correct to you are addressed?

A. I don't remember exactly what I thought when I read this, but I expect I would have thought that is a question for the surgeon to answer.

Q. Then did you suggest that, actually, we should have the surgeons at this meeting?

MR FORTUNE: Sir, the difficulty with this line of questioning is that Professor Savage saw this document for the first time earlier this summer.

MS ANYADIKE-DANES: Not this document.

THE CHAIRMAN: The consultation note.

MR FORTUNE: Certainly the consultation note. But if my learned friend's referring to the letter --

MS ANYADIKE-DANES: That's what I'm referring to.

MR FORTUNE: Then even so, looking at the consultation note, once again it's not clear, although it's said to be circulated, that Professor Savage has actually responded specifically to it.

MS ANYADIKE-DANES: As I understand it, Professor Savage said that he responded to a part of it which dealt with the deficit issue and he did that by his letter of 7 June. What I'm asking Dr Savage to help us with is, when he sees these things and thinks that that's a significant issue, that's a difficult issue, does he not ensure that they can have a proper discussion about it? And Professor Savage is giving his evidence that that whole bladder question is something that you really ought to involve the surgeons with. And he will have seen who is copied into this. I'm just asking him whether he thought to communicate to Dr Murnaghan and say, "Look, we really ought to have the surgeons at a meeting like this"?

A. Does it say who it's copied to somewhere? Because you remember, I received this by fax.

THE CHAIRMAN: Yes.

A. On the previous page, does it --

THE CHAIRMAN: No, I think if there was a CC, it would be at the end of the letter. I think this went to Dr Murnaghan, who sent it on to various people by fax,

and you then responded in the same way.

A. Anyway, it's impossible to answer these questions of "What did you think when you read this 17 years or so ago?" because I don't honestly remember, and I suspect that I answered the topics which I thought I had clear knowledge of. For instance, the CVP readings and so on, I was not in theatre. The business of opening the bladder, I'm not a surgeon, so I probably addressed the things that I thought I could answer sensibly.

THE CHAIRMAN: I want to float another point with you on the bladder issue, Professor Savage. This letter says, at the bottom of page 39, the two issues which were raised and one of them was about the bladder, Dr Taylor not having an opportunity of accurately measuring urinary output:

"This point will have to be made in very trenchant terms. He will be asked what other opportunities the anaesthetist had to measure urinary output."

Correct me if I'm wrong, but I don't believe it was made in very trenchant terms during the inquest, was it?

A. The business of the bladder being opened?

THE CHAIRMAN: Yes, and that being an explanation for the fact that Dr Taylor did not have an opportunity of accurately measuring urinary output.

A. No.

THE CHAIRMAN: Am I right in understanding that?
A. Well, as far as I remember, there was no great discussion at the inquest.
THE CHAIRMAN: We do have a note that says the bladder was open, but we do not have any note which suggests that it was put to Dr Sumner in trenchant terms that that helps to explain what Dr Taylor's difficulty was in accurately measuring urinary output. Does that tally with your recollection of events?
A. Well, I don't remember the cross-examination of Dr Sumner.
THE CHAIRMAN: But you don't remember a big issue being made about the bladder being open and that's why Dr Taylor had particular difficulties?
A. No, but I think my view at that time was if the bladder was open, then a lot of the fluid that would have been -- some of the fluid that would have been in the abdominal cavity might have been urine mixed with blood and that the total blood loss that Dr Taylor thought was 1,200 ml might have been partly blood and partly urine. But the total volume lost would have been similar.
THE CHAIRMAN: You see, if we move on from that, because that's a note which precedes the consultation on 14 June, and if we go back to the consultation note on 14 June at the top of page 4, when this point seems to

have been raised. The opening paragraph on page 4. Again, there seems to be an issue which is being emphasised:

"It was of vital importance that one was not able to measure the urine output. However, during this procedure, the bladder was opened immediately. It was open for some two hours, so it wasn't possible to measure the urinary output and this child was known to have high urine output."

Well, was Adam known to have high urine output?

A. Oh yes. Anyway, if we go on:

"It was also pointed out that some of what was thought to be blood loss could in fact have been a mixture of urine and blood --

THE CHAIRMAN: Right. So this is --

A. -- if the bladder was open."

As it turned out, it wasn't.

THE CHAIRMAN: Well, this all suggests to me that the consultation note is right insofar as it is a note of what was discussed. The problem is that Dr Taylor and everybody else says the basic information is wrong because the bladder was not opened.

A. Mm. There was no one there to contradict that because there was no surgeon present who --

THE CHAIRMAN: There was no surgeon present, but Dr Taylor

has told this inquiry that the bladder wasn't opened.

A. At that time, he must have thought it was. However, just to go back to the point that you're making, I'm not saying that this note is entirely wrong. What I'm saying is that there are parts of it that I just think perhaps it's not entirely accurate in certain areas. That's the nature of notes, that occasionally mistakes are made, and this one, with the needle in the artery, is obviously a very crucial point. I genuinely believe that there's some transcription problem with that. I only drew the other things out to say it's not a perfect note, but it wasn't meant to be a perfect note probably.

THE CHAIRMAN: But the note is not so imperfect that things like the open bladder and like the page 2 box on calculation of fluid -- they seem to be right in terms of the accuracy of the note because they tally with what Dr Taylor has been saying.

A. But the business with the artery doesn't correlate with anything else anyone else has ever said.

THE CHAIRMAN: That's right. That's makes it even more curious because significant parts of the note are accurate, but we then have this very unexpected and, perhaps, bizarre entry on page 5 about the needle in the artery. But the more that the rest of the note is

correct, do you understand then the stranger it becomes that this major error has crept in? Unless it's your idea, which I understand the basis of, which is that somebody may have floated this as a possibility or as something which can happen sometimes, and that has been inaccurately recorded as something which did actually happen in Adam's case. But it's not just that there's a reference to a needle in the artery, it's also how that sentence continues.

A. I entirely understand the quandary that you have.

THE CHAIRMAN: Okay.

A. I just find it difficult, impossible, to believe that senior surgeons would sit in this court, under oath, and tell a lie. It's not conceivable to me.

THE CHAIRMAN: Well, professor, I also have difficulty with that. I also have to say, for the record, that Dr Taylor has come to this inquiry and he has said here at the inquiry that what he has said previously, including statements he made to the police, were outrageous and indefensible.

A. I know. And I worry --

THE CHAIRMAN: You also think that what he has said previously is outrageous and indefensible in the sense that he told me you were amazed when, from the inquiry, you saw what he told the police. So the idea that

senior clinicians may tell or may say things which are indefensible and outrageous is something which is already a matter of record at the inquiry and that's exactly the problem I have here.

A. But the danger is because you believe that of one person, that that situation taints every other bit of medical evidence.

THE CHAIRMAN: You're absolutely right. That is an issue which I have to take into account. I'm not stupid enough to believe that because one person has said things which are indefensible, it means other people are saying it too. But I have to find a way to understand, or put in proper context, this note.

A. I understand.

THE CHAIRMAN: Okay.

MR FORTUNE: Sir, in fairness to Professor Savage, he said "senior surgeons", he did not use the term "senior clinicians", which would have included Dr Taylor. That may be splitting a hair, but --

THE CHAIRMAN: Mr Fortune, I understand the point you're making, but you'll understand the point I'm making. If one senior person in the Royal says things to the police and in various places which are indefensible, why can I not leave open, as at least a possibility, that other people are doing the same thing?

MR FORTUNE: Sir, one thing is very clear to everybody. The contents of this note are disturbing.

THE CHAIRMAN: Yes.

MR FORTUNE: And Professor Savage has thought long and hard, as he's told you, about this. You need to look at the purpose behind this meeting. Of course, the inquest was coming up fast. As we know from the document 059-020-046, which is the letter from Brangam Bagnall to Dr Murnaghan of 30 May 1996, Professor Savage's view was well-known and it was one to which he would hold during the course of the inquest, that here was Dr Taylor, who -- I will use the expression -- was the fish out of water because he had a completely different view of how Adam came to die, effectively, on the table, and how Mr Brangam, as the solicitor, was going to deal with the matter.

This wouldn't have happened if, as I suggested and got the sharp retort from my learned friend, Mr Lavery, Dr Taylor had been separately represented. But here was the solicitor trying to represent all interests.

THE CHAIRMAN: And we'll come back a bit more after lunch to the thrust of this consultation because I agree with the point that the reason why the surgeons weren't there was because this was really Dr Taylor, whose line was going to be difficult, if not impossible, for the Royal to

hold to because it was not the line of Professor Savage, nor was it the line of the coroner's experts.

MR FORTUNE: Put bluntly, the solicitor should never have actually tried to run the line that Dr Taylor wanted to run, but I say no more at this stage.

THE CHAIRMAN: Okay. We'll break until 2 o'clock. Thank you.

A. Can I say something about that? I didn't analyse the reason or what was happening at the meeting at the time, but it seems to me that what happened, going forward to the coroner's inquest, was it was decided that I could put my point of view and so could Dr Sumner and Dr Taylor would be given the opportunity to state where he stood, and it was for the coroner to decide. And the coroner decided correctly.

THE CHAIRMAN: Yes.

A. And that was why, at the end of the coroner's inquest, I thought the situation had been resolved and explained as it had happened. And I always believed that my responsibility was to Debra Strain and to Adam Strain to make sure that the correct reason for Adam's death was established at the coroner's inquest, and I believed it had.

THE CHAIRMAN: Thank you. Thank you, professor. We'll resume at 2 o'clock.

(1.04 pm)

(The Short Adjournment)

(2.00 pm)

MR SIMPSON: Before we start, could I mention one matter. It's purely an administrative matter. In the transcript of Thursday last, which was day 36, if it could be called up, at page 209, line 21, on this transcript we have before us, there is the name of an individual who was a patient in the hospital who was referred to in the course of Dr O'Connor's evidence. She's actually been named on the transcript. She's nothing to do with this inquiry and it appears on the website at page 215 on the corrected transcript.

THE CHAIRMAN: Sorry?

MR SIMPSON: It's at line 21 of page 215:

"Doing haemodialysis on a child ..."

It's the name of the child which still appears on the website.

THE CHAIRMAN: We'll get that removed.

MR SIMPSON: If that could be removed, yes.

MS ANYADIKE-DANES: Thank you very much.

I wonder if we could call up the letter at 059-014-038. Professor Savage, this is a letter that you got along with the others who were attending the consultation on 14 June and was part of what was to be

discussed there.

What I want you to help us with is that when you received this letter, apart from the letter you sent of 7 June, what efforts did you make to address anything in there that you thought was erroneous, needed clarification, or raised concern with you? And let me help you by going particularly to some things. Staying on that first page, the second paragraph, it says:

"Issues contained in the experts' reports, which will require to be carefully and exhaustively examined and investigated. In that regard, I have already had the benefit of very detailed instructions from Dr Taylor and these have now been reinforced to me by Dr Gaston."

Did that cause you to want to find out what of Dr Taylor's view of things in relation to fluid management was Dr Gaston reinforcing?

A. I'm just reading the letter.

Q. Sorry?

A. I'm just reading the letter.

Q. Yes. (Pause).

A. Well, obviously I don't remember what I thought 17 years ago, so it's very difficult to answer these questions.

Q. Would you have wanted to know which part of Dr Taylor's views on Adam's fluid management Dr Gaston was reinforcing?

A. I don't think so. I would have expected that we would discuss that at the meeting that was due to be held before the inquest.
Q. But you had yourself quite clear views on elements of Dr Taylor's fluid management, so would you not want to see what it is that a colleague of his, a co-consultant paediatric anaesthetist, would be reinforcing?
A. Not particularly. I mean, Dr Gaston was an adult anaesthetist, he was head of the department of anaesthetics. These discussions were obviously between Dr Gaston, Dr Taylor and, I assume, Dr Murnaghan. It was well-known to Dr Murnaghan and to the others what my views were. So I don't think I would have been particularly concerned that anything that Dr Gaston was going to say would have changed my view of the cause of Adam's sad and unfortunate death. I was quite clear in my own mind as to the cause of his death. So I don't think I would have been particularly concerned in advance of the meeting of finding out what he'd said.
Q. Would you have been concerned at the meeting to find out what he was reinforcing of Dr Taylor's views?
A. I would certainly have been listening very carefully, yes.
Q. Then if we go over the page to 039, and then if we're in that section number 1. The first bit of it is:

"Dr Taylor has indicated that fluid output was impossible to measure prior to surgery because the child did not have a catheter in place."

And we go back to that in terms of the open bladder point. What it goes on to say is:

"The information from the case notes, which indicate in unequivocal terms, what the outputs for the child were as and when measured prior to surgery."

Then he refers to Dr Sumner's report and that Dr Sumner is suggesting that, on the basis of Dr Taylor's calculation, the deficit was somewhere in the region of 150 ml per hour for maintenance, whilst Dr Taylor thinks that his calculation would indicate a figure of 120 to be more likely. Then it's said that further clarification on this point will be required.

If you were going to go into a meeting to discuss that, would you want to know how Dr Taylor was, in fact, basing his calculations?

A. I don't think that was the way I was thinking. If you go back to the previous page, it asks Dr Taylor to -- can we go back to the previous page?

THE CHAIRMAN: Can we put the two up together, please? Thank you.

MR FORTUNE: Sir, Professor Savage's response to this letter is set out at 059-003-005, but is my learned friend

suggesting to Professor Savage that he should have, point by point, addressed the concerns raised by Mr Brangam to Dr Murnaghan in this letter? Because it begs the question, what's the point of having this meeting? Surely there were matters to be discussed and was that not an appropriate time? I'm trying to understand the purpose of this line of questioning.

MS ANYADIKE-DANES: The purpose of the line of questioning, Mr Chairman, is that it would appear -- although it's not entirely clear -- but it would appear that Dr Savage's letter of 7 June is actually trying to address some of the issues. It is not clear that that is a direct response to this 7 June because we don't know the order in which the faxes went. But if it is a response to having received this Brangam Bagnall letter, then he's dealing with some things, and what I'm trying to ascertain is why he didn't seek to deal with other things that he might have commented on.

And for that matter, what he might have, if they were going to go in to have a clinical discussion about these things a serious way, what he might have wanted to furnish himself with before he went into such a meeting so it could be at its most productive.

THE CHAIRMAN: Do you understand, professor?

A. Yes, I do. What I was going to say is that the last

sentence on the first page says that:

"It is important that Dr Taylor provides express instructions in relation to his view of the cause of the death, which Dr Armour classifies [et cetera]."

Now, I go back to the point that it has been made completely clear to Dr Murnaghan and to Dr Taylor and the others what my view is. They don't ask me to refute any of the arguments that are put forward. They ask Dr Taylor to explain how he can be at variance with other people. So I assume that's the reason that I didn't respond point by point.

And of course, the other thing is that I did respond to two points, and it may well be that Dr Murnaghan asked me about those in particular, apart from the fax. But these are not things that I remember specifically at this distance.

MS ANYADIKE-DANES: I understand that.

A. And you may ask me why I did not do that. I don't know the answer and it's probably not the way I was thinking at the time. I don't think that every time I get a letter I necessarily respond to every single point to it if it's not directed primarily at me. This, I suggest, is directed primarily at Dr Taylor.

Q. The point is, though, that not every time do you get a letter from a solicitor that's dealing with the Trust

dealing with its position in relation to the death of a child and you're just about to go into an inquest. So what I was seeking to have from you is, it has been clear on your evidence that for some time you and Dr Taylor have been at variance in terms of how Adam ended up with the gross cerebral oedema that he did. And the first bit of this page suggests that, in some part, Dr Taylor's position, whatever that might be, might have received some support from Dr Gaston.

A. Well, I possibly didn't pick up on that.

Q. This meeting is to try and see and to understand, one assumes, how people have those differing positions. And all I am asking you is, when you see this letter, the points where you can actually make some contribution to, how do you respond and, for that matter -- which is the second part of my question -- what sort of further information do you want to have so that you can help Dr Murnaghan and all the others there try and understand the differences between the clinicians? That's the point I was putting to you.

A. Yes. And you've put it several times and I've said that my position was clearly known. This letter is directed at Dr Taylor and, again, on the second page at the top:

"This is really the starting point in relation to the instructions which I would require from Dr Taylor

and if he has any difficulties ..."

There is no request of points that I should answer. However, it is true that the two areas which I thought were relevant to my input were in relation to the fluid deficit and the fluid balance, number one, and, secondly, that relating to the wisdom of taking a repeat electrolyte blood test. And I did reply to those two points. I can't say anything more than that.

Q. Thank you very much. You did reply to the point about the repeated electrolyte test. If we bring it up very, very quickly. Ultimately, you conclude at 059-003-006, which is the second page of your 7 June letter:

"I understand that venous access was readily achieved in theatre and therefore it would have been possible to check the electrolyte picture at that stage."

Your evidence to the inquiry was not only that it would have been possible, but Dr Taylor had specifically agreed with you that he would do that. So is that not a point that needs to be addressed? It's just not that it was possible to do it, but you, as Adam's nephrologist, had formed the view that it was relevant to have it done, and you had agreed with Dr Taylor that he would do it. So there now raises a question of why didn't that happen. And that's

exactly what is being said in Brangam Bagnall's fax at 2. It says:

"The issue of electrolytes was thought about, particularly in the light of the note made by Dr Savage and, if they were thought about, then why were these tests abandoned?"

So that's an issue, why did that happen? And what Dr Murnaghan would not appreciate from your letter is, if they had been abandoned, they would have been abandoned by Dr Taylor because you'd reached an agreement with him that he would do it and that is something that needs to be addressed and he will need to be in a position to explain that. That could have been in your letter.

A. I think your thesis is that because something is not written down, that it was not known to the parties involved; is that right?

Q. No. Well, firstly --

A. Because I think it was known.

THE CHAIRMAN: Okay, I've got the point.

MS ANYADIKE-DANES: And then if we go down, finally, to the point that you might have addressed. We had covered it before in relation to the bladder, but not from this perspective. What it says at the bottom of 039 is:

"Dr Taylor did not have an opportunity of accurately

measuring urinary output due to the fact that the bladder had been opened early on in surgery."

As I understood it from your evidence, you had been present right up to some point, which is not entirely clearly known, between 9 and 9.30. So in terms of the early part of the surgery, you were in and out in the early part of the surgery. And your evidence today was, "Well, I didn't see the bladder being opened". Did you not think that that was something that should be commented on?

A. Well, as I said before lunch, I didn't know whether the bladder had been opened early or not. I thought it was unlikely, but I thought that was an issue for the surgeon to address. He would have known whether he opened the bladder or not.

Q. Yes, but you knew that the surgeon wasn't coming to this meeting.

A. No, I didn't. Why would I have known?

Q. Because of who it is copied to and who it is addressed to. It's not addressed to the surgeons at all.

A. Who's it copied to? I think I just --

THE CHAIRMAN: Pardon my ignorance, professor, but you were in and out of the operation in the early stages and then you had other responsibilities and Dr O'Connor took over that aspect. Would you have known from being in and out

whether the bladder was open?
A. No.
THE CHAIRMAN: As I understand the evidence that we received last week, it'd be very, very unusual for it to be opened deliberately at the start of the operation. If it had been opened inadvertently, would you have expected to have been told it had happened?
A. I would expect I would have known because obviously when I went to speak to Debra Strain before I handed over to Dr O'Connor, I checked in theatre that everything was going smoothly if slowly, and it would have been surprising to me if someone had not said, "By the way, we've accidentally put a scalpel into the bladder and we're having to sew that up". So I think I probably would have known. These are intangible things. The surgeon equally may have thought, "I have made a small hole in the bladder, I'll sew it up and it's sorted", and still have told me that things were going okay.
THE CHAIRMAN: Let me just take on that point because we haven't quite heard that detail. If the bladder had been nicked, you would have expected it to have been sown up straightaway?
A. I'm saying that because that's what Mr Keane told us on Friday.
THE CHAIRMAN: Yes. So the notion that it was open from the

start of the operation and stayed open --

A. Seems unlikely, yes.

THE CHAIRMAN: -- would be even more bizarre, wouldn't it? I know these things can happen accidentally in the minutiae of an operation, but you would hope that generally the bladder should not be nicked and opened, but if it is opened, then it should be closed straightaway?

A. I think you did ask Mr Keane about that. It's not my area of expertise, but that would be my feeling, yes.

MS ANYADIKE-DANES: In terms of your query as to how you knew who it was circulated to, it's to be found at 059-009-027. It's being circulated to Dr Taylor, yourself and Dr Gaston as those who were going to attend.

But in any event, when you turn up at the meeting it is clear, isn't it, that there isn't a surgeon there?

A. Yes.

Q. And some of these issues you have said are surgical issues. Do you at any stage suggest "We should really have a surgeon here if we're going to get into that kind of thing"?

A. I don't remember. I don't think so. If I could add to that? In a situation where I believed Adam Strain had had large amounts of inappropriate fluid, these surgical

issues may not have been thought to me to be of major importance.

THE CHAIRMAN: Because the inquest is focusing on what caused his death --

A. Yes.

THE CHAIRMAN: -- and what caused his death, in your mind, was excessive fluids?

A. And that's what Sumner and the autopsy had both said.

THE CHAIRMAN: Yes.

MS ANYADIKE-DANES: That's right, Professor Savage. And really, the only value of talking about whether the bladder is open or not is the impact it has on the ability to measure urine, which in itself has an impact on the ability, so Dr Taylor thought, to accurately calculate fluids for his fluid management. That's why all that is being mentioned.

A. Of course, it's not a straightforward matter because, if you remember Dr Coulthard in his evidence, he suggested that with a precarious kidney function such as Adam's, that often once anaesthesia started, the damaged kidney shut down completely and produced very little urine.

Q. Yes, which is why you want to have a good way of accurately measuring that sort of thing and that goes into the bladder issue.

A. That goes back to the question of whether a catheter are

should have been placed or not, which again is not something that I was involved in.

Q. Exactly. And to round that off, the argument -- because this is how it comes full circle -- for why we couldn't put a catheter in, apart from any other thing, is because the bladder was opened and so on and that is how that arises --

A. No, I don't think --

MR MILLAR: [Inaudible: no microphone] why a catheter wasn't put in.

MS ANYADIKE-DANES: I appreciate it's not Mr Keane's evidence. That is the way this particular argument was being presented. But anyway ...

MR FORTUNE: [Inaudible: no microphone] because the issue was raised as to whether it was physically possible to place a catheter. That was one topic that was discussed.

THE CHAIRMAN: Sorry, Professor Savage, did you want to say something? If the moment's passed, let it go. Okay? Let's move on.

MS ANYADIKE-DANES: Yes. Could we go to 122-001-004? Leaving aside the top of that, which is the bit that recites how all this bladder business was coming into the argument, where I would like to take you to is the comment that's attributed to you, which is about halfway

down:

"Dr Savage commented that one could not argue against the point that there was hypernatraemic fluid overload, although there was correct logic in how the fluid calculations were done."

Do you accept that there was correct logic in how the fluid calculations were done?

A. The first thing to say about this is that it should say "hyponatraemic fluid overload", of course, which immediately puts the sentence into question as to whether it has been correctly understood.

THE CHAIRMAN: You have already told me this morning that if you correct hypernatraemic to hyponatraemic, you agree with the first part of the sentence, but that the second part of the sentence cannot follow on correctly from the first part of the sentence --

A. Exactly.

THE CHAIRMAN: -- and you think the second part is [OVERSPEAKING].

A. There's some confusion in the wording.

MS ANYADIKE-DANES: Yes. It goes on to say that Dr Taylor was very strongly of the view that there had been no fluid overload.

Before we get to the penultimate full paragraph, your evidence was quite clear about this to the

tribunal. It happens on 22 June at page 6, lines 1 to 8. It starts with:

"Immediately, Adam was in the paediatric intensive care unit, Dr O'Connor and I formed the view that there was a major problem with the fluid he had received in theatre. Adam was clearly bloated. His mother pointed that out to me and I already saw it. When we looked at the balance of fluids in theatre, it was obvious to us that he had certainly had excessive fluid and had had a lot of fifth normal saline."

So then, if we go to the sentence which is the first full -- starting "Again Dr Taylor":

"Again Dr Taylor was concerned to say that one could not conclude --

THE CHAIRMAN: Sorry, slow down for a moment. You're going back to a different document. It's the consultation note at 122-001-004. And it is about seven lines up.

MS ANYADIKE-DANES: "Again, Dr Taylor was concerned that one could not conclude that there had been fluid overload and it was confirmed that this phrase would not be used."

Before we get into "it was confirmed that this phrase would not be used", despite your view, Dr Taylor seems there to be holding firm to his view that there was not fluid overload. Can we go to the bit which just

precedes it, which is attributed to Dr Gaston? Is that a correct summary of the two main issues to consider in this area so far as you are concerned?

A. Well, I think this is the sort of difficulty I have with this note. Because I think I would have expected this to read:

"Dr Gaston felt there were two main issues to consider. Firstly, the issue of volume replacement, which he had felt was appropriately covered, and the suggestion that the calculations had been reasonable. And secondly, whether this was the most appropriate fluid to use".

This minute suggests that there's an agreement that the fluid volume was okay and that the type of fluid was okay.

THE CHAIRMAN: No, it suggests that Dr Gaston felt that --

A. Yes.

THE CHAIRMAN: -- not that that was the concluded view of everybody present.

A. Well --

THE CHAIRMAN: But it does suggest that that was Dr Gaston's view.

A. Well, that is all right if it's Dr Gaston's view. I'm just concerned that it's read that other people agreed with it.

THE CHAIRMAN: In your ease, I don't read that as you agreeing with it. I read that as Dr Gaston setting out that those are his issues and, to a degree, that chimes with the Brangam Bagnall letter from a week earlier, which refers to, at least, some of Dr Taylor's views being reinforced by Dr Gaston.

A. Possibly, yes.

MS ANYADIKE-DANES: Did you consider that -- I presume that the answers there and "the calculations have been reasonable in relation to volume replacement" is that you didn't think that they had been reasonable?

A. Yes.

Q. And if we go to the appropriate fluid to use, did you think that was appropriate?

A. No.

Q. No. In fact, what happens after that:

"However, obviously, the fluids provided had not been correct, but one was to the know why."

Did you recognise that as an issue that people were wrestling with in that consultation?

A. I think, as the chairman says, that's what he was saying. It's not the view of either myself or Dr Sumner.

Q. Well, do you remember him expressing those sorts of views?

A. No, I don't remember the detail of this meeting.
THE CHAIRMAN: In a sense, this should read right to you, professor, because it records you as saying we can't argue it was hyponatraemic overload. And Dr Taylor's saying differently, and actually Dr Taylor being supported by Dr Gaston?
A. I think this is the difficulty, that Dr Taylor fell into. He was ill-advised both by some of his anaesthetic colleagues and the legal team who were representing him.
THE CHAIRMAN: Let me be specific. It seems to me that there's at least an argument that he was ill-advised by Dr Gaston supporting him. Is that what you're saying?
A. If we read it the way you interpret it, yes.
MS ANYADIKE-DANES: Well, if that's happened, as it's recorded, that would be a pretty significant thing because, as far as you were concerned, your side, if I can put it that way, from the nephrologist's point of view, you and Dr O'Connor were pretty clear and you were pretty clear fairly early on. So now you've come in and you have two consultant anaesthetists, so from a different discipline, but they've got a different view on that. It's one thing saying that Dr Taylor is a fish out of water and a lone voice about these sort of things. It's another thing, a senior colleague also

supporting him. Is that not something that struck you at the time?

A. I don't remember what I felt about it. As I said just before lunch, I think we were getting into a situation where it seemed to be that the people who were advising on the approach to the coroner's inquest were saying, "Dr Savage has that view, Dr Taylor has that view and we must allow him to put that view forward". That seems to be how it developed, looking backwards.

MR FORTUNE: Sir, that's exactly what happened at the inquest.

THE CHAIRMAN: Yes.

MR FORTUNE: I'm concerned about this line of questioning because no comment or criticism has been made yet of Mr Brangam's conduct in this meeting or what flows from it.

THE CHAIRMAN: You might come back to it. That might be a point to make at submissions, Mr Fortune. What I'm more worried about is this, professor -- can I put it this way? I have concerns from the evidence which we heard in June about the nature and extent of the investigation within the Royal after Adam's death. And I'm increasingly concerned, partly on the basis of this note, about the way in which Dr Taylor's apparently untenable view was given some level of support by

Dr Gaston. We'll explore this tomorrow with Dr Gaston and Dr Murnaghan, and whether, as a result of that, there was a failure to learn important lessons from Adam's death.

Whether they contributed and the extent to which they contributed to any later events such as Claire's death or the ones which we're going to come on to look at later, will become a matter of discussion as the inquiry progresses. But I note and appreciate your bluntness by saying that you think he was ill-advised, and it's not just by Mr Brangam, but it's by people within the Royal.

I think you would agree that that really should not have happened in these circumstances.

A. Well, I think at that time I was probably relatively naive to the legal process and probably thought that it was reasonable where two clinicians differed that the two points could be made to the coroner and he would make a judgment. I actually had no problem with that because I felt that Dr Sumner's report, the strength of it was such that it would be the one that would be --

THE CHAIRMAN: Would hold the day?

A. Would hold the day because it was also backed up by the autopsy. So in a way I thought, in terms of fairness, if that's what Dr Taylor thought, yes, let him put his

point of view, but it is not going to win the day.

THE CHAIRMAN: Can I ask you to develop one point you made a few minutes ago when you talked about your concern that Dr Taylor was ill-advised by the legal team and by some of his anaesthetic colleagues? You identified Dr Gaston as one of those. Would that concern extend to other of his anaesthetic colleagues who have given evidence at the inquiry or, if not, when you said "some of his anaesthetic colleagues", who did you mean beyond Dr Gaston?

A. I think Dr Gaston, probably, but I actually don't like to point the finger even at Dr Gaston. I think that what was allowed to happen was that Dr Taylor did not get advice from anyone that said, "Look, the evidence from Dr Sumner, from the autopsy, from Dr Savage, from Dr O'Connor is such that we think the position you're taking is untenable". No one ever said that to him, I don't think. Therefore, he was allowed to proceed down that road and, unfortunately, has got into the difficulties that he's now in, I think, as a result of that process. But I have made the mistake today, I think, of speculating to some extent, and I shouldn't do that.

THE CHAIRMAN: I think we agreed at one point this morning that it was necessary to a limited degree to speculate

about how some of this note came about. But anyway, let's move on.

MS ANYADIKE-DANES: Can we just go to the final part of that sentence, which is:

"And it was confirmed that this phrase would not be used"?

I understand that you have said that you don't recall the detail of this consultation, but surely given the differences that you had with Dr Taylor -- and you expressed them -- if there had been any decision or discussion as to whether anybody would be using the phrase "overload", surely that's something you would remember?

A. Well, it was certainly never my intention not to use that phrase and I can only assume that that statement is that, between Dr Taylor and Mr Brangam, that phrase would not be used in the court.

Q. Well, it wouldn't be used by Dr Taylor because he didn't accept that that happened. So one way of interpreting that is that actually it's directed at you.

A. No, because Dr Sumner's report is there, the coroner has it, and therefore the question is bound to come up, but they're agreeing that they will not volunteer it.

Q. Yes. And in fact --

A. I mean, again, that's the way I feel it must have been

because I would not have agreed that I was not going to say that there was fluid overload. And I think I earlier referred to the handwritten record of what happened in court, and I think it's clear from that, as well as from my written statement, that there was no doubt that I was saying that there was dilutional hyponatraemia.

MR FORTUNE: Sir, in that regard, can we go to 122-044-034 and can we bring up the subsequent page as well? If you go to the bottom of 034, the coroner refers to the relevance in relation to the central line. And then this question:

"Do you agree with Dr Sumner's view as to the cause of death?"

Dr Savage:

"Yes, I think that is the cause of death."

"Question: When did Adam die?

"Answer: I think died during the op, if you accept brain death as death."

Then it's the next few lines. Dr Savage says:

"Swelling due to dilutional hyponatraemia."

Next -- I found the second word quite difficult to read:

"This arises due to excessive fluids containing insufficient sodium being administered, which absorbed

into the brain."

Dr Savage:

"Can't say gross fluid overload. Dilutional hyponatraemia. High risk for children that will affect brain if sodium changed rapidly. Dr Sumner picked this out. Rapid change because it happened within 12 hours."

So there clearly is not only reference to dilutional hyponatraemia, but also fluid overload. Whether it was gross was a matter ultimately for the coroner. So if there was any agreement to be sought in that meeting on the 14th, Dr Savage, as he then was, was certainly not going to be a party to it.

MS ANYADIKE-DANES: Did you think it was gross fluid overload before you were giving your evidence to the coroner?

A. Well, I ... You know, the question whether it was gross or -- I mean, the real reason his brain swelled was to do with the excessive dilute fluid. Gross fluid overload, I think, was difficult to be sure of because, although Debra Strain and I had thought that Adam was very puffy initially in theatre, we were also aware that that was not the view of the person who did the autopsy. But of course, I think Debbie has pointed out the reason for that in a previous occasion, and that was that the post-mortem was several days later and we had removed

fluid while he was in the intensive care unit. So by the time he was removed from the life support system, he was no longer as puffy as he was. So that's possibly why I was saying you couldn't say there was gross fluid overload because I had some doubt about just how bad it really was, but there was certainly excessive fluid and excessive fluid of the wrong type.

Q. Did you have a doubt that it wasn't gross?

A. I don't remember why I said that. I'm saying that's possibly the reason because of the autopsy.

Q. But coming into there, wasn't it your view that it was gross?

A. I don't think I've ever used the word "gross".

Q. I didn't say you had. Was it not your view that it was?

A. My view was that he had had excessive fluid.

Q. And was clearly bloated?

THE CHAIRMAN: Does gross indicate to you a level beyond excessive?

A. I don't know what "gross" means.

THE CHAIRMAN: Well, professor, we won't take much time on this, but by saying ... You've demurred from using "gross" and you are happy with "excessive". That suggests that you must have formed the view that you can have excessive fluid and even more than that again is gross.

A. Possibly. It's the differentiation between what caused the brain swelling. It wasn't caused by gross fluid overload, it was caused by dilutional hyponatraemia. He got excessive fluid of the wrong type, which dropped his sodium very low. There was excessive water in his system and it shifted into his brain. I don't mind either way whether we say "gross" or "excessive". He had far too much fluid.

THE CHAIRMAN: Yes.

MS ANYADIKE-DANES: Can we go to the consultation note at 122-001-004? It says there:

"Dr Gaston said to provide one-fifth normal saline solution was providing the same sodium concentration as the child had previously been receiving and the same type of fluid as the child was used to."

A. Sorry, can you highlight that?

Q. The fourth paragraph. Do you see that there?

"... said to provide one-fifth normal saline, was providing the same sodium concentration as the child had previously been receiving and the same type of fluid as the child was used to. This child was not retaining fluid as his output was high."

I think when you were giving your evidence, you did accept that Nutrizon had approximately 43 millimoles per litre and Dioralyte had 60, but that Solution No. 18 had

30.

A. Yes.

Q. If that's the case, is that a correct statement?

A. Well, it's a very similar concentration in the Nutrizon.

Q. But it's not the same?

A. No, it's not identical, but if you were giving half normal saline, it would be 75. If you were giving normal saline, it'd be 150. So the difference between 25 and 35 wouldn't be of major importance. I think it's true what Gaston's saying, that fifth normal saline is not unlike the sodium concentration of his normal night feeds.

Q. So that part is right?

A. You wouldn't think about it.

Q. And you wouldn't have thought that that would be something that should have provoked a comment from you?

A. Well, I don't know. It's not inaccurate.

Q. Can I ask you about the electrolytes?

A. Can I go back to say, of course, that he had 1,500 ml of fifth normal saline at night. He had 1,500 ml, but it was given over 10 to 12 hours. He got that 1,500 ml over one to two hours. That's the significant difference. It's the speed.

Q. Yes.

A. I think we've covered that many times.

Q. We have. Can we go to the previous page, 003? This is to do with electrolytes:

"It was asked whether there was an opportunity to do the electrolytes when the child was in theatre and it was confirmed that the opportunity was certainly there. However, the procedure was planned to last one to one-and-a-half hours."

It's in the middle there and then it goes on:

"Dr Taylor's explanation is that if you had done that at the beginning because of how long it takes for the bloods to get back that the whole thing would have been redundant because you would be practically finished before you had an opportunity to receive the results."

I'm paraphrasing a little bit. But that couldn't have been your view that that was a redundant thing to attempt at that stage because you had reached an agreement with him that that's what would happen.

A. Yes, we had an agreement that he would send an electrolyte blood test once he had a line established.

Q. And you had experience with paediatric renal transplants and you'd have had a view as to whether they were likely to last longer than 1.5 hours; isn't that right?

A. Yes, I would have known they usually lasted 3 or 4 hours.

Q. Exactly. Is that a point that you might have mentioned?

I mean, even if he was correct about the turnaround time, which we'll come back to in a minute, that procedure was, from your experience, unlikely to be lasting 1 to 1.5 hours.

A. Correct.

Q. Is that a point that you might have felt that you might make?

A. I might have done, but as I've said so many times, there are no negative comments to any -- to most of what Dr Taylor said from anyone. It seems to be a construction as to how they were going to deal with Dr Taylor's evidence. Any contrary view seems to be absent.

THE CHAIRMAN: Except on what you regard as the crucial point of fluid overload?

A. Yes.

THE CHAIRMAN: That's the --

A. That's the crucial point.

THE CHAIRMAN: And that is the one area on which you are recorded as having made a negative comment.

A. Oh, yes.

MS ANYADIKE-DANES: But this was an important point also, was it not, because it starts with explaining where his position was and what one would have been working out as to how sodium depleted he was and so on and so forth?

This is an important point.

A. Well, the fact is he agreed with me he would send an electrolyte sample as soon as he had a line in and that wasn't done.

Q. I understand that. The point I'm making, Professor Savage, is nowhere does one actually see that on any document. Nowhere does one see that all this business of it taking 1.5 hours and so on and so fourth is all well and good, "But you and I actually agreed this, that you would do it and there are very good reasons for it". One just doesn't see that in the actual contemporaneous evidence, if I can put it that way. And I'm asking you why not.

A. I think it's because, as I've said before, you seem to have this thesis that because nothing's -- a point is not written down, that the people present did not understand that point. I mean, this was a very important situation, and I think Dr Taylor, Dr Murnaghan, myself, we all knew the situation. So we knew that the operation lasted until 11.30.

Q. But one way of -- if this was an accurate record -- and in fairness, you have said, "I can't say whether it was because I don't remember things in that level of detail", but if it was, one way of characterising what's going on is actually to produce a misleading impression;

is that right?

A. To whom?

THE CHAIRMAN: Sorry, you have to specify who's doing the calculating. If you say one way of characterising it is it's actually to produce a misleading impression, who is trying to produce a misleading impression?

MS ANYADIKE-DANES: That the outcome, if the evidence to the coroner was going to be produced along the lines of some of what's discussed here, that would end up with the coroner being given a misleading impression; would that be fair characterisation of it?

A. It could be possible, I agree with you. I wasn't taking that point. I think what I was thinking was anyone there would have known the operation's likely to last three or four hours and, of course, it did last three or four hours. I would have thought, similarly, Mr Leckey would have said, yes, but this operation went on until 11 o'clock. I accept your point that there is this suggestion there that if this was accepted as being that would be said, it might mislead the coroner.

Q. Mr Leckey's point would be that, as a matter of fact, this operation lasted that long. This is the issue as to the wisdom or not of having sought at an early stage the electrolyte testing. What seems to be being suggested is you wouldn't do that at an early stage

because you would, at an early stage, have thought that the procedure would last 1 to 1.5 hours, which would have been too short to have got a response back. That's the point, not how long it actually took. And your evidence was that you would know, even right at the beginning, even with a fair wind, I presume, it was never going to take 1 to 1.5 hours. And in any event, that's irrelevant because we had agreed that it was going to be done and therefore that means that we knew we could get it back in an appropriate time, otherwise what on earth is the point in agreeing it? That would be your evidence, wouldn't it?

A. Can you phrase the question for me so that I can answer it?

Q. No, I'm asking you if that's not your position. Your position is: we specifically agreed that, I wouldn't agree something that was unlikely to be able to happen, so obviously we agreed it in the knowledge that we would get the electrolyte tests back in a time that would make it relevant for Adam's surgery.

A. Yes.

Q. Thank you.

A. And of course he could have done one on his blood gas machine. He'd have had it back within a couple of minutes.

Q. Exactly. As a matter of fact, did you not disagree with it taking 1 to 1.5 hours to get a test back?
A. I think I suggested, if I phoned up and said, "We have a child having a renal transplant and we desperately need a sodium back", I think the laboratory would have bent over backwards to get it through as fast as they could.
Q. Exactly. So it wouldn't have taken that length of time?
A. Probably not.
Q. Thank you.
A. Of course, if they had a bomb blast at the same time, they might be ...
Q. I appreciate that. If that's an accurate record of the sorts of things that were being discussed, did you think that it might be worthwhile amending your deposition to more precisely put forward your position?
MR FORTUNE: How could the witness amend his deposition ahead of the inquest?
MS ANYADIKE-DANES: His statement, I beg your pardon.
THE CHAIRMAN: He could add to it.
MS ANYADIKE-DANES: Yes.
THE CHAIRMAN: I think the suggestion is that whether the professor considered adding to his statement in advance.
MS ANYADIKE-DANES: Thank you, Mr Chairman.
Because in fact, your deposition rests on the

statement that you provided on the date of 28 November. In the interim, an awful lot has happened. You have seen how arguments are being presented, you've become even more firm in your views about certain things. Did you consider that you might express yourself in the sort of clear terms that you have given to this inquiry about matters?

A. No. I wasn't aware that that was something that was available to me. And it was certainly not suggested to me by any legal individuals that I had contact with. The advice, if you remember, that I was given was that I should stick to the facts as I knew them in the part of the procedure that I was involved in. What I did expect was that, at the inquest, it would become clear because of Dr Sumner's report and the post-mortem report, and I would be strongly supporting them. So I wasn't aware that I could have put a supplementary statement in or that it was something that people did. Indeed, I --

Q. Nobody suggested that to you? If you just bear with me one second.

MR FORTUNE: I'm concerned that a lot is being put on the shoulders of Professor Savage as to what he should have done, perhaps in the circumstances just outlined. There was a solicitor holding this meeting. It was his duty

to advise his lay clients as to what they could or could not consider doing. And to say to Professor Savage, "Did it not occur to you that you could make a further statement or add to your original statement?", frankly is unfair. The whole point of being met by a solicitor in these circumstances is to receive proper advice.

THE CHAIRMAN: And you would add that, if proper advice had been received, first of all, there should not have been the same representation.

MR FORTUNE: Certainly.

THE CHAIRMAN: And, secondly, that that advice could be or could have been that the professor might add to his written statement with a supplementary one?

MR FORTUNE: Certainly, because it would have been perfectly proper for the solicitor, if acting for everybody but Dr Taylor, to have said, "Now, Dr Savage, you have seen the reports of Dr Armour, Dr Sumner, Dr Alexander, do you think that there is something you would wish to add to your further statement, and, if so, what do you want to say?". Perfectly proper and there could be no complaint in those circumstances. Most coroners, I'm sure, would welcome further assistance, particularly from senior clinicians.

MS ANYADIKE-DANES: That's prescient, thank you, Mr Fortune, because I was actually going to take Professor Savage to

the transcript of his evidence on 22 June. If we start, I think, at page 90. Could we also bring up alongside it page 91?

Starting with line 11 on page 90, it's really dealing with this area about the typed-up version of the answers he gave to questions. Perhaps starting with line 8. But your direct evidence is reflected in the typed part, if I can put it that way:

"Is it clear there, when you're giving your evidence, that you think that Adam received too much low-sodium fluid too quickly and, as a result, developed dilutional hyponatraemia."

To which the answer is no.

And the question then from Mr Chairman [sic] is "Why?":

"Because as I said before, my advice was to put a strictly factual statement of the areas in which I was involved and not to draw any conclusions because that was the role of the coroner."

Then I think you acknowledge that that may not have been wise advice, but nonetheless that was the advice that you had.

Then when one looks at line 12 at page 91:

"Is there any reason, when you were giving your evidence, why you didn't provide that information to the

coroner?"

This is the trenchant views that we are talking about. You say at line 15:

"Answer: There was no reason, but I would have expected the Trust solicitor to explore that with me.

"Question: What do you mean 'explore it with you'?

"Answer: Ask me what my view was or indeed the coroner or someone."

In the more detailed evidence, the note of it that was taken by Mrs Neill, you do go into more detail. But what you were there explaining to the chairman is that you actually thought, at some point, somebody, firstly, the Trust solicitor, is actually going to ask you to comment on all of this. You've done what you've been asked to do, which is to give your factual account, and, at some point, somebody's going to ask you, as a senior clinician, to give your view. Isn't that what you thought was going to happen?

A. I think so. As I say, I think you have to understand, this is the only inquest, to my memory, that I ever attended, which is very fortunate in the medical world. And so I was being guided by the legal advice that I had as to the course that things would take. And if you go back to this note, it says there:

"What the doctors need to do at the inquest is to

explain what was done and why."

And what I was being told is that you stick to the area in which you were involved. So it wasn't that someone was saying to me, "You then need to tell the coroner what you think went wrong"; the implication was that that will be drawn out during the inquest. And perhaps I've watched too many television programmes, but I thought that is what did happen at an inquest and, in fact, it is what happened at the inquest. But the person who asked me the questions, as I understand it, was Mrs Higgins, who represented Debra Strain.

Q. Would you have welcomed an opportunity to express yourself about a number of these matters of which you could give some clear and experienced view? Would you have welcomed that opportunity at the inquest?

THE CHAIRMAN: Mr Fortune?

MR FORTUNE: Sir, I'm very concerned about this line of questioning. You know, sir, from your experience, that Her Majesty's Coroner is mandated to pose four questions, and the fourth question is:

"In what circumstances did the deceased come by his death?"

Witnesses fall into two categories, effectively, at an inquest: witnesses of fact and expert witnesses who are entitled to give an opinion.

Professor Savage, Dr Savage as he then was, was a witness as to fact. It would not arguably have been proper for him to have given an opinion in a statement. Alternatively, he could have given that opinion and the coroner could have ignored it. If HM Coroner then asked Dr Savage, when he was in the witness box, "Based on your experience, based on all you now know, and that includes what you have read, do you have an opinion?", then there can be no criticism.

THE CHAIRMAN: Well, I'm not quite sure how the question is going to help me in writing the report. But is he not both a factual and an expert witness?

MR FORTUNE: Well, sir, strictly speaking, he is a witness of fact. It's up to the coroner whether he gives him, by virtue of his experience, more weight, but he's not an expert instructed by the coroner. In any event, sir, he's not independent --

THE CHAIRMAN: Yes.

MR FORTUNE: -- and that is a particular point.

THE CHAIRMAN: But that might affect the sort of expert he is. It doesn't mean that he cannot give expert evidence. In any event, I'm not sure that developing this line any further is really of much assistance to me.

MR FORTUNE: No, but it's the criticism that may be

attracted to Professor Savage because he didn't volunteer this opinion. If the instructions given to him, and indeed to all the witnesses, by Mr Brangam was, "Remember you are witnesses of fact, tell Her Majesty's Coroner what you heard, saw and did", no one could criticise him. If, on the other hand, he was told, "And listen carefully to the question and, if Her Majesty's Coroner asks you for an opinion, then you're free to give that opinion" --

THE CHAIRMAN: Thank you.

MR FORTUNE: How many witnesses are advised by counsel not to say anything which is outside the facts?

THE CHAIRMAN: Yes.

MS ANYADIKE-DANES: Thank you.

A. Anyway, I hope I've answered the questions you're asking honestly and comprehensively. I followed the advice I was given and, when you said to me, "Would I have welcomed those questions?", I don't know about the word "welcomed", but yes, I would have been quite happy to have received them and would have responded to them and I think I did so when they were asked to me.

Q. Just to round off where I was going with that. Leaving aside the inquest, but actually from a governance point of view, if there was any sort of investigation into how all this had happened and been managed and so forth, if

there was any of that, would you have welcomed the opportunity to give your views as to how it had been managed, the process?

A. Yes.

Q. Thank you. Just finally, did you expect that an opportunity like that would be made available?

A. I did.

Q. Thank you. One final question I'd like to ask, and it's really for a point of clarification. It's one of the things I've been asked to clarify with you. It relates to the nine children who died with hyponatraemia following renal transplant. If we can put up 122-001-006.

I think that you, in your evidence earlier today, said, leaving aside whether the doctors would propose that UK nephrologists would look into the matter, the information is information that is likely to have come from you.

A. Yes.

Q. Can I just ask why you were bringing that information to the meeting?

A. I don't know. I think -- I mean, Adam's death had such a devastating effect on everyone who knew him that any time I met other nephrologists -- and we would meet every two or three months -- I would undoubtedly bring

up what had happened with Adam and would then say, "Has this ever happened to you?". And as I think I've explained, I eventually worked out that Dr Kate Verrier-Jones had told me, because she was on the Paediatric Audit Registry at UK Transplant, that she thought there might have been nine or ten other children who died in similar circumstances, and I then wrote and suggested we looked into that.

Q. Sorry, can we pull that up in ease of you? It's 002/2, page 108. That's the letter --

A. This is to Dr Postlethwaite.

Q. If we bring up the next page and you can see that. Do you want to just briefly explain who Dr Postlethwaite is?

A. Dr Postlethwaite was president of the British Association for Paediatric Nephrology and he also sat on the Paediatric Audit Committee of what was then UK Transplant. Previously, that role had been taken by Dr Kate Verrier-Jones, who I mentioned in this and I wrote to both of them around this time.

Q. So we can see on the top of page 109, that you're referring to her and:

"... the information was discussed within our hospital. It came to be subsequently mentioned at the child's inquest. As a result of this, the coroner

requested that I should attempt to find out if there was any similarity between these deaths and any other procedure."

So you asked for that and:

"If you could tell me if it is possible to access information about these deaths."

Do you know what ultimately happened about that?

A. There was an audit carried out of all deaths from children with renal transplant. I can't remember the exact period, but I've provided the paper that was published as a result of that.

Q. I think it was 2001 or 2002.

A. Yes, but it was looking back at this decade. And I think what transpired was although there were children who had died from heart failure and various things, which would be consistent with fluid overload, they were unable to identify if any of them actually had dilutional hyponatraemia. The database wasn't able to tell them that. Of course, it did flag up the problem to the entire paediatric nephrology community.

Q. Yes.

A. And Sue Rigden, I believe, in Guy's, was probably secretary of the British Association for Paediatric Nephrology at that time.

Q. It may be that you couldn't have got down to that level

of detail, but did you discuss with Dr Postlethwaite and Kate Verrier-Jones the actual type of fluids that Adam had received?

A. I think so, yes.

MR FORTUNE: Sir, it may be I could refresh Dr Savage's memory. I apologise to you and my learned friend in that we've not had this e-mail copied. In fact, it's only coming on to this topic that I was reminded that I had it. Can I show Professor Savage an e-mail and then perhaps we can have it copied? It's a response from Dr Verrier-Jones. It's dated 29 July 2011, timed at 18.23. (Pause).

A. You can see it when it's copied, but it's just a ... I think I had phoned her as well as sending the letter. So it just says:

"I remember setting up an audit meeting for the British Association for Paediatric Nephrology members and UK Transplant near Bristol, several years ago, when audit first became fashionable. My task was to analyse the causes of death and the second task was to set up practices to avoid these situations."

So that was the source of the information from that meeting. Because at the time, someone had asked me where did I get that information, and I couldn't remember. She was able to remind me of that.

MS ANYADIKE-DANES: I think that was us in a request for your third inquiry witness statement. I have one final question for you. During the course of the clinical part of your evidence, there was quite a bit of discussion about when people appreciated Dr Taylor held or no longer held the views in relation to his administration of fluids to Adam. And some people thought that, whatever he felt before, he didn't hold those views after the inquest. Others, and I think you expressed a view -- and I will have to try and find it in the transcript -- that at some point before the inquest, that he had actually formed the view that you were right about the calculation of fluids and you may not have retained your differences about what kind of hyponatraemia and so forth. But in terms of the calculation of fluids, that you were right.

I want to ask you, given how things appear to be being recorded in that note of 14 June, could you really, at least at that stage, have felt that Dr Taylor still agreed with your assessment of the calculation of fluids?

MR UBEROI: Just before the witness answers, just for the sake of completeness, it's not at the forefront of my memory which piece of evidence my learned friend is referring to when she couches a question in that way.

THE CHAIRMAN: Yes. Well, if I attribute any weight to this consultation note at all, nobody who was at that meeting could have concluded that Dr Taylor had accepted dilutional hyponatraemia.

MR UBEROI: Absolutely. Thank you, sir.

MS ANYADIKE-DANES: So is it not the case that whatever may have happened after the consultation of 14 June, at least, at that time, you would have been fairly clearly of the view that there was a fundamental difference between the two of you?

A. I think so, yes.

MR FORTUNE: Sir, can I assist you with the reference? It's Friday 22 June. It starts effectively on page 40 at line 22 at the bottom and it goes on to 41. So if we have 40 and 41 brought up side by side.

In particular, it starts at line 16 on page 41, if that's the paragraph that my learned friend is looking for.

MS ANYADIKE-DANES: Thank you very much.

A. So this was in relation to the Arieff mechanism?

Q. Yes.

MR FORTUNE: Then at page 42, line 21, and beyond, there is a further part to Professor Savage's evidence and understanding.

MS ANYADIKE-DANES: Yes. Thank you very much, but that

mainly refers to the inquest. But in any event, if anything turns on it, we have tomorrow. I will try and see if I can identify the transcript where it seems that Professor Savage was indicating that he felt, even before the conclusion of the inquest, that Dr Taylor may have been brought round to his own way of looking at the calculation of fluids. But if I can't find it, then I will announce that tomorrow morning.

MR FORTUNE: We know the evidence Dr Taylor gave at the inquest, whether it's --

MS ANYADIKE-DANES: That's precisely the point.

THE CHAIRMAN: It's actually worse than that. Not only was Dr Taylor not coming round, but he seemed to be getting some level of support from Dr Gaston.

MS ANYADIKE-DANES: Yes, exactly. So it's as mixed as that, I'm afraid. Mr Chairman, I don't have any further questions. I wonder if we might have five minutes to see if I can take any soundings to see whether anyone else has.

THE CHAIRMAN: We'll break for a few minutes for soundings to be taken. If there are no questions or only a few more questions, then we will finish a bit early today. Tomorrow, we have Dr Gaston and Dr Murnaghan coming. That leaves us with an issue about Wednesday.

I mentioned last week that there were some exchanges

between the inquiry and the Trust's lawyers, the Directorate of Legal Services, about whether it was fair to recall the witnesses who we've scheduled for Wednesday. I'll say, Mr Simpson, Mr McAlinden, I would like the two nurses, Mathewson and Popplestone, to go on the record about the bladder and the needle, the open bladder and about the needle in the artery. I entirely understand that they don't particularly want to come back here again. I think Miss Mathewson left nursing entirely in 1996. Miss Popplestone, the note that we have is that she left theatre nursing in 1996. I'm not sure if she still is an active nurse or not. But I think it is important to have the people who were in the theatre on the record about those two issues.

MR McALINDEN: I have consulted with both those individuals in relation to those issues and they are prepared to give evidence in relation to those matters.

THE CHAIRMAN: Thank you very much. The only question is whether either or both of them might be available tomorrow. It may be that their evidence is very short and, if that is the case, then Wednesday would be a very short day indeed.

MR McALINDEN: I will certainly make enquiries now in relation to that issue, whether they could be available for tomorrow.

THE CHAIRMAN: Professor Savage's evidence has taken two sessions and, if doctors Gaston and Murnaghan took roughly that same time tomorrow, then it might be we could squeeze in the nurses if they were asked not to come until the afternoon and we'll see if we could get them done tomorrow. We were scheduled to sit on Wednesday, but there's a lot of people on a lot of money to bring everybody back on Wednesday for what would inevitably be a short day.

MR FORTUNE: If the nurses are to give evidence, can we have some notice of the evidence they're likely to give?

THE CHAIRMAN: I'm telling you now what the evidence is. I'm specifically going to ask them about their position or their recollection of the issues which come out of the consultation note. The evidence which they gave orally was very short on, I think it was 30 April, but I specifically want to hear what they have to say, if they have any recollection, either about the open bladder or about the needle in the artery. And in fact, the evidence from Mr Keane on Friday was that one of them would have had to go to get the needle to put into the artery, and that would be -- so that may ring a bell or the fact that it doesn't ring a bell may be significant.

MR FORTUNE: There was also the description of how the

bladder had to be held.

THE CHAIRMAN: Yes, to make it taut.

MS ANYADIKE-DANES: The artery, I think, not the bladder.

THE CHAIRMAN: I will rise for a few minutes to see if there are any more questions.

MS ANYADIKE-DANES: Thank you very much, Mr Chairman.

(3.20 pm)

(A short break)

(3.32 pm)

THE CHAIRMAN: Okay, there is one more issue, is there?

MS ANYADIKE-DANES: One more question, Professor Savage. If we can pull up 122-001-006. And it is that reference to the nine children, which is the fourth paragraph down from the top. We know from looking at the inquest note that the issue of nine children who had died with hyponatraemia was actually given in evidence to the coroner. We know the coroner expressed interest in that and, indeed, offered to write if that would assist in pursuing it.

The question that I want to tease out with you is: you were the person who had the contact and therefore had the information. I'm not saying that you brought it to this meeting in this way, but you were the source of that information, if I can put it that way. From your point of view, given the things that were

being discussed at this meeting and what this consultation was for, what was the relevance of referring to that?

A. I don't know, except that in the six months after Adam's death, after having talked to lots of people round the country, it was something that I was aware of.
I suppose the only thing I was saying was it's not the only time that's happened, really, or appears not to be the only time it's happened.

Q. But you would like to think that it hasn't happened many times before in circumstances such as this, which was such a level of fluids, low-sodium fluids, being given over such a relatively short period of time.

A. Well, that's what I thought we needed to find out from UK Transplant, if we could, and I know there have been a lot of questions about why wasn't there more done in Northern Ireland. At that time, I thought this was a peculiarity of someone in the renal transplant situation whose electrolytes and urine management was quite complex. Therefore, I thought this was of more relevance to the renal community than to the paediatric community. Subsequently, of course, it becomes apparent that the whole issue of fifth normal saline in children anywhere in the world is a significant issue. But after Adam's death, I was thinking, is this a hazard for our

renal patients?

Q. And if we deal with the hazard, can we see what you meant by that hazard? Presumably, your view was if you give any child huge amounts of low-sodium fluid over a relatively short space of time, that's not a good thing to do.

A. Yes.

Q. So you don't need to look at the research literature about nine children to see that point. That point was fairly basic and you had that point. So what was it you were trying to see in relation to Adam's case that might be helpful to be discussing nine other children who have died with hyponatraemia following renal transplants?

A. Well, of course, I mean, the Arieff paper was there, where he had, whatever it was, 16 children, and here I was getting information that there might be another nine. I don't think there was any particular reason for bringing it up, except it was very vivid in my psyche that there was a potential hazard here.

Q. Do you think Dr Taylor might have taken some -- "comfort" is the wrong word because I don't think there's any comfort to be taken in the circumstances in which you all found yourselves, let alone the family. But the fact that this had happened to others ...

THE CHAIRMAN: Could he draw some support from that for his

notion that it wasn't dilutional hyponatraemia and it wasn't really his fault?

A. I wouldn't have thought so. I wouldn't have thought so.

MR FORTUNE: There's a broader issue here than just whether this topic was brought up at the 14 June meeting.

If we all step back a pace, my learned friend has criticised the clinicians, or some of the clinicians at the Royal, for not disseminating or learning from the tragedy of Adam's death.

THE CHAIRMAN: I will stop you immediately.

Ms Anyadike-Danes has not criticised anybody. She has properly probed the extent and the nature of any investigation which took place. She has not been critical of any person. Okay?

MR FORTUNE: I will stand corrected, sir, by virtue of the language, but clearly there have been concerns probed about whether lessons were learned.

THE CHAIRMAN: Yes.

MR FORTUNE: Here is Professor Savage saying, "I'm aware of nine deaths. I've raised this with the body of nephrologists to which I belong and whose members I meet from time to time. Here is an opportunity to either find out more or to learn in these circumstances how hyponatraemia has affected nine children". I'm merely seeking the balance of --

THE CHAIRMAN: You say in fact this goes the other way?
MR FORTUNE: It goes the other way.
THE CHAIRMAN: At least in Professor Savage's case, there's some investigation.
MR FORTUNE: Yes. So to that extent I used the expression that you have reminded me I shouldn't, that there was criticism by my learned friend.
MS ANYADIKE-DANES: Thank you for that, because an issue undoubtedly will be why one didn't move into the other phase that Mr Keane referred to on Friday, once you've dealt with the clinical issues, now the investigation as to how matters were handled and what should happen going forward. Thank you very much indeed.
THE CHAIRMAN: And Professor Savage has given evidence on that, that you thought, after the inquest, there would be something further done?
A. I did, and I believe there was a mortality meeting in the anaesthetic division.
MS ANYADIKE-DANES: Thank you very much indeed, Professor Savage.
THE CHAIRMAN: Professor, thank you very much for coming back again. You are now free to go.
Do we know a position about the nurses? I'm not asking for an immediate response.
MR McALINDEN: I think they are being contacted as I speak.

Perhaps your counsel can be informed shortly as to the outcome of that.

THE CHAIRMAN: Okay. I don't need to know this afternoon. We will start -- is it Dr Gaston first or Dr Murnaghan? Okay, that can wait until tomorrow. It will be Dr Gaston and Dr Murnaghan. If the nurses are here tomorrow, I would be inclined, unless there's any special reason not to, to sit late. If, by doing so, without rushing anybody's evidence, we can conclude this recall segment of the inquiry -- if it becomes too rushed and pressurised, we will sit on into Wednesday morning. But I think, as I said, Mr McAlinden, I wouldn't have thought there's any point in the nurses being here until lunchtime tomorrow if they're available at all. If they're not available tomorrow, we will take them on Wednesday.

MR McALINDEN: Mrs Mathewson has confirmed her availability. We're still making checks in relation to Mrs Popplestone. Now, there was a third witness, Margaret Jackson, who was the theatre manager, who was due to give evidence on Wednesday.

THE CHAIRMAN: There was an issue raised about her well-being. The issue which I'm most concerned about is what happened inside the theatre and I don't think that she was ever inside the theatre on any information

we have to date.

MR McALINDEN: No, she wasn't.

THE CHAIRMAN: If that's the case, we will let Nurse Jackson go. We can juggle the witnesses a bit tomorrow, so if for instance we finish one of the two doctors tomorrow morning, we might then take the two nurses and go on to continue with the second doctor. But we don't need to write that in stone tonight, we'll sort it out tomorrow morning. Thank you.

(3.42 pm)

(The hearing adjourned until 10.00 am the following day)

I N D E X