Tuesday, 27 March 2012

(10.00 am)

(Delay in proceedings)

(10.12 am)

THE CHAIRMAN: Ladies and gentlemen, the written opening address by Ms Anyadike-Danes was circulated at the end of business yesterday afternoon. It's easier for everyone to follow, as Ms Anyadike-Danes completes her delivery this morning. She said there are some changes to be made, some small points to be corrected, and the final corrected version will be on the inquiry website by tomorrow.

Ms Anyadike-Danes, over to you.

Opening by MS ANYADIKE-DANES (continued)

MS ANYADIKE-DANES: Thank you.

I don't know whether it was explained as it was handed out, but the version that you had was actually a draft and the purpose of it was to assist you today. I would have liked you to have it at the start of yesterday, but I know that you'll appreciate that in trying to do that, it's not necessarily as final as we would want it to be. You will get the final version. Nothing of very great importance will change and, in any event, I'm going to give you, obviously, the correct version as I deliver it today. But if you'll just bear

that in mind and, when you receive the correct version, get rid of that so there's no confusion as to what actually is the correct position.

THE CHAIRMAN: Picking it up in the version that was circulated, we're at page 59, paragraph 212 or so; is that right?

MS ANYADIKE-DANES: Yes, I think we were there. I was about to set out for you the debate -- well, at least how the debate arose. Actually, setting out the debate for you is one of those things that I intend to do when we resume the hearing on the 16th and I can conclude the part of the opening that deals with the experts' reports.

But I think it is important to appreciate how it arose and the sorts of things that are involved in it. So until the preliminary report that had been provided by Professor Kirkham on 16 February 2012, the shared view of the inquiry's experts was that dilutional hyponatraemia was the major cause of the acute cerebral oedema that led to Adam's death. That's not to say that there weren't some differences between them, principally in relation to the role of a possible ligation of Adam's left internal jugular vein, as described in Alison Armour's report on the autopsy -- we've already gone through that yesterday and I took you to the part

-- and its contribution to any obstruction from the venous drainage from the head as referred to in Dr Sumner's report of 22 January 1996 and, indeed, his evidence on 18 June. I also took you to that.

The report of Professor Kirkham, though, signalled a change to there being a common view on dilutional hyponatraemia amongst the inquiry's experts. She introduced in her preliminary report the explanation that -- and these are her words:

"On the balance of probabilities, chronic venous sinus thrombosis was a likely cause of Adam's previous, rather subtle, neurological problems. It was likely that further acute thrombosis in the venous sinuses was associated with acute posterior cerebral oedema during the operation."

She also addressed the view that the development of PRES, for which Adam had at least three risk factors -- anemia, blood transfusion and immunosuppression -- contributed to the rapid development of mainly posterior cerebral oedema. I think that should read "of the mainly cerebral oedema". And Professor Kirkham then goes on to deal specifically with dilutional hyponatraemia at paragraph 54 of her preliminary report -- and you have all had that -- in which she summarises and addresses in turn the bases of the

argument that Adam's acute cerebral oedema and brain death was caused by dilutional hyponatraemia and she concluded with:

"Although it is possible that the compensatory mechanisms were overwhelmed because of the rapidity of the fall in the sodium ..."

And if I pause there: that was one of the issues that I had raised yesterday. Really, the three issues about the fluid were: the type of fluid it was, the amount that was administered, and the speed with which it was administered, and that's the rate issue, if you like. So the rapidity of the fall in sodium and the associated shift of water into the brain along an osmotic gradient, on the balance of probabilities, the rapid development of fatal posterior cerebral oedema was secondary to acute on chronic cerebral venous thrombosis, probably with the additional development of posterior cerebral oedema similar to that seen in cases of PRES."

So there is an issue there about whether she is accepting, apart from any other thing, that the rate of the fall of the sodium, which is to be -- one of the debates is how much that is associated with the rate of the administration of the dilute fluids and to what extent does that have a role in the development of

a cerebral oedema.

Since Professor Kirkham's preliminary report, the inquiry's clinical experts have had two lengthy meetings. They had one on 22 February 2012 and one on 9 March 2012. Both of those were recorded and I think you've all had CDs of that. There's also a transcript that was provided of each of those meetings. Professor Kirkham's preliminary report and those two meetings have served to generate a considerable number of reports from the experts, as they explore and indeed challenge their differences and the bases for them.

If I go through them, it's worth knowing exactly what the extent of the expert material is that this issue has given rise to. It's by no means straightforward, as you will appreciate.

We first had Dr Anslow and he produced a note on 18 February 2012, dealing with certain queries that Professor Kirkham had raised. She had raised some queries with Dr Squier and Dr Anslow, which she had actually wanted to receive the answer to before she provided her preliminary report. And as matters occurred, she had the answer from Dr Squier, but she didn't have the answer from Dr Anslow. She released her report or provided her report because it was felt that she really had to provide a preliminary report on the

16th and Dr Anslow's note didn't come in until the 18th. So that wasn't factored into her preliminary report.

In any event, that's the report, it deals with those queries. Then there's Dr Coulthard. He produced a report on 15 March and that report deals with the CVP and it presents his arguments as to the error in zeroing. You'll remember that the CVP measurements are a real issue as to what was happening. Was the catheter in such a place that the CVP measurements were entirely unreliable and couldn't be used at all? Could they be used for reference purposes, so we can just see relative change? And what exactly could be made of them? Or were they actually reliable? They may not have been in an appropriate place, but they were still giving useful information as to the CVP.

So that's the issue. There is also a question about, if you thought they were giving inaccurate measurements or readings, I should say, then what should you do? Should you fiddle about with the catheter, move it around a bit to see if you can get it into a more appropriate position? Should you, if you thought it might be the machine, re-zero it, clear it and see if it came back and started giving accurate readings? That's the zeroing issue. And Dr Coulthard's report is actually dealing with that whole CVP question and what

one can make of either the readings that one had from it and/or the arguments in relation to it.

Then there's a report on 15 March, and that deals with two papers that Professor Kirkham had cited in her preliminary report, Paut "Severe hyponatraemia encephalopathy after paediatric surgery", which was a report of seven cases, and the recommendations for management and prevention, and Sicot, "Death of a child due to post-tonsillectomy hyponatraemic encephalopathy", and also a third paper that hadn't be mentioned by Professor Kirkham, but he thought was relevant. And really that's what that report is dealing with. It's part of the literature debate.

So as I understand it, literature to them is to lawyers what authorities would be. That's their source for being able to say that something is a credible or not credible hypothesis or argument. So for them, in the experts' literature, it's a very important question and what that literature establishes about the studies that are going on and how relevant they might be to the particular cases you have.

So that's that paper. Then he produced a paper on 16 March on free water balances. The free water, I should just say, if you've listened to the DVD or more probably read the transcript, you will see that there is

an issue between Professor Kirkham and at least Dr Coulthard, and maybe others, about the role of free water. There's a question about whether it makes any difference that you're talking about the administration of fluid which has dextrose in, the administration of fluid which has low amounts of sodium in, or just free water, the amount of actual water. That's the debate.

And so he produced that report that's dealing with that, and what he considers to be the amount of free water in Adam, which is part of the argument of what would have been the effect of that. In the course of that, he produced two pages of calculations that are based on Dr Taylor's statement of 1 February.

Then there's another report from him on 16 March and he was providing responses to queries that had arisen during the meeting on 9 March. As you will appreciate, we've seen the transcript coming out of the 22 February, there are a number of issues and queries, and they're all followed up by papers, aide memoires, notes to agenda, that the legal team sent to remind people of all the various strands that they had left that they wanted to consider and we wanted to make sure that they did in fact consider them. And a similar thing happened coming out of the meeting on 9 March, and this report is really Dr Coulthard seeking to address some of those.

He also deals with some things in Dr Taylor's statement and he recalculates his own table, Adam's perioperative fluid balance, and those that were originally produced by Dr Haynes, Professor Gross and Dr Taylor. And that is one of the points I think I made yesterday: that although we had produced that comparative table at the time, we had not reflected Dr Savage's position, but in any event, Dr Coulthard has gone back and relooked at the whole thing and he's made changes to his own calculations, and while he's about it on that basis, he has seen what that would do if others adopted -- I presume, I haven't been able to study it fully -- a similar basis and he's looked at their calculations and, so far as I can tell, he has just a suite of different calculations. Obviously, we have to look at it and see what the implications of it is, as do they. They need to look at it and see whether they accept that that is something that can be done with their calculations.

Then there's another report on 16 March in response to the queries raised and other issues, matters raised by Professor Gross and so forth.

Then he produced a report on 17 March, providing his final views from the perspective of a paediatric nephrologist. You'll be aware when I was addressing it

yesterday that he had two roles. He is a consultant nephrologist, paediatric nephrologist, so he has produced reports dealing with that role. But he also has produced reports on the appropriate fluid calculations and management. So this report of his is a sort of final view, looking at it from the perspective of the paediatric nephrologist.

Then there's Professor Gross. He produced a report on 18 March on the meeting of 22 February. And as I think you've already been advised or informed, he is to produce either the report coming out of 9 March and/or his final report. But in any event, whatever it is, there is a report that he has signalled to us that is coming. So far as I know, we don't yet have it.

Then there's Dr Haynes. He produced a report on 20 February responding to the report of Professor Kirkham. That was her preliminary report. So he produced a relatively short report, just to his reaction to that report. And you'll recall that when that report was released, all the experts were being asked to provide their views on it, on the 20th, which was a relatively short period of time. And some of them were able to do that: Dr Haynes was, Dr Coulthard was, but Dr Haynes has specifically said at the meeting that he thought he had produced that rather under a rush in

order to get it in for 20 February, as we had asked him to do.

Then he produced a supplemental report on 6 March and he produced a report on 18 March on his final position, having regard to it the expert reports to date and the two meetings of experts. Unfortunately, of course, that's the reports that he'd seen to date. There are others out there. Probably, most significantly for him, is Professor Kirkham's report that is out there. But in any event, he can only do the best he can with what he's got so he's produced his final report on everything that he has had and he then helpfully produced a summary report, which really sort of -- I think, I haven't studied it sufficiently, but it's sort of like an executive summary bringing together, in summary form, his position. So we have that from him.

Dr Squier produced a report on 17 February 2012 responding to Professor Kirkham's report of the 16th. I should have added she was another who was able to get a response in, although her response only ever deals with relatively discrete things -- she's a neuropathologist -- and she also produced a report on 15 March on her final position as matters stood at the time. So that's how it is.

We don't yet have Professor Kirkham's report. Her first report was only ever expressed as a preliminary and she said that she had produced that in a rush. We await her report -- and it's a final report that will take into consideration, we hope, all the responses that she has had and the debate that has occurred in Newcastle.

The debate amongst the inquiry's experts deals with extremely complex medical issues. Some of those issues may well be being developed out of research that is still ongoing. However, even that, actually, is not accepted by all the inquiry's experts. In fact, sometimes on certain issues there isn't that much that's accepted. At other times on other issues, they do come together on certain points. But anyway, on the literature front, which is important, you have Dr Coulthard saying at page 3 of his report of 20 February -- that's his report responding to Professor Kirkham's 16 February report -- that he doesn't consider that there is anything new in PRES; it's just a radiological description for acute hypertensive encephalopathy, which is something that all nephrologists know they need to manage, they've been doing that and there's nothing new in PRES. So you have him saying that. Then, on the other hand, you'll have

Dr Haynes, who acknowledges at paragraph 25 of his report, which is also 20 February responding to Professor Kirkham, that PRES is increasingly recognised as an entity and believes he's come across it. He also agrees in his report that PRES can be considered where there is no obvious underlying cause for the cerebral oedema, although it has to be said in Adam's case he thought that there was an underlying cause and that the underlying cause was dilutional hyponatraemia.

As a pathologist, Dr Squier approached the issue of PRES from a different perspective. She's examining the material. And she explains in her report of 22 February that PRES is not yet a condition that is diagnosed pathologically. And Dr Anslow states in his note of 18 February, when he's responding to queries from Professor Kirkham, that PRES is a diagnosis best made on MRI. But Dr Squier nonetheless comments at paragraph 50 when she's dealing with PRES:

"It has been a very interesting condition that is well worth consideration."

So they are not entirely at one with whether it's new, what it means exactly, but hopefully it will become clearer when we see all their final positions because they will know each other's arguments about that and hopefully they can reflect that -- or the ones who have

put in their final positions, have reflected that in their reports.

The ongoing research and study on the matters being considered and debated by the inquiry's experts is well illustrated by the published literature that they cite in their reports. And that's been included in the updated bibliography or will be, if it's not already there, compiled by the legal team. But you can, in any event, see the currency of the publications that they are citing, that deals with ongoing research, and the present position, the views of three of the inquiry's experts, Dr Coulthard, Dr Haynes and Dr Squier, is reflected in that raft of reports that has only just been received by the inquiry, with the reports of Professor Gross and Professor Kirkham still being outstanding.

So that is actually why I am not in a position to put before you, Mr Chairman, the position of the experts on the various clinical matters relating to Adam. It's something that needs to be considered very, very carefully, both in terms of their views -- some of the experts' views may have shifted, their views in relation to each other's views -- and how all that fits or works or relates to the actual evidence, what the people were actually doing, what they thought they were doing, why

they thought they were doing it on 26 and 27 November 1995.

That historical perspective is also important. But it takes time and we hope that we will have that. We intend to have that worked through so that I can conclude this opening when this hearing resumes on 16 April. But I hope you will understand the reason for it.

So let's go to putting Adam on the transplant register. If I can just recap a little bit. A large part of what I was doing yesterday was actually to set out the evidence that we had, what it related to, where we got it from and, to some extent, to try and indicate its significance. What I'm entering into now is to look at what the issues actually are, what the issues are that we may be seeking to address in the oral hearing and why they are issues. So it's not really possible to get into the issues until you survey the territory and yesterday, in large part, was about surveying the territory.

We now come to the issues. Let's start with putting Adam on the transplant register. I have, just to recap again for you, looked at these issues from a number of different periods. Here, we are dealing with his pre-surgical period, if I can put it that way. And one

of the important things in that period, apart from his general condition leading up to it, is the decision to actually put him on the transplant register, and that's where we are now.

So as can be seen from the timeline, reference 307-001-032, that's not quite where I thought it was going to be. Right okay. If you look down to 14 July 1994. This is July, this is the arrangements being made, you can see that he's admitted and his mother's going to be trained in the use of the home dialysis equipment and the arrangements are being made to have Adam's tissue typing done with a view to putting him on call for renal transplant. And in fact, the form is there -- the initial part of the process, anyway.

So contemporaneous with putting him on dialysis, the decision is made to put him on call for a kidney transplant. He was registered with the United Kingdom Transplant Support Services Authority, in fact, in November 1994. And I took to you that form and some of the details that are on that form.

The main members of the transplant team together with the inquiry's experts -- the experts in question are Dr Coulthard, Dr Haynes and Messrs Forsythe and Rigg -- were all asked to complete a template for a table for paediatric renal transplant showing the

involvement of personnel in the various phases. Their completed tables show who they regard should be involved at any particular stage from the first mention to the family of transplant as an option to communicating the child's death. I'm going to see if we have one of those, we may not be able to pull that up for you, but let's try 300-064-124. Yes.

There would have been these forms completed for, as I say, the main members. I think they were completed for Dr Savage, Dr Taylor and Mr Keane. This happens to be Dr Savage. You can see going down on the left-hand side are the phases, as we have been advised, the phases in a transplant process, starting with transplant option, first mention to the family, ending with 15, "Communicating child's death to parents". And across the top you have the various people who might be involved in that. So you have the physicians, ward staff, intensive care unit staff, the anaesthetists, medical technical officers, surgeons, scrub nurse and runner.

The first bit that we're dealing with is "Transplant option first mentioned to the family", and you can see that, so far as Dr Savage is concerned, we're really only talking about the physicians/ward staff and so on. And he has "MS", Maurice Savage, and there isn't an

indication that anybody else would be involved at that stage. And then as you go down, just while we have it here, you can see what his responses are. So "Transplant surgery consent process started, risks and benefits explained". That's Maurice Savage and ward staff. No involvement with anybody else. "Preoperative preparation on evening of the admission" and then you see he has himself involved there. And "RT", the anaesthetist, Robert Taylor. I should just say that how you indicate whether somebody is involved to a significant degree or not depends on how many crosses you have in there. So if you have two crosses, you're involved to a significant degree, and if you have one, then you have a lesser involvement, but you are involved.

You can see therefore that the "Preoperative planning or preparation on the evening of admission and consent confirmed" -- so he has himself significant involvement in that, and Robert Taylor is significantly involved in that, but no one else. And in fact, you can see that he has himself significantly involved in all those -- on the first four, and then he comes in at the end, "Communicating the child's condition at the end of surgery" and, of course, being involved in communicating the child's death to the parents.

So that's his take on that. If we go to 300-065-125. This is Dr Taylor. You can see that he himself doesn't appear to have significant involvement until you get to preparing the theatre for the start of surgery, and he has Dr Montague significantly involved in the preoperative preparation and so forth, which is phase 4. I'm not going to go through it all, just to give you the -- they are there. I will whizz through the rest. 300-066-127.

There we are. That is Mr Keane. He's done it in a slightly different way, he hasn't really given anybody's identity, but he's given the significance of the category of discipline, if I can put it that way, so that you can see that he regards the surgeons as really only coming into it all at 3, which is the preoperative preparation. It's there for you to see, the weight that he gives the other disciplines that were involved.

There are issues to be explored in the oral hearing as to the way in which the decisions were made relating to placing Adam on the transplant register. And those issues include the information options that were given to Adam's mother on the most appropriate transplant centre and also the possibility of a living donor. Dr Savage discusses in his inquiry witness statement of 28 September 2011 what he told Adam's mother, and whilst

acknowledging that the information he provided to her is not recorded in Adam's notes, but he does set out what he told her.

Adam's mother refers to the particular issues of options and living donor in her inquiry witness statement of early this year, and she also addresses the issue of the transplant booklet in her witness statement. That's because there was an issue as to whether that form of information is provided to the families of all children who are to undergo renal transplants, whether they were all provided with that booklet. That booklet gives certain information and she simply says that she didn't, as far as she was concerned, ever have anything in writing. So there is an issue to be explored about that.

Dr Coulthard's comments on the information that he considered should have been provided to Adam's mother is at page 13 of his report, dated 7 November, and also at page 12 of his report, dated 16 February. Those reports are there for you to see and you can see the position that the expert takes in relation to that.

The other issue is the extent to which the decision to place Adam on the transplant register should have been informed by a multi-disciplinary team to include a transplant surgeon. Dr Savage refers in his inquiry

witness statement of 14 April 2011 to a multi-disciplinary team for renal transplants, and he described it as comprising, in addition to the nephrologist -- obviously, he's in it -- renal nurses, dieticians, psychologists and social workers. And he expands on that a little bit in his inquiry witness statement dated 28 September 2011 by identifying staff nurse Clingham as the senior renal nurse at the time of Adam's transplant surgery and Mrs Mercer as a dietician. So those are people he's identifying as part of this multi-disciplinary team.

He also makes it clear that the transplant surgeon did not participate in these multi-disciplinary team meetings, except by special arrangement, as he worked not on the Royal Victoria site, but on the Belfast City site. That's something that I had already flagged up yesterday. There may be a significance to that. In any event, that issue will be pursued from a governance perspective, but just clinically, there may be a significance to that -- and to the fact that Dr Savage doesn't regard the transplant surgeons as regularly participating as a matter of course in the multi-disciplinary team meetings.

The inquiry's experts, Mr Forsythe and Mr Rigg, comment on that issue of the transplant assessment in

their report of June 2011 at paragraph 2.1 and paragraph 3.1, and also paragraph 4.1. They are clearly of the view that a consultant transplant surgeon should be involved prior to placing the child on the transplant register for the purpose of carrying out a physical examination of the child and explaining to the family the procedure, together with the risks and benefits involved. Dr Coulthard also comments upon that phase in his report dated 7 November 2011, and the involvement of surgeons in the process, and he says:

"I believe that the final decision to plan to undertake a transplant should not be made by the paediatric nephrologist alone, but jointly by the paediatric renal team and the transplant surgeons."

Dr Coulthard develops these points at page 5 of his report, dated 7 November. Another issue is whether such a multi-disciplinary team should have developed a plan for Adam's surgery that could be implemented by the available clinicians if and when a donor kidney became available. That might be regarded as particularly an issue if you don't have a dedicated surgeon or anaesthetist who is going to carry out that child's surgery.

Anyway, Mr Forsythe and Mr Rigg, the inquiry's experts, refer to that at paragraph 4.1.5 of their

report of June 2011 to discuss options that a transplant assessment clinic and not in an emergency situation when decision-making can be pressured. And then they say:

"Having a plan to transfer Adam's care to a larger paediatric centre would have been a realistic option for them to consider."

Although they acknowledge there are logistical difficulties with such an option. But what they are saying is that's a possible option and if you're going to have it, you have to have a plan about it. It's not the sort of thing that you can decide on the evening that you get the offer of the kidney.

Dr Coulthard also considers that a specific plan should have been formulated for Adam's transplant surgery, and he makes a point at page 4 of his report of 7 November 2011:

"One important role of having such a meeting and assessment by a transplant surgeon and paediatric nephrologist is to formulate a specific plan for that particular child and to record it in their case notes. The importance of this is that it may not be that particular surgeon who is available to operate at the time a kidney becomes available and it allows a calmly considered plan to be used at the time instead of considering these details under a last-minute time

pressure."

And he returns to that point on the following page of his report:

"We would see it as good practice for them to meet the transplant surgeons at least once before listing them."

There he means the children who it's proposed should receive donor kidneys:

"And for them to receive advice in that way. The paediatric nephrologist should liaise with the transplant surgeons before listing the child. At that point, any particular specific decisions about management should be recorded for future reference."

This is a significant point he makes:

"Also at that point, they should jointly decide on the level of urgency. This has major implications for the choice of kidneys that would be accepted."

You will recall from the registration form that I pulled up for you yesterday of November that there is a way in which you could indicate what level of mismatch you were prepared to take. So what Dr Coulthard is saying here is that, depending on how desperate -- if I can put it that way -- or how serious the need is for a kidney for that particular child, that affects whether you would take a kidney which, in other circumstances,

you might not. And that's the sort of thing he is saying should be recorded.

THE CHAIRMAN: In other words, whether you would take the kidney of a 16 year-old rather than pulled out for a 4, 5, or 6 year-old.

MS ANYADIKE-DANES: Maybe. Whether you would take a kidney of any given cold ischaemic time. Maybe, in the best of circumstances, we wouldn't take that, but if this child is particularly desperate, we don't know when a match even approximating that child will become available, so maybe we just do and see. That's the sort of thing that's considered in a multi-disciplinary team at a meeting ahead of it, not when the actual circumstances arise. According to Dr Coulthard, that's part of the benefit.

So the issues for the arrangements for placing Adam on the transplant register, together with the information that was provided to his mother at the time, are all matters that are going to be considered, not just at the clinical hearings that we are going to go in to, but also from a governance perspective.

Then we have accepting the offer of the donor kidney. If we turn now to the period that commences with the perfusion of the donor kidney at Glasgow Southern General Hospital at 1.42 on Sunday morning of

26 November. Ms Eleanor Donaghy, who was a transplant coordinator at the Belfast City Hospital at the time of Adam's transplant surgery, she explains the process of donor kidney retrieval, the offer and acceptance. She does that in her inquiry witness statement of 22 September 2011, and she refers to a protocol that she drew up in July or August 1992 with a senior sister of the Belfast City Hospital transplant ward. She says it set out the agreed roles between the nursing staff on the transplant ward and myself when a transplant is being arranged at BCH, Belfast City Hospital. She states that it's out of date now and no longer exists, but then goes on to say:

"No such protocol existed for the Children's Hospital."

So although the Belfast City Hospital and the Children's Hospital had decided that certainly all those children who were going to have kidney transplants, who were under the age of 14, they were all going to have them at the Royal, the Children's Hospital, notwithstanding that, there was no protocol developed for how that would work. And that's something that will be looked at from a governance perspective, bearing in mind what I outlined to you yesterday, which is you're essentially using surgeons from one hospital, taking

them to do a procedure in another hospital. In that hospital, you have a protocol about how it all works -- at least you do in relation to the nurses. At this hospital, according to Ms Donaghy, you don't have a protocol. That's an issue we'll explore: whether she's right that there wasn't a protocol; and, if she is right, what the significance and implications are.

The inquiry's experts, Mr Forsythe and Mr Rigg, also describe the organ retrieval and offering process in their joint report of June 2011. I should say they always produce a joint report. They also explain in that report the significance of that period for the cold ischaemic time of the donor kidney and refer to the issue of cold ischaemic time and discuss warm ischaemic time in their joint report of October 2011. Warm ischaemic time is basically when you're handling it, so it's no longer being chilled.

Dr Savage's name appears on Adam's registration form and accordingly, he was the person to be notified of a possible donor kidney for Adam. And he has described in his witness statement of 14 April 2011 what actually happened insofar as, to be fair, as he can recall it. And in relation to Adam's case. He expands upon that in his inquiry witness statement of 28 September 2011 to address the role of the surgeon in accepting the donor

kidney as well as collecting it from the Belfast City Hospital and bringing it to the Children's Hospital. There are some issues to be pursued during the oral hearing about that because there is not entire agreement among everybody as to who was doing what in relation to the kidney or when they were doing it, for that matter.

The time at which Dr Savage received the offer of the donor kidney for Adam is another matter that is unclear. One would assume that it would have to be some time before 8 o'clock that evening on the 26th because that's when Adam is recorded as having been admitted into the Children's Hospital. But it may become important to know, so far as we can do it, more precisely when he knew, and that's an issue to be pursued. Dr Savage believes that he had one conversation with the UK Transplant Service when they would have informed him of a number of things: that a kidney which had a reasonable tissue match was available for Adam; that that match was 3 out of 6 -- it was a half-match, basically, it's referred to; the cause of death of the donor, the time at which the kidney had been donated; the age, blood group and tissue type of the donor; and any significant medical history; and any significant anatomical detail of the donated kidney, for example that there were two arteries on a patch, say.

Patch comes with the kidney and depending on how the kidney is removed, you have more or less of a patch. What is described is that there were two arteries on that patch. Most times -- well, as I understand it, a kidney normally has one artery.

Dr Savage has no recollection of being told that those two arteries were widely separated. He has no recollection of being told that the two arteries were widely separated. The significance of whether they were widely separated and for the surgeons is obviously something that is to be considered and has been considered by the inquiry's experts.

So what would he glean from all of that? He should have known that the donor was 16 years old and that the donor kidney was essentially the size of an adult. It's an adult kidney, essentially, going in to a 4 year-old child. It had two arteries and, although he is not a surgeon, he should have appreciated, so it might be said, that that could present a surgical issue, or at least something for the surgeons to think about. And as at Adam's admission, if it was appreciated when he was being asked to come in for, that the donor kidney would have a cold ischaemic time of about 19 hours.

On the basis of that information, Dr Savage, after speaking to Mr Keane and Adam's mother, took, so far as

we understand it, the initial decision to accept the donor kidney for Adam and have Adam's mother bring him in. Mr Keane states that he had no input or involvement in the decision to accept the kidney from UK Transplant. That will be an issue to be pursued.

There will also be an issue to be pursued on the issue of taking consent from Adam's mother and proceeding on with the transplant surgery in relation to the information that they had about the kidney. But it's worth noting at this stage that that cold ischaemic time of 19 hours, which is, as I say, what it would have been, simple arithmetic, by the time Adam was brought into the Children's Hospital, was getting quite close to that 24-hour optimal time within which to commence surgery to which Dr Savage refers in his inquiry witness statement of 28 September 2011.

He just referred to it as an optimal time. Of course it doesn't mean that you can't do it outside of that period of time, but that was his view of an optimal time, and you have seen what the averages were since 1998 that people were aiming for. So ischaemic time is an issue in terms of the decision-making and the information given to Adam's mother.

So too are really all the matters that were taken into account or should have been taken into account and

their significance. Those are all issues that are to be pursued and dealt with at the oral hearing.

Compiling the transplant team. Well, Dr Savage was responsible for putting together the principal members of the team for Adam's transplant surgery, and by that I mean the consultant anaesthetist and the consultant surgeon. It was essentially his responsibility, which he accepts, to locate an anaesthetist for it and a surgeon. Dr Taylor was the consultant paediatric anaesthetist on call over Friday 24 November 1995 to Sunday 26 November 1995. So he was on call when the offer of the donor kidney was received by Dr Savage, and it may be that that's how he came to be included: he just happened to be the consultant paediatric anaesthetist rather than anything to do with his particular expertise in relation to transplants, although I've already said something about his expertise.

Dr Taylor himself states in his first inquiry witness statement of 17 January 2005, ie that one just before the inquiry's work was suspended:

"I only agreed to provide general anaesthesia for Adam with an experienced senior registrar, Dr T Montague, experienced theatre nursing staff, and the ready access to experienced surgeons and

nephrologists, who were in theatre dress and beside me in theatre for large parts of the procedure."

What all that means and its significance is something that we're going to address in the oral hearing. It's not clear -- if I move now to Mr Keane -- whether Mr Keane, who was a consultant urologist, was contacted by Dr Savage simply because he was a surgeon on call. Dr Savage states in his inquiry witness statement dated 14 April 2011 that from the surgeon on call list for renal transplants held in the renal unit at BCH, the transplant surgeon was identified. That's how he said he found a transplant surgeon:

"On this occasion, Mr Patrick Keane confirmed that he was available and willing to carry out a paediatric transplant."

There's a matter to be explored as to exactly what that means, but from Mr Keane's point of view he doesn't think that he was on call. Rather, he thinks that he was contacted by Dr Savage because he was the only available surgeon trained in transplantation. And it seems from Mr Keane's inquiry witness statement of 20 September 2011 that the other surgeons, the other two, may have been on sick leave at the time.

Furthermore, it also seems from Mr Keane's inquiry witness statement of 20 September 2011 that at the time

of Adam's transplant surgery there were only three surgeons who performed paediatric renal transplants, and that had Mr Keane -- had he been away, these are his words, "there would have been no one capable of doing the transplant". I have already referred to Mr Keane's own experience in carrying out such surgery.

So the implications of the statements of both Dr Taylor and Mr Keane are matters that will be addressed in the oral hearing in relation to the extent of suitable expertise that was available to Dr Savage on 26 November when he was trying to put together a team for Adam's surgery. It's also something, of course, to be addressed from a governance perspective, the depth of the experience resources that are required for the provision of proper paediatric renal transplant service as at 1995.

In addition to Dr Taylor and Mr Savage, Mr Brown may be considered to have been a significant member of the team due to his experience as a consultant paediatric surgeon, who had operated on Adam previously. I've already referred to his experience. In fact, if you recall -- you don't have to recall it, you'll have it when the get the papers. You'll see from the schedule of surgical procedures on Adam, which identify the surgeons and the anaesthetists, you'll be able to see

the procedures in which Mr Brown had previously been involved in relation to Adam.

But coming to the point about how he got to be in the team, exactly how he got to be included in the transplant team as a surgical assistant to Mr Keane is not entirely clear from the witness statements of all of those who are relevant to comment. It's not entirely clear from the witness statement of Dr Savage or Mr Keane or even Mr Brown himself. Now, some of these things I'm sure are to do with the passage of time, but it's not entirely clear.

An explanation may be that his prior involvement in surgery on Adam was considered helpful. Mr Keane, so far as I'm aware, had never operated on Adam previously. So certainly Dr Savage says that it is likely that he informed Adam's mother that a paediatric surgeon would also be involved in the surgery, who had knowledge of Adam's previous surgery, who would therefore be available instantly during the transplantation procedure. The precise circumstances of why he was telling her that are something that will be explored, but the extent of that involvement can be seen, as I said, from that schedule, as for that matter can be seen the experience of the other paediatric consultant surgeons who had been involved previously with Adam.

The result of those early surgical procedures, some of which involved Mr Brown, is described in Adam's notes. So you see the ICU discharge summary dated 20 January 1992 by Dr Craig. He was senior house officer in intensive care:

"He had a ureteric reimplantation on 23/11/1991 --"

These are the procedures with which Mr Brown had previously been involved:

"-- which obstructed, leading to acute renal failure."

And that was one of the procedures, as I say, that Mr Brown had been involved in, and as can be seen from the schedule of serum sodium levels I showed you, there followed a period of hyponatraemia with Adam's serum sodium levels reaching as low at 111 millimoles, and when you consider that the normal range is 135 to 145 -- and they didn't get back into the bottom of the normal range, that is 135, until 28 November 1991.

So this was the procedure that had been carried out on 23 November 1991.

Then there's an updated operation note by Mr Victor Boston, who's a consultant paediatric surgeon, of a procedure on Adam of 8 December 1991. He describes it in this way:

"Previous re-implantation of both ureters.

Subsequently developed renal failure necessitating bilateral ureterostomies. The left kidney, which appeared to be the best biochemically, unfortunately displaced as demonstrated by tube nephrostogram. At no stage was there drainage into the bladder and it is presumed that there was an obstruction at the lower end of both ureters. The old wound was opened."

So this was his procedure opening to see what had happened:

"And it was clear that the ureter had necrosed about two centimetres above the bladder."

So there's a procedure on 23 November, it leads to a difficulty, he is coming in to perform his procedure on 8 December in order to see what that difficulty is, he has to expose it, and he's describing what he sees, and that's his note.

The letter dated 12 May 1992 from Dr Savage to Dr Scott, who I understand was Adam's GP at the time:

"He was operated on at the Ulster Hospital and here in the Children's Hospital by Mr Brown."

I should just say: this is one of a number of regular updates that Dr Savage provided to Mr Scott and if you have the files, if you look through file 16, you will see -- they are quite useful summaries of what had been going on with Adam:

"He has ended up with one ureter attached to the other and then the single lower part of the ureter draining into the bladder. We are not entirely happy that this drains completely freely, but it is felt by our surgical colleagues that this is the best result that can be achieved at the minute and they are loath to interfere again because he has had five operations in this area."

Then there's a letter dated 2 April 1993 from Mr Boston to Mr Savage:

"He had a bilateral re-implant in November 1991 [that's the first one I told you about] and lapsed into renal failure, necessitating bilateral T-tube drainage."

That's the one into the other and then one just into the bladder:

"In December 1991, it was obvious that the left ureter was not draining and he ended up with a left sided ureterostomy. This was followed by a left ureteral ureterostomy to try and solve the problem of drainage of his left renal tract. He had a fundoplication in 1992 for GOR ... an attempt at retrograding in January failed to identify the right ureteric orifice."

Adam's mother asked Dr Savage to obtain from Mr Boston -- that that's surgeon I've just read out his

note to -- a second surgical opinion. So by the time she gets to December 1992, she wants a second opinion and she wants Mr Boston to give it.

Mr Boston refers to Mr Brown having agreed that that should happen and, on 30 March 1993, Mr Boston saw Adam and his family, and it seems from Adam's notes that the last surgical procedure performed by Mr Brown on Adam was a cytoscopy on 8 February 1993 and thereafter, Mr Boston and a number of others operated on Adam, as you can see. If you look at the schedule of surgical procedures, you can see the last procedure that Mr Brown does until we get to his assisting Mr Keane, and you can see who is involved and what they're involved in. There are supplementaries on the procedures and the way that I have just spoken about them now.

So thereafter, Mr Brown and a number of others carried out that work. And Adam's mother states that she made it quite clear that she didn't want Mr Brown to be involved in any surgery with Adam because, "Previous experience had left me with no faith in him."

For the sake of completeness, the other members of the transplant team were the assistant -- I should just say, obviously, there's going to be an issue to be explored in the oral hearing as to exactly how and why Mr Brown became a member of the team and what Adam's

mother was told about it and when she was told about it and the significance of all that for consent and there will be an issue from a governance perspective at all.

For the sake of completeness, the other members of the transplant team were the assistant anaesthetist, the theatre nurses and the medical technical officer. And they were included, so far as we can, tell, from the papers at this stage, in this way.

On 26 November 1995, Dr Montague, senior registrar in anaesthesia was the resident on call for both the labour word and theatres. That was 24-hour shift that was due to end at 9 o'clock in the morning of Monday 27 November 1995, which of course was the morning of Adam's transplant surgery, and he was brought into the team by Dr Taylor as an assistant anaesthetist for a limited period until the end of his shift. So that's Dr Montague.

Dr Savage contacted the theatre and thereafter the theatre nurses for Adam's transplant surgery, who were staff nurses Conway, Popplestone and Mathewson, all seemed to be those who were on duty at that time, and specifically staff nurse Conway was on duty on Sunday 26 November 1995 and handed over to staff nurse Mathewson at 8 am on Monday 27 November 1995.

Now, staff nurse Popplestone claims to have come on

duty at 8 am on that Monday. But there is an issue to be determined about that because staff nurse Conway has a different view as to when staff nurse Popplestone came on duty. She says that staff nurse Popplestone came in early to prepare her instrument set as a scrub nurse for the surgery -- and that can be seen from the witness statements -- and joined her at approximately 7 am. So there's an issue as to which nurses were there in the operating theatre, and when they were there.

Then we have Peter Shaw. He acted as a medical technical officer for Adam's transplant surgery and it seems that he was simply the medical technician on duty on that day. You can see from his witness statement that he doesn't particularly remember that, but his manager has been able to identify that from the records so far as we understand it. So that's the team as far as we know apart from a couple of other additions.

In addition to that, Dr Taylor claims that he was assisted by an anaesthetic nurse and, as I indicated to you yesterday, he said actually he would not have administered the anaesthesia without three nurses being present. He also claims that Dr Montague was replaced in the operating theatre at the end of his shift by a trainee anaesthetist.

So there are issues to be explored in the oral

hearing as to exactly how the transplant team was put together, who was in it, what information about the principal players of the team was given to Adam's mother, both prior to and following the taking of her consent for this transplant surgery, and issues about the reasons for Mr Brown's involvement, together with the significance of his particular knowledge of Adam for the transplant surgery. And you will have when that knowledge dates back to. There are issues about whether there was an anaesthetic nurse to assist Dr Taylor and if so, who she was, and if there wasn't one, why wasn't there one. Whether Dr Montague was replaced by an anaesthetic trainee and if not, why not, and if he was replaced at what stage or, more precisely, when was he and by whom. And all those issues raise questions also to be addressed from a governance perspective.

Then we come to Adam's care, discussions among the transplant team. Adam was admitted on to Musgrave Ward under the care of Dr Savage, who acknowledges in his inquiry witness statement of 14 April 2011 that he was responsible for satisfying himself that the renal transplant protocol was followed. That renal transplant protocol includes the measurements of his electrolytes, and he was also responsible for ensuring that Adam was properly managed and that he was fit for his transplant

surgery and that he was in the best condition possible when he was taken to theatre.

Dr Coulthard's comments in his report on 7 November 2011 deal with Dr Savage's role in the management of Adam's preoperative fluids and in delivering Adam to the operating theatre in appropriate condition. Dr Coulthard also refers in his report of 4 December 2012 to the Newcastle guidelines and explains why a report blood test is not included in them, and you'll recall this is -- this was a very live issue until 1 February of this year. But it may still be an issue for learning about when you take electrolyte tests for a procedure of this nature and why you're taking them at that stage. He also responds to the different view expressed by Mr Koffman in his report for the PSNI of 5 July 2006 on that question. There's a difference of view between those two experts. Mr Koffman thinks it would have been helpful to have had an electrolyte test done; Dr Coulthard is not so concerned about it, largely because of what he thinks is the effect of the peritoneal dialysis overnight. But in any event, he says when he returns to that issue -- he deals with whether it's desirable or mandatory in his report on 7 November 2011, and it ultimately comes down to whether the nephrologist thinks it's something that

should happen and you will see Dr Savage's view about whether he thought that such a test should have happened, and if it didn't happen in the evening, whether it should have happened first thing in the morning when Adam had been anaesthetised and there was ready access, without troubling him, to his blood and you will see that, in a way, what Dr Coulthard is really doing is deferring to: if the consultant anaesthetist thinks it would be useful, probably, unless there's some very good reason why not, it should happen.

The issue as to whose responsibility it was to have carried out the repeat blood test that is referred to in the renal protocol. Of course, it is in the protocol so it's not just a matter of people exercising judgment without a guidance at all; it's in the protocol that there should be a check of the electrolytes. Whether and when it should have been done and its significance, those are all things to be addressed fully at the oral hearing.

The management of Adam's peritoneal dialysis overnight was also a matter for Dr Savage's responsibility, which he concedes in his inquiry witness statement. In fact, one way of looking at it is, to a large extent, it is Dr Savage's responsibility to get Adam through the evening of 26 November and to the

operating theatre on 27 November in as good a shape as he possibly could, for that surgery to give him his best chance of having a successful outcome, both in terms of obviously surviving the surgery, but also a successful outcome in terms of the transplant. And that's essentially what I think one can take from what Dr Savage says and what some of the other experts say as well.

So the condition of Adam is really something that is his primary focus. And that, therefore, means it's part of the peritoneal dialysis that's part of maintaining Adam's condition the evening before.

However, having said that, he does acknowledge that there are no dialysis records. At least, if there are, none have been identified. And we look at Dr Coulthard's comments in his report on 7 November 2011 on Dr Savage's role in the management of Adam's preoperative fluids and dialysis. And then one should also look at the report of the nursing expert for the inquiry, Ms Ramsay, on record keeping generally, and then there's Dr Haynes in his report. He states that the nursing staff on the ward should have kept meticulous details of Adam's fluid balance while he was being dialysed: the volume of urine produced, precise details of all fluid administered to or taken in by

Adam. And the anaesthetist should have reviewed that information before Adam's transfer to theatre. But clinical examination would have given a guide as to whether Adam was hydrated, dehydrated or fluid overloaded and Adam should have been weighed at the end of dialysis and the ward nurses would have been responsible for recording all that information under the direction of the nephrology team. And Dr Haynes states that the adequate information in this respect does not appear to have been made available to Dr Taylor.

So whilst Dr Savage is responsible for the condition of Adam coming in, there are tests and results being produced that are necessary or useful for the others who will be involved in his renal transplant, the preparation for his surgery and actually conducting his surgery. That's where this area is moving into: whether there is proper and adequate testing done and, if there was, whether it was properly recorded and what was the quality of the information that was being provided to other clinicians who were going to play their part in the renal transplant for Adam.

Then if one looks again at Sally Ramsay's report, she states that the record keeping fell below the expected standards, more elements of Adam's care required more detailed documentation. Perhaps if one

goes back to the idea of having a plan: if you don't have a plan, then there is an issue as to whether you should at least maintain very detailed records so that those who are coming who have no prior knowledge necessarily of the child have an opportunity to learn as much as they can of that child before they embark upon the process of major surgery on him. And for example, she gives examples of what she regards as deficiencies: there was no nursing care plan, the dialysis records were not recorded, including the number of cycles, the volume of fluid removed post dialysis and post-dialysis weight. There was no prescription for dialysis detailing the type of fluid, the volume for each cycle, the number of exchanges, the dwell time. The prescription chart nursing and medical records did not make clear any intention to administer the fluids at 75 ml an hour. They're on the prescription, you can see that they're prescribed, if you look at the documentation, but what Ms Ramsay is saying is that the nursing records don't make clear any intention of administering that or when the feed stopped at 5 am, so there's no plan in relation to that, and there's no prescription for the initial infusion of the rate of 20 ml, of which 18 ml were delivered, despite the cannula having been inserted by a doctor who would have

been able to write the necessary prescription. There's no record of the actual type of gastrostomy feed or whether there were bolus feeds, no individual hourly recordings, merely a running total which is incomplete. she says:

"If 'clear fluids' meant 'Dioralyte', there was no prescription written for that fluid. Prescriptions for medicines should have been signed to confirm they had been given. Vital signs were not recorded post-dialysis. Adam's height had not been measured contrary to the admissions protocol."

His height, of course, is one of those things that enables you to estimate the surface area and that forms part of what his insensible losses might have been. And Sally Ramsay goes on to state:

"Renal nurses, as nurses working in a specialist area, would have been able to initiate urinary measurement or ask a doctor whether urine was to be measured. Adam's nappies could have been weighed to estimate his urine output as a child in chronic renal failure about to undergo major surgery."

And her overall impression is that:

"The care given to Adam preoperatively lacked structure and this resulted in omissions in his care."

And then if one goes to Dr Coulthard's reference in

his report of 4 December to the effect of dialysis on imbalance in biochemistry and Adam's condition when arriving at theatre. He says:

"The effect of Adam's dialysis on his fluid balance and serum sodium levels, including the fact that he received only 8 of his usually 15 cycles, that is a matter that was the subject of discussion during the experts' meeting of 9 March."

We can see that from the transcript and we'll wait to see what their views of that are, but that is certainly an issue, what consideration was given as to whether that would have any effect.

There is a recent statement in from Dr Savage on that very question and his view would appear to be very much that of Dr Coulthard's, which is that the effect of the peritoneal dialysis may have been to have corrected any of those imbalances, but those obviously are issues and they're issues to be developed further in the oral hearing.

Dr Savage also liaised with Dr Taylor in relation to his particular requirements for clear fluids and the cessation of fluids in relation to safely anaesthetising Adam and ensuring that what was prescribed by junior staff -- and that was doctors Cartmill and O'Neill -- ensuring that they had actually prescribed and had

administered what he wanted.

In addition, Dr Savage describes himself as liaising with Mr Keane and Dr Taylor to formulate a plan for the arrangement and conduct of Adam's renal transplant, but that, of course, would necessarily be something that was happening on 26 November.

And then, if one looks to Dr Coulthard on the fluid management information that Dr Savage provided to Dr Taylor, it deals with that in his report, and he also deals with matters that Dr Savage should have discussed with Mr Keane.

It seems that Dr Savage took the decision to accept the donor kidney once the transplant cross-matching process was complete at some time in or around 1 o'clock, and that indicated a half match. And Dr Coulthard indicates or comments in his report:

"A child who was thriving happily on dialysis would be listed to have an especially well-matched and, in some ways, extremely suitable kidney."

And then he goes to:

"The range of issues to consider include the size and age of the donor, their medical condition before retrieval, the time since the organ was harvested, any anatomical issues such as multiple arteries and the degree of tissue type mismatch."

So essentially he's saying those are the things we think about, but if we have a child who's doing well and is healthy, then in his view you list that child to have an especially well-matched and, in other ways, extremely suitable kidney, and there will be an issue as to whether the donor kidney that was ultimately accepted for Adam fits that description of especially well-matched and, in other ways, extremely suitable kidney.

Then, compliance with the 1990 Children's Hospital guidelines on paediatric renal transplant. Those are quite often called the renal transplant guidelines. The protocol for paediatric renal transplants that was operating at the time of Adam's surgery was called "Renal transplantation in small children". That had been introduced by Dr Savage in September 1990. The examinations and investigations on admission included a chest X-ray. Adam's notes include a request by Dr O'Neill for such a chest X-ray, but in the evidence part of this opening that I was going through yesterday, you will appreciate that although there is a request for it and you can see the request form in these notes, there's absolutely no record of the corresponding radiological report. In fact, there's no direct record that a chest X-ray was actually carried out. There are

references to whether Adam's chest was clear or not, but there's no reference in the notes to that being related to or derived from a chest X-ray. In fact, that's exactly what has happened and what I've just explained is recited in a DLS correspondence.

The implications of that are that the post surgical X-rays that were taken at 13.20 and 21.30 on 27 November could not be considered by Dr Landes, who was the radiologist instructed by the inquiry, but more particularly by the radiologist at the time by reference to Adam's pre-state. So if one was trying to see what the effect of what had happened over the surgery had happened, you didn't have a before X-ray. What you had was two afters, 13.20 and 21.30. And so there was no way to look at what the implications of what they were seeing were or how any of that reflected the administration of 1,500 ml of hypotonic fluids during his surgery. That doesn't, of course, mean that the X-rays weren't useful; they were trying to see whether there was any pulmonary oedema and, if there was, if there was a gradual progression of it. So of course, they had clinical utility. But for this particular point, to see whether you could see the implications of what had happened during the surgery to him, they were missing an X-ray beforehand.

That is an issue that will be pursued, as I say, firstly, as a matter of fact, so we can find out what on earth happened about it, and also from the point of view of record keeping and protocol, compliance with protocol.

The absence of a pre-surgical chest X-ray is only one issue in relation to record keeping that's going to be pursued during the oral hearing. And I had indicated another one that we will also pursue and this is this matter of the record of his serum sodium levels. At 2300 hours, 11 o'clock, Dr O'Neill records Adam's serum sodium level from bloods taken at approximately 9 o'clock as 139 millimoles. However, there is no corresponding laboratory report, so we don't know how that result was actually got, except for it's just written there in his notes.

In the absence of a printout, his handwriting was misread by Dr O'Connor, and she recorded Adam's serum sodium level as actually 134 millimoles on the transplant form. Subsequently, the inquiry received a set of laboratory results from the DLS and that included a laboratory report dated 27 November 1995 in respect of blood specimen taken at some time on the 26 November 1995. That report records Adam's serum sodium levels at 133 millimoles, as I've already told you

yesterday.

There's no reference to that at all: not to the laboratory report, not to the values that it shows in Adam's notes and records, and it's not clear whether at any time anyone appreciated that, over that evening of 26 November, that Adam's serum sodium levels had fallen to a level that was just below the range of 135. So in the mid-evening, it's 139, perfectly within the acceptable range of 135 to 145. Then, if it is the case that it's from bloods taken at about 11, then it's now fallen just below that range. Well, we simply need to see whether anybody knew that had happened and if they did know that it happened, what, if any, significance they attributed to it.

I think I'm being indicated ...

THE CHAIRMAN: If you finish this section and then we can break.

MS ANYADIKE-DANES: I think one of the other matters to be explored is not just from a clinical point of view that we don't know how these matters arose, but we don't know what effect, if any, they had on anything. From a governance point of view, which we will look at later on, that might be potentially quite significant. As it happened, his serum sodium level had fallen to 133. If it had fallen to even more than that, unless anybody was

looking at any other factors that would assist them in appreciating that, that might be something of quite some significance. But the junior doctors who were looking -- who were in Dr Savage's team and looking at these things have no knowledge of that. They wouldn't know that something serious had started to happen before he went into his transplant surgery. We know they didn't test them before that, so we know the opportunity to check whether any such thing had happened wasn't there. So, yes, I've identified the clinical issues, but from a governance issue, how that could happen and what you ought to put in place to make sure that that sort of thing doesn't happen, that is something that we are going to look at.

There might be some very obvious explanations for it, but we haven't seen them on the face of the medical notes and records yet and we haven't seen them recited in the witness statements yet, so it is something we're going to pursue.

The protocol did provide for electrolyte tests, as you know, and that didn't happen, and the witness statements of Dr Montague and Dr Taylor provide the explanation for that. And they say that Adam was upset and that a decision was made to leave him alone until the morning. I don't think any of the inquiry's experts

have taken issue with leaving him alone. I think where the issue turns is having decided they are leaving him alone, should you then be carrying out the test before he embarks on the surgery. Thereafter, Dr Taylor just didn't seem to consider that the pre-surgical electrolyte check was a priority. In fact, he said so in a number of his statements.

His reasoning is not always clear, nor always entirely consistent, but in his most recent statement of 1 February 2012, he accepts that he should have sent a sample to the laboratory for electrolyte analysis before surgery commenced. So he accepts it now. There is still an issue as to what he has said about it previously and how he came to say those things. That will be explored in the oral hearing.

So Dr Haynes is of the view that serum electrolyte measurement was strongly indicated at the completion of dialysis and that, as an absolute minimum, once Adam was anaesthetised. So we will see how they finally resolved themselves in their expert reports. And whatever it might be that peritoneal dialysis was doing over the evening, Dr Haynes was strongly of the view that it was indicated at the completion of dialysis. He says that there could be abnormal results and that, if there were abnormal results, that would have guided the fluid and

electrolyte administration, and that is a principal role of the anaesthetist during surgery.

Dr Coulthard, as I've just indicated to you before, took a different view. He takes a different view, as I've said, because of what he thinks is a consequence of the process of dialysis. The basis of the explanations, as I've mentioned, that Dr Taylor gave about his conduct in relation to the serum sodium tests, those are going to be explored, as is the question of the likely effect of the peritoneal dialysis on his hydration and serum sodium levels. And not just the likely effect, but what people thought at the time was going to be the likely effect because those are the people making decisions at the time and, whatever they thought, what should they have thought at the time.

I recognise that we are dealing with things from very much a time remove: we're in 2012 with our experts, and they were in 1995 with their patient. So it is important to make sure that we are addressing things from what people should and could have appreciated at that time.

THE CHAIRMAN: Okay. That's a convenient point. We'll break for 15 minutes and, after the break, Ms Anyadike-Danes will finish. Mr McBrien will present his address and then we'll cover any outstanding issues

which have to be dealt with today. Thank you very much.

(11.40 am)

(A short break)

(12.02 pm)

MS ANYADIKE-DANES: The next phase that I want to move to is the timing of the surgery and the cold ischaemic time. It seems from Adam's notes and records that before the results of the tissue matching were received at about 1.42 in the morning of the 27th, a decision had been made for the transplant surgery to start at 6 am on Monday 27 November.

It's not clear exactly when that decision was made, but it should have been known by those making it that at 6 am, the cold ischaemic time of the donor kidney would be approximately 29 hours. In fact, the start time of the surgery was put back to 7 am and there are issues about that, and we'll explore how that happened and why, and the donor kidney was not perfused with Adam's blood until about 10.30 on the 27th, following an anastomosis time of 120 minutes. That makes the total cold ischaemic time approximately 32 hours.

The warm ischaemic time, there be an issue that will be discussed as to its significance, but anyway it is clear from Dr Savage's inquiry witness statement of 14 April that he incorrectly believed when making this

statement that putting back Adam's surgery to 7 would constitute only 16 hours after the kidney had been donated, and his inquiry witness statement shows that he had assumed that the kidney had been donated at 1.42 pm on Sunday the 26th, as opposed to early in the morning, 1.42 am. Thereafter, he states in his inquiry witness statement of 28 September that this error in regards to the time was in the statement, not at the time of the surgery, and that he:

"... would have been unlikely to accept the kidney if I believed we were unlikely to be able to perform the transplant within 24 hours of it being donated."

In other words, what he was saying is it was unlikely that he would have accepted it if he had thought that, by the time they got around to being in a position to be able to perform the surgery, that would have been after or in excess of 24 hours of it being donated. So he was really therefore envisaging the surgery being completed at 1.42 on Monday morning.

Cold ischaemic time of the donor kidney is referred to by Mr Koffman in a letter to the inquiry dated 7 July 2010, and he notes that the average cold storage time in the UK is about 20 hours, but he goes on to state that he had been involved in transplanting organs with cold storage times greater than 48 hours with

a great deal of success. The particular circumstances of those surgeries have not been provided to the inquiry and that's a matter that we might explore in the oral hearing. But he goes on to state that the longer the cold storage time -- and this is really the significance of it -- the more likely there is to be acute tubular necrosis, which can affect the blood circulation of the kidney and might explain the description of the donor kidney not looking so well perfused in the later stages of the operation. It will be recalled that Dr Taylor expressed the view in his deposition at the inquest that the new kidney did not work leading to a re-assessment of the fluid given.

The significance of the cold ischaemic time of the donor kidney is also expressed by Messrs Forsythe and Rigg in their joint report of June 2011. They associate:

"A prolonged cold ischaemic time with delayed kidney function, which can increase the risk of thrombosis in children."

They also refer to the seeming two hours of warm ischaemic time involved in the preparing and transplanting the donor kidney, which they consider overlong and likely to have caused it irrevocable damage.

The cold ischaemic time of the donor kidney, especially in relation to the decisions that were made by Dr Savage, Dr Taylor and Mr Keane during the pre-surgical period and its infarction are issues that will be addressed in the oral hearing.

It's probably worth noting that nobody -- in the same way as none of the experts have thought that anything to do with the condition of kidney or the way in which the transplant surgery, from the actual surgical point of view, caused Adam's death. That's not the issue that we're exploring here. We're exploring this as a significant element of his care, which is also part of the terms of reference. And so we are looking at the surgical care he received, and that is its significance. So we will be exploring in the oral hearing actually what they had appreciated about the donor kidney's cold ischaemic time and, when they were making the decision, the basis on which they appreciated that, and what they actually weighed up, whether they turned their minds to the risks of the successful graft of the kidney and whether they weighed up those risks and obviously decided to proceed, why they did and what, if any, of that they communicated to Adam's mother. Those are the sorts of issues that will be pursued. And also what, if any, of that can be related to the

condition as observed of the kidney during the surgery and its condition as observed during autopsy. How is all that related to these factors? Those are the sort of things that we will be exploring.

In fact, just as I talk about that, the condition of course of the kidney was examined and has been commented upon by at least two experts. It was examined at autopsy and Dr Armour made a number of histological slides. She provided those to Professor Berry. He was engaged by the Coroner specifically to provide the Coroner with an expert report, a report to the inquest. Of course, at that time, nobody knew what the effect of the kidney might or might not have been to Adam. He examined those slides and he expressed the view in his report of 23 March 1996 that the transplant kidney was infarcted, dead. That's if you look at his report. He puts it as bluntly as that:

"The extent of change suggested that this occurred at or before the time of transplantation and this could be resolved by enquiries about the fate and function of the donor's other kidney after transplantation."

And we did make those enquiries.

Dr Armour concluded then, because her report of autopsy come after his report, that:

"There was complete infarction of the transplanted

kidney."

The PSNI, when they were conducting their investigation, they gave Professor Risdon -- you can see his qualifications -- a number of tissue samples from the transplanted kidney to examine for the purpose of advising on the likely time of its infarction. That's what they wanted to know. When was it dead, effectively. And he concluded that the changes seen in the transplanted kidney were more advanced than would be expected after only 24 hours of non-perfusion.

The starting point for that calculation would be some time after the completion of the vascular anastomoses at 10.30 and the perfusion of the transplanted kidney with Adam's blood and would extend to the removal of ventilatory support. So that's the time when the donor kidney is hooked up to the time when ventilatory support is removed. So then you have a period of time when the kidney is simply there and reached to round about 11 o'clock, I think, when it's being examined the following day at autopsy. So he's taking that into consideration, factoring that in, but he's saying even if you factor all that in, he says he sees more advanced changes in that kidney than you would otherwise expect, unless of course the kidney was infarcted at or some time before its actual

transplantation.

So he goes on -- it's a very short report and he says:

"In my opinion, the transplanted kidney must have suffered significant ischaemic damage prior to its insertion for this degree of ischaemic damage to be apparent at post-mortem."

It's really as blunt as that. He also referred to the other kidney from the donor and he drew support for his conclusion from the fact that that kidney had also failed. So we made enquiries, as I said we did, about the fate of that kidney and we had a response in a letter in June 2010 from NHS Blood and Transplant, and they explained that the other kidney, which had been transplanted on 26 November 1995 -- obviously they were both removed at the same time -- that kidney actually was transplanted that day, the same day. That had failed, but the explanation for the failure was poor recipient arteries, which is obviously something to do with the recipient. It can be addressed by the experts, but my understanding of that is that the poor recipient arteries meant the blood supply to the donor kidney wasn't sufficiently good to sustain it.

What would have happened if there had been good recipient arteries, nobody knows because we're not

in that situation, but that's as much as we know about what happened about the other kidney.

So there are issues to be addressed during the oral hearing in relation to the timing of the transplant surgery, the cold ischaemic time of the donor kidney transplanted into Adam, whether its condition had any effect during the transplant surgery as well as the ultimate cause of its infarction. Having said that, it is important to note that the experts have all formed the view that the infarction of the transplanted kidney, whenever and however it occurred, that did not contribute to Adam's death. But as I said, it's an important issue from the point of view of his care.

If we go then to taking consent for Adam's transplant surgery. Dr Savage assumed the sole responsibility for taking consent from Adam's mother for his transplant surgery. He also states that in 1995, it was not uncommon for initial consent to be obtained by someone other than the surgeon carrying out the procedure. That's commented upon by Professor Koffman in his report of 5 July 2006, which he carried out for the PSNI during their investigations; he was their expert. It appears from the records that consent for the operation was not performed by the surgeons, but probably by the paediatric nephrologist, Dr Savage. And

this would be normal accepted practice in the mid-1990s. He then goes on to state:

"It will be important to view the consent form and, if possible, the topics that were discussed with Adam's mother, including the risk of death and serious adverse events from the procedure."

Well, you can review the consent form and there's not a lot in it that will tell you or help you with what was discussed with Adam's mother. Of course, you know from Dr Savage that whatever was discussed with Adam's mother, it wasn't recorded. So it is an issue at the oral hearing of what was discussed, what he informed her about it, the circumstances and context, what she would be expected to appreciate about it and what she herself understood about it at that time. Those are all issues to be addressed.

Dr Coulthard expresses the view that, in 1995, it was common for the final written consent for a child's kidney transplant to be undertaken by the consultant paediatric nephrologist. However, that is put in the context of a surgeon having previously been involved and he explained that.

"In our local arrangements, the parent will always have met a transplant surgeon in advance of the surgery and will have covered the relevant issues then."

Then Mr Forsythe and Rigg, they note in their report of June 2011 that consent was taken by Dr Savage, who they say was not capable of carrying out the transplant operation himself, and they then express a different and very firm view to that of Mr Koffman and Dr Coulthard and that it is the role of the transplant surgeon to gain consent from paediatric patient's parents and this was the case in 1995 as well as now.

I'm simply, in this opening, reading out certain extracts from all these expert reports. Of course you'll read them yourself in full and we will address them in full with the experts. But what I'm identifying is some of the critical issues that they identify about these things. So there are a range of matters that Dr Savage believes he communicated to Adam's mother prior to or at the time consent was taken, although as I say, he acknowledges that he didn't record it. He says he communicated to her the donor kidney was an adult kidney, effectively, that a paediatric surgeon would be involved who had knowledge of Adam's previous surgery, who would therefore be available instantly during the transplant procedure, that several units of blood would need to be cross-matched because of the risk of blood loss during surgery, that Adam's normal overnight feeds would need to be changed so that his

stomach was empty at the time of receipt of anaesthetic and that once Adam's tube feeds had ceased, some intravenous fluids would be given to him up until he got into the operating theatre.

The issues relating to consent which will be dealt with at the oral hearing that will include the information that should have been provided to Adam's mother, particularly in relation to risks, and those who should have been involved in explaining that information to her for the purpose of obtaining her consent for Adam's transplant surgery. And then, of course, the information that actually was provided to her and the explanation for what that information was.

The issue of consent is an important issue that will be looked at from a governance perspective as well, including the consideration of the extent to which the consent form that was used complied with any current requirements as to consent forms. If it didn't, why didn't it?

I move now to the information gathering by the transplant team. I mentioned some of this, a little before, the importance, when I was discussing record keeping, of recording those results precisely so that those who are going to be involved in Adam's surgery could appraise themselves of his condition, as it were,

and as part of their own planning for what they were going to have to do.

So the value of the information gathering for the transplant team rather depends on the quality and accessibility of the information that had been compiled on Adam once he was placed on the transplant register. That goes right back to the issue that we discussed before about the planning for that. Dr Haynes states that as Adam was such a complex patient, a medical summary should have been prepared when he was placed on the transplant waiting list, and placed in a prominent place in the case notes. That was important because the surgeon involved in that initial assessment may not be the actual surgeon performing the transplant operation. That's something that I've already said that is mentioned by Coulthard in his report.

The depth and efficacy of the information gathering process at the initial assessment stage to go on to the transplant list and therefore on any reviews prior to the offer of a donor kidney lay the foundation for a well planned and successful transplant. And it's this information, together with Dr Savage's briefing to the surgeon and anaesthetist preoperatively, which forms the basis of the actual plan for the particular transplant surgery that's going to happen that day or whenever

it is going to happen once they get the offer.

So of course you've got a plan -- according to the experts, there should have been a plan starting from when he was put on the actual transplant list and that tells you all about how you're going to manage him and what information you're going to collect and where you're going to put it for convenient use. But then he talks about this phase just before -- once you've actually got an offer of a donor kidney and how you use that information that you hope has been accumulated so that they can prepare for the surgery.

By 26 November 1995, Adam's medical notes were been contained in 10 files, so if there wasn't a ready summary that had started to be compiled once he was put on the transplant register, then there's an issue to be explored as to how those who were coming in to perform the surgery were to glean the information that was important for them to have along with whatever briefing they were given from those ten files.

I hope, when we have the oral hearing, that we'll have them here, the actual files, so that one can see the volume of material that anybody coming in would have had to work their way through to find whatever they thought was the important information that they needed to prepare themselves for such a procedure.

Dr Haynes would have expected the anaesthetist to have sifted through Adam's notes to gain an understanding of the pathology involved and to identify particular problems as well as introducing himself to Adam and his mother and to examine Adam, as required. That's part of what Dr Haynes considers is an information gathering exercise for the anaesthetist. Dr Haynes says that the preoperative assessment is an integral part of the anaesthetist's duties and, if not performed adequately, mistakes will inevitably be made. And he would have expected Dr Taylor to have ascertained the nature of Adam's renal pathology, noted Adam's current normal fluid balance and electrolyte requirements, including his fluid intake, normal insensible fluid losses, usual volume loss during peritoneal dialysis and Adam's average urine production and also noted that Adam required sodium supplements to maintain normal sodium serum levels and that he could not regulate urinary sodium losses. That's what he would have expected Dr Taylor to have had by way of information on Adam.

He states that the anaesthetist should have realised that sodium had to be given as a constituent of all fluid administered and that repeated tests on Adam were required to ensure that the sodium serum concentration

was acceptable, ascertained the detail of the post-operative course following major surgery. For example, December 1991 to January 1992, ascertained the details of Adam's normal peritoneal dialysis regime, read the medical correspondence after the nephrology outpatients visits, noted any difficulties arising in previous anaesthetics and to have noted any other features regarding Adam's health.

Mr Forsythe and Mr Rigg say that the transplant surgeon ought to have met Adam and his family when Adam was first assessed for transplant and prior to going on the transplant list and that the operating surgeon should see the patient and parents again before surgery, preferably early in the preoperative period, to reassess the patient and become fully aware of all active problems and any relevant past medical and surgical history. In other words, he may have been seen and certain notes made of him, but things may have changed. There needs to be a period before the donor kidney is offered, and so the surgeon coming in to perform the transplant should meet and assess the patient, satisfy himself -- which is how matters lie -- and also meet the patient's parents. They also state that the transplant surgeon should have been aware of Adam's current position, active problems, past medical and surgical

history and recent and current results of investigations and should have examined Adam's abdomen. There appears to be no record of a transplant plan of Adam. That's what they note.

The timeline that I went through yesterday, or at least introduced you to yesterday, and which will you will see, is a very long document -- I accept that because it is dealing with about four years and I have really only described one or two pages in it for illustrative purposes. But I do suggest that you look at it because it does try and provide some sort of running chronology of the things that were happening to Adam and when they were being done and when they were happening.

But anyway, it highlights a number of factors from Adam's notes and records that they may have been relevant for the transplant team to have known or appreciated before embarking on the transplant, for example, Adam's previous fluid balances. It's something that the experts feel they ought to have been aware of: his episodes of hyponatraemia, the level to which his serum sodiums fell, and the way at which they did so and, if it's disclosed in the records, why.

You can see the rate at which that was happening from the actual schedule of the results and you can see,

graphically, when he had his loads from the actual chart that I took you to yesterday. The details of his previous surgeries, especially those involving central lines and urethral catheters. And you can see those from the schedule of previous surgical procedures that I provided. But they, as the clinicians, will have access to that information from his medical notes and records and they would be able to see, just as we have distilled them out, the descriptions of those surgeries and what was happening.

Dr Savage was familiar with Adam's notes and records as he'd been in charge of Adam's care since his admission to Musgrave Ward in 1991. Both Dr Taylor and Mr Keane say they read Adam's notes and records prior to surgery. The inquiry's expert Dr Haynes refers in his report of August 2011 to the central importance of Dr Taylor knowing about Adam's past history of hyponatraemia with serum sodium results below 120 millimoles and its implications for his fluid management.

The inquiry's experts, Forsythe and Rigg, also deal in their report of June 2011 with the importance of Mr Keane being aware of Adam's history of hyponatraemia and of his current condition as well as being aware of Adam's active problems, past medical and surgical

history and recent and current results of investigations. Pausing there: from their point of view, it's not just Dr Taylor as the anaesthetist who needed to know that he had a history of hyponatraemia. From their point of view, the surgeon needed to know that as well and they say that Mr Keane should have seen the following documents before commencing surgery: the operation consent form; kidney donor information form; the admission notes from the 26th and 27th, including results of investigations; an investigation summary sheet to know what the trend for results of investigations had been in the preoperative period; recent clinic letters; and knowledge of Adam's previous abdominal surgical procedures.

When I said that Dr Savage was familiar with Adam's notes and records, he's their initial point of contact, so he's contacting them and inviting them to be part of the transplant team. So there is an issue as to the quality and extent of the information he gave them. They have, so we understand it, their own obligations to satisfy themselves that they understood about Adam, that he was a person who knew Adam best, so there may be an issue as to exactly what was conveyed and how adequate it was in the time that was available to communicate with those people, over and above the

quality of the investigation that Dr Taylor and Mr Keane made as to Adam's own condition.

So those are issues to be explored. An important one is: if they had the time, what would they have learned from Adam's medical notes and records, configured as they were, assuming they're contacted some time in the evening of 26 November? And if those notes were not in a form which was easily accessible to them so that they could get the relevant information, then there may be questions: why weren't they?

The timeline highlights from Adam's notes and records periods of his dehydration and polyuria -- those were one of the red-line issues I read to you -- anemia, iron deficiency -- that's another red-line issue -- and the administration of erythropoietin -- another red-line issue -- and whilst there's agreement amongst the inquiry's experts that they actually are all risk factors for the chronic venous thrombosis that Professor Kirkham thinks is a possibility for Adam, they disagree that any of them actually operated to expose Adam to the risk of developing that condition. But they do say that those are risk factors, so there's an issue to be explored whether those, as risk factors for anything in particular, were identified or recognised by the clinicians, and if they were, what did they do about

them. We'll see.

The issue of whether Adam was likely to have or did develop chronic venous thrombosis and its relevance to the development of his cerebral oedema obviously is something to be addressed during the oral hearing. It obviously has quite significant implications.

I have, Mr Chairman, for this opening largely dealt with the span of the period from when it was decided to place Adam on the transplant register until the morning of his transplant surgery, which is the preoperative stage and the preoperative planning stages. There are other issues leading up to the end of where I wanted to get to with the opening, the end being the report on autopsy, and they can be categorised into the remaining three periods. I have previously told you there were four, I've dealt with one. That's the perioperative period: that deals with that period from the start of his anaesthesia for his transplant surgery until he's transferred to paediatric intensive care. So that's when the transplant's going on, basically, and deals with all that was happening, both from a number of different perspectives, all that was happening in terms of who was there. That's one question. All that was happening in terms of what people were doing, who were there. So if you look at it from the point of view of

the anaesthetist, Dr Taylor, what was he doing in terms of Adam's fluid management? If you look at it from the point of view of the surgeons, what were they doing in terms of the actual transplant itself? And if you look at it from the point of view of the nephrologist -- and we know that Dr Savage was not there for the entire time and that Dr O'Connor came in and out -- but there'll be an issue as to what the nephrologist should have appreciated about what was going on and what they should have been doing as well as, of course, what actually was happening to Adam and why was that happening.

So that's a very big area and it is no surprise that that is the area that the experts are most concerned with, particularly that latter point, which is what actually was happening to Adam and why was it happening to him.

Then there is post-operative period to deal with. That really is the period from his transfer to paediatric intensive care up until his death. There are issues to deal with that as to, what, if you look at that period, might explain or help to have a better understanding of what was happening to him actually during the surgery or rather why it was happening to him if one looks at that period there.

And then, of course, there's the period following

his death, which deals largely with the autopsy up until the verdict on inquest and how that autopsy was conducted: what was the information that was obtained and what is one to understand from that information? Those events that took place in those periods are all deeply associated with clinical matters of evidence and the debate that I've already said about the experts and are therefore not a matter that I can address with you, Mr Chairman, today, but will be addressed, so far as it can be, when we get all these reports in, on 16 April. So those are matters that I will have to leave over.

THE CHAIRMAN: Thank you very much indeed.

Mr McBrien?

Opening by MR McBRIEN

MR McBRIEN: Thanks to the inquiry team's sterling efforts to date, Adam's family now has a fairly good idea of what happened. However, there are still gaps. They hope that the relevant witnesses will provide informative answers to the following: did a desire to increase their transplant statistics play any part in the fact that neither Dr Savage nor Mr Keane suggested to Adam's family that in view of all the issues arising, Adam's surgery could or should have been cancelled?

On a more specific basis, bearing in mind the

desirability of having a donated kidney in place within 24 hours of it being harvested, why did Dr Savage not make it clear to both Dr Taylor and Mr Keane that the clock was running from 1.42 am on the morning of Sunday 26 November 1995? Was it because he confused 1.42 am with 1.42 pm as he had indicated to the police in his statement at 093-006-016?

As the clinician who knew Adam best, why did Dr Savage not take a more active role in theatre to protect Adam's health and well-being? Why has Dr Savage never realised in a period of 16 years that the calculations were wrong and that Adam was not in a fluid deficit situation when he went to theatre?

Why did Dr Taylor make so many mistakes? Why did it take Dr Taylor 16 years to recognise the fact that he made so many mistakes? Why did Dr Taylor not have adequate anaesthetic assistance for the whole of the operation? Why was there such poor communication between the clinicians?

Will Mr Keane answer the following questions put to him by the inquiry? For the avoidance of doubt, these are:

First, what would he have said or done if he had been told of a CVP reading of between 20 and 25, approximately 15 minutes before the completion of the

vascular anastomosis?

Secondly, what would he have said or done if he had been told of a serum sodium reading of 123 at 09.32?

Thirdly, whether he thought a chest X-ray should have been taken to check the line position in respect of the CVP.

The family also want to hear Mr Keane's views on who he considers has the final say as to whether fluid is administered in a situation where the surgeon requests more fluid is given, for example, to increase kidney perfusion and the anaesthetist present believes this to be inappropriate.

Using the expression "knife to skin", did this actually happen at 0800 or some other time? When was the donated kidney actually put into Adam? In other words, when did anastomosis occur? When did the surgery actually end? At the moment, the family are bewildered by all the conflicting evidence. For example, the experts say that it should only have taken 90 minutes from knife to skin. On such a view, it should, therefore, have ended at about 9.30.

Dr Taylor has said on one occasion that he put in more fluid at 09.30 to pink up the donated kidney. Dr O'Connor recorded the anastomosis time as being 10.30. Mr Keane said he left after the anastomoses.

Adam did not leave theatre until noon. Who was doing what during the period from 0800 until noon?

Bearing in mind that they were said to be there to learn, Adam's family want to hear what both Dr Montague and Mr Brown have to say about what they actually learned from the operation.

Adam's family want a definitive answer to questions: how did Mr Brown come to be involved and why did Dr Savage, as a matter of common courtesy, not tell Debra that Mr Brown was going to be involved? Adam's family want to know why Mr Brown has proved so evasive in some of his answers to the inquiry. This can best be seen in one of his witness statements, where he has answered that he does not understand the relevance of the questions in relation to the list of surgical procedures and his role and involvement, the fluid management regime employed in each procedure and the lessons learned about Adam's fluid management for surgical procedures.

Adam's family want definitive answers as to who was present and when, notwithstanding both an inquest and a police investigation, the following issues still arise. Who were the nurses present in the theatre between 0700 and 0800? Nurse Conway was there, she's referred to nurse Popplestone. However, nurse

Popplestone stated she only arrived at 0800. When precisely did Dr Montague leave? He was still present when Dr O'Connor arrived. When did Mr Keane leave? At what time did Eleanor Donaghy arrive? She said she saw him in theatre. Adam's family also want to know why was there no anaesthetist to replace Dr Montague? Who wrote up the blood loss figures between 0700 and 0800? And whether Dr Campbell will remember anything about what happened.

The overall position is best summarised by Dr Coulthard, a document at 200-022-272. He has written:

"Adam's death was an avoidable tragedy. I am pleased that Dr Taylor has recently been able to recognise that his decision to infuse a massive volume of hypotonic into Adam was a mistake, as it may now finally allow important lessons to be learned and shared. Any tragedy should be used to learn from, so we may be able to build ways of doing better in the future and avoid repeated mistakes in other children. It is a shame that it has taken so many years for the lessons to be learned in this case."

For the sake of all our children, how such a situation should be avoided in future will have to be addressed in both the clinical and the governance parts

of this inquiry. Thank you.

Housekeeping

THE CHAIRMAN: Thank you, Mr McBrien.

In the absence of any other opening addresses, let me move on to a few more issues before we finish for today.

As you know from what you've heard from Ms Anyadike-Danes, she will complete her opening on 16 April. That has been brought about because of the reports which are still coming in from the Newcastle meetings. We have, this morning, received Professor Gross' report and we can arrange for that to be circulated tomorrow. We understand that Professor Kirkham's report will be available later today, so we will arrange for both of those reports to be circulated tomorrow.

We will also ask our advisors to update the consolidated report which was circulated in late January/early February to you in light of what has been discussed since they wrote that report and we will ask the peer reviewers to comment on the advisors. The advisors' report, I hope, should be available by the end of this week so that you then have an idea not only of what the further expert reports say, but also what the advisors have highlighted to the inquiry as outstanding

issues of concern.

The fact that the opening has to be completed on 16 April means that we may have to tweak the witnesses who are giving evidence that week. Professor Savage is due to start on Monday 16th. Can I ask, I think, Mr Fortune, you represent Professor Savage; is that right?

MR FORTUNE: I do, sir.

THE CHAIRMAN: If Professor Savage's evidence didn't finish on Monday 16th, could he run into Tuesday 17th? Is he available on Tuesday 17th?

MR FORTUNE: Yes, he is, but my first question would be how long my learned friend in completing her opening is likely to take on that Monday because, listening to my learned friend, I anticipate that she has still a great chunk of opening to deliver. If so, Professor Savage is not likely to start his evidence until some time around the midday adjournment, and that may be hopeful. More realistically, it may be that I ask for Professor Savage to start his evidence cleanly first thing on Tuesday morning because there may be matters that we need to reflect upon in the course of that day, following my learned friend's completion of her opening.

THE CHAIRMAN: Okay. What I was going to say, what I was coming to is that we're due to sit from Monday 16th to Thursday 19th. We can actually sit on Friday the 20th

as well. What I wanted to check was whether, if your client is available on the Monday going into Tuesday, if Dr Taylor, who was due to be Tuesday/Wednesday, if he is also available on the Thursday, if his evidence runs over, and if Mr Keane is then available on Thursday into Friday, we could still have at least four days to hear their evidence that week, even if we started late on the Monday or didn't start on the Monday at all.

MR FORTUNE: Sir, can I deal with that matter in two ways? Firstly, Professor Savage has made himself available throughout the whole period with which clinical issues are to be addressed.

THE CHAIRMAN: That's very helpful.

MR FORTUNE: There is a matter about his availability during the period relating to governance, but I needn't detain on you that matter at the moment. However, looking at the witness list, and looking at the days that have been assigned to each of the witnesses, at this stage is it more in hope that each witness will be completed within a day or, in Dr Taylor's case, two days? Because the timetable will come under great pressure unless a tight rein is held to all the witnesses. We're not at this stage suggesting a guillotine of any questioning, but clearly there must be concerns with slippage.

THE CHAIRMAN: Well, a tight rein has to be kept,

Mr Fortune. That's why I'm suggesting that for that opening week, we try to keep Fridays free for a variety of reasons, but it's also there as a runover day if needs be, and it may be that we need it in that week. But in any event, I think you're confirming that your client is available that week and if his evidence starts late on Monday or doesn't start until Tuesday, he can accommodate that and I'm grateful for that indication. Thank you.

Mr Uberoi?

MR UBEROI: I don't know the answer off the top of my head, sir, but we could certainly make enquiries this afternoon and let you know straightaway.

THE CHAIRMAN: Thank you very much. Can I ask you, it would be helpful -- I'm not asking for an answer on the spot unless you can give it. But in his statement of 1 February, Dr Taylor clearly changed his position in a number of fairly significant ways, which have been highlighted. One of the fundamental points which he had made previously was that he didn't believe that physiologically Adam could have dilutional hyponatraemia.

In his statement, which was volunteered to the inquiry, he says that, I think in effect, he now recognises that the administration of excessive volumes

of hypotonic fluids can produce a movement of water and, in particular, lead to cerebral oedema, known as dilutional hyponatraemia [sic]. So he's now accepting that in fact in that can happen. It's not clear from that whether he also accepts that that is what did happen to Adam. Can you consider, can you confirm whether he -- he has moved from saying this couldn't have happened to saying it can happen. Does he move further and say it did happen or -- can you answer that immediately?

MR UBEROI: I think, sir, it's difficult for me to answer on the hoof now. I also don't have the statement in front of me. I recognise it's a potential middle path that arises from the extracts you have quoted to me and I recognise it's something Dr Taylor may well be questioned on.

THE CHAIRMAN: Okay, thank you very much.

Mr Millar for Mr Keane?

MR MILLAR: I'm sure he will be available on Friday if required. I think, sir, it's useful to point out that we seem to have used all of the Fridays during the clinical period. We did have Fridays as back-ups previously, but on this schedule all of the Fridays seem to be used except that first one.

THE CHAIRMAN: Well, yes.

MR MILLAR: On the schedule, sir, I think this was sent as a draft, the schedule. It'd be surprising if some people hadn't come back to the inquiry and indicated that a day doesn't suit, for example. I'm just wondering, is there to be a revised schedule which reflects the up-to-date position?

THE CHAIRMAN: I will confirm that whatever the up-to-date position is, it is circulated generally later on. Thank you very much.

Let me move on from that to refer to Claire's case because Claire's case is the next one scheduled to be heard, I think starting on 11 June. I think you'll understand how the inquiry's operating. We get advice from the advisors, we get expert reports, and then we get witness statements from those who are involved in the care and treatment of the various children.

In Claire's case, we have, although we haven't shared it with you, a battery of expert reports and witness statements. We have been troubled by two particular problems, which I'm afraid are unavoidable. The first is that one of the doctors who was separately involved in looking after Claire has been very ill and, as a result of that illness, was unable to provide the detailed witness statement which you were looking for without some considerable delay. That has knocked back

our preparation to some extent.

Secondly, on our side of the house, one of the inquiry expert witnesses has had to withdraw from the inquiry due to illness; he simply cannot continue. Those reports will be circulated and shared, even though that witness will not be available to give evidence. We are resolving at the moment how that void will be filled and we'll come back to you on that as soon as possible.

The result of that is that although we have made very, very substantial progress in Claire's case, we are not yet ready to distribute either form of witness statements, that is the witness statements from those who were involved in her care or the expert witness statements. And I think, as you know from the way that we've dealt with Adam's case, we prefer not to do that until we have received -- we prefer not to distribute, for instance, the expert witness statements until we have received the witness statements from those who were involved in looking after one of these children because, frankly, we would prefer the people who are giving us information about their role in the care and treatment of a child not to see what the experts are saying until we have received a report from them.

Our original intention was to distribute those

reports before Easter. That is not achievable, but I haven't missed the fact that Claire's hearing will be starting on 11 June and we will report back to you on 16 April on what further progress we've made in Claire's case to advance it. It is substantially advanced, but it's not quite at the stage that we needed it to be because of the illnesses to which I've referred.

Beyond that, I have nothing further to say to anybody here. Unless there are any issues which anybody wants to raise, can I say that we'll adjourn now and resume with the evidence and the resumption of Ms Anyadike-Danes' opening on Monday 16 April.

Thank you for your time.

MR McCREA: Mr Chairman, just before you do rise, for the purposes of the record, my name is Michael McCrea, I'm instructed by Ferguson Solicitors on behalf of the Roberts family. Mr Chairman, you indicated that you've got problems in relation to the combination of witness statements and the matter is going to be reviewed. Is that my understanding, reviewed 16 April?

THE CHAIRMAN: No, we will report back to you on 16 April to tell you what further progress we've made.

MR McCREA: Does that mean therefore that no documents will be released prior to 16 April?

THE CHAIRMAN: I understand the concern that you have about

seeing the documents far enough in advance of 11 June. But I think you'll understand our point that if we are still seeking some -- as a result of witness statements we have received, we sometimes go out and ask for either a supplementary statement or a witness is identified, about whom we were previously unaware. We are very, very reluctant to distribute the witness statements including the expert statements we've received, which frankly could tip off a witness from whom we're seeking a further statement. But there's a balance here between providing you with the information and us keeping the system as pure as we would like.

MR McCREA: I appreciate that, Mr Chairman. The problem, of course, is in Claire's case there's a considerable overlap, not only in time but also in terms of personnel and issues between Claire and Adam's case. And the problem arises that if documents are released so late in the day, as far as Claire's case is concerned, we may not be in a position to properly prepare both Claire's case and also deal with the commonality in Adam's and Claire's cases.

THE CHAIRMAN: Okay. Well, I'm not sure if I can say much more, but I understand the concern because I think it's been raised by your Mr Quinn, before. We'll do everything we can to facilitate you, but we have to get

round this problem of the illnesses. Thank you very much.

(1.00 pm)

(The hearing adjourned until Monday 16 April at 10.00 am)

I N D E X