1 Tuesday, 17 April 2012

2 (10.00 am)

3 (Delay in proceedings)

4 (10.20 am)

5 THE CHAIRMAN: Sorry for the slight delay, but we are now
6 ready to start. I should say that we have a slight
7 hiccup with bringing up documents on screen, which might
8 slow things down a little bit when documents are called,
9 but we hope to get that sorted out today and as the week
10 continues.

11 The only other initial matter is that I understand
12 that, following a meeting yesterday between legal
13 representatives, there were some issues raised about the
14 questioning of witnesses and about consulting with
15 witnesses. I have covered those as best I can in
16 a note, which was prepared last night, and circulated to
17 you this morning. As the note indicates, it should be
18 read in conjunction with the hearing procedures paper,
19 which has already been circulated, and I hope it lays
20 down a fairly clear way forward.

21 The order of questioning will depend to some extent
22 on who the witness is, but for this morning's purposes
23 I've tried to set out at paragraph 4 what I expect the
24 order of questioning to be and, at paragraph 6, if the
25 witness is a trust witness, then the order will change,

1 and it will also change, obviously, when a family
2 member, like Debra Slavin herself, comes to give
3 evidence.
4 But I'd like now to proceed. Ms Anyadike-Danes,
5 I think you want to call the first witness.
6 MS ANYADIKE-DANES: Thank you very much. Good morning,
7 everybody. I wonder if I might call Professor Savage.
8 PROFESSOR MAURICE SAVAGE (called)
9 THE CHAIRMAN: We'll take it, I think, professor, and
10 Ms Anyadike-Danes, that the various statements that
11 you've made, both to the coroner, to the police and to
12 the inquiry are all ... We don't need to introduce each
13 of those statements, they're all taken as being before
14 the inquiry.
15 A. Okay. That's fine.
16 Questions from MS ANYADIKE-DANES
17 MS ANYADIKE-DANES: Good morning. Do you have there your
18 CV?
19 A. I do.
20 MS ANYADIKE-DANES: I wonder if I might just, as a bit of
21 housekeeping confirm, Mr Chairman, that you have a copy
22 of Professor Savage's CV and that the interested parties
23 do as well; can we all confirm that?
24 THE CHAIRMAN: I've got mine. I've got Professor Savage's
25 CV. Do the other parties have it? Thank you.

1 MS ANYADIKE-DANES: I just want to ask you to go through
2 a little bit of this with me so that we understand.
3 You're retired at the moment, are you?
4 A. I am, I retired in July 2011.
5 Q. Right. Then this is really historic to sort of get an
6 appreciation of your career and what your qualifications
7 were at the time that we're interested in, which is
8 really from the time that you took over the care of
9 Adam, up until his transplant surgery and the events
10 immediately thereafter.
11 So if you go to the third page of your CV, which in
12 any event is headed up "present appointments". I beg
13 your pardon, if we go literally to the second page,
14 there are your academic qualifications and distinctions.
15 And I think if -- we literally see what they are.
16 I wonder if, when we get to the fellowship, whether you
17 can say a little bit about what it means to become
18 a fellow or what you have to do to become a fellow. In
19 this case, I think, you are the fellow of both the Royal
20 College of Physicians of London and the Royal College of
21 Paediatricians and Child Health. And you would have
22 been a fellow of the Royal College of Physicians in
23 London at the time when you were treating Adam; is that
24 correct?
25 A. That's correct.

1 Q. And what's involved in becoming a fellow?
2 A. To become a fellow of the Royal College of Physicians,
3 you have to undertake a certain period of training and
4 then take both clinical and written examinations to
5 become a member of the Royal College of Physicians. If
6 your practice and standing in the profession is of
7 a high standard, you are then elected by the college to
8 become a fellow, and I was elected a fellow of the
9 college, the Royal College of Physicians of London, in
10 1989. The fellowship of the Royal College of
11 Paediatricians was because, in the mid-1990s, the
12 paediatricians separated from the college of physicians
13 and I was therefore a foundation fellow of the Royal
14 College of Paediatricians and Child Health when that was
15 set up.
16 Q. I understand. That's something that happened. When
17 would that have happened in the year of 1996, roughly?
18 A. Too far back to remember.
19 Q. In any event, that wasn't a qualification that you had
20 at the time when you were treating Adam?
21 A. No.
22 THE CHAIRMAN: Sorry, when you were made a fellow of the
23 second Royal College in 1996, it was on the basis of
24 your standing in the profession and that was a standing
25 which had been established over the previous years?

1 A. That's correct.

2 THE CHAIRMAN: So it recognises your standing including the

3 standing you had acquired in 1995?

4 A. That's right.

5 MS ANYADIKE-DANES: Can I just ask you: you had an OBE

6 in the New Year's honours in 2010; what was that for?

7 A. I had the honour of being awarded an OBE for services to

8 medicine, in particular in relation to my work with

9 dialysis and transplantation in children in

10 Northern Ireland.

11 Q. And what did that mean exactly? What is your work?

12 I think you were responsible for starting the paediatric

13 service at the Children's Hospital.

14 A. Yes.

15 Q. Is that what you are talking about?

16 A. That's right. When I was a senior registrar in the

17 1970s, I came across some children who had terminal

18 renal failure, but there was no treatment available for

19 children at that time. To go on a dialysis programme,

20 you had to be at least 15 years old, so I decided that

21 I would try and train and develop a service in

22 Northern Ireland so that children could be treated with

23 dialysis and transplantation and because of that,

24 I was ... I obtained a training fellowship with the

25 Medical Research Council at Great Ormond street and

1 subsequently at Manchester, and then was appointed in
2 Northern Ireland to a post specifically to develop that
3 service, as you'll see in the next page.
4 Q. Yes. Just before we go there, where did children who
5 required renal transplants go before that service was
6 established?
7 A. There was no treatment for them.
8 Q. You mean they didn't have renal transplants? They
9 didn't go to London or anywhere like that?
10 A. No, in fact the dialysis and transplant programmes
11 in the United Kingdom were only just being developed at
12 that time. So for instance, Great Ormond Street when
13 I went there, although they had a dialysis programme,
14 they did not have a renal transplant programme. But
15 Guy's Hospital did and Manchester did. That's why
16 I proceeded on to Manchester to train there.
17 Q. I understand.
18 THE CHAIRMAN: Sorry, when did you go to Great Ormond
19 Street?
20 A. In 1977.
21 THE CHAIRMAN: Right. So at that time, they did not have
22 a transplant programme?
23 A. No.
24 THE CHAIRMAN: Okay, thank you.
25 MS ANYADIKE-DANES: If we go over the page, we look at your

1 previous appointments. I'll do it that way first before
2 we come to your present appointments. Then if we are
3 looking at your consultancies, it's correct that you
4 first became a consultant in 1979.
5 A. Yes.
6 Q. And you were a consultant paediatrician locum at the
7 Ulster Hospital.
8 A. Yes.
9 Q. And then you became consultant paediatrician and
10 nephrologist in March 1980 at the Children's Hospital.
11 A. That's correct.
12 Q. And then you became professor of paediatrics
13 in June 1990 at the university.
14 A. I think there's a misprint there. It should be 1999.
15 I was still a senior lecturer in 1995, for instance.
16 Q. So at the time when you had the care of Adam, you were
17 the consultant paediatrician and nephrologist --
18 A. Yes.
19 Q. -- at the Children's Hospital --
20 A. Yes.
21 Q. -- and you were a senior lecturer at the university;
22 is that correct?
23 A. That's correct.
24 Q. Thank you. If we go up to the top of that page and look
25 at your present appointments, does that mean literally

1 now or just before you retired?
2 A. Just before I retired.
3 Q. So just before you retired, you were consultant
4 paediatric nephrologist at the Children's Hospital,
5 professor of paediatrics at the university and you were
6 also Director of the Centre for Medical Education?
7 A. Yes.
8 Q. Do you retain any appointments at the moment?
9 A. The last appointment was effectively head of the
10 undergraduate medical school at Queen's University,
11 Belfast. And I still am professor emeritus at the
12 medical school and do some work for them.
13 Q. Can I ask briefly what does that involve?
14 A. It's educational work. I don't do any clinical work any
15 longer.
16 Q. Then if I just move you a little bit through your CV and
17 we come to the summary of personal research and academic
18 related interests. Can we go through that? It's the
19 next two pages on.
20 A. Yes.
21 Q. Then you'll see one of your interests is renal disease
22 in childhood.
23 A. Mm-hm.
24 Q. And under B, paediatric dialysis and transplantation.
25 A. Yes.

1 Q. Can you help a little bit about what your research prior
2 to Adam's surgery would have been in relation to
3 paediatric dialysis and transplantation?
4 A. Well, I didn't publish anything specifically in the area
5 of dialysis and transplantation. My interest in
6 paediatric nephrology was more centred on hypertension
7 and the development of chronic renal disease and,
8 particularly, reflux nephropathy. That is where my
9 publications were. My interest in hypertension then
10 progressed so that I was also interested in the genesis
11 of hypertension in adults because of their childhood
12 medical background.
13 So I was involved in a very large project, for
14 instance, called the Young Hearts Project in Northern
15 Ireland where we looked at coronary risk factors in
16 children to see if they were predisposing the high
17 coronary heart disease rate in adults in
18 Northern Ireland, which is well recognised.
19 Q. I understand that. I'm not going to take you through it
20 all, but at the back of your CV is a list of your
21 publications.
22 A. Yes.
23 Q. And I think your interest and the way you have just
24 distilled it now appears from there. Am I right in
25 saying that there is a paper on paediatric dialysis?

1 A. Yes, there's a paper that I published on continuous
2 ambulatory peritoneal dialysis.
3 Q. For those who are trying to follow it, it's item 29 in
4 his publications.
5 There's also, item 14, a paper that you published in
6 1986, "Peritoneal dialysis on transcutaneous blood
7 gases in infants with acute renal failure and
8 respiratory distress". The one in 29 was continuous
9 ambulatory peritonitis [sic] from the primary treatment
10 for end-stage failure". Can we go to 14? That is
11 a paper that was published nine years before Adam's
12 surgery. I haven't had a opportunity to see what's
13 in that paper, but is there anything in that paper
14 that's relevant to the issues that we are dealing with
15 here in Adam's case?
16 A. In those days, no. There was a significant difficulty
17 in dialysing very small babies, new-born babies, and
18 particularly with peritoneal dialysis where fluid is run
19 into the abdominal cavity. There's a danger, if you
20 don't get the volume of fluid right, that it splints the
21 diaphragm and they can't breathe. So we wrote a paper
22 about how best you can manage peritoneal dialysis in
23 very small children and premature babies.
24 Q. When you were dealing with that research and publishing
25 that paper, were you confining it essentially to that

1 particular problem of how you manage that or did you go
2 into a wider issue in relation to peritoneal dialysis,
3 which is what its effects are on fluid management,
4 including serum sodium levels?
5 A. No.
6 Q. Have you published at all in that area?
7 A. No.
8 Q. Thank you. Thank you very much indeed. I wonder then
9 if I can move on to something that I had started with
10 you before when I was taking you through your CV, which
11 is to do with the Paediatric Renal Transplant Service.
12 I wonder if I might just ask you a few questions about
13 that.
14 Can I ask you, since you I think were principally
15 involved in bringing that service to the Children's
16 Hospital. Previously, I think the paediatric
17 transplants were being carried out at the Belfast City
18 Hospital and I think you were instrumental in bringing
19 them to the Children's Hospital. And thereafter, the
20 City Hospital didn't really deal with paediatric
21 transplants; would I be right in saying that?
22 A. When I came back and started setting up a dialysis and
23 transplant service, I worked with the adult team who had
24 considerable experience in all aspects of dialysis and
25 transplantation, but had not offered that to small

1 children. So as we gradually developed the service,
2 I worked with the adult nephrologists and the adult
3 transplant surgeons and initially we would have
4 transplanted older children and we could manage them in
5 an adult unit. But of course, an adult unit isn't ideal
6 for children and as we gained the skill to dialyse and
7 transplant smaller and smaller children, it became
8 obvious that we should be taking those children into the
9 environment of a children's hospital with all the other
10 ancillary provision there, including schooling,
11 psychology, specifically paediatric dietetics and those
12 sort of things ...
13 Q. You have mentioned about how you were dealing with older
14 children. I wonder if we could pull up a table and see
15 if we can help with numbers. I think it's 301-115-640.
16 Can we pull that up?
17 No, that's not what it's supposed to be. I don't
18 know what's happened there. (Pause).
19 300-190-190. According to my reference, it's
20 300-021-033. Can we try that? Having got it,
21 I'm not sure it'll be quite as exciting as the wait for
22 it. In any event, you were mentioning numbers and
23 I think we can see here that 1995 is, of course, Adam.
24 1980, your first renal transplant at the Royal, at the
25 Children's Hospital, is 1990; is that correct?

1 A. That's right.
2 Q. And then if one looks before then, this table, as you
3 can see -- Belfast is referred to as a one renal
4 transplant centre, but in fact we have got the figures
5 broken down between the Children's Hospital and the
6 Belfast City Hospital. And you can see that in the
7 early stages, 1981 and 1982 and 1984, 1985, 1986, 1987,
8 1988, 1989 and 1990, there were a small number of less
9 than 14 year old renal transplants being carried out
10 at the City Hospital. That's correct, isn't it?
11 And then if one looks at when you started that
12 service at the Children's Hospital in 1990, there are
13 still a small number of less than 14 year-old
14 transplants being carried out at the Belfast City
15 Hospital; do you know why that is?
16 A. I think -- well, again it's to do with age and the
17 suitability of a transplant unit for children. So the
18 nursing staff and the junior staff in the City Hospital
19 transplant unit would be used to managing adults. So
20 I think we made a decision around then that if we had
21 patients who were very small, we would certainly now be
22 doing them in the Children's Hospital where the
23 expertise for looking after small children was better.
24 But if they had children, for instance -- I can't
25 remember exactly where our cut-off would have been.

1 Perhaps between the age of 10 and 14 or 15, we
2 continued, on occasions, to transplant them in the adult
3 unit while we built up our expertise in the Children's
4 Hospital.
5 The transplant team, of course, in terms of surgery
6 were the same surgeons, whether it was the City Hospital
7 or the Children's Hospital. The transplant surgeons are
8 adult transplant surgeons, as is often the case in
9 paediatric units, and certainly was at that time, and
10 they would come to the Children's Hospital and carry out
11 the transplant there.
12 Q. And I'm going to ask you about that in a little while.
13 Sticking with these figures, because I can see that
14 one's trying to develop, at least from what you say, or
15 trying to develop paediatric renal transplant service
16 for Northern Ireland. But if I look down at the very
17 small children, which I think you have just said are the
18 ones that would be coming over to the Children's
19 Hospital --
20 A. Yes.
21 Q. So that would mean that, before Adam's case, leaving
22 aside 1995 because we know there were actually three in
23 1995, one of which was Adam's case, but leaving that
24 aside, before 1995, there were in fact only five;
25 is that right?

1 A. No, eight cases before Adam.
2 Q. No, no, in the Royal, in the Children's Hospital.
3 A. Yes, two in 1990, one in 1991.
4 Q. One in 1992 and one in 1993.
5 A. So that's six and then there were two in 1995 before
6 Adam.
7 Q. I said leaving aside 1995.
8 A. Okay.
9 Q. So you've got two in 1990 and one each in 1991, 1992 and
10 1993.
11 A. Mm-hm.
12 Q. And the ones in 1995 -- because we'll come to them in
13 a little while -- we know from the information that
14 we've got from the DLS that they were all quite close to
15 Adam's own transplant. I think there was one
16 in September and one in November and then, of course,
17 Adam's in the latter part of November. So if one's
18 looking at the acquired experience of that service
19 before Adam's transplant, just in terms of sheer
20 numbers -- not necessarily the only way of measuring --
21 but just in terms of sheer numbers, there weren't that
22 many numbers who had gone through the Children's
23 Hospital.
24 A. No.
25 Q. Thank you. To what extent, if you are trying to provide

1 a transplant service, which means you don't really get
2 to choose when the donor organ becomes available, so
3 you, I presume, you've pretty much got to be available
4 24/7 to be able to deal with any offer that you receive.
5 I'm just trying to think about how you were being
6 assisted in being able to provide a service of that
7 nature with all that that would involve -- not just the
8 clinicians who are going to do it, but all the
9 resources, the labs and the theatre and all that sort of
10 thing to support you. Can you explain how that was
11 being developed? Some of these may well be governance
12 questions and it may well be that we'll come to that
13 proper when we deal with governance, but I'm trying to
14 get a sense to put some context to it before we go in
15 and deal specifically with Adam's case.
16 So how were you ensuring that you were getting that
17 kind of service, that you personally, in trying to
18 provide the service, were getting that kind of support?
19 A. From the paediatric nephrology point of view, I was the
20 only paediatric nephrologist, so I would make myself
21 available 24/7, as you say, and always did so. But
22 obviously there are not a lot of transplants, but you
23 certainly would have not been going out and having
24 a drink in those days because you knew that any time
25 UK Transplant could phone you and say: we have an offer

1 of a kidney. So that was my life in those days until
2 Dr Mary O'Connor was appointed.
3 In terms of the availability of the back-up
4 services, the paediatric intensive care unit, of course,
5 was always there in the Children's Hospital and that was
6 probably the most crucial thing for the small children.
7 Once they got through their surgery, they needed to be
8 managed in an intensive care unit. That was the big
9 reason that we started transplanting the smallest
10 children only in the Children's Hospital and then
11 gradually started doing them also -- I think, in the
12 last year or so, we've maybe done 10 transplants in the
13 Children's Hospital, so the volume of work has gradually
14 increased.
15 In terms of the transplant surgeon, then the
16 transplant surgeon who was available for transplants in
17 Belfast on any given day or evening would be the same
18 person as would be available in the Children's Hospital.
19 The other members of the team -- the tissue-typing
20 service, for instance, was a tissue-typing service for
21 Belfast, so we used that service, which is in fact
22 located on the City Hospital site, and of course you
23 know it's only half a mile from the Children's Hospital.
24 The anaesthetists that were involved were always
25 consultant paediatric anaesthetists and it was certainly

1 preferable that we had paediatric anaesthetists rather
2 than adult anaesthetists, and indeed I think we would
3 have had trouble -- indeed, it would have been
4 impossible to persuade an adult anaesthetist in the City
5 Hospital to anaesthetise a four or five year-old child
6 for a transplant. Again, we used the service that was
7 there for any emergency in Belfast, located where the
8 main paediatric surgery was done -- indeed now the only
9 renal paediatric surgery is in the Royal Belfast
10 Hospital For Sick Children. The regional intensive care
11 unit is there, the anaesthetic expertise was and is
12 there.
13 Q. Laboratories?
14 A. The laboratories were part of the Royal Hospital
15 laboratories. I notice that in one of the statements it
16 said that the biochemistry laboratory in the Children's
17 Hospital was available from 9 o'clock and I can't
18 remember if, in fact, in 1995 there was a biochemistry
19 laboratory available in the Children's Hospital site.
20 There had been, but it was concentrated into a new
21 laboratory service at the Kelvin site and that's where
22 our biochemistry tests went.
23 Q. If we just pause there and see if we get that right.
24 Because I must admit, I was always assumed -- we went
25 round and took some photographs and had a site visit and

1 those photographs are available for everybody to see.
2 There's also a site map and I had always had the
3 impression that there was a smaller laboratory, which
4 serviced, if I can put it that way, the operating
5 theatres for the Children's Hospital, but it opened 9 to
6 5, as you say. But there was a much -- the lab that
7 actually serviced the entire Royal Victoria Hospital,
8 the main lab, that is what was used out of hours, and
9 that's some distance away if you walk it; it's not just
10 next door.
11 Are you thinking that at the time when Adam would
12 have had his transplant surgery that actually there
13 wouldn't have been available the small lab to which I've
14 referred and everything -- whether it's out-of-office
15 hours or not out-of-office hours -- would have gone to
16 the main lab?
17 A. I'm not sure about that, but certainly around that time
18 the Children's Hospital biochemistry facility was
19 withdrawn. There was still a haematology facility
20 because of the oncology service.
21 Q. I see. That may be the distinction then.
22 A. Yes.
23 Q. We'll look into that. Thank you very much for that.
24 THE CHAIRMAN: Can I pause for a moment. Professor, you
25 were saying until Dr O'Connor was appointed, you were on

1 call 24/7. For how many years?
2 A. 15.
3 THE CHAIRMAN: Thank you.
4 MR FORTUNE: You might wish to establish the date of
5 Dr O'Connor's appointment.
6 MS ANYADIKE-DANES: We have that. We have that and we'll
7 come to that, but thank you.
8 A. I should say in that context that if, for instance,
9 I was ill -- though I don't remember ever being ill --
10 or on holiday, then we would not have taken a kidney for
11 a small child. The adult unit might have taken one for
12 a 14 year-old, but I was cross-covered by the adult
13 nephrologists. And in terms of the dialysis management,
14 there were other doctors who took an interest in
15 dialysis, although they weren't paediatric
16 nephrologists. And at the same time, if they needed
17 help, the adult nephrologists would have come and given
18 advice. And I had a close working relationship with
19 them.
20 Q. I'm very glad to hear that you weren't often ill, but
21 I presume you did take holidays?
22 A. Yes.
23 Q. So that means there were periods when there simply
24 couldn't be provided the service that you would wish for
25 the smaller children?

1 A. Yes.
2 Q. And then before I go on to that point in terms of
3 numbers, just as Mr Fortune has mentioned it, I think
4 Dr O'Connor was appointed on 1 November 1995.
5 A. Yes.
6 Q. Literally just before Adam and, in fact, there was
7 a ward visit that she accompanies you -- or attends
8 a clinic, I think, a dialysis clinic on 9 November,
9 which is her first introduction to Adam, if I understand
10 it, and her notes can be seen of that.
11 A. When Dr O'Connor was appointed, she then met all the
12 children who were on the waiting list and who were
13 receiving dialysis, and got to know them, so that we
14 both knew them intimately.
15 Q. Can I ask you this question about numbers because
16 you have talked about, in latter periods, you were able
17 to increase those numbers to 10. How important is that,
18 to have sufficient numbers so that everybody gains and
19 maintains, if I can put it that way, their experience
20 and expertise? It's quite a specialist area.
21 A. It is. I think the numbers are related to the
22 population base, so you've no control over that.
23 Q. True.
24 A. So the numbers of children requiring dialysis and
25 transplantation would be similar in Northern Ireland,

1 to, for instance, Wales. And being the only centre in
2 Northern Ireland, we looked after all those children,
3 but our numbers would certainly have been less than many
4 other centres. If you look at the numbers, for instance
5 in Guy's Hospital currently or in Great Ormond Street,
6 they're much bigger. Part of the reason why our numbers
7 credit increased is related to the increasing use of
8 live-donor transplantation.
9 Q. But if we stay where we were historically at 1995,
10 you've already accepted that the experience of those
11 smaller children was not great up until that time.
12 You will have seen the fact that there was a --
13 I presume you would have seen it, that there was
14 a recent review of the sustainability of the Paediatric
15 Renal Transplant Service. I don't think it was a review
16 of the sustainability of it; it was a review of renal
17 transplants and it looked at that aspect in terms of
18 paediatric renal transplant. And I think maybe this is
19 the section I wanted to go to before.
20 Can I please pull up again 301-115-640? There
21 we are. Perhaps we can enlarge that a little bit.
22 A. The first thing I would say is that I had no input into
23 that report. I was not invited by that review to give
24 any evidence.
25 Q. I understand.

1 A. And indeed, I think it was produced after I had retired.
2 Q. I'm going to ask you in a minute whether you appreciate
3 the point that's being made. Perhaps we can go over the
4 page to 301-115-641.
5 Can we pull that up a little bit? Those who are
6 conducting the review -- and I entirely understand what
7 you said about the fact that you didn't participate in
8 it, but these are the comments and recommendations that
9 are being made. What they say is:
10 "We saw figures concerning the number of young
11 patients who required dialysis and then renal
12 transplantation. It is unlikely that new transplant
13 surgical appointments will have much expertise in
14 performing such transplants in small children. Sadly,
15 it is hard to see how the renal transplant service for
16 children can be put onto a robust footing for the
17 future. It would appear unacceptable to rely on one
18 surgeon performing the renal transplant operation in
19 small children. Therefore consideration may wish to be
20 given ..."
21 And they give their recommendation of what
22 consideration should be given in terms of doing that.
23 This is all to do with just the numbers that
24 a service can have experience dealing with and therefore
25 those involved in the service and giving it can develop

1 the expertise in it. Do you recognise that concern
2 in relation to the renal transplant service?
3 A. I recognise that it would be better if we were doing
4 larger numbers and I'm sure that that can be negotiated.
5 We live in a different era now where Ireland can be
6 treated as one island, but I don't necessarily accept
7 that it should be one centre.
8 Q. No, I wasn't taking you to that part. I'm simply
9 dealing with the effect of or concerns over the numbers
10 that one has in order to gain expertise and experience.
11 I am not asking you to comment on the suggestion that
12 there should be one centre and it deals with the whole
13 of Northern Ireland. In any event, I think you have
14 said it would be better to have more numbers.
15 A. Yes.
16 Q. Thank you. If I may now move away from that and ask you
17 about the protocol. This is the protocol for renal
18 transplantation in small children. I'm going to try
19 this reference and see if this one is right:
20 200-007-119.
21 A. Can I just say one other thing in relation to the
22 numbers? That would be that the success rate of renal
23 transplantation in a small unit like Belfast is
24 comparable with any of the other units in the
25 United Kingdom.

1 Q. I understand.

2 That isn't it, so perhaps we could go to witness
3 statement 002-3. It's appendix 3; appendix 3, not
4 page 3.

5 No, okay. I think appendix 3 might start on
6 page 52. Let's try that. No, it doesn't. Okay. We'll
7 try and get that at some point because I do want to go
8 through that with you.

9 In any event, that protocol is dated 1990.

10 A. Yes.

11 Q. And am I right in saying that you devised that protocol?

12 A. Yes.

13 Q. When you did, what was your purpose in doing so?

14 A. The purpose of the protocol was so that if any child
15 came into hospital for a renal transplant, that whether
16 you were a nurse or a junior doctor, or indeed myself,
17 or anyone else involved, that they could look at the
18 protocol and say: this is the standard way that we
19 proceed with the transplant, these are the tests that
20 need to be done when the child comes to the ward, this
21 is the information that we need in terms of
22 biochemistry, blood tests, X-rays, before we proceed to
23 theatre. And it also lays down, for instance, for the
24 junior doctor what bloods they need to take. For
25 instance they'll need to take blood and send it to the

1 tissue-typing laboratory, they'll need to take blood and
2 send it to the biochemistry laboratory, they'll need to
3 take blood and send it to the haematology laboratory and
4 also take blood and take it to the blood bank to get
5 blood available for transfusion if it's needed. So it's
6 a guide as to what needs to be done.
7 Q. So from your --
8 THE CHAIRMAN: Sorry, Ms Anyadike-Danes, if you're looking
9 for the protocol, it's attached to witness statement 2
10 by Professor Savage and it starts at page 51.
11 MS ANYADIKE-DANES: Sorry. If we could go back to 002/2,
12 page 51.
13 THE CHAIRMAN: The first substantive page is 52.
14 MS ANYADIKE-DANES: Could we go to 52? There we are. So
15 there you see it deals with admissions. Can you just
16 take us through what you are -- well, firstly, was it
17 a guide or did you really expect people to follow this?
18 A. Both.
19 Q. Well, how important did you regard it that people
20 actually carried this out?
21 A. I think it was important, yes.
22 Q. So can you just take us through what it is that you are
23 requiring to happen from this page and who the target is
24 for these activities?
25 A. Well, in a way it's an aide memoire for me, but more

1 importantly, it is for the junior doctor to know when
2 he's taking the history, writing the notes, examining
3 the child, and organising the investigations, what
4 I expect to be done. I would have regarded it as my
5 responsibility then to go through and check that all
6 those things had been done -- and if you remember there
7 is a checklist in Adam's case where I have written down
8 exactly what had been done and ticked them off.
9 So it goes on --
10 Q. Can we look at a few points there? Chest X-ray -- let's
11 look under investigations. No, I beg your pardon, let's
12 start with the examination on admission. Height and
13 weight; you expected that to be carried out?
14 A. Yes.
15 Q. The investigations on admission. If we go to the fifth
16 down, chest X-ray.
17 A. Yes.
18 Q. And this was a new chest X-ray to be carried out when
19 the child was admitted?
20 A. Yes. I mean, the chest X-ray, you could say was not
21 essential, but if there was any concern that the child
22 might be fluid overloaded or might have had a recent
23 chest infection, we would certainly have wanted a chest
24 X-ray to be done, so it is listed there as a standard
25 part of the admission workup. The other reason for

1 having the chest X-ray is so that you could compare
2 a preoperative chest X-ray with a post-operative chest
3 X-ray in the situation where you were concerned, for
4 instance, that there might be some accumulation of fluid
5 in the lungs or that there was some infection in the
6 lung or some collapse of part of the lung secondary to
7 the anaesthetic. It's so that you have a normal chest
8 X-ray because you would only be sending a child to
9 theatre if you thought they were fit and healthy. So
10 it's an X-ray for comparison.
11 Q. In fact, you have given two reasons: one is that if you
12 had any concern at all, you would want to satisfy
13 yourself that you weren't sending a child with some
14 latent difficulty into theatre --
15 A. Yes.
16 Q. -- and the other is for your comparison purposes.
17 A. Correct.
18 Q. So even if the child -- and one would see that -- is fit
19 and healthy, you still need the chest X-ray in case
20 something were to happen and you'd want your "before and
21 after", if I can put it that way.
22 A. Yes.
23 Q. And then we see the U and E. That's the electrolytes,
24 isn't it?
25 A. Yes.

1 Q. When is it that you anticipated that that would be done?
2 A. Well, when -- the sequence of events in terms of kidney
3 transplant, as you probably are aware, is that the
4 UK Transplant Service, as it was called in those days,
5 would contact me and say: we have a kidney that may suit
6 your patient. And then if we decided, yes, indeed it
7 probably did suit our patient, we would bring the child
8 in because the most crucial test probably of all is the
9 tissue type cross-match where you look to see if the
10 child's white cells would attack the cells of a donor,
11 and when you're taking blood for that we would take
12 blood for all the other things. So it's one blood
13 sample divided into a series of bottles. Is that ...
14 Q. Not exactly. I'm trying to ...
15 A. Sorry.
16 Q. It is an answer, but what I am trying to see if you can
17 help me with is: when you had in mind that the
18 electrolytes were being tested, what was --
19 A. Yes.
20 Q. When you were drafting this -- and you said,
21 essentially, you started off with a bit of an
22 aide memoire -- the things that you would want to have
23 done and then it's now a guidance or a directive for the
24 use of others, so what did you have in mind as to
25 when the electrolytes would be being tested?

1 A. As soon as the child came to hospital that evening or
2 day.
3 Q. And at any other time?
4 A. Well, the sequence of events usually -- although not in
5 Adam's case, as you know -- would be that we would take
6 all these bloods, do the tissue cross-match, we would
7 have a result four hours or so later and we would move
8 on immediately to theatre. So you'd really only need
9 the one blood test in that situation, the one
10 electrolyte test.
11 Q. What would guide anybody if that wasn't exactly the
12 situation, which it wasn't with Adam?
13 A. Well, I mean, my view in Adam's case was that because
14 there was a delay from, let's say, 9 or 10 o'clock
15 in the evening until 6 or 7 in the morning, that I would
16 have wanted another electrolyte and urea test just
17 before he went to theatre. But that is a safety test;
18 it wasn't that I was expecting it to be abnormal, but as
19 we say in Ireland, I wanted to be sure to be sure.
20 Q. I understand. What I'm getting at really is that that's
21 not something that a junior doctor would pick up from
22 this transplant because --
23 A. No.
24 Q. Because the junior doctor would have already taken his
25 bloods some time shortly after the child arrived, sent

1 those off to the lab, got the results back. This is
2 something that you -- that somebody would put on the
3 notes or prescribe --
4 A. Yes.
5 Q. -- in that situation, which, as you say, is not entirely
6 a normal situation.
7 A. Correct.
8 Q. Thank you. Then can we go to "Obtaining written ...
9 Can we go to "Obtaining written consent from parents"?
10 Underneath that section, you've got "Assess the degree
11 of fluid restriction caused by preoperative fasting".
12 Firstly, why is that under "Obtaining the written
13 consent from parents"; is that because it's something
14 you're going to discuss with them?
15 A. No, I mean ... I don't think it's the way -- it's the
16 way it's typed, but I don't think that is part of the
17 consent procedure, no. That's just something that you
18 would want to look at.
19 Q. If I go back substantively, what does that mean, "Assess
20 the degree of fluid restriction caused by preoperative
21 fasting"?
22 A. Well, if anyone's going to theatre, they're fasted
23 before they go to theatre so that their stomach is empty
24 and, if for some reason, they were sick, there's nothing
25 in their stomach to bring up which might get into their

1 airway or lungs. So if there was a significant length
2 of time when the patient was fluid restricted,
3 particularly if they didn't have their normal intake
4 replaced by intravenous fluids, you would want to assess
5 if that was a significant amount.
6 Q. That's a standard thing that you have fasting before any
7 surgery, really.
8 A. Yes.
9 Q. It's not restricted to this. In order so that you
10 didn't have to get into the difficulty of the effects of
11 the preoperative fasting, would you not put the patient
12 on intravenous fluids?
13 A. Yes.
14 Q. Would that not be fairly normal to do?
15 A. Yes.
16 Q. So why would this be a normal thing to do if actually
17 how you address that situation is to put the patient on
18 intravenous fluids?
19 A. Well, it's just, as happened in Adam's case, there was
20 a problem with providing intravenous fluids because of
21 venous access. So you're trying to cover every
22 eventuality.
23 Q. I understand that, but this is not actually drafted for
24 Adam's case. When you have the situation that you had
25 in Adam's case, then you have extra directions or notes

1 in the same way as you sought an extra electrolyte test
2 to be carried out. This is your standard, what normally
3 happens, and I think what you were saying is what
4 normally happens is you would address that preoperative
5 fasting -- in fact, it wouldn't happen as a problem
6 because you'd have intravenous fluids?
7 A. Yes. Why do I write it down at all?
8 Q. Yes. Sort of, yes.
9 A. Seems like a wise move to me.
10 Q. Very good.
11 A. Just ... Again, you're trying to cover any eventuality,
12 so that if a child's going to theatre, you look at the
13 fluid balance and say: he was receiving no fluids for
14 two hours, but that hasn't made any significant
15 impact --
16 Q. Yes, I understand.
17 A. -- or otherwise. So it's to remind you just to look and
18 see if the fluid restriction is significant and is
19 something you need to take into account.
20 Q. Okay. Can I just ask: the children who would be
21 undergoing renal transplants, are they likely all to be
22 on dialysis? By the time they get to the stage where
23 they need a renal transplant, are they likely to be on
24 dialysis of one form or another?
25 A. Not all of them because we also do what we call

1 pre-emptive transplants so that we can predict from the
2 gradual loss of GFR or rise in creatinine -- from the
3 blood tests you can predict and say: that individual is
4 going to need to be on dialysis in three months, four
5 months, six months. And if we discuss that with parents
6 and say: we've two options, we can put them on call for
7 a transplant now and we may be fortunate and get
8 a transplant before they ever need dialysis. And we
9 often would do that, put them on call. I think Adam's
10 initial transplant registration was before he went on
11 dialysis.
12 Q. I think it was pretty much simultaneous.
13 A. Well, the form was filled in by the time the workup was
14 done, I think. It probably was simultaneous. And the
15 other situation, of course, is if that was a chance
16 we were looking at and there was an opportunity to do
17 a live-donor transplant, we might do that pre-emptively
18 so that there are other options. But most of the
19 children would be on dialysis by the time they came to
20 transplant.
21 Q. In 1995, were you carrying out pre-emptive paediatric
22 renal transplants on children as young as Adam?
23 A. I don't think we had done any then, but it would have
24 been in our mind to --
25 Q. How many live renal transplants --

1 A. Live-donor?

2 Q. -- in young children -- live donor --

3 A. I don't think we had done any or very few --

4 Q. -- by Adam --

5 A. I know for instance there was one child who was being

6 worked up for a live-donor transplant at that time,

7 a bigger child. But I don't think we had done any.

8 I haven't looked at those figures. I don't remember.

9 It's 17, 20 years ago.

10 Q. That I can entirely understand. So as at 1995, if we're

11 back in time for Adam, then would I be right in saying

12 that any child, at that stage, coming up for renal

13 transplant would be on dialysis?

14 A. Yes.

15 Q. Thank you. Can we go to the third line:

16 "Ensure parents have transplant booklet."

17 A. Yes. We had a transplant booklet that we used from the

18 Nottingham Children's Hospital. And I think I've

19 provided that to --

20 Q. You have, you have provided a copy of that. I'm going

21 through this so I understand this. What does that mean?

22 That means when they come in for the paediatric

23 transplant, you make sure that somebody gives them the

24 booklet?

25 A. No, we would have given them the booklet before that

1 when they went on call or shortly after they went on
2 call as part of our education on what was involved in
3 transplantation.
4 THE CHAIRMAN: Professor, when you say when they went "on
5 call", you mean when they went on the register?
6 A. Yes.
7 THE CHAIRMAN: Thank you.
8 A. Once someone is approaching dialysis or going on call,
9 we start talking to families about what's involved, how
10 the transplant's performed, what's involved in the
11 dialysis. So there's a drip feed of information going
12 to parents over many months and part of the education
13 that we provide is to give them a booklet about
14 transplantation -- perhaps nowadays it's more than just
15 that booklet.
16 I'm aware that Debra Strain feels she did not get
17 that booklet. I did look through the notes and see that
18 there's a checklist where I've ticked that someone had
19 given her the booklet. But ... Who knows?
20 MS ANYADIKE-DANES: I'm sure we'll come to that.
21 In any event, was this to ensure that the family had
22 it?
23 A. Had it, yes.
24 Q. Okay. And then the contact with the transplant surgeon,
25 paediatric surgeon, anaesthetist, the theatre, ICU.

1 That's all the nephrology department, if I can put it
2 that way, you, your job; is that right?
3 A. I would do all that, yes.
4 MR FORTUNE: Before my learned friend moves on, the booklet
5 itself is to be found in the witness statement 002/3,
6 page 124.
7 THE CHAIRMAN: Thank you.
8 MS ANYADIKE-DANES: I'm going to come to it, but not at this
9 stage.
10 Can I ask, what did you include -- and why -- in
11 this protocol in relation to fluids? This is
12 pre-surgical. So prior to the surgery, what was your
13 provision for fluids?
14 A. We haven't got any provision for fluids. It's not
15 written down there.
16 Q. So what's the guidance then as to how you manage the
17 patient's fluids from the moment they're admitted until
18 they go on to the theatre?
19 A. Well, if ... In most cases, you will have a patient who
20 can drink normally. So they would be allowed to drink
21 up until two hours before theatre and that usually
22 doesn't cause any significant problem. If you have
23 a patient who cannot drink normally, then you would
24 prescribe some alternative appropriate fluid management.
25 In Adam's case, he had gastrostomy feeds and the plan

1 would be, in the final couple of hours, to have
2 intravenous fluids. But that would be something I would
3 have decided as the nephrologist on the night.
4 I wouldn't have left that to the junior doctor.
5 Q. That's not quite what I meant. What I meant is that,
6 irrespective of whether the child can drink and
7 therefore has a thirst to which it can respond, or if
8 the child has a condition like Adam's, which it didn't
9 appear to have that feeling and therefore respond -- and
10 didn't drink, but had everything through his
11 gastrostomy, leaving aside that, what guidance were you
12 giving your junior doctors as to monitoring the fluid
13 levels and managing the fluids of the child before that
14 child goes into surgery?
15 A. I would have individualised that myself and given
16 instructions on the evening. I wouldn't have put it in
17 a protocol.
18 Q. Because that would differ child to child?
19 A. Yes.
20 Q. In any event, is not the principle the same or is there
21 a common principle that it's important to manage those
22 fluids?
23 A. Oh yes.
24 Q. No matter how you're doing it, whatever the child's
25 particular condition is, is there not a common principle

1 that they need to be carefully managed?

2 A. Yes.

3 Q. Is that something that's conveyed to the junior doctors

4 other than through this protocol?

5 A. Yes.

6 Q. Okay. Managing the fluids, of course, is input and

7 output --

8 A. Yes.

9 Q. -- if I can put it that way. What about the output? Is

10 there anything in the protocol that would give some

11 guidance to -- you mention the nursing staff also look

12 at this protocol. Is there anything there to give some

13 guidance as to the importance also of output?

14 A. Well, I think in a paediatric ward with paediatric

15 nurses, it would be part of their normal working day to

16 keep an accurate record of input and output. So I don't

17 think you need to write down, "Please keep an accurate

18 record of input and output", although we might do. But

19 that's the normal process.

20 Q. But it's not -- I may be wrong. I'm asking for your

21 guidance on it, really. Is it not particularly

22 important for children in renal failure to keep

23 a particular note of their fluid status, if I can put it

24 that way, and so although you would say in any

25 paediatric unit the nurses are carefully monitoring how

1 much children are vomiting, whether they are vomiting,
2 how much urine they're passing if they are passing
3 urine, but if it's of particular note, especially for
4 a child due to go into surgery, is that not something
5 worth -- to be sure to be sure, to put into your renal
6 protocol?
7 A. Yes, and of course there are other difficulties with
8 small children in terms of measuring output in that --
9 particularly if they've got abnormal bladders, they
10 don't pass urine on request, as we might. And small
11 children are often in nappies, so we have a situation
12 where we recognise what the normal urine output for our
13 renal children is and, although it's best to measure as
14 precisely as you can the output, it's not always easy.
15 For instance, if you have an incontinent child, you
16 might have to weigh every nappy dry before it's put on
17 and weigh it wet when it comes off and make an estimate
18 of the urine output from that.
19 Q. Dry nappies have a fairly standard weight; you wouldn't
20 necessarily have to do that each time.
21 A. I think the nurses would do that each time.
22 Q. But in any event, it is possible?
23 A. It is, yes.
24 Q. Thank you. Thank you for going through that protocol.
25 A. Okay.

1 Q. Was a copy of it placed on Adam's file?
2 A. Yes.
3 Q. When would that have happened?
4 A. As soon as he was admitted. Every child who's admitted
5 would have a copy of that provided with their notes.
6 Q. So it's not when he goes on to the register, and you
7 know, hopefully, at some -- in due course --
8 A. No, no, no. In the ward, we would have a renal file and
9 in it would be a transplant protocol. So when someone
10 comes in for a transplant, you would take a copy of the
11 protocol and have it available with the notes or at the
12 nursing station for everyone involved to have a look at.
13 Q. And in terms of educating, if I can put it that way, the
14 junior doctors about it -- and, of course, some of these
15 junior doctors, like senior doctors -- may never have
16 been involved in a renal transplant at all. Given the
17 numbers that we've just seen, the likelihood is that
18 they wouldn't have. Who takes them through it, explains
19 it to them? How does that work?
20 A. That would probably the consultant who's there that
21 evening.
22 Q. You?
23 A. Yes.
24 Q. And did you --
25 A. And often you would write down exactly what you wanted

1 done in the notes, apart from the protocol. And again,
2 later in the evening go back and check that the
3 protocol -- the checklist and the protocol had been
4 completed and tick them off.
5 Q. And did you take Dr Cartmill and Dr O'Neill, who were on
6 duty that evening, through that protocol?
7 A. Yes. I think there's a record in the notes, which says
8 "Jackie" at the top of it, which is one of the SHOs and
9 it gives a list --
10 MR FORTUNE: [inaudible] 002-002.
11 MS ANYADIKE-DANES: I have it.
12 A. You'll see each of the things that are required to be
13 done are ticked off by me and Jackie Cartmill together.
14 Q. And that means you had taken her through that and were
15 working her way through it and checking it was done?
16 A. Yes.
17 THE CHAIRMAN: Mr Fortune, the stenographer didn't quite
18 catch that full reference.
19 MS ANYADIKE-DANES: 058-002-002.
20 THE CHAIRMAN: Thank you.
21 MS ANYADIKE-DANES: There we are. Let's have a look at it
22 now it's up.
23 A. The cross-match has been done. The full blood picture's
24 been done, the coagulation screen's been checked. The
25 electrolytes and urea done. The virology is sent off.

1 We've written down that he's to get nil orally and he's
2 to get maintenance IV fluids at that stage.
3 Q. Why is that crossed through, "Patient D, no IV fluids
4 needed"?
5 A. Patient D, I think, was another child who was
6 considered for this kidney and was able to drink.
7 Q. Right.
8 A. That's my recollection.
9 THE CHAIRMAN: Would you have been referring to another
10 child on that -- if you go through this when Adam was
11 admitted --
12 A. This is where I've gone through it with Jackie Cartmill
13 to make sure that the appropriate things have been
14 carried out.
15 THE CHAIRMAN: Yes, but this is at a point when Adam has
16 been admitted.
17 A. He's in the ward.
18 THE CHAIRMAN: Is Patient D in the ward?
19 A. I think so, yes.
20 THE CHAIRMAN: So you have two children who are there.
21 A. Yes.
22 THE CHAIRMAN: Either of whom may be the potential
23 recipient.
24 A. I think the potential recipient, as far as my memory
25 goes, was Adam Strain, and if his cross-match had been

1 unfavourable, then we would have considered giving the
2 kidney to Patient D if her cross-match was
3 favourable. But the kidney was more suitable for
4 Adam Strain.
5 THE CHAIRMAN: Okay. Thank you.
6 MR FORTUNE: Do you intend to give a patient who's
7 [inaudible] confidentiality, if so [inaudible].
8 THE CHAIRMAN: I was going to say -- I agree, Mr Fortune.
9 I don't think that we understood that Patient D --
10 A. We should just say "another child", probably.
11 MR FORTUNE: Or "Patient D".
12 THE CHAIRMAN: Yes, Patient D is fine.
13 MS ANYADIKE-DANES: If we then go to X-rays:
14 "Get all old X-rays."
15 What does that mean, exactly?
16 A. Well, I think -- again, it's 17 years ago, but I think
17 the "get all X-rays" to my understanding was that the
18 chest X-ray had been ordered and I had then said: can we
19 get all the old X-rays so that they're available for
20 theatre.
21 Q. What are the X-rays that you had in mind that they
22 should be getting?
23 A. Adam would have had a folder with all his X-rays in it,
24 so they may have been of interest to particularly the
25 transplant surgeon in terms of his previous surgery and

1 studies of his urinary tract with dye that would outline
2 the exact structure. So it would be our normal practice
3 to call up all the old notes and all the old X-rays so
4 that they're available for the theatre transplant team.
5 That's what that means.
6 Q. Thank you. And you're saying that putting Jackie on the
7 top of that page means that you had gone through the
8 protocol with her?
9 A. As far as I understand it, yes. I mean ... I can't see
10 any other reason for writing her name on it.
11 Q. Well, there may be any number of reasons, that you need
12 to contact her about something. But in any event,
13 you'll have seen their witness statements, they're not
14 entirely clear that they did get the protocol or that
15 they discussed it with you. I can give you the
16 references for that. There's witness statement 003/2,
17 page 5. Can we pull that up?
18 If we go to the second third of that under (b):
19 "Identify the renal transplant protocol, if any,
20 governing your actions in respect of Adam over the
21 period 26 November to 27 November. I do not recall
22 a renal transplant protocol that may have governed my
23 actions over the period 26 November to 27 November."
24 So she doesn't recall it. I don't suppose she's
25 been involved in many renal transplants, so this might

1 have been something that impinged on her mind.
2 A. I do believe further down though that she agrees
3 that ...
4 THE CHAIRMAN: Can we go on to the bottom? Are you
5 referring to the bottom of the page, professor?
6 A. "I note the documentation from Dr Savage. It appears to
7 have my name on the top. This would appear to indicate
8 that I was acting under --
9 MS ANYADIKE-DANES: "Acting under the instruction."
10 When she is asked a specific question -- in fact,
11 that might be her interpretation.
12 A. Oh yes.
13 Q. But in any event, when asked a specific question, she
14 says she doesn't remember it.
15 A. No.
16 Q. And then if we go perhaps to O'Neill, maybe, witness
17 statement 004/2, page 4:
18 "Identify the renal transplant protocol, if any,
19 governing your actions in respect of Adam ... As
20 a basic grade SHO on call, my role was to carry out the
21 admitting duties outlined above at the request and under
22 the supervision of the renal team. I do not recall the
23 renal transplant protocol governing my actions."
24 I think this probably was maybe his first renal
25 transplant. That might be something he might have

1 remembered, but in any event he doesn't remember it
2 either.
3 MR FORTUNE: What's my learned friend trying to establish in
4 this line of questioning? Professor Savage has told us
5 his recollection of these events going back a long time.
6 It will be for the other two junior doctors to tell you
7 about their respective recollections.
8 MS ANYADIKE-DANES: Absolutely right, Mr Fortune, and
9 it would be remiss of me if I put it to them and
10 I hadn't already put what they say to Professor Savage
11 so that he can respond to it. His response may
12 be: I don't know why they say that, I certainly remember
13 giving it to them. But in any event, I think it would
14 be wholly improper for me to be asking their position
15 and not be asking Professor Savage to comment on their
16 view. One of the things that I said that I was going to
17 do during the oral hearings is that I was going to
18 address with witnesses not only the differences between
19 their own various statements, but the differences
20 between their statements and those of other witnesses
21 and the differences between their position and those of
22 the experts so that one can get a full appreciation of
23 exactly what people are saying and the basis upon which
24 they are saying it. It's not an attack on
25 Professor Savage; it's simply to get him to comment on

1 that.

2 THE CHAIRMAN: And presumably it is also the point that --

3 the statement which refers to Doctors Cartmill and

4 O'Neill is gone out in 2011.

5 MS ANYADIKE-DANES: Yes.

6 THE CHAIRMAN: So they're saying, in 2011, they don't recall

7 the protocol from 1995.

8 MS ANYADIKE-DANES: Well ...

9 A. 1990.

10 THE CHAIRMAN: Their particular involvement in the

11 transplant was 1995.

12 MS ANYADIKE-DANES: Yes. Well, Mr Chairman, that is

13 a matter that you're going to have to deal with, with

14 all of the witnesses, because all their recollections,

15 almost by definition, are some considerable time after

16 the events.

17 THE CHAIRMAN: Yes.

18 MS ANYADIKE-DANES: Those sorts of matters as to weight are

19 entirely a matter for you. My job is to try and get the

20 information out to you.

21 A. I accept what you're saying. My position is that

22 I would have used the transplant protocol, I would have

23 made it available, and I accept that they may not

24 remember that. I think that's fair enough.

25 MS ANYADIKE-DANES: That's fair enough. I'm looking at the

1 time and the stenographer. I was going to go on to
2 something else. Maybe that's a convenient moment.
3 THE CHAIRMAN: We'll resume in about 15 minutes.
4 (11.28 am)
5 (A short break)
6 (11.48 am)
7 MS ANYADIKE-DANES: Can we please pull up again 058-002-002.
8 Sorry, professor, we're looking at the documents
9 in relation to your protocol, just so that we understand
10 how it was all working.
11 If we go back to the fluids item, can you see it
12 says -- I think it says -- does it say, "Give
13 maintenance rate"?
14 A. Yes.
15 Q. I think you've explained that you didn't actually
16 address fluids in the protocol because you dealt with
17 that on an individual, child-by-child basis --
18 A. Yes.
19 Q. -- that you would have prescribed yourself for each
20 child. What was the maintenance rate for Adam?
21 A. The maintenance rate for IV fluids, when he had finished
22 his gastrostomy feeds, was 75 ml per hour, and I think
23 that's noted both in the text of his clinical notes and
24 on the IV sheet.
25 Q. So let's just be clear. When was the 75 ml an hour

1 going to apply?
2 A. Well, I think on this document that is not made clear,
3 but the plan that we formed that evening, if you
4 remember, is that he would have gastrostomy tube feeds,
5 but they would not be his normal Nutrison tube feeds;
6 they would be clear fluids and once they had finished,
7 he would have intravenous fluids at his maintenance rate
8 of 75 ml per hour. That number is worked out as an
9 average of the fluid he needed each hour over 24 hours,
10 because we know that normally he got just over 2 litres,
11 and if we multiply 75 by 24 ... It comes out,
12 I think ...
13 Q. I'm listening to you, professor.
14 A. It comes out at about 2 litres. So that was his basic
15 maintenance requirement.
16 Q. Yes.
17 A. But a more sophisticated plan for the evening was
18 formulated after this.
19 Q. I appreciate that. Firstly, is there any indication of
20 when this note's being written?
21 A. No. Not to me.
22 Q. I understand.
23 A. But it was written that evening, obviously.
24 Q. Yes, obviously. What I'm trying to get at is looking
25 forward, because this is prescribing something, when you

1 thought the 75 ml an hour would start. If everything
2 had gone to plan, when would you have started with that?
3 A. I can't say exactly because I don't remember. I suspect
4 that when I wrote this, Adam was coming in, we thought
5 he was going to theatre as soon as we had the tissue
6 match.
7 Q. Which would have been 1 o'clock or 2 o'clock, something
8 like that, in the morning?
9 A. Yes, and therefore we would just have given him
10 maintenance fluids in that interim between, let's say,
11 10 o'clock and 1 o'clock. And we would have given him
12 75 ml an hour. When the decision was made to defer the
13 transplant until the following morning, then we --
14 Q. No, no, we'll come to that in a minute. I'm just
15 looking at the original plan. The original plan,
16 am I understanding you, is once he's admitted and all
17 those administrative things are done, he would have
18 started on this IV maintenance rate of 75 ml an hour?
19 A. Yes, that's my recollection as best I can remember at
20 that length of time.
21 Q. That would have been carrying on whilst he was having
22 his dialysis?
23 A. Yes.
24 Q. I understand.
25 A. No, no. He wouldn't have been having any dialysis if

1 he was going straight to theatre probably.

2 Q. If he'd gone to theatre at 11ish, sometime around then

3 when you'd have got your tissue match, if that had

4 happened, he wouldn't have gone on to dialysis at all;

5 is that what you're saying?

6 A. I don't know the answer to that because it didn't

7 happen.

8 Q. No, well, I know that. But you actually started by

9 saying he wouldn't have gone on to dialysis, and that's

10 what I'm trying to check.

11 A. He probably wouldn't have got dialysis. It would have

12 been a very short time obviously.

13 Q. So between his admission --

14 A. Anyway, we shouldn't say "probably". I don't know.

15 I do not know what the plan would have been if we had

16 gone straight to theatre because that was not the

17 situation.

18 Q. I'm trying to understand what the plan was before we

19 deal with what actually happened.

20 MR FORTUNE: Sir, can I intervene and assist everybody?

21 Because there are two references that would be helpful.

22 509-006-022. It's the entry by Dr Cartmill --

23 MS ANYADIKE-DANES: I have that and I'm just about to

24 take --

25 THE CHAIRMAN: Let me hear what you have to say, Mr Fortune.

1 I am anxious to let Ms Anyadike-Danes continue as
2 speedily as she can, and you know that you will be
3 entitled to question Professor Savage and you will,
4 effectively, have the last word in all probability.
5 MR FORTUNE: I accept that, sir, but I'm trying to assist
6 you, but also we're dealing with an event 16 years ago
7 and the professor is entitled to be assisted by medical
8 records if they exist. And there is one that refers to
9 a time at 9.30 and there is another at 057-010-014,
10 which is the intravenous fluid prescription chart, to
11 which the professor has already referred.
12 THE CHAIRMAN: Yes, but I think the question here isn't --
13 I'm not sure if the questioning is relating to that.
14 I'm not sure how far this is going to get us. It's
15 a little bit speculative about what "would have happened
16 if". And you are unsure of whether Adam would have got
17 dialysis if he had gone to theatre at 1 am. You don't
18 know what the plan would have been in that event.
19 A. I'm trying to remember what exactly happened that
20 evening. If we had the dialysis record, which is
21 missing, I would know when he started dialysis. Now, it
22 may well have been that I said, "We will put him on his
23 normal dialysis at 10 o'clock until we find the result
24 of the cross-match", but I don't remember because the
25 dialysis record for that whole month is missing.

1 THE CHAIRMAN: Before Ms Anyadike-Danes resumes, can I just
2 make one point to you? This is a long time ago and
3 I know that since then you've been involved in many
4 operations. So please don't try to guess at what did or
5 didn't happen. It doesn't help me and it may very well
6 not help you. If you don't know or you don't recall,
7 just please tell us that and we'll work things out as
8 best we can. The same applies to all witnesses in due
9 course.
10 A. That's what I was trying to say. The 75 ml per hour
11 intravenous fluids was the plan if the dialysis -- if
12 the transplant had gone ahead quickly. I cannot
13 remember precisely what I prescribed in terms of
14 dialysis in that situation because I have been unable
15 ever to locate the dialysis record for that month.
16 MS ANYADIKE-DANES: Let me assist you with one document.
17 We're going to come back to this document in a minute,
18 but just to assist you with this. 058-035-144. There
19 we are. You see that's 26 November 1995. That's 9.30
20 in the evening, and it's signed by Jacqueline Cartmill,
21 the SHO.
22 A. Yes.
23 Q. Then if you work your -- "Patient attended ward for
24 possible renal transplant". And then it goes through
25 her notation, "Four packed cells ordered". And then if

1 you work your way down, apart from the fact they noticed
2 that whole blood isn't available at such short notice.
3 Pause there. Is there any significance about that at
4 all? Did you expect that whole blood would be available
5 at short notice?
6 A. No, packed cells would have been perfectly satisfactory.
7 Q. No, sorry. Did you expect that whole blood would be
8 available at short notice?
9 A. No.
10 Q. Okay. Then it says:
11 "To have IV fluids at 75 ml an hour (maintenance)."
12 A. Yes.
13 Q. Is that something that she is recording that you have
14 communicated to her at least by 9.30 if not before?
15 I think he actually came on the ward at about 9 o'clock.
16 A. Yes.
17 Q. So just so that we're clear on it -- because it has got
18 a little bit unclear -- is that something that you
19 envisaged that she would ask to be or have erected
20 immediately?
21 A. Yes.
22 Q. Thank you. And then can we go back to where we were,
23 which was 058-002-002. So when you're
24 saying: Adam Strain erect IV, give maintenance rate.
25 That's the maintenance rate that you are talking about?

1 A. Yes.
2 Q. Which is a rate of administration that subsequently
3 changed, but at that time dealing with things
4 chronologically, that's what it was going to be?
5 A. Yes.
6 Q. Thank you. Then I wonder if we can go back to the renal
7 protocol, which we had earlier, which is --
8 THE CHAIRMAN: 002/2, page 52.
9 MS ANYADIKE-DANES: Yes, thank you.
10 There's nowhere on that protocol that provides for
11 any preoperative -- I think that's something we were
12 discussing before, but just to be clear -- any
13 preoperative measurement of urinary sodium
14 concentration.
15 A. No. That's something we added to the protocol that we
16 developed immediately after the events with Adam.
17 Q. Well, I think you will have seen a report of
18 Malcolm Coulthard, where he suggests that preoperative
19 measurement of urinary sodium concentration be included
20 and that would be a good thing to have. Just so that
21 we have the reference for it, I think it's 200-020-244
22 and 245, just so we have the record of it. You say that
23 you did that after Adam. Was that in response to Adam's
24 case?
25 A. Yes.

1 Q. Is there any reason why you didn't have it in there
2 anyway?
3 A. I don't think there's any specific reason.
4 Q. Was it important?
5 A. It would have been useful.
6 Q. Then --
7 A. Bearing in mind the events that happened. But at that
8 time, if you remember, we were estimating his urinary
9 sodiums from his intake. We knew that if we gave him
10 a certain amount of saline bicarbonate and feeds that
11 his sodium would stay reasonably stable.
12 Q. I didn't mean just for Adam because this is not
13 a protocol that's created just for Adam, this is
14 a protocol in the generality. You said it would be
15 useful. Is there any reason why you didn't include it?
16 A. I hadn't thought of it --
17 Q. Okay.
18 A. -- at that stage, but it is in all our protocols
19 subsequently.
20 Q. Can I deal with the issue of chest X-ray? I think you
21 had explained before two things in relation to X-rays.
22 One, it was part of the protocol to have one for the
23 reasons that you gave. And secondly, leaving aside
24 that, you had actually required all his old X-rays to be
25 brought up in the folder because it might be something

1 that would be of some benefit to the transplant team to
2 look at.
3 A. Yes.
4 Q. You said that you had gone through and satisfied
5 yourself that all the elements of the protocol had been
6 complied with. In fact, when we looked at your tick
7 list, you had ticked X-rays.
8 A. Yes.
9 Q. If we go to 058-035-133, this is your note, is it,
10 signed off?
11 A. Yes. My signature's at the bottom, yes.
12 Q. Yes. So this is after the transplant cross-match --
13 A. Yes.
14 Q. -- and after the changed time for the surgery: now 7,
15 not 6. But then you see about the fifth line down:
16 "X-rays all available and present."
17 To what X-rays are you referring there?
18 A. All the X-rays in his folder.
19 Q. Does that include the X-ray that was required in terms
20 of the protocol?
21 A. I presume so, but it's 17 years ago. I know that
22 you will tell me that we have been unable to locate that
23 X-ray.
24 Q. Can I put it a different way, help a different way,
25 because I do understand the business of time. I do

1 understand that. If that chest X-ray that was required
2 to be carried out in accordance with the protocol had
3 not be carried out, would you expect that there would be
4 some note of that?
5 A. I would have looked for it, yes.
6 Q. So in other words, you would have satisfied yourself
7 that it had been carried out?
8 A. Correct.
9 Q. So there's just an issue as to why we can't find it?
10 A. There is.
11 Q. Okay. And of course, in this case, part of the
12 difficulty of not having -- being able to find it is
13 because we do actually, in this case, want to make
14 a comparison between the befores and afters, and we're
15 in the position of not being able to do it. That's one
16 of the very things that you wanted a clinician to be
17 able to do when you were setting your mind to
18 formulating your renal protocol.
19 A. I agree. Can I say, of course, that there were other
20 X-rays that were only found very recently --
21 Q. Absolutely.
22 A. -- by the hospital.
23 Q. Yes. I understand that point. So there is still a hope
24 that it might be out there somewhere and emerge. Okay.
25 Can I ask you something about Adam -- I've called it

1 Alan Arieff's article. It actually wasn't his article,
2 it was an article he co-wrote based on some research
3 work he had done with a number of children. Leaving
4 that aside, you refer to it in your witness statement,
5 002/2 at page 30.
6 So if we go down to the bottom, you say the:
7 "The paper published by Arieff alerting the medical
8 profession to the possibility of hyponatraemia and death
9 in healthy children receiving hypotonic intravenous
10 fluids perioperatively eventually stimulated a
11 reconsideration of IV fluid management recommendations
12 in children which were developed 40 years before. None
13 of the children in this paper had renal disease."
14 Can I ask, were you aware of Alan Arieff's paper?
15 I'm calling it, for shorthand, "Arieff's paper".
16 I don't want to do a disservice to his co-authors. Were
17 you aware of that paper at the time of Adam's surgery?
18 A. I don't think so. I was certainly aware of it by the
19 time of the inquest.
20 Q. Yes. What did you regard as its significance?
21 A. Well, as I've said, it's significant in that it did
22 raise with the profession the question of whether using
23 fifth normal saline as a standard perioperative fluid
24 was safe. So it's significant from that point of view.
25 However, the children in that paper -- and I've said

1 none of them had renal disease -- were different to
2 Adam.
3 Q. Sorry, I meant: generally, what did you regard as its
4 significance?
5 A. It's like I said, it alerted people to the possibility
6 that using fifth normal saline in normal children
7 perioperatively could be hazardous. What I was going to
8 say was that his contention is that some of those
9 children developed what is called an inappropriate ADH
10 secretion. Adam, of course, had abnormal kidneys and
11 ADH, antidiuretic hormone, could not have affected his
12 kidneys. It wouldn't have worked, they were resistant
13 to it. So that's why I'm saying it's a very relevant
14 paper generally, but perhaps not so relevant
15 specifically to Adam, except that the use of fifth
16 normal saline in any child in large and rapid amounts
17 can be hazardous, as we all now know.
18 Q. And just sort of moving on while we're at the paper,
19 is that something that -- you couched it in broader
20 terms than "just Adam" because, obviously, it didn't
21 apply directly to Adam, but it had this sort of broader
22 significance --
23 A. Yes.
24 Q. -- as to the hazards of using that kind of fluid in
25 large volumes or at a very speedy rate. That broader

1 significance, is that something that -- you may not be
2 able to answer it. Is that something that you think was
3 properly appreciated after Adam? I mean, that paper
4 was, I think, attached to Alison Armour's -- if it
5 wasn't attached to the autopsy report, it was certainly
6 attached to Dr Sumner's report and became a bit of
7 a feature in the inquest and after the inquest. Is that
8 something that people at the Children's Hospital have
9 now appreciated? Not just in relation to renal
10 transplant cases, but the wider significance of that
11 paper and its message in relation to fluids?
12 A. I think so, but I can't be sure that that was the case
13 with every single consultant in the Children's Hospital.
14 Certainly, from my point of view, we went back to our
15 protocol and indicated that we would not be using fifth
16 normal saline in any of our renal transplant children.
17 I would also say, of course, that in the 1990 protocol
18 we don't mention fifth normal saline and dextrose at all
19 either.
20 Q. No. Well, you've already said that you don't really
21 mention fluids at all.
22 A. Intra-operatively.
23 Q. Yes. I want to move on now to an area to do with the
24 management of Adam before he received the offer of the
25 kidney. Can I ask you: have you seen the reports of the

1 inquiry's experts?

2 A. Yes.

3 Q. Right.

4 A. I wouldn't say that I can remember them all in detail.

5 There's so many of them.

6 Q. I'm not sure anyone can, to be perfectly frank.

7 What I want to ask you is this: if you have,

8 you will have seen that there was a bit of a debate

9 amongst the experts as to risk factors for cerebral

10 venous thrombosis and for PRES. Just so that we see

11 if we start off on the same footing: leaving aside

12 whether you think he actually had any of those risk

13 factors, do you accept that the risk factors being

14 identified there are risk factors for chronic venous

15 thrombosis and PRES? I'll try and take you to what they

16 have identified as them.

17 Let's just go to the risk factors that they

18 identified. The first is erythropoietin. Do you accept

19 that that is a risk factor for chronic venous sinus

20 thrombosis?

21 A. Can I say that I did not wish to be an expert in this

22 area because I'm not? But erythropoietin, if it raises

23 your blood count above normal, it could predispose you

24 to thrombosis and everyone knows that.

25 Q. Thank you. I'm not seeking to turn you into an expert.

1 THE CHAIRMAN: Sorry, he hadn't finished.
2 A. What I wanted to say was: if it's used to keep your
3 haemoglobin, your blood count, at a normal level,
4 I don't know that is really is a risk factor, but it's
5 not my area of expertise. What I would further say
6 is that virtually every patient with chronic renal
7 failure, whether adult or child, is on erythropoietin
8 and I don't recognise that chronic venous sinus
9 thrombosis is a widely acknowledged problem.
10 MS ANYADIKE-DANES: Maybe that's the starting point. Were
11 you aware of the condition of chronic venous sinus
12 thrombosis as at 1995?
13 A. No.
14 Q. That takes care of that, more or less.
15 A. Nor of PRES because it didn't exist.
16 Q. Then can we go to something of the experience of
17 paediatric renal transplants, which I touched on before?
18 Can I ask you about your experience? You say in your
19 witness statement, 002/2, page 29 -- I think you say
20 that you had experience of 31 -- this is in the period
21 before Adam's transplant, 31 paediatric renal
22 transplants. I think that's right. And only four of
23 those children were below six. So only four of them are
24 roughly comparable to Adam.
25 A. Yes.

1 Q. Would that be right?

2 A. Correct.

3 Q. Did any of those children have polyuria so far as you
4 can recall? It's a very long time ago, so you may not
5 be able to recall that.

6 A. I don't remember, but I believe that I drew up a table
7 for the trust, identifying the number of children who
8 had polyuria.

9 Q. We may ask about that.

10 A. If I try to think on my feet about those small children,
11 it's possible that one of them did. But I can't say for
12 certain; I would have to go back to the notes. I spent
13 a long time looking at these notes, but of course even
14 that was some time ago.

15 Q. I understand.

16 THE CHAIRMAN: Sorry, was that at the time of the inquest,
17 professor, or was it after the inquiry was established
18 that you prepared that table?

19 A. After the inquiry was established. But of course,
20 that's five years ago as well. I can't remember the
21 date of that.

22 THE CHAIRMAN: It's even longer than five years ago, I am
23 afraid.

24 Can I just intervene to ask you one other point: is
25 there a reason why so few children under six had renal

1 transplants? Of those four, of the four out of 31
2 children below six, would that still be the case, that
3 there would be comparatively few children of that age
4 having renal transplants?
5 A. Yes, you'd have to look at the underlying diagnosis.
6 The small children that we transplant tend to fall into
7 two clinical groups. One is a group with a condition
8 known as congenital nephrotic syndrome and they tend to
9 go in to kidney failure around the age of 2. That's why
10 I'm saying I can't remember exactly, but certainly at
11 least three of the four would have had congenital
12 nephrotic syndrome and they have virtually no urine
13 output by the time they're transplanted. The other
14 major cause -- and I think you'll remember Coulthard has
15 said that some 60 per cent of children requiring
16 a transplant have dysplastic kidneys and they are likely
17 to be polyuric.
18 But the reason that there are so few is just that
19 there are so few. Any child that needs dialysis or
20 transplant in Northern Ireland today receives it. It's
21 just a feature of the population base.
22 THE CHAIRMAN: Sorry, I didn't make myself clear. What
23 I was getting at was: accepting 31 is a comparatively
24 small number of children, only four of those were under
25 six.

1 A. Yes.
2 THE CHAIRMAN: So most of them are obviously between six
3 and, what would be your cut-off point, 17?
4 A. Yes.
5 THE CHAIRMAN: That's just the way it is?
6 A. Yes, I think so.
7 THE CHAIRMAN: Thank you.
8 MS ANYADIKE-DANES: You hadn't yourself, as at Adam's
9 transplant surgery, been involved in very many
10 transplants for children of that age. Did that affect
11 the kind of team you were looking for? Did that make
12 any difference? Did that mean that you were trying to
13 get an especially more experienced team or did it make
14 no difference at all?
15 A. A more experienced team in terms of?
16 Q. For his transplant team.
17 A. You mean the surgeon and anaesthetist?
18 Q. Yes.
19 A. If we take the anaesthetist, my view would be that if
20 you are a consultant anaesthetist in the regional centre
21 with the paediatric intensive care unit where you look
22 after the illest children in the province, I would
23 expect -- and I'm sure everyone would -- that you'd be
24 able to cope with the anaesthesia for a renal
25 transplant. In terms of the surgical expertise, I would

1 accept that all our transplant surgeons are primarily
2 adult surgeons and I would therefore defer to them as to
3 whether they were happy to proceed with a transplant in
4 a small child. And I would always ask that of the
5 consultant that's on call.
6 Currently, it tends to be one of the transplant
7 surgeons who will transplant virtually all the children.
8 He's taken a special interest in that. But of course,
9 when you're setting up a service, you have to start
10 somewhere.
11 Q. Of course.
12 A. Yes.
13 Q. It's going to be a little bit like you on the 24/7.
14 Can I ask you about -- this is all prior to the
15 offer -- the information that you gave Adam's mother
16 about the possibilities of a live donor? What did you
17 tell her about that?
18 A. I think one of the things I need to say about any reply
19 I give to you or to the chair is that the notes that
20 I would have kept in those days were a lot less than
21 a note I would record today. So conversations that
22 I had in those days, I wouldn't have written down in
23 detail. As time has changed, I would write down and
24 record conversations I have with parents.
25 So I am aware that Debra Strain offered to become

1 a live donor for Adam and, of course, Adam was her
2 entire life, and I accept that. As her nephrologist and
3 his nephrologist, I don't recollect exactly what I said
4 to her, but my feeling would have been that Adam was
5 totally dependent on Debbie Strain, he was very close to
6 her, he was very dependent on her. She looked after all
7 his dialysis, all his tube feeds, all his medicines.
8 She lived and breathed for that little boy. He was
9 a lovely little boy. So my feeling probably was that to
10 do one of our first live donor transplants in that
11 situation, where there's a risk to the mother and a risk
12 of failure -- because he's so small, putting an adult
13 kidney into a small child -- and also the idea that she
14 would be ill in a different hospital and not be there
15 for him during the transplant and because she was
16 a single parent -- although I accept, of course, that
17 his grandparents were enormously involved in his care as
18 well -- I thought, on balance, that that was something
19 we should not pursue, and I believe I advised her: let's
20 put him on call and see if we can get a cadaver
21 transplant, then you will be there to look after and to
22 support Adam through that transplant. I think that was
23 probably the discussion that we had.
24 Q. What actually were the risks to her?
25 A. In percentage terms?

1 Q. Yes.
2 A. I don't know. They'd be fairly slight, but she could be
3 quite unwell for six months afterwards.
4 Q. What are the improved chances of a successful transplant
5 using a live donor for Adam?
6 A. Today?
7 Q. No, then.
8 A. Well, they probably would have been better, but you'd
9 still be putting an adult kidney into a small child. If
10 you remember the kidney was selected from a 16 year-old,
11 which is not quite an adult.
12 Q. Well, we'll hear some views on that, I think most people
13 have interpreted that as, effectively, an adult kidney.
14 But there we are. Maybe we can do it by pulling up
15 Dr Coulthard's report. Perhaps we can go to
16 200-013-187.
17 Just under 5(1). Let's start there, the first
18 paragraph:
19 "The obvious reason which might be expected to lead
20 to the introduction of a policy of refusing live
21 donation from a single parent is the prospect of that
22 parent dying as a result of the surgery and leaving the
23 child without any parent. However, the risks of this
24 happening are so small as to make this an unreasonable
25 blanket policy decision either in 1995 or now. The risk

1 of a donor dying is extremely small. It was of the
2 order of 3,000 to 1 against in 2001 and this had not
3 changed in 15 years. In my experience, this risk is
4 considered so low by relatives considering donation that
5 it hardly enters into the decision-making compared to
6 the other issues."
7 THE CHAIRMAN: I think you accept that, professor --
8 A. Yes. I accept that.
9 THE CHAIRMAN: -- that that wasn't part of your reasoning.
10 A. No.
11 MS ANYADIKE-DANES: In terms of the benefits to Adam,
12 I think you also accepted, though, that there was an
13 improved chance of success, certainly in 1995 -- it may
14 be I think Dr Coulthard goes on to explain that actually
15 things have evened up a bit now -- but in 1995 there was
16 a marked difference between the chances of success of
17 a live donor and one from a cadaver; would you accept
18 that?
19 A. I know there's been a large discussion about the cold
20 ischaemic time, but you can imagine that the cold
21 ischaemic time across half a mile, across the city, is
22 not very long. So there are factors like that that
23 would make it beneficial, yes. But as I say, I was
24 trying to discuss with Debbie Strain a balanced approach
25 to the care of Adam and I thought there's no risk to

1 Debbie Strain with a cadaver kidney; she would be there
2 to support him through the trauma of the surgery. And
3 remember he had 20 operations; it was very traumatic for
4 him to have an operation and those were the sort of
5 things I put to her: we're better to go for a cadaver
6 kidney.
7 So you're refining your advice to the individual
8 patient. So the business where they say "no blanket
9 decision" is exactly -- it wasn't a blanket decision; it
10 was looking at Adam and his mum and the family and
11 trying to work out what was the best for them. Sadly,
12 it didn't work out that way, of course.
13 Q. No.
14 MR FORTUNE: Before my learned friend moves on, can we go
15 back to that document, 200-013-187?
16 THE CHAIRMAN: For what purpose?
17 MR FORTUNE: The final paragraph because Dr Coulthard, in
18 fairness to Professor Savage, deals exactly with the
19 point being made that if a child loses the graft and the
20 mother is ill, there is the feeling of guilt perceived
21 by a parent. It is all set out in that final paragraph.
22 MS ANYADIKE-DANES: Let's go to the final paragraph:
23 "A child losing a kidney graft and needing to remain
24 on dialysis is traumatic enough, but for their parent to
25 have also lost one of their kidneys and not to be as fit

1 as normal to look after their child at this important
2 time can compound their grief considerably.
3 In addition, the feeling of guilt perceived by a parent
4 engendered by their kidney not working for their child
5 can be highly traumatic. Many doctors were therefore
6 understandably cautious about undertaking live donation
7 at that stage.
8 "However, since about 1990, it has been much rarer
9 for kidneys to be lost early for technical reasons and
10 this has influenced a gradual and now major shift
11 towards live donation from parents or other close
12 relatives. Even more recently, being able to harvest
13 donor kidneys by keyhole surgery [which was not what
14 happened in Adam's case] has made the procedure less
15 painful for the donor with quicker recovery time and
16 less scarring and this has also influenced the trend."
17 THE CHAIRMAN: When Dr Coulthard is writing this report in
18 2011, he's referring to a gradual shift from about 1990,
19 which has then become a faster shift in more recent
20 years?
21 MS ANYADIKE-DANES: Yes.
22 A. And that's exactly how it is in Belfast.
23 Q. And Adam's was 1995, of course. Can we be clear on
24 this: the whole issue of live donation, that's something
25 that came from Adam's mother?

1 A. Yes.
2 Q. She sought that. So it wasn't that you were opening out
3 the options: look, we could do this, we could do that,
4 and so on; she specifically asked you about it for Adam?
5 A. She did.
6 Q. Whilst we are dealing with the things that you may have
7 discussed with Adam's mother, was there any discussion
8 that Adam might actually have his transplant surgery or
9 could have his transplant surgery done at another
10 centre, at Great Ormond Street or somewhere else in
11 England?
12 A. There was no reason for that.
13 Q. No --
14 THE CHAIRMAN: So there was no discussion?
15 A. No, I don't believe there was any reason to have that
16 discussion. We do sometimes send children for
17 transplants to Great Ormond Street. If they were very
18 small children, less than 10 kilograms, where you do
19 need a very paediatric expertise, then we might refer
20 them to Great Ormond Street and have done so. Or if
21 they have complex congenital heart disease, which makes
22 the operation much more hazardous, we have sent children
23 to Great Ormond Street. But with a child like Adam,
24 20 kilograms, well grown, thriving, healthy, and not
25 different from many other children that we transplant,

1 then there would have been no reason to think about
2 sending him to London to have a transplant with all the
3 complications that that would have for the family in
4 terms of looking after both mother and child in
5 a strange city.
6 MS ANYADIKE-DANES: But the point was, and I think the
7 chairman had it, there wasn't a discussion about it?
8 A. No.
9 Q. Right. Can we go back one point that I wanted to ask
10 you about the live donation? There is also another
11 difference between the donation from a cadaver and
12 a live donation. Because with a live donation, you
13 actually plan it.
14 A. Yes.
15 Q. You know when it's going to happen --
16 A. Yes.
17 Q. -- so there's no business about of, "Shall we have it at
18 1 o'clock in the morning?", "No, no, we'll have it at 7
19 o'clock in the morning", or whatever it is. You can
20 plan the whole thing. You can even plan it around your
21 most expert transplant team, whereas when you're
22 dependent on a donor, you don't know when that will come
23 in, you won't know who will be available. It could be
24 the unfortunate time when you are on one of your very
25 rare holidays or when the sole transplant surgeon just

1 is engaged or, for some other reason, there simply isn't
2 the support to enable that transplant to happen so the
3 child's waited, an opportunity has arisen, for various
4 reasons it can't happen. But with a live donor, it
5 doesn't work like that. Once you have decided to go
6 that route, you can plan the whole thing and everybody
7 knows when the surgery is going to take place and knows
8 who is going to do it and you can have a full plan;
9 isn't that right?
10 A. That's correct and that's why there has been
11 a considerable shift in the last ten or 15 years to live
12 donation.
13 Q. Thank you. Speaking of experience, was there any
14 discussion with Adam's mother as to the experience and
15 expertise at the Children's Hospital of carrying out
16 paediatric transplants on a child as young as her son?
17 A. No.
18 Q. Is that something you think she might have wanted to
19 know?
20 A. Yes, it may have been something she wanted to know. It
21 may have been something she did know because we have
22 a very small family of patients who are on dialysis and
23 awaiting transplant and they tend all to know each
24 other.
25 Q. But you didn't discuss it with her?

1 A. No.

2 Q. And you're not aware of anyone else discussing it with
3 her?

4 A. I don't think so.

5 Q. Thank you. Just so that we have it, in fact the
6 expertise was, so far as we've been provided it, that
7 there were 14 surgeons before Adam's surgery who had
8 experience of transplants, but none of them with more
9 than about three transplants, and it may have been
10 actually that Mr Keane was the most -- and another was
11 the most experienced transplant surgeon. Wouldn't that
12 be about right?

13 A. I couldn't answer that. But what I do know about
14 Mr Keane was that he had carried out a renal transplant
15 in a three year-old child ten days before very
16 successfully and I was also aware he had written
17 a chapter in a book or co-authored it on paediatric
18 transplantations.

19 Q. Yes, and I'll come to that.

20 A. I was aware that he was an experienced adult transplant
21 surgeon, so I had confidence in Mr Keane.

22 Q. Yes. But he hadn't carried out many paediatric
23 transplants?

24 A. No.

25 Q. And were you aware of the fact that there were really

1 only four anaesthetists with any -- this is paediatric
2 anaesthetists -- with any paediatric transplant
3 experience? I think one was Dr Crean, and he'd been
4 part of that team who carried one out in November, and
5 I think also September. And Dr Hill, who joined him in
6 one of those. So that was 1995. And then there was
7 a team earlier on, who has not been identified to us,
8 who had carried out, but that was it in terms of the
9 anaesthetists available. So that was the extent of the
10 transplant team pool that you had available to you for
11 Adam's transplant surgery.
12 A. Well, there are two things I would say. I've already
13 said that I think if you are a paediatric anaesthetist
14 involved in paediatric intensive care and in a tertiary
15 centre, that that -- I would have assumed that was
16 sufficient experience to cope with a renal transplant.
17 The second thing is that I don't think there were only
18 three. I think we had already carried out eight renal
19 transplants in the Children's Hospital.
20 Q. Sorry, we had asked for those, so far as the records
21 could tell us, those who'd been involved in young
22 children before Adam, and that's the information that we
23 got.
24 A. But we looked at that table earlier, which shows that --
25 THE CHAIRMAN: Sorry, I think the difference is that Adam

1 was the eighth paediatric transplant in the Royal.
2 A. Yes.
3 THE CHAIRMAN: Of those eight, not all of those eight or
4 most of those eight were not as young as Adam.
5 A. No.
6 THE CHAIRMAN: I think that's the point.
7 MS ANYADIKE-DANES: That is exactly the point.
8 A. But from the anaesthetic point of view, being four as
9 opposed to eight, you would have to ask an anaesthetist
10 if that's --
11 THE CHAIRMAN: Your point is any anaesthetist who works in
12 the Royal Belfast Hospital For Sick Children should be
13 able to do this operation well.
14 A. I think so, but again I think that's a question for an
15 anaesthetist.
16 THE CHAIRMAN: And Mr Keane, you say, had done one on
17 a younger child ten days earlier?
18 A. Yes, and that kidney is still working, I'm happy to say.
19 MS ANYADIKE-DANES: Does that mean that you didn't expect
20 the fluid management problems that ultimately developed
21 with Adam to develop?
22 A. No.
23 Q. And you did not expect whoever was in charge of the
24 fluid management for those problems to have developed
25 in that way?

1 A. No.
2 Q. Did that surprise you?
3 A. Yes.
4 Q. Can I ask you about the process of putting Adam on the
5 renal transplant register or putting him on call,
6 I think you refer to it as. What was the discussion, so
7 far as you can remember -- and I understand entirely
8 that in those days, you didn't make notes of these
9 things and so you're dependent on how much you happen to
10 recall because you've been asked about it periodically.
11 But so far as you can, what do you remember about what
12 was being discussed with Adam's mother? We know some of
13 the things that weren't discussed with her, but
14 positively, what were the things that were discussed
15 with her?
16 A. Well, I mean, I think the first issue that I would have
17 discussed with Debbie Strain was the fact that Adam's
18 kidneys were progressively failing and that he would not
19 survive without some sort of renal replacement therapy,
20 either dialysis or transplant. So that would have been
21 the initial discussion. And of course, you could say
22 that the first thing we want to know is: are the family
23 prepared for Adam to undertake dialysis and
24 transplantation? In Debbie Strain's case, that was
25 a no-brainer, as we say. She obviously would have done.

1 We would then have discussed what was involved with
2 the dialysis and the types of dialysis that were
3 available. And probably, at that stage, we would have
4 been biased towards peritoneal dialysis, particularly
5 with Adam, because it meant that he could be managed at
6 home by his mum and could have a reasonably normal life
7 during the day as opposed to haemodialysis where he
8 would have to come to hospital three times a week. And
9 of course, he was fairly allergic, by that stage, to
10 hospitals; he'd had enough of them. So that would have
11 been the type of discussion that we had.
12 We would also have discussed what else was involved
13 in managing a child whose kidneys weren't working well
14 in terms of other treatment: erythropoietin, we've
15 mentioned, to keep his blood count up; special drugs to
16 make sure his bones were strong, alpha vitamin D,
17 phosphate binders, various things like that; and also
18 the fact that his sodium was difficult to manage and he
19 needed supplements from that point of view. So we would
20 have gone over all those things.
21 Reading various things and, for instance, Debbie has
22 suggested that she didn't really appreciate how big
23 a problem his sodium was, I wonder if we talked about
24 salt or saline without saying sodium. Who knows? But
25 certainly, she knew he was on sodium bicarbonate. So

1 there were all those things we would talk about.
2 As far as the transplant goes, we've talked about
3 her offer of a live donation. And we would then have
4 talked to her about what was actually involved in
5 a kidney transplant. And that is where the booklet
6 comes in to some extent. And it's not just that I would
7 have been saying to her, "This is what happens, you go
8 on call, we do the tissue type, the cross-match is a bit
9 like cross-matches blood, except you're cross-matching
10 the kidney, we want to make sure it's not rejected
11 if we use it". The fact that he would have to come to
12 hospital and get those tests done and only if they were
13 satisfactory would we proceed, all those things. All
14 that information is repeated and drip fed over many
15 months, not just by me, but by our renal nurse
16 specialists and renal nurses with renal expertise in the
17 ward and by our social worker, by perhaps the
18 psychologist that was involved. So that information is
19 gradually reiterated and built up. Does that answer
20 your question?
21 Q. It does and allows me to go on to ask the next one,
22 which is: who else would have been involved? Because
23 a decision is being made at that time that Adam is going
24 to go on to the register and therefore that means all
25 being well, if he gets an appropriate kidney, he will

1 have a transplant surgery.

2 A. Yes.

3 Q. That's the decision that you're helping her with in

4 providing the information that you do and so on, and

5 presumably she does agree to that because we know that

6 he goes on to the register some time in September,

7 I think it is, 1994. Who else would have been involved

8 in that decision that Adam should go on the renal

9 transplant register or the provision of the information

10 to her at that time?

11 A. Well, the one person who probably was not greatly

12 involved would have been a transplant surgeon, and

13 I assume that's where the questioning is going. I would

14 very readily say that we did not involve a transplant

15 surgeon directly with the family at a this stage, but we

16 do now and did subsequently. What happened at that time

17 was that at the time a child was going on call for

18 a transplant, it would be discussed in our own renal

19 team -- the social worker, the dietician, the renal

20 nurse, myself -- and with the parents.

21 In terms of the surgical input, I would then

22 informally mention to the surgeons that we were putting

23 a child on the transplant list or were proposing to do

24 so and what their underlying diagnosis was. We would

25 then communicate that information to the transplant

1 coordinator, who drew up a transplant on-call list for
2 Belfast. And Adam would have been included in it. His
3 name would have been there, his hospital number, his
4 blood group, his tissue type, his underlying diagnosis
5 and his age, and that would have been circulated to any
6 of the surgeons involved in transplantation, to the
7 adult unit, to the transplant coordinator, to me. And
8 that was a live on-call list.
9 So that was the type of arrangement there was.
10 Following Adam's transplant and subsequently over years,
11 we would now make sure that the -- one of the transplant
12 surgeons sits down with a clinical summary and talks
13 with the parents of the family. But we did not do that
14 in 1995.
15 Q. Okay. I wonder if we could call up witness statement
16 002/3, page 124? Can we move on to the next page of
17 that? 126. Just give me one moment. (Pause).
18 The reason I'm pulling this up is because it does
19 indicate in it that the placement on the transplant list
20 follows discussion with the kidney specialists and
21 transplant surgeon. And I think, if we go to 126, if
22 you see just above "a kidney may also be donated".
23 THE CHAIRMAN: It's the top of page 127. The top left.
24 MS ANYADIKE-DANES: Sorry, I wanted to start at 126, first
25 of all:

1 "If going ahead, transplant surgeons require
2 a detailed physical and social assessment."
3 And then if we go to 127, right at the top of the
4 left-hand side:
5 "Placement on the transplant waiting list follows
6 discussion with the kidney specialist and transplant
7 surgeon. Preparation is very important for all the
8 family and this will be carried out by the primary nurse
9 and play leader."
10 So this is the booklet that the department gave to
11 Adam's mother, the purpose of which you said you went
12 through was to explain to her how the whole thing was
13 going to work.
14 A. Mm-hm.
15 Q. And there, in two places, is a reference to the
16 involvement of the -- I take the kidney specialist to be
17 a nephrologist. There is, in two places, a reference to
18 the involvement of a transplant surgeon, so since you
19 were using this as your guide to the families at that
20 time, although after Adam you might have decided perhaps
21 it'd be a good idea to involve a transplant surgeon, my
22 question to you is: why weren't you involving one at
23 that time when you were providing the families with
24 a guide that said one would be involved?
25 A. Well, they were involved in as much as I would have

1 spoken to them, but they weren't involved directly with
2 the family. I'm accepting that it would be better that
3 the families meet the surgeon in advance and that a plan
4 had been drawn up in advance. I accept that and that
5 became our practice as time went by.
6 THE CHAIRMAN: Did it become your practice specifically
7 because of Adam's death?
8 A. I don't think so, no. It became -- simply because we
9 realised it was the best way to go and it was best for
10 the families to have met the surgeon beforehand. It was
11 just an improvement in our practice. I suppose --
12 I mean, it's difficult to say why specifically, but if
13 you remember I said that following events in late 1995,
14 Dr O'Connor and I sat down with the transplant protocols
15 from five or six different centres and we looked at what
16 they did and we picked out what we thought was best
17 practice then and produced a new protocol.
18 And around that time, we started involving the
19 transplant surgeons in seeing our families. And again,
20 I couldn't tell you exactly when that became standard
21 practice, but it's where we moved to and it's what
22 happens now.
23 MS ANYADIKE-DANES: Well, actually, you do refer in your
24 witness statement 002/3 -- it starts at page 19 and goes
25 on to page 20. You do refer to the involvement of

1 transplant surgeons. At that stage you're, I think,
2 really talking about the multi-disciplinary team. If
3 you go right down to the bottom:
4 "The transplant surgeon did not participate in these
5 multi-disciplinary team meetings, except by special
6 arrangement, as he worked not on the Royal Victoria
7 site, but on the Belfast City."
8 And then it goes over the page, but I think we can
9 get the sense of what it's saying. What I'm trying to
10 really get at is that you have, both in the provision of
11 the booklet, recognised the appropriateness of involving
12 the transplant surgeon. You also recognised it shortly
13 after Adam, but you say not just directly because of
14 Adam. You recognise, in your own witness statement,
15 that they could participate in your multi-disciplinary
16 team meetings by special arrangement. What seems to
17 have been the hiccup is not the lack of foresight in
18 seeing that it might be useful to have the involvement
19 of a transplant surgeon, but the physical fact that the
20 transplant surgeons were on the Belfast City Hospital
21 site and you were at the Royal, dealing with your
22 paediatric renal transplant service there.
23 But can I just ask you about the special
24 arrangement? What would it take to have a transplant
25 surgeon involved in the multi-disciplinary meetings?

1 What sort of special arrangement would have to be made?
2 A. I think if we thought it was going to be a particularly
3 technically difficult operation for some reason ...
4 It is true that the two hospitals are a short distance
5 apart. I think what generally happens now is that our
6 patients and their parents and one of our renal team go
7 and meet with the transplant surgeon.
8 Q. I know. I'm trying to get at then as opposed to now.
9 A. Then, we did not do that.
10 Q. That I know as well. But here you are saying that it's
11 all possible by special arrangement. And what I'm
12 trying to find out is what was required. You have said:
13 well, if we thought that there was some difficulty or
14 something about the patient, we might arrange that. But
15 you yourself have said that Adam, who already had had
16 about 20 operations and just about everybody has
17 described Adam as a complex surgical case, so what
18 special arrangements could have been made to enable Adam
19 to be examined by a transplant surgeon at around that
20 time when he is being put on the register and for his
21 mother and family to be informed about the views of
22 a transplant surgeon? What arrangements would have to
23 have been made?
24 A. I would have to have asked the transplant surgeon to
25 meet with the family.

1 Q. Is there any reason why you didn't think of doing that?
2 A. I don't know.
3 Q. What sort of reason would prevent you from doing that,
4 given the complexity of his case?
5 A. It is complex in terms of his sodium and so on, but
6 I did not probably think that, in terms of the actual
7 transplant, it was any different to other transplants of
8 children of that size. I don't know the answer to that.
9 I can say, in hindsight, it would have been better
10 if one of the transplant surgeons had met Adam in
11 advance. I agree with that and it's one of my regrets
12 that we didn't have that arrangement. That's one of the
13 things that we learned around that time, that we should
14 have a system like that, and we do now.
15 Q. I understand. Professor Savage, I'm not actually trying
16 to be critical; I'm simply trying to understand what
17 happened and what the arrangements were. It may well be
18 that the sheer fact that the pool of transplant surgeons
19 that you had at your disposal were in a different
20 hospital in a different trust, in and of itself, brought
21 its -- if I can put it this way -- complexities to the
22 situation.
23 And that is something that I'm seeking to explore
24 with you, if that is possible. I'm not intending to be
25 critical; I'm intending to understand and, for that

1 purpose, getting the information out for the chairman.
2 A. Well, I accept that, and I agree with what you're
3 saying. And in fact, we did not have a designated
4 transplant surgeon in Belfast until, I think, 1997. The
5 surgeons who did transplants in those days were adult
6 neurologists who had some expertise as transplant
7 surgeons. When we moved to a situation where we had an
8 appointed transplant surgeon, then it became much easier
9 and he would probably have expected that we would send
10 the children to him and that's what made the shift. So
11 in a way, what you're saying is close to the truth.
12 THE CHAIRMAN: Professor, if you had thought that Adam's
13 surgery was likely to be particularly complex or
14 particularly risky, would you have arranged, in 1995,
15 for a meeting with a surgeon in advance?
16 A. Yes, I probably would, but in fact I don't think there
17 was a problem with the surgery of his transplant.
18 THE CHAIRMAN: That's what I was going to ask you. You
19 didn't think --
20 A. No.
21 THE CHAIRMAN: Do I assume from what you're saying, or do
22 I infer, that you did not anticipate that the renal
23 transplant for Adam was particularly complex or was
24 particularly risky?
25 A. I think I probably accepted it because he'd had previous

1 surgery, that it would be slightly more difficult than
2 another kidney transplant, but I did not think it was
3 something that a transplant surgeon with the assistance
4 of a senior paediatric surgeon would be unable to cope
5 with.
6 THE CHAIRMAN: Thank you.
7 A. And I think that was our practice in those days: that we
8 always tried to involve a paediatric surgeon along with
9 a transplant surgeon so that they worked together. So
10 you have the two areas of expertise working, dare I say
11 it, hand-in-glove.
12 MS ANYADIKE-DANES: Maybe not literally for the purposes of
13 the transplant surgery! Can I just explore that
14 business about how complex one might, at that stage --
15 hindsight is a wonderful thing -- have understood his
16 surgery to be. There is a schedule of Adam's surgical
17 procedures, which is 300-060-107. I wonder if we could
18 just pull that up.
19 Maybe we could expand it a little bit. It's going
20 to be difficult to expand; maybe we can take it in
21 sections.
22 Before Adam actually had his surgery, as you say --
23 it actually goes over the page to 108, but I'm not going
24 to take you there -- he had actually about 20 separate
25 procedures.

1 A. Mm.
2 Q. And he'd ended up, as I understand it, with this sort of
3 T-shaped arrangement with one ureter draining into
4 another and that ureter being into his bladder. And in
5 the early part of his life, as you can see there, he had
6 about five right off the bat in which Mr Brown was
7 involved. And I think some of your correspondence to
8 his GP indicates just the complexity of his internal
9 arrangements -- plumbing, if I can put it that way.
10 He'd had a lot of surgery, as you say, a lot of
11 adhesions there. Most of the people who have commented
12 on whether one might anticipate that he would be less
13 than a straightforward case have described this as
14 rather complex, not necessarily that the transplant
15 itself is complex, but because of the amount of
16 procedures he has had in a very small area, with all the
17 scarring that he might have, that that is something that
18 might be complex, might produce quite a bit of blood
19 loss. Is that something that you really hadn't
20 thought -- maybe we'll just have a surgeon look and see
21 if they can assist while I take the mother through this
22 or, for that matter, look at Adam himself and produce
23 a helpful note for whatever surgeon might be the surgeon
24 on duty if and when that donor kidney emerges?
25 A. I agree that would have been --

1 MR FORTUNE: [inaudible].
2 MS ANYADIKE-DANES: Well, I think he was just about to agree
3 with it.
4 A. It is a long question. But if you just look at that
5 list on that page, I think if you work up from the
6 bottom, "insertion of a peritoneal dialysis line" --
7 Q. Well, the actual bottom is over the page. Anyway, work
8 from this bottom.
9 A. What I was going to say was, the surgery which involved
10 his kidney and bladder and opening his abdomen was way
11 back in 1991. The only abdominal surgery he had after
12 1991 was putting the dialysis cannula in. Most of these
13 other things are to do with endoscopies, cystoscopies,
14 X-rays and so on. But I'm not saying that, no, he
15 didn't need to see a surgeon or it wouldn't have been
16 better to see a surgeon, but I think most of that
17 complex surgery was way back when he was tiny and he was
18 more stable from that point of view. He didn't need
19 further urological surgery in recent years.
20 Q. That wasn't actually my question. My question to you is
21 the question of scarring and the implications of that
22 because he ended up with an irregular arrangement for
23 his plumbing, if I can put it that way.
24 A. Yes, he did.
25 Q. We can see that. Let's take the first one, the

1 laparotomy, the T-tube drainage of the ureters. And
2 then you have the transureterostomy, left to right.
3 A. Yes.
4 Q. So he had had a number of procedures which had left him
5 with a non-standard arrangement, if I can put it that
6 way.
7 A. Yes.
8 Q. And that is something that any transplant surgeon was
9 going to have to address.
10 A. Yes.
11 Q. So the only point that I'm putting to you is, without
12 needing to get into any hindsight at all, but just
13 remembering what was happening: are you still really
14 saying that you didn't think that he was a case that
15 really ought to have had the involvement of a surgeon at
16 that stage?
17 A. No, I'm saying it would probably have been better if
18 he'd seen a surgeon at that stage. I thought I had said
19 that.
20 Q. I thought there was a slightly changed version when you
21 were explaining it. Okay, thank you. That was my fault
22 then, I didn't quite understand that.
23 A. You couldn't have changed the situation, of course.
24 Q. No, but we're simply talking about procedures at the
25 moment.

1 A. Yes.
2 MS ANYADIKE-DANES: Mr Chairman, I was actually going to
3 move on to a slightly different point and I see the
4 time.
5 THE CHAIRMAN: Okay. We'll break until 1.55.
6 (12.57 pm)
7 (The Short Adjournment)
8 (1.55 pm)
9 (Delay in proceedings)
10 (2.01 pm)
11 MR FORTUNE: Sir, could you give Professor Savage an
12 indication as to the time when you will rise this
13 afternoon? Because at the moment, none of us at the bar
14 have any idea.
15 THE CHAIRMAN: Okay. What we've done before for the opening
16 sessions was to go to the -- the stenographer needs
17 a break about every hour and a quarter, so what I wanted
18 to do was go on until 3.15 or so, break for 15 minutes,
19 and sit until about 4.30. We haven't moved along as
20 quickly this morning as I'd hoped. I understand there
21 was some discussion yesterday to the effect that, on the
22 witness schedule, the professor was due to finish today,
23 which I think is clearly -- unfortunately, you won't,
24 sir.
25 Dr Taylor was to be the next two days and there have

1 been some discussions to the effect that you now
2 anticipate that Dr Taylor might take a bit less than two
3 full days; is that right? I know it's guesswork, but
4 hopefully a bit less.
5 MR UBEROI: Yes, that was certainly discussed at the
6 meeting, yes.
7 THE CHAIRMAN: If we could finish the professor tomorrow by
8 lunchtime and if we could then get through Dr Taylor's
9 evidence in a day and a half, we would be on track.
10 MR FORTUNE: Sir, let me put down the marker. We believe
11 you're unrealistic. We anticipate that Professor Savage
12 will certainly go well into tomorrow and may well
13 complete his evidence on what is Thursday, which would
14 be day 3.
15 THE CHAIRMAN: Well, if that is the way it looks tomorrow,
16 then I don't want to -- I understand Mr Keane could be
17 treating people rather than sitting here; is that right?
18 Is Mr Keane here?
19 MR MILLAR: Yes, sir. He's also not available on Monday, as
20 I understand it.
21 THE CHAIRMAN: Yes, I'd been told that.
22 MR MILLAR: I think he's taken some leave, sir, so I think
23 this week is not inconveniencing him in the sense that
24 he has made arrangements to not be at the hospital, so
25 it's not as if he can just pop back and resurrect things

1 that have been cancelled.
2 THE CHAIRMAN: Yes, it would be too short notice to call
3 someone for tomorrow. Okay. Let's see how quickly
4 we can move along. Thank you.
5 MS ANYADIKE-DANES: Professor, can I ask you something about
6 the dialysis records? I think you, at some point, had
7 said this morning that the dialysis records for the
8 entire month have gone missing for some reason. Well,
9 it's a long period of time. What exactly do you mean by
10 the dialysis records? What are the records that you
11 would expect to be there that aren't there, if I can put
12 it that way?
13 A. There are a lot of dialysis records that have been made
14 available and they're the parent-held records. The
15 parent-held record for the last month, which I had hoped
16 included the last evening, had not been found, as
17 I understand it.
18 Q. Does that mean they were kept and for some reason --
19 A. I don't know.
20 Q. The reason I ask you is, I wonder if we could pull up
21 witness statement 005/4, page 3. This is a witness
22 statement by Staff Nurse Murphy and then, if you look
23 under 4.5, "peritoneal dialysis", she's being asked
24 precisely that question:
25 "Having looked through Adam's hospital charts, at

1 his admission records for 26 November, and for previous
2 admissions to Musgrave Ward since he commenced dialysis,
3 apart from a form which, from memory, was used for
4 manual dialysis in ICU, there appear to be no other
5 record of Adam's regular dialysis regime filled in his
6 charts. This would suggest to me that the only dialysis
7 records are those held in the family-held daily dialysis
8 record, although the cycle-by-cycle record stored in the
9 dialysis machine could be consulted by medical staff if
10 required."
11 Were you aware of that?
12 A. Yes, I think that's correct.
13 Q. So that is the situation?
14 A. I think so, yes.
15 Q. Does that mean therefore that when one is talking about
16 the dialysis records, that she's correct that the only
17 records are those that the family held and that anything
18 else you would have to consult from the machine?
19 A. If you wanted to, yes. I mean, the dialysis records
20 that Debra Strain kept are extremely well kept and cover
21 every day, virtually, of his life. But apparently the
22 book for the last month hasn't been found.
23 Q. Oh, sorry. So when you say for the last month, you mean
24 Adam's mother's book for the last month and not any of
25 the records that may have been retained at the hospital

1 because the hospital did not, in fact, retain any. Al
2 that the hospital had was what was in the machine.
3 Do you happen to know how long the records could be
4 consulted from the machine?
5 A. Well, you can go back through the computer on it and
6 look at it. But the daily record was usually kept in
7 his dialysis diary, which was parent-held. That's my
8 understanding.
9 Q. And was Adam's mother asked to bring his dialysis books
10 with her?
11 A. I don't know. But that would have been what she usually
12 did.
13 Q. Sorry, I meant for his transplant surgery. Would she
14 have been asked specifically to bring those books with
15 her?
16 A. I don't know.
17 Q. Okay.
18 A. I would have thought, knowing Debra Strain, she would
19 have brought them with her.
20 Q. There's no record in his medical notes of records of
21 having received them and having consulted them or
22 assessed them or anything of that sort.
23 A. No.
24 Q. Would the dialysis, so far as you are concerned, records
25 have been an important record for any member of the

1 transplant team to have available to them?
2 A. Well, as you know, we don't know how much fluid was
3 taken off that night because we don't have the dialysis
4 record. So that would have been useful to know. But
5 of course, knowing how much fluid normally came off on
6 a night because Debra Strain has provided us with
7 records for, I think, a whole year, and I think
8 Dr Coulthard -- because he had those records before
9 I ever saw them -- has analysed how much fluid came off
10 on a usual night and the range, and was able to say that
11 there were other nights when he only had eight cycles
12 and this is the amount of fluid that came off and
13 therefore we can deduce that that's the amount that came
14 off on the night prior to his transplant.
15 Q. Yes. That's Dr Coulthard doing it for the purposes of
16 providing an expert report, but for the clinician that
17 means --
18 A. We would have looked at the machine or looked at -- and
19 it would have been recorded in a diary.
20 Q. Yes, sorry, I'm just trying to get at what was available
21 for the transplant team. You say you would have looked
22 at the machine. What was available for Dr Taylor to
23 see?
24 A. Well, if you remember, what I had said to Dr Taylor
25 was: looking at his normal daily regime and looking at

1 what happened on the day prior to his transplant,
2 I estimated that he might have been 500 ml behind and
3 that was based on those sort of calculations. Most of
4 all because, on the night in question, he had some
5 970 ml by gastrostomy or IV feeds, whereas on a normal
6 night he had 1500 ml. So the question was: could he
7 have been 500 ml light and that was therefore important
8 to know when you looked at the CVP record because it
9 tells you -- if you have too little fluid, it would be
10 low; if you had too much fluid, it would be high. Do
11 you follow?
12 Q. I am following you. But I am thinking of Dr Taylor
13 himself coming in in the early hours of the morning to
14 look at Adam's medical notes and records as part of his
15 preparation for establishing Adam's fluid regime and
16 what I'm trying to find out is what would be available
17 for him to consult in relation to Adam's dialysis
18 records.
19 A. I don't know because we don't have the dialysis book.
20 Q. What you're saying, so far as I understand you to be
21 saying, is: what would have been available is the
22 records that his mother kept in the book, if she had
23 brought her books with her to the hospital, to have the
24 details in the machine recorded in the book.
25 A. Yes.

1 Q. That's what it amounts to?
2 A. Yes.
3 Q. And if she hadn't done that, then short of going up to
4 the machine himself -- and I'll ask you in a minute if
5 that was possible -- there wasn't actually a dialysis
6 record for him to consult as part of his preparatory
7 work; is that what it amounts to?
8 A. We don't know.
9 Q. But if that's the case, there wouldn't have been.
10 You've either got the machine or something from the
11 machine recorded in the books if the mother brings the
12 books. Those are the two sources, as you say.
13 A. It's likely if there was no book, someone would have
14 recorded what was said on the machine.
15 Q. Is there any particular reason why it's not recorded in
16 his own medical notes and records?
17 A. I suppose because the dialysis daily diary tells you
18 what's happening day to day.
19 Q. I appreciate that, but in terms of what was actually
20 happening that evening of his dialysis, is there any
21 reason why any of that wasn't recorded in his medical
22 notes and records so that anybody looking at his medical
23 notes and records would have that information?
24 A. I presume because it was available in the diary.
25 Q. Yes, but that's the mother's diary. I'm saying --

1 sorry.
2 A. It's the child's diary.
3 Q. Yes, that the mother keeps.
4 A. Yes. I know what you're saying.
5 Q. Thank you.
6 THE CHAIRMAN: But if the diary has been kept by the mother
7 over a previous number of days, he comes in on the
8 evening of the 26th, he's going to be operated on, as it
9 turns out, the following morning. Is it your
10 understanding, whatever dialysis records are available,
11 are added to the mother's diary --
12 A. Yes, I think so. That's my understanding.
13 THE CHAIRMAN: -- and not necessarily made in a separate
14 hospital note and record?
15 A. Correct.
16 MS ANYADIKE-DANES: And who would be responsible for doing
17 that?
18 A. Recording the diary? Usually his mum. Well, for that
19 evening --
20 THE CHAIRMAN: Would it not be a nurse who made the entry?
21 A. It might be the nurse, but it's more likely to be Debra
22 here.
23 THE CHAIRMAN: Either or?
24 A. Remember, his mother had been dialysing him for over
25 a year. She's an expert.

1 MS ANYADIKE-DANES: I'm not doubting that. I'm simply
2 trying to see where we stand in comparison to when she's
3 doing all that at home, he's then brought in for his
4 transplant surgery. I'm simply trying to see what the
5 hospital is doing about his dialysis records.
6 A. I know. It's not unusual when children come into
7 hospital that their parents continue doing their
8 dialysis.
9 THE CHAIRMAN: Okay. I've got the point.
10 MS ANYADIKE-DANES: Is there any change in the practice?
11 Nowadays, the information in relation to his dialysis,
12 would that have been added to his medical notes and
13 records nowadays?
14 A. Yes.
15 Q. Yes, that would happen?
16 A. Yes.
17 Q. And do you know when that change was made?
18 A. A long time ago. I don't know.
19 Q. A long time ago, thank you. That was simply because
20 I was actually trying to understand something that you
21 had said about his peritoneal dialysis records, which
22 I had confused. I thought you meant the hospital had
23 them and somehow they had got lost. You were talking
24 about his mother's records. If I can take you back to
25 where we were in this preparatory phase, if I can put it

1 that way.
2 If I can understand something about the
3 multi-disciplinary team meetings that would have been
4 happening over this period from the time when it was
5 agreed that Adam would go on -- do you need some water?
6 A. No, I'm fine.
7 Q. -- on the transplant register, right up until the time
8 he was actually admitted into hospital for his
9 transplant surgery. I wonder if I could refer you to
10 the comments that Malcolm Coulthard has made. He
11 compares what would have happened in Newcastle roughly
12 at that time. I'm sure you have read that. He says
13 there were regular professional meetings between the
14 nephrology and surgical teams -- and I think you have
15 already conceded the bit about surgical teams -- to
16 review the particulars of each child who was waiting for
17 a graft, the minutes of which are readily available in
18 case a different consultant surgeon is on call.
19 And he talks about how the paediatric nephrologist
20 and the transplant surgeon should jointly decide the
21 level of urgency for the transplant. Do you have any
22 views on that as to how the level of urgency should be
23 decided or whether it should be decided at all, for that
24 matter?
25 A. No, we would decide on the level of urgency and, if for

1 instance a child was not being dialysed efficiently or
2 it was impossible to dialyse them efficiently, then
3 we would be looking urgently for a kidney. If the
4 dialysis was going reasonably smoothly and the kidney --
5 and the child was well, then there would not be the same
6 pressure.
7 Q. And what level of urgency had you ascribed to Adam's
8 case?
9 A. Well, in Adam's case he had, as you know, had all these
10 operations. He'd been unwell, he'd been in hospital
11 with temperatures, with a gastrostomy-site infection,
12 but I think from July that year until November he was in
13 the best health he had ever been. So that seemed to me
14 to be the best time to get him transplanted. He was
15 fit, well, and ready for that sort of surgery, rather
16 than when he wasn't so unwell or had recently been
17 unwell.
18 Q. Sorry, does that make him more urgent because he's in
19 good health?
20 A. I think in his case, if we had in him good health, which
21 he was not always used to and he was offered a kidney,
22 we would take it, we would not delay it. There are
23 other considerations, of course, as to when you would
24 take the kidney as well. For instance, he was due to
25 start school and starting school on dialysis or being at

1 school or nursery school on dialysis is a lot more
2 abnormal, shall we say, in terms of lifestyle than if
3 he'd got a successful kidney transplant. Getting
4 a successful kidney transplant would have made his life
5 so much better.
6 Q. Yes.
7 THE CHAIRMAN: I think Ms Anyadike-Danes' point was that
8 sounds to us, from the outside, as being a bit different
9 from being more urgent; do you see? The example you
10 were giving us, if dialysis was going badly, and you
11 seemed to be saying that would make a transplant more
12 urgent. Adam was doing very well, in Adam's terms,
13 from July to November and I think the question was
14 really: did that not make him less urgent, even if there
15 were compelling other factors which would have prompted
16 you towards a transplant, like he's due to start school?
17 If he's healthy and therefore perhaps a bit stronger,
18 this would be a better time for him to withstand the
19 rigours of surgery.
20 A. I think the idea of urgency and optimal time for
21 transplant are possibly slightly different. Here
22 we have a boy who is now really well and we've an offer
23 of a kidney, good time to do it. As opposed to waiting,
24 waiting, and maybe him becoming unwell again.
25 MS ANYADIKE-DANES: I might explore that with you. The fact

1 that he is well, doesn't that give his mother options in
2 terms of whether she's prepared to consent to transplant
3 surgery if there are other factors in relation to it,
4 like for example what you mentioned just earlier: the
5 length of the ischaemic time, any factors in relation to
6 the kidney itself, how good the match is, all those sort
7 of things. If they give some pause for question, if
8 I can put it that way, the fact that he is very healthy,
9 doesn't that give his mother an option to say, "Well,
10 I maybe can afford to wait until maybe another chance
11 comes along because he's actually doing very well at the
12 moment".
13 A. It does.
14 Q. Okay. Then during this period of time when you could be
15 or were having multi-disciplinary meetings, how many
16 would you have or how periodic would they be, to discuss
17 Adam's case?
18 A. Well, we have a multi-disciplinary team meeting every
19 week and the patients that we discuss are the patients
20 who are either have been at the dialysis or transplant
21 clinic the day before or the patients who are actually
22 in the ward because they have some problem at the time.
23 So we would probably be discussing Adam every month.
24 Q. Okay. And when you discussed him, did you discuss, for
25 example, things -- I mean, I know that we've been

1 backwards and forwards about how complex his surgery
2 might be, so we'll leave that to one side. But did you
3 discuss things like Dr Haynes raises in his report?
4 I think it's his report of 204-013-395.
5 We can get it up. He says:
6 "As numerous central lines had been placed in
7 Adam --
8 THE CHAIRMAN: Whereabouts in the page?
9 MS ANYADIKE-DANES: It's just under "Central venous drainage
10 and CVP measurement", and it starts:
11 "Numerous central venous lines had been placed in
12 Adam, some at a very early age. It is my opinion, as
13 previously stated, that this almost certainly means that
14 there was some narrowing of the great veins draining his
15 head and neck. It would therefore have been sensible to
16 have arranged for ultrasound examination of these
17 vessels when Adam was placed on the transplant waiting
18 list and a plan made for gaining central venous access
19 at the time of transplantation, depending on the
20 findings. As detailed in my reply, clarifying points
21 raised by the inquiry team following ... I'm absolutely
22 certain that the CVP reading obtained during Adam's ..."
23 He goes on to talk about that, but leaving that
24 aside, the reason I had drawn it to your attention
25 is that he is dealing with some of the sorts of things

1 and considerations that you could have been addressing
2 in this period of time before he actually has an offer
3 of a kidney and when you could be preparing, so far as
4 you can, the tests and records and notes and so forth to
5 give whoever is going to be the transplant team in as
6 good a position as possible to understand about Adam's
7 condition. So the point is: had you considered the
8 effect on Adam of the numerous central venous lines, and
9 if you had, had you thought about an ultrasound
10 examination?
11 A. Virtually all our children who are in chronic renal
12 impairment from birth will have had multiple central
13 lines, I accept that. And I would also say that
14 nowadays, with modern ultrasound, we would evaluate
15 their vessels prior to transplant. But that was not
16 always the case -- or ever the case -- 20 years ago.
17 And of course -- well, it's possibly irrelevant, but
18 some of those lines had of course been placed by
19 Dr Taylor and he was aware of that situation. If there
20 was any concern from that point of view, an ultrasound
21 could have been carried out at the time or just prior to
22 his transplant.
23 Q. Yes, I appreciate it could have, but is your
24 answer: actually we wouldn't have thought about it at
25 that time?

1 A. I don't think so. But nowadays, if we have a child
2 who's coming for a transplant and we know they've had
3 lines before, we would do an ultrasound examination near
4 the time of the transplant, particularly if it was
5 planned in advance.
6 Q. Yes. If you can go on with Dr Haynes and his report at
7 204-004-154. It's at paragraph 8(v), (a) to (c), and
8 (vi), (a) to (b). All these experts -- well, the ones
9 who are particularly addressing it, which is
10 Dr Coulthard and Dr Haynes, are all drawing attention to
11 what could have been planned. So here is Dr Haynes and
12 he's saying that it could be predicted that Adam's
13 transplant procedure would be difficult for both the
14 anaesthetist and the surgeon, and:
15 "A planned multi-disciplinary meeting shortly after
16 he was placed on the transplant waiting list with
17 representation at consultant level from nephrology,
18 transplant surgery and paediatric anaesthesia should
19 have been scheduled. Adam's history and likely
20 difficulties at the time of the transplant would then
21 have been identified in the cold light of day well in
22 advance and an entry could have been made in a prominent
23 place in his medical records to be read by whichever
24 consultants were rostered when he presented for his
25 transplant operation."

1 Then he repeats:
2 "Ultrasound examination could have been carried out
3 as an outpatient or during the course of an intercurrent
4 hospital admission and the findings documented in the
5 medical records. Had ultrasound examination of the neck
6 veins not been arranged, it would still have been
7 appropriate [with the] insertion."
8 Then he goes on to talk about that. But in any
9 event, the point that I am drawing to your attention is
10 this emphasis that Dr Coulthard, initially, and now I'm
11 drawing your attention to Dr Haynes have as to what
12 could have been done by way of planning in these
13 multi-disciplinary meetings to ensure that whoever came,
14 whatever time it is that his transplant is going to take
15 place, will have the benefit of as much information as
16 possible of Adam, which is considered at a time when
17 everybody's not in a panic trying to respond to the
18 urgency of the situation, but -- without that kind of
19 pressure. And I'm asking for your comment about that.
20 Had you thought that maybe we could do it like this for
21 Adam?
22 A. The first thing I would say was that no one was in
23 a panic. The second thing I would say was that if
24 he had needed an ultrasound, it could have been done any
25 time between midnight and 6 am. And the third thing

1 I would say is that we were developing our transplant
2 programme then. We didn't carry out ultrasounds at that
3 time and the points that these experts make are exactly
4 what we do today and have done probably for the last ten
5 years.
6 Q. The difference is that they're making them about what
7 could and, they say, should have happened in 1995. If
8 you leave the ultrasound out of it, if you go to that
9 third sentence where he talks about a planned
10 multi-disciplinary meeting and he's talking about who
11 should be there and the purpose of it. I don't mean to
12 say that anyone was running around in a panic on the
13 night of 26 November. I have no idea. But he certainly
14 says these things and planning ahead are better done
15 when you have time to do that, rather than when you have
16 the pressure of trying to arrange for the actual
17 transplant once your offer has been received. And all
18 I'm asking you is: if you see there how he describes how
19 you might have gone about the planning in those
20 multi-disciplinary meetings, did you consider that
21 at the time?
22 A. Not at that time.
23 Q. And if not, why not?
24 A. Because we did not possibly have the experience to form
25 those plans, those protocols. But subsequently, we have

1 learned that that is better practice and that's what we
2 do today. Because always, we're trying to improve our
3 practice, and I think we've done that.
4 Q. I understand.
5 THE CHAIRMAN: Dr O'Connor arrived at the start of November
6 or October that year to work with you and she had
7 experience of working with other hospitals where
8 transplants were carried out; is that right?
9 A. Yes, in Bristol.
10 THE CHAIRMAN: I think you described how later, after Adam's
11 death, you sat with her and went through different
12 protocols and practices.
13 A. We did.
14 THE CHAIRMAN: Was that taking advantage of her different
15 experience and adding that to your experience to make
16 this system in the Royal better than it had been before?
17 A. Of course. And indeed, we had already changed some
18 things after Mary arrived back. That was when we
19 decided we would look at some five or six different
20 protocols. I am not aware that any of them suggest that
21 we should have advance meetings with anaesthetists or
22 carry out ultrasound scans for the neck, but I would
23 need to go back and look at those protocols. I don't
24 think that what we were doing was dramatically different
25 from what most other people did at that time.

1 THE CHAIRMAN: Right.

2 MS ANYADIKE-DANES: Just finally in this area, I wonder if

3 I could have pulled up 300-059-079. That is a chart

4 that is made by recording all Adam's serum sodium levels

5 from, so far as we can do it, when they were first

6 recorded in his notes and records up until the last

7 recording of them. You can see, Professor Savage, that

8 in his early months, and in fact throughout really, if

9 one takes that double band as being the normal range,

10 135 to 145, that there are quite a number of low sodium

11 results. I think the experts, certainly Dr Coulthard,

12 have said that he was hyponatraemic at that stage, and

13 we have tried as you probably will have seen to match

14 them up with his hospital visits to try and see what

15 regimes he was on at that time that might have produced

16 those. But in any event, that is something that was

17 produced by a sort of scouring through all his medical

18 notes and records.

19 Do you think it would have been helpful for

20 Dr Taylor, as the anaesthetist, to have been aware of

21 the extent to which or the occasions when Adam was

22 hyponatraemic previously?

23 A. Yes, and I believe he was aware.

24 Q. Is that something that you think would be important for

25 the transplant anaesthetist to know?

1 A. I certainly told Dr Taylor that he had a tendency to
2 hyponatraemia and, of course, all these results that are
3 presented graphically here were filed in the
4 continuation sheets in his notes. And you can see them
5 quite clearly.
6 Q. Yes. I'm going to come to that in a minute. What I'm
7 trying to establish first of all is, quite apart from
8 what you told him, did you regard Adam's propensity or
9 previous incidence of hyponatraemia to be an important
10 thing for the transplant anaesthetist to know?
11 A. Yes.
12 Q. And did it occur to anybody that in this pre phase, if
13 I can call it that, one of the things that might have
14 been helpful to do would be to handily put together his
15 serum sodium level records so that whoever would come,
16 at whatever point that might be, could readily see what
17 his pattern of serum sodium levels had been?
18 A. Did I think of doing that?
19 Q. Yes. Not you personally, you might have got a junior
20 member of your staff to do it. If it's important
21 information, did you think it might be useful to compile
22 it in that way? Not necessarily as a graph, but just as
23 a running record?
24 A. There is a running record.
25 Q. A running record of all of these in one place?

1 A. There are sheets with every single electrolyte test that
2 he's had done with the date and the time in his notes.
3 Q. Well, we'll go back to that as to whether each of these
4 are recorded like that. In fact, I think we're going to
5 have his actual medical notes and records brought here.
6 But you see the point, don't you, that Adam's medical
7 notes and records as at the time of his transplant
8 surgery, so we've been told, ran to 10 files. Whichever
9 way you look at it, they were substantial.
10 A. Yes.
11 Q. So whoever is coming in is, quite apart from whatever
12 planning they want to do, going to go through or have to
13 go through quite a volume of material. And I think the
14 point that I'm putting to you, which is really to build
15 on something that Dr Haynes has said, is: did it ever
16 occur to anybody that it would be quite useful to have
17 a summary of these key bits of information somewhere so
18 that whoever comes in can just have them handily to look
19 at? Even if you did have all the records of his lab
20 results, it's still quite a task from August 1991
21 to October 1995 to look at them. In fact, I personally
22 have recorded all of them and there's a schedule of
23 them. It's not something that you would do very
24 quickly. And you've got to do that to get a sense of
25 where he is, don't you?

1 A. Well, I had a very clear sense of where he was.
2 Q. You did, yes.
3 A. And I was there that evening and I was the only
4 paediatric nephrologist. So if anybody was going to be
5 performing a transplant I would be there to give that
6 information. So the simple answer to your question is:
7 no, I did not think of producing a graph like this. But
8 I did have the information and communicated it and
9 I don't think there's been any -- anyone has suggested
10 that it was not communicated to the transplant team that
11 Adam had a propensity to hyponatraemia.
12 Q. No, but if Dr Taylor had wanted to get a sense for
13 himself as to the incidence of it and try and understand
14 when it occurred and why it might have occurred, he
15 would have had to work his way through the lab result
16 reports, I think they were, and whatever other
17 information if there wasn't a lab result report -- and
18 there isn't one for all of these values -- whatever
19 other information is in his medical notes and records.
20 That's what he would have had to do from scratch, is the
21 point that I'm putting to you.
22 A. What I'm saying to you is that I would have been able to
23 explain that to him. He had these episodes of marked
24 hyponatraemia rather than the ones which are just around
25 130 when he was either unwell, dehydrated or had been in

1 theatre and received intravenous fluids. And I was
2 aware of that.
3 Q. Did Dr Taylor actually ask you about any of his very low
4 hyponatraemic incidences?
5 A. I don't remember, but I'm aware that Dr Taylor was
6 involved in his care in the intensive care unit and in
7 theatre when he did have those low sodiums, so he did
8 have some concept of the background.
9 Q. We're going to come to this a bit later on, but since
10 you've raised it maybe this is a convenient point to at
11 least open it. You said that you were in the hospital
12 at that time and you were there to be consulted. Fast
13 forward to 26 November. Can you help with when you
14 actually were physically in the hospital on 26 November?
15 A. On the evening prior to the transplant?
16 Q. Yes. You may not be able to remember that. Since you
17 mention that you were there, I wondered if you did know.
18 A. I do remember because I was there from the time that his
19 mother brought Adam to the hospital until 2 am, when it
20 was decided that we were not going to go straight to
21 theatre at that time, we were going to go at 6 or 7 in
22 the morning. So I was there that entire time and during
23 that time I had conversations with Dr Taylor and with
24 Mr Keane as to the situation regarding Adam and on his
25 propensity to develop hyponatraemia.

1 Q. We'll come to it, but just to round that off, was
2 Dr Taylor physically in the hospital at the same time as
3 you were to have these discussions with the notes?
4 A. I talked to him by telephone.
5 Q. Okay. Can I ask you about whether it would have been
6 reasonable to have measured Adam's urinary sodium at
7 regular intervals, maybe 6 to 12 months, while he was on
8 the transplant list?
9 A. Yes.
10 Q. Do you know if that was done?
11 A. It wasn't done.
12 Q. Do you know why not?
13 A. I suppose it was neglected because we knew what his
14 sodium requirements were, what the sodium in his feeds
15 were, and we were able to manipulate his serum sodiums
16 by adjusting his feeds. The last record of his urinary
17 sodium, I believe, was 1993.
18 Q. It is.
19 A. With hindsight, it would have been beneficial to have
20 had it six-monthly, I accept that.
21 Q. Yes. I suppose -- I mean, I think Dr Coulthard's
22 point -- I'm sure you are aware of it -- is that that
23 assumed that nothing very much had happened in respect
24 of his urinary sodium levels between 1993 and 1995,
25 which may not have been a correct assumption.

1 A. I don't recollect where Dr Coulthard said that, but
2 during that period of time we were altering the saline
3 and bicarbonate supplements that he required to keep his
4 sodium within a reasonably normal range. So it would
5 not be true to say that we wouldn't have thought there
6 was any change, otherwise we wouldn't have had to change
7 his oral supplements.
8 Q. So you'd have accepted that there was change?
9 A. Yes.
10 Q. And of course, his kidneys are progressively failing,
11 I presume?
12 A. Yes.
13 Q. So there was definitely change.
14 A. Yes.
15 Q. And so I'm just trying to -- I know that you have said,
16 candidly, that you didn't do it. I'm just trying to get
17 an appreciation of why you wouldn't have done it since
18 you were appreciating that there was change.
19 A. Because we were manipulating his serum sodium by
20 adjusting his intake and that seemed to be the sensible
21 way to do it at that time.
22 Q. Wouldn't that have been all the more reason why you'd
23 engage in testing to see where you stood?
24 A. It might have been, yes. I have said I would have
25 preferred, with the eye of hindsight, to have done it

1 six-monthly.
2 Q. Would it also have been reasonable to have measured his
3 creatinine at regular intervals as well?
4 A. His urinary creatinine?
5 Q. Yes.
6 A. Well, I would have no reason to do that.
7 Q. Okay. Can I ask you about fractional excretion rates?
8 In your witness statement of 002/2, page 10, you say
9 that fractional excretion rates weren't measured or
10 recorded; can you explain why?
11 A. They weren't standard tests that we would have done nor,
12 I believe, most other units carried out in this
13 situation.
14 Q. What's the benefit of them if you can help us with that?
15 A. Well, Dr Coulthard can help you better than I because he
16 wrote a paper in 2008 proposing that
17 fractional excretion of sodium and water was a help in
18 deciding which intravenous fluids to give. But that was
19 2008 and it was not common practice to measure
20 fractional excretion of sodium and water in these sort
21 of children in 1995.
22 Q. Did people know about it in 1995?
23 A. Yes, and I think I've pointed out that I have a chapter
24 in a book where I've described how fractional excretion
25 of sodium and water can be performed.

1 Q. And --
2 A. But we used it for different reasons.
3 Q. I understand. If people knew about it in 1995, what did
4 nephrologists consider to be its benefit in 1995?
5 A. In this situation?
6 Q. Well, firstly, the benefit of measuring them for
7 children with chronic renal failure in the period of
8 1995. What were nephrologists thinking were its benefit
9 if people knew about it?
10 A. Nephrologists used it in determining whether people had
11 established acute renal failure or had what we call
12 pre-renal uraemia, in other words they were dehydrated
13 to the point where their kidneys couldn't work properly.
14 They weren't used generally in the monitoring of chronic
15 renal failure, but rather in the diagnosis and
16 management of acute renal failure, which was not the
17 situation with dialysis patients.
18 Q. But the knowledge of how it works, didn't that mean that
19 people recognised that it could be of benefit to
20 monitoring? I mean in 1995.
21 A. I couldn't say that.
22 Q. Did you recognise it could be of benefit?
23 A. No.
24 Q. You didn't?
25 A. And I think if you look at any of the protocols that we

1 looked at, there's no mention anywhere of measuring
2 fractional excretion of sodium or water in them.
3 Q. Okay. Let me move now to the period when the offer is
4 actually received. I know that you've provided witness
5 statements, but I'm just trying to see if we can tease
6 out a little better -- if we look at the UK Transplant
7 form. Sorry, I'm just going to try and pull that up.
8 It starts at 058-009-025.
9 If we could go to the next page of that, which is --
10 the page after that, 027. 058-009-027.
11 So there at item 24, the top left-hand side:
12 "Time perfusion commenced. 01.42."
13 So 1.42 in the morning of 26 November. So we now
14 that is when that happened. We know that Adam came in
15 at about 8 o'clock that evening, somewhere thereabouts,
16 according to the records. So when did you first know
17 that there was an offer of a kidney for Adam?
18 A. I don't know the exact time, but I presume it was late
19 afternoon that day because UK Transplant would have
20 phoned me, offered me the kidney, and if I decided that
21 we could use it, they would then have needed to arrange
22 its transport to Belfast.
23 Q. We know you did decide. On what basis did you decide to
24 accept that offer?
25 A. Well, first of all, I would have looked at the tissue

1 type and the tissue match for Adam and satisfied myself
2 that it was at least a 50 per cent match, which is what
3 we had put on the UK Transplant form that we'd be
4 willing to accept. Although we wouldn't necessarily
5 accept it on the day. The next thing one would look at
6 is to make sure that there was not a common phenotype,
7 a common tissue type that differed from Adam's so that,
8 if he received that kidney, he would be sensitised
9 forever against getting a kidney from someone with that
10 tissue type. There are some tissue types, for instance,
11 that are carried by 50 per cent of the population and
12 although we would take a 50/50 match, we would not take
13 a 50/50 match if it included a mismatch on a tissue type
14 that was common in the population because it's very
15 likely that if a child has one kidney, at some juncture,
16 he would need another one. So we wouldn't want to
17 produce a sensitised patient. So that's one thing
18 we would look at.
19 The next thing I would be looking at is, if the
20 kidney got to a certain time, would it be feasible to
21 transplant that kidney in before what we have as an
22 arbitrary 24-hour deadline. And this kidney having been
23 removed at 1.42, I would have wanted it to be in Belfast
24 four to six hours between 1.42 the next morning, and my
25 estimate obviously was that, from what they told me,

1 that it would be flown in, that we would have time to do
2 the transplant and proceed with the transplant around
3 that 24-hour optimal time, although there are kidneys
4 that go in later than that, as you probably know.
5 We would have looked at any other details they gave
6 us, the nature of the patient who's donating the kidney.
7 You can see from the earlier part of this form that this
8 was a healthy 16 year-old who had a subarachnoid
9 haemorrhage. So in other words, they had no other
10 diseases, so this was likely to be a perfect kidney, so
11 that would have been attractive that we got a young
12 person's kidney, which is therefore likely to function
13 and last a long time. And also, we might look at the
14 size discrepancy and we tend to take kidneys from people
15 who are not more than three times the size of the donor.
16 So if Adam was 20 kilograms, we'd be happy to take it,
17 for instance, from somebody who was 60 or 70 kilograms
18 and that would also be a consideration.
19 And then finally, we would look at the anatomy, and
20 you can see that, as we know, there were two arteries,
21 although it doesn't say here, on a patch, and having
22 received that information, I would then talk to the
23 transplant surgeon and say: we have a four year-old,
24 we're being offered a good kidney from a 16 year-old,
25 the match seems reasonable, are you available and happy

1 to proceed with that transplant? And if that was
2 agreed, I would then check that we had an anaesthetist,
3 that we had a theatre, that we had an intensive care bed
4 and, if all that was in place, I would then phone his
5 mother and say, "It looks like we have a kidney that
6 would be reasonable for Adam; are you still happy to
7 come in and have a tissue type done and talk to us about
8 proceeding with the transplant?"
9 Q. That sounds as if the main person trying to assess the
10 situation as to whether the kidney should be accepted at
11 that stage, anyway, is really you?
12 A. Yes.
13 Q. Was there any involvement in terms of the
14 decision-making with the surgeon?
15 A. Well, I would have discussed all those issues with the
16 surgeon. I wouldn't obviously have proceeded with the
17 transplant if the surgeon had any concerns.
18 Q. The form that we are looking at here, is that -- and you
19 received this offer by telephone?
20 A. Telephone, yes.
21 Q. Are the details on this form the information that is
22 communicated to you over the telephone?
23 A. Yes, I think so, and a subsequent form, as you know,
24 does say there were two arteries on a patch. So they
25 may have told me that as well on the telephone. I don't

1 know. I don't remember the conversation and I didn't
2 record it. Nowadays, I probably would record it and
3 write down exactly what they told me.
4 Q. I think we can possibly get a better copy of that
5 because it's not terribly clear. I think if we go to
6 301-121-657. Let's try that. I beg your pardon. I thought
7 that was going to be replaced in your documents. The
8 reason why I'm saying that is that we have a clearer
9 copy of that form -- I don't know if you have been able
10 to see it -- that the DLS provided to us, which actually
11 shows that there were three arteries. I'm trying to see
12 if we can -- I had pulled up before the clearer version
13 of the form. I'm trying to see if we can get that
14 clearer version because I think it might be quite
15 important. If you just give me one moment, I'll try and
16 see if there's a different reference where we can get
17 it.
18 THE CHAIRMAN: You pulled it up yesterday, I think.
19 MS ANYADIKE-DANES: We did. That's why I'm surprised to see
20 this.
21 I'm sorry, professor, if you give me one moment,
22 I'll try and see if I can locate that.
23 A. While you're doing that, of course, I would not have
24 seen these forms until after the kidney arrived.
25 Q. Oh no, I understand that. That's why I asked you

1 whether it was your understanding that the information
2 that would be given to you was essentially what was on
3 this form because that's all anybody would have to
4 communicate to you. I presume that's the purpose of the
5 form.
6 A. Yes.
7 THE CHAIRMAN: If you go to paragraph 232 of yesterday's
8 opening, there's a reference. Could we try to bring up
9 reference 301-121-656?
10 MS ANYADIKE-DANES: Thank you.
11 THE CHAIRMAN: Let's see if that works.
12 MS ANYADIKE-DANES: Well, this is the letter which provided
13 us with the better picture. I wonder if 657 may be the
14 page that we want. Yes, it is, there we are.
15 Professor, we can now see it a little clearer. This
16 is the same page we were looking at, but you can see the
17 number of arteries. There seems to be something written
18 faintly underneath it, and then there's a heavier "2".
19 Then there's:
20 "Arterial patches, 1. Number of arteries on
21 patches, 3."
22 And then if you look down:
23 "Branches tied, 1."
24 Then there's:
25 "Other, please specify."

1 And that, so that letter that we just had -- in
2 fact, if we flick back quickly to 656, the previous
3 page. That letter says that the writing just at the
4 bottom says:
5 "? Third artery tied off plus cut-off patch."
6 This we understand from the letter is the
7 interpretation of that provided by Miss Donaghy, who
8 you'll probably remember was the transplant coordinator.
9 She's the person who dealt with that form for Adam. And
10 she's had a better look at it and has obviously got
11 a better photocopy of it and that is her interpretation
12 of what that says. If we go back again to 301-121-657.
13 There we are. That's what she says is under "other,
14 please specify".
15 Professor Savage, you may not remember this at this
16 remove, but have you any recollection of being given
17 those details?
18 A. No. Indeed, I had no recollection that there were two
19 arteries and a patch -- although I accept that that was
20 the case -- until this inquiry started because it had
21 passed out of my memory. But the business of a third
22 artery tied off and cut was never in my memory, I don't
23 think, and I speculate that the reason for that is that
24 this was a tiny thread-like artery that sometimes is
25 seen and is not really of any significance in terms of

1 the perfusion of the kidney. But that might be best
2 asked to a transplant surgeon.
3 Q. I understand. But in any event, until you actually see
4 the kidney, we have no way of interpreting these things.
5 All you do is take as the flat fact what is said. And
6 that's really the reason why I'm asking you. These
7 sorts of anatomical details, if I can call them that,
8 these are things really for the surgeon to consider what
9 effect or not they're likely to have on whether this
10 would be a good kidney for this particular patient or
11 not; isn't that right?
12 A. Correct.
13 Q. So isn't it the case that really, unless you've got
14 a kidney that indicates absolutely nothing at all, it's
15 got one artery and everything else is just as it ought
16 to be, in fact you can compare that kidney.
17 Unfortunately, the left kidney has these features, if
18 I can put it that way; the right kidney, which went to
19 somebody else, has none of those at all. So that's
20 a sort of ready comparison. In any event, does that not
21 really mean that the decision as to whether to accept
22 a kidney is something that really gives an important
23 role to the surgeon?
24 A. Yes. And that would be why I phoned the surgeon to
25 decide whether we were going ahead or not.

1 Q. And in terms of who actually should be the decider, if
2 I can put it that way, in whose area of expertise do you
3 think this sort of issue is most and therefore that
4 person ought really to have the final say as to whether
5 this is an appropriate kidney to accept or not?
6 A. The two arteries?
7 Q. Any of the anatomical features in relation to a kidney.
8 A. The anatomical features would be something that the
9 surgeon would comment on.
10 Q. Yes. So ultimately, I suppose, is what I'm trying to
11 ask you -- ultimately, which consultant do you think has
12 the responsibility of making the final decision as to
13 whether you should or should not accept any donor
14 kidney?
15 A. Well, it's probably me, but if the surgeon was to say to
16 me, "I am not happy with the anatomy of this kidney",
17 I would not take it. So it's not something that's made
18 by one person. That's a mutual decision made by both
19 the surgeon and myself.
20 THE CHAIRMAN: So you could say "no" before it gets to the
21 surgeon? You might get an offer and think that's not
22 good enough so you wouldn't take it any further.
23 A. If, for instance, I thought the tissue match wasn't
24 particularly good, I could say: no, we don't want that
25 kidney.

1 THE CHAIRMAN: And the next stage is you might ring the
2 surgeon, if you're satisfied completely or so-so. You
3 ring the surgeon, you have a discussion with him and if
4 the surgeon has serious reservations, they're likely
5 to --
6 A. Any reservations.
7 THE CHAIRMAN: Then you're going to say no.
8 A. No, that's right.
9 THE CHAIRMAN: As a matter of interest, in that event, would
10 you contact the mother at all.
11 A. No.
12 THE CHAIRMAN: Because, medically, you've decided this is
13 not a good idea?
14 A. Yes.
15 THE CHAIRMAN: So you only contact the mother after you and
16 the surgeon have discussed it and have agreed that
17 you have no reservations?
18 A. That's right, sir, because you could understand that if
19 I was to speak to the mother and say, "It looks like we
20 might have a kidney", and then it would build her hopes
21 up. And for me to ring back half an hour later and say,
22 "I'm terribly sorry, but the surgeon has pulled the plug
23 on this", it would be devastating.
24 THE CHAIRMAN: Okay, thank you.
25 A. The usual reaction when you phone someone and say, "It

1 looks like we've got a kidney", is that they're
2 absolutely delighted. They're out the door before you
3 can --
4 THE CHAIRMAN: If I understand your evidence correctly, it's
5 a collective decision.
6 A. It is.
7 THE CHAIRMAN: Okay, thank you.
8 MS ANYADIKE-DANES: I wonder if we could pull up witness
9 statement 006/3, page 23. This is Mr Keane's witness
10 statement. If you go down to section 42 at the bottom:
11 "State your involvement and input in any of the
12 following decisions: that the match was acceptable for
13 Adam."
14 He didn't have an involvement in that:
15 "To accept the kidney from UK Transplant."
16 He didn't have any involvement in that. That's
17 the stage that we're talking about here, isn't it?
18 A. Yes.
19 Q. So there's a difference between you?
20 A. Yes, I think so. I've read this statement before and
21 that surprised me because it would seem to me that
22 it would be very strange that I would phone a transplant
23 surgeon and not tell him everything I knew.
24 Q. I understand that.
25 A. It may well be that Mr Keane is saying he never spoke to

1 UK Transplant and that it was me who spoke to them and
2 I accept that.
3 Q. I'm not entirely sure that's the way the question is
4 put. I put these things to you -- I'm not in any way
5 challenging what you're saying, but it's just simply so
6 we see the different views on things. He does say that
7 he did have some involvement and maybe this is where the
8 difference between you lies. If we go over the page to
9 006/3, page 24. This is a continuation, a list of
10 questions about his involvement and at what stage. You
11 see, after the tissue cross-match to confirm that Adam's
12 renal transplant would proceed, you see at that stage
13 the kidney obviously has already been accepted,
14 otherwise it hasn't got over to Belfast City Hospital to
15 be having a tissue cross-match. Then he says that was
16 a joint decision with yourself and Dr Taylor, and then,
17 on inspection of the kidney to confirm that Adam's renal
18 transplant would proceed, he said that was his decision
19 alone.
20 But certainly getting the kidney over to Belfast,
21 which is what's required for accepting, he says that he
22 didn't have any role in that decision at all.
23 MR FORTUNE: Look at question 43 because that is ambiguous.
24 THE CHAIRMAN: If you want to read question 43. Let
25 Professor Savage read it just so he's got the full ...

1 (Pause).
2 MS ANYADIKE-DANES: I'm not sure where we're going with
3 that.
4 A. I think what's being pointed out is that the statement
5 says it was discussed with myself and Dr Taylor, whereas
6 the previous statement suggests that perhaps it wasn't.
7 Q. No, it says "prior to each decision in which you were
8 involved". He said he wasn't involved in the decision
9 to accept the kidney from UK Transplant. He was
10 involved in the decision after the tissue cross-match to
11 confirm that it would proceed and he was involved in the
12 decision to accept the kidney. In those decisions in
13 which he was involved, that is the information that he
14 had. That actually wasn't the question that I was
15 putting to you; I was at a previous stage, which is
16 accepting it from UK Transplant. So that actually isn't
17 relevant to the questions at 43.
18 THE CHAIRMAN: Sorry, professor, if there is any uncertainty
19 or ambiguity about this, on one interpretation of what
20 Mr Keane has said at paragraph 42(a) and (b) -- if we
21 could bring up the previous page again, please,
22 page 23 -- he says, if you read that, he had no
23 involvement or any input into the decision that the
24 match was acceptable or to accept the kidney. That is
25 what you said you were surprised at.

1 On one view if Mr Keane is right, when you rang him
2 about the kidney being available, you would have been
3 saying to him in terms, "I've already accepted this
4 kidney; will you do the transplant later on tonight or
5 tomorrow morning?", or whatever.
6 A. What happens when UK Transplant phoned at that time was
7 that they would say: we have a kidney which we think
8 would suit your patient, would you be willing to accept
9 it? And I would look at the tissue match and the
10 details they gave me and I would say: yes, I will
11 provisionally accept it but I need to speak to the
12 transplant surgeon, make sure we have theatre time,
13 anaesthetist and intensive care and I will come back to
14 you after I've spoken to the parents. So I would then
15 speak to the other people involved and if all were
16 agreeable, I would then phone back UK Transplant and
17 say: yes, we will definitely take the kidney.
18 So there's a situation where, for perhaps half
19 an hour, the kidney is held for Belfast and then we
20 either come back and say, "Yes, all systems go", or,"No,
21 for some reason, we're not happy with it", and then they
22 would offer it somewhere else.
23 THE CHAIRMAN: Okay. Thank you, I understand your position
24 and we can hear what Mr Keane says in a few days' time.
25 MS ANYADIKE-DANES: Sorry, professor, can I just take you

1 back to that? When you were answering the chairman as
2 to what the procedure was, did I hear you say "after
3 I had spoken to the parents"? I thought that you
4 wouldn't be speaking to the parents at that stage.
5 You're not going to speak to the parents until you have
6 the red light from the surgeon.
7 A. Yes. Green light.
8 THE CHAIRMAN: I think what you said -- [OVERSPEAKING].
9 You're confirming what you said before: you speak to the
10 surgeon; only if the surgeon agrees, does he ring the
11 mother; and if the surgeon and the mother agree and
12 you are all in agreement, you ring back and accept the
13 kidney.
14 MR FORTUNE: That's not quite correct either, sir. It's
15 speak to the surgeon, get the theatre time, get the
16 anaesthetist.
17 A. Yes, I did say that.
18 THE CHAIRMAN: Sorry, you don't speak to the anaesthetist at
19 that point.
20 A. Oh yes, I usually speak to the anaesthetist.
21 THE CHAIRMAN: Is that to check that there's an anaesthetist
22 available?
23 A. That there's a senior anaesthetist available.
24 THE CHAIRMAN: That's not because the anaesthetist has an
25 input into the decision?

1 A. No, it's to make sure we have the theatre ready to go if
2 the kidney needs to be put in.
3 THE CHAIRMAN: So there are three people whose opinion is
4 relevant to the decision to accept the kidney: there's
5 you, there's the surgeon and there's the parent.
6 A. Yes.
7 THE CHAIRMAN: Thank you.
8 MS ANYADIKE-DANES: And the theatre slot.
9 THE CHAIRMAN: Yes. That's not a person.
10 MS ANYADIKE-DANES: Just on the theatre slot, there was
11 a theatre list for the -- I'm sure you've seen that
12 theatre log in which Dr Campbell was the anaesthetist
13 and Mr Brown had his list of what was being carried out
14 by his assistant or junior. So that was going on in one
15 theatre. Adam's surgery happened in another theatre.
16 So when you were communicating with the hospital,
17 presumably -- actually, you were there. When you were
18 making your arrangements as to whether there was
19 a theatre available, what did that involve? Obviously,
20 it wasn't going to go into the theatre where Dr Campbell
21 and Mr Brown had theirs, so what exactly were you
22 confirming?
23 A. Well, if we were going to do the transplant at 1 or 2
24 in the morning, then I would phone and say, "Is there
25 a theatre available to do a transplant in the early

1 hours of the morning?", and the theatre manage or sister
2 would say yes. On the other hand, she might say, "No,
3 there's been a dreadful road traffic accident, we're
4 completely swamped", and that would --
5 Q. That would be that.
6 A. I don't remember it ever happening, but it's feasible.
7 When things moved to 6 or 7 o'clock, then there
8 obviously had to be some manipulation of theatre space
9 and I don't remember that I was in any way involved
10 in that.
11 Q. I understand.
12 A. That would have been probably Bob Taylor who spoke to
13 people.
14 Q. Okay. When you are going through the procedure that you
15 outlined to the chairman -- forgive me because I was --
16 there was a little bit of intervention. I'm trying to
17 make sure that I have got it straight in my head.
18 You're speaking to the surgeon, getting the surgeon's
19 okay. If he says it's okay, then do you go to find out
20 if there's an anaesthetist and theatre and then you go
21 to the mother; is that right?
22 A. Surgeon, anaesthetist, theatre, mother.
23 Q. Yes, right. Can you recall when you were actually doing
24 that on 26 November?
25 A. No.

1 Q. Roughly?
2 A. Roughly? It would have been when UK Transplant phoned
3 me.
4 Q. Which is some time in the early evening or so?
5 A. Yes.
6 Q. And at which stage were you told that: actually, we
7 don't think this is a good idea to have the transplant
8 surgery proceed at the 1 or 1.30 that you had in mind to
9 fit yourself within your 24 hours, if you like? At
10 which stage was that decision?
11 A. Well, that is a little bit unclear in my mind because
12 the decision as to when to start surgery really is
13 beyond my control because I'm the physician who's
14 saying, "Here's a boy who is well, fit for a transplant;
15 here is a kidney which appears to match him. The
16 cross-match is fine."
17 Then I think the anaesthetist and the surgeon
18 started to think: we're going to start this at 2 in the
19 morning, it would be more sensible to start it after
20 we've had a few hours' sleep at 6 or 7 in the morning.
21 And I think that was a decision that, my perception is,
22 was made between Dr Taylor and Patrick Keane, but
23 I noticed just know that Mr Keane has said that was
24 a decision made by Dr Taylor and me, but I don't
25 recollect that would be the case. I don't remember that

1 I was ever involved in that decision.

2 Q. Yes. What I'm trying to find out is roughly when that

3 was happening.

4 A. The change of time?

5 Q. Yes.

6 A. I think when the cross-match came back, saying

7 favourable.

8 Q. So in other words, when Adam's mother would have been

9 contacted, so far as she was concerned -- if you have

10 gone through your four steps, then the theatre is being

11 booked for roughly 1, 1.30, whatever it was, and that's

12 what she's being told. So all that arrangement has been

13 made and now somebody else will have to find out whether

14 there's actually a theatre slot for the 6 or -- as it

15 ultimately proved to be -- 7 o'clock in the morning when

16 the surgery's going to take place; is that the way it

17 works?

18 A. Yes.

19 Q. And whether or not there was one, presumably that's part

20 and parcel of the decision-making: yes, we'd like to do

21 it later because we've had a bit of sleep, but where's

22 the theatre space?

23 A. Yes, I think that was an arrangement that was probably

24 made most directly between Bob Taylor and the theatre

25 manager or theatre sister because it's his theatre.

1 Q. I understand that. It sort of does affect you a bit
2 because when you thought that you were going into your
3 transplant at 1 or 1.30 in the morning, there would be
4 a certain arrangement you'd make in terms of Adam's
5 fluids and whether or not you would think it was worth
6 even starting the peritoneal dialysis. Of course, if
7 it's going in -- so he's got a full night -- and he's
8 going in at 6 o'clock in the morning, that raises other
9 considerations. So although you may not have had an
10 involvement in the actual decision because you're not
11 going to have to carry it out and if they're carrying it
12 out and they say they need sleep, okay. So although
13 you're not involved in that, it does have an impact on
14 what you do because your job is making sure that Adam
15 gets there in terms of his fluids, and every other part
16 of his condition, in as good a state as possible.
17 A. Mm-hm.
18 Q. So are you saying that you think you may have known
19 about that some time after the tissue match came back
20 favourably?
21 A. Yes, I'd have known about it because the transplant team
22 would have said to me, "We think we're best doing this
23 early morning", and I would have been saying, "Well, you
24 know, from my point of view the cold ischaemic time
25 would be better at 1 or 2 o'clock", and so there would

1 probably have been a bit of discussion and, finally, it
2 was decided that 6 in the morning was a better time.
3 And I think if you remember from one of the expert
4 opinion reports, they agree that that's not
5 unacceptable, that you would operate when people are
6 fresh and --
7 Q. No, no, it's just the effect that it has on planning.
8 A. If we talk about that, I think back to questions you
9 asked me this morning -- when did I decide to start his
10 dialysis and so on -- and I think I probably indicated
11 at 9 or 10 o'clock that we should go ahead with his
12 dialysis, so he got a bit before going to theatre, but
13 at that time, thinking it would probably be 1 or 2
14 in the morning, but as it happened, it went on until
15 7 o'clock then.
16 Q. While we're on the things that I had raised with you,
17 now that we are talking about the time being put back,
18 we saw the entry into Adam's medical notes and records
19 that Dr Cartmill made of 75 ml of his maintenance per
20 hour. What was the effect of putting his surgery back
21 on the fluids he was going to receive?
22 A. Well, that is what I then discussed with Dr Taylor and
23 we decided to give him clear gastrostomy fluid until two
24 hours before theatre, and then at the end of that, we
25 reverted to the 75 ml per hour maintenance IV.

1 Q. At the end of?
2 A. The gastrostomy feed, which was to stop two hours before
3 theatre.
4 Q. So --
5 A. The gastrostomy feeds are until 5 am because he went at
6 7, if you remember, and then he was to have had two
7 hours at 75 ml per hour, but he'd lost his venous access
8 by that time.
9 Q. Yes. He was actually going to have his surgery at
10 6 o'clock. So if you were going to stop two hours
11 beforehand, you'd have been stopping at 4 am and making
12 your calculations from there. The 5 am is only relevant
13 because, as it happened, his surgery got put back to
14 7 o'clock. Do you know when that happened?
15 A. I don't know precisely.
16 Q. You certainly noted it in the notes because you do have
17 6 in your --
18 A. I changed to 7, but of course, the instruction would
19 have been to stop the gastrostomy feeds two hours before
20 going to theatre, not 5 o'clock.
21 Q. No, no, it's what people are working to when they're
22 making their other calculations about what he's going to
23 receive. Okay.
24 Now that you mention the clear fluid, maybe I might
25 ask --

1 MR FORTUNE: Before we have any more clear fluid, it's
2 quarter past 3. This witness has been going for an hour
3 and a quarter. The stenographer needs a break, sir, and
4 you have indicated that this was the time.
5 THE CHAIRMAN: Thank you very much. Yes, we'll break until
6 3.30 and then resume for about one hour until about
7 4.30, professor, if that's okay. Thank you.
8 (3.15 pm)
9 (A short break)
10 (3.35 pm)
11 MS ANYADIKE-DANES: What I was going to ask you about was
12 clear fluids. The reference, if we can pull it up, is
13 058-035-133. Just above "in theatre to have", we've
14 got:
15 "First thing in AM, on Dioralyte overnight."
16 I take it that's what "ON" means, "overnight":
17 "Rather than Nutrison."
18 Is that right?
19 A. Yes.
20 Q. What's the difference between the two as a matter of
21 interest?
22 A. Dioralyte -- a clear fluid, I think, by definition is
23 a fluid you can see through.
24 Q. Yes.
25 A. So it might be slightly pink or blue in these modern

1 days or whatever. But Nutrison is a full-calorie feed,
2 so the problem with Nutrison is that when it's in your
3 tummy and reacts with acid, it may turn into sort of
4 porridge. Whereas Dioralyte, being a clear fluid, will
5 empty from your stomach quickly, Nutrison tends not to
6 do so, so the idea of changing from Nutrison -- which
7 should be spelt with an S, by the way -- to Dioralyte is
8 so we could are sure that Adam's tummy was empty when he
9 was going to theatre.
10 Q. They also have different sodium contents, don't they?
11 A. Yes.
12 Q. Not that you were changing it for that reason, but they
13 do. Dioralyte has a sodium content of about
14 60 millimoles, whereas Nutrison would have one of about
15 43 or thereabouts.
16 A. Yes, and there was a reason for choosing Dioralyte.
17 That is that the Nutrison normally had saline added to
18 it, if you remember, which would have brought the sodium
19 content up somewhat, whereas the Dioralyte already being
20 at 60 would have been very similar to the
21 Nutrison/saline mixture.
22 Q. Yes, and just for comparison purposes, since we've heard
23 so much of the No.18 Solution, that has about
24 30 millimoles; would that be right?
25 A. Yes.

1 Q. Okay. The clear fluids. The fact there was clear
2 fluids at all, just for the record, is to be seen at
3 reference 057-014-019. I think that's the nurse's note.
4 We can see there:
5 "Clear fluids. Admitted for query renal transplant.
6 Clear fluids via gastrostomy at 180 ml per hour, IV
7 fluids at 20 ml an hour."
8 And that was meaning that he was getting 200 ml
9 an hour.
10 A. Yes.
11 Q. We'll come back to that in a minute in relation to the
12 tissuing of the cannula. But anyway, that is where one
13 sees the reference to clear fluids. If we go back to
14 where we were with your reference, which was
15 058-035-133. Am I right in understanding -- well, how
16 would the nurse know that what the clear fluid should be
17 would be the Dioralyte? Because her entry, I think,
18 refers to 26 November, whereas your note, which
19 clarifies matters, is the 27th. Yours is sort of
20 retrospective that he was -- am I right?
21 A. Yes.
22 Q. "On Dioralyte overnight, rather than Nutrison."
23 So where does the nurse get to know -- or the junior
24 doctors, for that matter -- that what is actually being
25 prescribed here is Dioralyte? Where would they find

1 that in Adam's medical notes and records?
2 A. I don't know where it's found other than where I've
3 written it, but that would have been an instruction that
4 I would have given.
5 Q. Have I interpreted it rightly, that's your note that
6 you have written on the 27th?
7 A. Of course that's the 27th at 1 am. Because we decided
8 at that stage -- obviously that note is written after
9 we've got the tissue match back. We've changed from
10 1 am or 2 am to 7 am, and so it's probably slightly
11 retrospective, yes, but --
12 Q. All I'm trying to explore is that the nurse has written
13 the clear fluids, and she's written that at an earlier
14 point in time because, at that stage, they're still
15 querying whether there was going to be a transplant
16 because, obviously, there wasn't been the successful
17 final tissue match. So what I'm trying to explore is,
18 if one's looking at Adam's notes and records, how would
19 you know that the clear fluids were supposed to be
20 Dioralyte?
21 A. Well, I suppose you ... It's possible or it should be
22 that at the top of the fluid balance chart, it would say
23 "Dioralyte".
24 Q. Is there anything else? I mean, I understand that clear
25 fluids are see-through, but it could be anything,

1 couldn't it, that's see-through? It could be water.
2 A. Well, I hope not, no. I don't think it would be water.
3 It'd be either Dioralyte or some sort of dextrose or
4 dextrose/saline solution usually. But in this instance,
5 I had ordered Dioralyte.
6 Q. I understand that. So if we go to -- one of the reasons
7 for clarifying that with you is because I think there's
8 an error in the -- well, anyway, you're going to help us
9 with that. It's the coroner's -- your deposition to the
10 coroner. 011-015-109. If you go right down to the
11 bottom, it says:
12 "This meant he had 900 ml of Dioralyte overnight."
13 And that's crossed out and "N/S saline dextrose".
14 Do you know how that came to be crossed out with that
15 put on?
16 A. If you look in subsequent pages, there's some clerk
17 in the court who took notes of my speech. And I have no
18 recollection at this stage -- when I read this and saw
19 that it said, fifth line, "normal saline dextrose", and
20 I don't remember seeing that. I signed, of course, the
21 deposition as being mine, but I suspect that I read the
22 detailed note in the subsequent pages and didn't notice
23 that that had been changed.
24 Whether there's been some confusion in the clerk's
25 mind about what was given intravenously and what was

1 given orally, I don't know. But certainly, it wasn't me
2 who changed it.
3 Q. It wasn't you who changed it. You didn't notice and you
4 would say that is incorrect. What was actually right
5 was the typed version.
6 A. Yes.
7 Q. Is the typed version something that you provided to --
8 A. Yes.
9 Q. -- the coroner? So you provided the typed version and
10 that has somehow been changed?
11 A. Yes. And I don't remember why.
12 Q. Okay.
13 A. I suspect that after signing the deposition on the day
14 of the inquest -- the next time I saw it was five years
15 ago.
16 Q. Okay.
17 THE CHAIRMAN: Can I ask you, professor, is it your writing?
18 A. No, it's not. It's not my writing.
19 MS ANYADIKE-DANES: We can go over the page to clarify that
20 for you. 011-015-110. That's, I believe,
21 Professor Savage, that's the clerk's writing that you're
22 talking about; is it?
23 THE CHAIRMAN: I think it's the coroner's writing actually.
24 Am I right? The coroner receives the typed deposition
25 and then, as you're asked questions orally, he adds to

1 your note. So somebody's asked the first set of
2 questions, then Miss Higgins has then asked the next set
3 of questions and I think then, Mr Lavery, you appear
4 further on down in that or maybe on the next page, but
5 that's the coroner's writing.
6 MS ANYADIKE-DANES: If we just go over to 011-015-111. No,
7 don't worry. Well, for some reason it's not coming up.
8 Don't worry about that.
9 THE CHAIRMAN: There it is now. It was Mr Brangam, not
10 Mr Lavery. Anyway, we have got the point, I think.
11 MS ANYADIKE-DANES: Can I just deal with this sort of phase
12 as we're moving towards the time when Adam actually is
13 taken to theatre, which is roughly when your principal
14 role ends. It's not that you don't continue to have
15 a role, but your principal role ends, as I understand
16 it.
17 There was an issue as to -- one of the things
18 we were trying to find out is they phone you up, offer
19 you the kidney, you go through your procedures, decide
20 to accept the kidney and the kidney is taken, brought
21 over, it goes to the tissue-typing laboratory, which is
22 on the Belfast City Hospital site, they do the
23 cross-matching for you. The next step then obviously is
24 when all that is acceptable, then the kidney is brought
25 over to the Children's Hospital.

1 At which stage in all of that do you actually take
2 consent from the mother? Is it after the kidney's
3 actually been brought and the surgeon has an opportunity
4 to look at it, or when do you actually physically take
5 the consent?
6 A. I don't know the exact time, but I believe it would have
7 been late evening on the 26th.
8 Q. After you know about the successful cross-match or
9 before?
10 A. I expect after.
11 Q. Afterwards?
12 A. Yes. There would be no point in taking it --
13 Q. No, because you have to consent to something that can't
14 proceed.
15 A. Sorry, early morning of the 27th, it is.
16 Q. I'm going to come back to the whole issue of consent
17 because that's quite a large area.
18 One thing I thought you might help us tidy up is how
19 the kidney actually gets from the Belfast City Hospital
20 to the Royal. Who is actually responsible for that bit
21 of it? I can understand from what you said that you are
22 there in the Children's Hospital and how does the kidney
23 then get from the Belfast City Hospital to the
24 Children's Hospital?
25 A. Well, I don't know how this particular kidney got from

1 the City Hospital to the Royal. In fact, it's not
2 delivered to the tissue-typing lab; it's delivered to
3 the adult renal unit.
4 Q. Ah. And then what happens to it?
5 A. Usually it is there until the transplant surgeon -- and
6 actually the tissue-typing technicians take the
7 samples -- they're separate samples of lymph nodes and
8 so on -- from that package to do their cross-match. And
9 when it's decided to go ahead with the transplant,
10 generally what happens is that the transplant surgeon
11 who's based in the city hospital picks up the kidney and
12 brings it across to the Royal Belfast Hospital For Sick
13 Children.
14 Q. Pause there so I understand what's happening. You say
15 it goes to the adult renal unit?
16 A. Yes.
17 Q. And from there it goes for --
18 A. Some of the tissue that's included in the box is taken
19 by the tissue-typing technician.
20 Q. So they don't take the whole kidney; they just take some
21 tissue?
22 A. No, no, they don't disturb the kidney.
23 Q. When all that is satisfactory, because that's where the
24 surgeon is, then that surgeon brings it with him,
25 effectively?

1 A. That's what usually happens, although my recollection
2 from reading documents is that Mr Keane did not bring it
3 with him.
4 Q. Well, yes. That's actually what I'm asking you.
5 A. All I can say is it got there. I don't know how it got
6 there.
7 Q. It certainly did, but let me see if I can help you and
8 start the chain of events.
9 THE CHAIRMAN: Sorry, does Professor Savage need to deal
10 with this?
11 MS ANYADIKE-DANES: It's part of the arrangements for what
12 happens.
13 A. What I'm saying is that's what normally happens.
14 Q. Sorry, professor, can I just take you to a witness
15 statement. Witness statement 002/3, page 21. Then if
16 you look at 20, there's a question (a):
17 "Identify the transplant surgeon who collected the
18 kidney and brought it to the RBHSC."
19 And you say the surgeon was Patrick Keane.
20 A. Mm.
21 Q. What I was going to ask you is: on what basis did you
22 reach the view that it was Mr Keane who brought the
23 kidney to the Children's Hospital?
24 A. What I was saying before was that that was usually what
25 happened -- and I was going to add that it might well be

1 that one of the nursing staff in the adult renal unit
2 arranged for transport to bring it across because
3 Mr Keane was at home, not in the hospital. I don't know
4 the answer to that.
5 Q. I appreciate that, but we haven't -- I don't want to
6 sort of be pedantic about it, but you haven't caveated
7 that. Actually, it's a straightforward question and
8 it's received a fairly straightforward answer, if I may
9 say so.
10 A. I thought that was correct until I read Patrick Keane's
11 statement.
12 Q. Right. Well, Patrick Keane --
13 A. I might have been better to say, "I have no idea how it
14 got there".
15 Q. Well, you have provided the statement. We can go to
16 what Patrick Keane says. It's 006/2, page 8. I think
17 it's the answer to question 9(f):
18 "Identify who collected the donor kidney, when and
19 from where. I am not aware of this information and
20 therefore this question should be raised with the
21 RBHSC/Belfast HSC trust."
22 So he's certainly not saying it was him. But
23 certainly, when you provided your statement, you thought
24 it was him?
25 A. I thought it was him.

1 Q. Okay. If we then --
2 A. The important thing is that it got there.
3 Q. Yes, the important thing is that it got there,
4 I appreciate that. But some of what we have to deal
5 with is what people's roles and responsibilities are and
6 just what the general arrangements are and that is what
7 we're trying to understand.
8 THE CHAIRMAN: I don't think it really matters whether or
9 not it was Mr Keane or somebody else who brought the
10 kidney.
11 Professor Savage has said his general understanding
12 is that it is the surgeon who brings it over. That's
13 what normally happens. Unless there's some issue that
14 something went wrong with this kidney when it was being
15 brought over, I don't think it really matters very much.
16 MS ANYADIKE-DANES: Well, it might help to place who came
17 over when. So there may be some timing issues to which
18 it assists us because if you know when the kidney came
19 over and if it's Mr Keane who brings it, it assists in
20 when Mr Keane came over. It's entirely a matter for
21 you, Mr Chairman.
22 Sorry, it's slightly out of order, but I wonder if
23 I can take you back to something I was looking for.
24 That is 058-035-131. This is a note -- if you go almost
25 down to the bottom you'll see: "Chest clear".

1 A. Mm.
2 Q. This goes back to that question that I was trying to
3 explore with you about the chest X-ray and the reason
4 being that the correspondence that the inquiry has
5 received from the DLS is pretty adamant that there
6 wasn't a chest X-ray for the evening of the
7 26th November. What there was was a request for one by
8 Dr O'Neill, which of course is entirely proper because
9 that's what's required by the protocol.
10 But what they say is that if there had been a X-ray,
11 then there would have been a report back from the
12 radiologist and there is no evidence of that at all on
13 the notes, so they have queried whether there ever was
14 a chest X-ray. You, in your note, which we looked at
15 earlier, show that you have ticked "X-rays" and "all
16 X-rays being brought" and so forth.
17 This reference to the chest being clear -- I just
18 want to be certain about this -- is this a reference to
19 having listened to his chest with a stethoscope and
20 doesn't take us one way or another, if I can put it that
21 way, to whether or not the chest X-ray existed?
22 A. This is the clinical examination.
23 MR FORTUNE: How is this witness going to answer that
24 question? Bearing in mind the author of this note is
25 Dr O'Neill.

1 THE CHAIRMAN: If he can't answer the question, he'll tell
2 us, but he has been asked for an interpretation of what
3 "chest clear" means in the context of whether or not
4 there was, in fact, a X-ray.
5 Please answer, professor.
6 A. My interpretation would be that this is a note of
7 clinical examination of the chest.
8 MS ANYADIKE-DANES: So that is him listening to it with
9 a stethoscope, effectively?
10 A. Yes.
11 Q. Thank you very much.
12 A. The issue of the chest X-ray would be speculation.
13 Q. Yes. I understand that. Well, we're simply trying to
14 resolve an issue that we've been given by the DLS, if
15 I can put it that way.
16 Then if I pick you up on a point that you had
17 mentioned before, which is when you were first referring
18 to the kidney transplant form, you had indicated that
19 a half match would be acceptable for Adam. Can I ask
20 you why?
21 A. Well, in broad terms, if you accept that you get half
22 your genes from your mother and half from your father,
23 a half match is as good as you'd get from your mother or
24 father.
25 Q. Why do people sometimes want more than a half match?

1 A. Studies show if you have a perfect match, you're less
2 likely to have any rejection, therefore the life of the
3 kidney is likely to be longer. However, in modern -- in
4 immunosuppressant with cyclosporin and so on, that is
5 not quite as big an issue.
6 Q. Yes, but if we're not dealing with modern
7 immunosuppressant medication, but we're back in that --
8 or do you take 1995 to involve modern?
9 A. Cyclosporin is pretty modern, yes.
10 Q. Sorry. What I mean is: when you say "in modern
11 immunosuppressant drugs", are you referring back to 1995
12 or talking about something more recent?
13 A. I think in 1995, if you received azathioprine and
14 cyclosporin, we would not expect there to be a major
15 problem with rejection, although it's always possible --
16 even with a very good match.
17 Q. So a half match carries with it a risk --
18 A. A slightly increased risk of rejection.
19 Q. But, on the other hand, it makes available more donor
20 kidneys to the recipient?
21 A. Yes.
22 Q. Just trying to see if we can gather together the
23 information that you were gathering together, that you
24 would convey to Adam's mother, so we've got some -- I'm
25 not saying that you would necessarily convey all these

1 details, but this is the information you had. So
2 you have information about the anatomical details of the
3 kidney. You have information about its ischaemic time,
4 its cold ischaemic time, and now because you won't be
5 talking to the mother until you've had the involvement
6 of the surgeon and, for that matter, the anaesthetist,
7 you'll have information on those two principal members
8 of the transplant team before ever you start to raise
9 with the mother, "We've got a potential donor kidney for
10 Adam"; would I be right in that?
11 A. Yes.
12 Q. I may have covered it a little bit before and forgive me
13 if I have, but I'm trying to understand what, if
14 anything, you knew about the experience of Dr Taylor and
15 Mr Keane at that time. At that time.
16 A. Well, I think you asked me this before.
17 Q. I'm trying to understand what you knew at that time.
18 A. At that time, I knew that Mr Keane had considerable
19 experience with adult transplantation. I understood
20 that he had, as I've said before, contributed part of
21 a chapter on paediatric transplantation to a standard
22 textbook. And I was aware, at least, that he had
23 carried out a successful transplant in a smaller child,
24 ten days before, and I believe I understood that he had
25 carried out transplants in other children as well.

1 That's my recollection. It's 17 years ago, so asking me
2 things is difficult.
3 Q. I understand that.
4 A. As far as the anaesthetist goes, as I've said, when
5 I ask an anaesthetist if he is prepared to carry out
6 a paediatric transplant, I am more interested in whether
7 he has other responsibilities or he can take that on as
8 his entire work on that occasion. I expected that an
9 adult or a paediatric consultant anaesthetist who worked
10 in a regional centre and had responsible for critically
11 ill children in intensive care would have no problems
12 with a paediatric transplant, and that would still be --
13 Q. Your expectation.
14 A. My expectation.
15 Q. Would you have known that -- when you were contacting --
16 let's start with Mr Keane first of all, actually,
17 because he's the first port of call as I understand you.
18 Was Mr Keane the surgeon who happened to be on call or
19 is there some other way in which you got to be asking
20 him whether he would carry out this transplant?
21 A. I don't remember exactly what happened that evening.
22 I believe that I would have contacted the adult renal
23 unit, who would have told me who the transplant surgeon
24 available for that night was, if a kidney was offered.
25 Q. So this is not a matter of you actually choosing or

1 selecting clinicians, it's just who's available?
2 A. Yes.
3 Q. And in terms of Dr Taylor, you got to him as the
4 paediatric anaesthetist on call?
5 A. Yes.
6 Q. And all you wanted to know from him is whether he was
7 able, subject to his other commitments, to carry it out.
8 What about Mr Brown? Why was Mr Brown part of the team?
9 A. I don't know. I suppose I could say that it was our
10 habit at that time with small children receiving
11 transplants that we attempted to put together an adult
12 transplant surgeon and a paediatric surgeon to assist
13 them.
14 Q. Well, one of the things that you've said is that
15 Mr Brown had previous experience of Adam. So you
16 thought that that might be useful. Why would that be
17 useful?
18 A. Because he had done his previous urological surgery, so
19 as you've said before, understanding his plumbing, as
20 you put it, would be completely available to Mr Brown
21 because he had carried it out. However, that was not
22 the reason for picking him.
23 Q. That wasn't the reason for picking him?
24 A. I don't think so.
25 Q. Can you recall what was?

1 A. No, I can't.

2 Q. Well, I will have to find that in your witness
3 statement. I don't have my hand to it immediately, but
4 I will look for it because I think there is some
5 guidance on why you did.

6 What did you know of Mr Brown's involvement in
7 Adam's case as at November 1995?

8 A. Well, Mr Brown had carried out his original urological
9 surgery when he was a small -- under the age of 2,
10 I think. As you know, he didn't really have any further
11 urological surgery after that. So he wasn't involved
12 further.

13 Q. Well, so far as you were aware, had that initial surgery
14 been entirely successful?

15 A. Well, that wouldn't be my judgment.

16 Q. Well, were you not involved in seeking a second opinion
17 for Adam's mother?

18 A. Because Adam's mother asked me to seek a second opinion
19 because she herself was not happy with the end result
20 whereby Adam had one ureter attached to the other, and
21 I believe you have a copy of the letter from Mr Boston,
22 who gave the second opinion.

23 Q. Yes. But you didn't think that his internal plumbing
24 was entirely satisfactory, did you?

25 A. I haven't said that.

1 Q. I think there's a letter from -- we'll find the letter
2 from you to Adam's GP. But in any event --
3 A. Obviously you'd rather have your two ureters going to
4 your bladder.
5 Q. So it was an unsatisfactory situation?
6 A. Yes, but it may have been the only possible situation.
7 Q. It may have been. Nonetheless, it was an unsatisfactory
8 result; yes? So she had specifically asked you if you
9 could obtain a second opinion from Mr Boston for her,
10 and you did that?
11 A. I was very ready to do that. It's every patient's right
12 to have a second opinion.
13 Q. Yes. When you say -- obviously we're going to ask her,
14 but you were having the communication with her, so
15 I want to get your view on it. When you say she wasn't
16 "entirely happy", what do you mean by that exactly?
17 Because obviously she can only know what happened from
18 what's told to her as to what's happened. Why wasn't
19 she entirely happy?
20 A. I don't know exactly, but I assume it is because he had
21 lost the lower end of one ureter following surgery and
22 had to have it connected across, and I'm sure that
23 Mr Brown had explained that to her and she therefore
24 wondered if the operation had not gone properly or
25 whatever. I don't know exactly why Debra Strain thought

1 that.
2 Q. Were you there when Mr Brown was explaining the events
3 of the surgery afterwards?
4 A. No.
5 Q. Were you normally there as a coordinating role to talk
6 to her about the aftermath of surgery on her son?
7 A. Not for that type of surgery. That would be the
8 surgeon's responsibility. If you remember, the aim for
9 the surgery was to achieve the best drainage of both
10 kidneys as was possible because they'd been obstructed
11 and although it wasn't a normal anatomical situation, it
12 did achieve satisfactory drainage.
13 Q. In the course of which, he suffered chronic renal
14 failure at that time and had a brief period of dialysis
15 as a result?
16 A. I can't remember the detail of that because that
17 happened in the Ulster Hospital Dundonald, as
18 I remember, and he came to the Children's Hospital and
19 I was involved in the brief period of dialysis and
20 sorting out his fluids and electrolytes and he recovered
21 then. But I don't know that that's when that surgery
22 happened. I would have to review the notes.
23 Q. Right. Maybe we'll have an opportunity to do that. But
24 in any event, you seek a second opinion for her. So far
25 as you're aware, was Mr Brown involved in any subsequent

1 surgery?
2 A. Not as far as I know.
3 Q. But there was subsequent surgery?
4 A. Yes.
5 Q. Mr Boston was involved in some subsequent surgery and so
6 were others. Do you know the reason why Mr Brown wasn't
7 involved in subsequent surgery?
8 A. Well, I think the next significant operation he had was
9 the fundoplication, which was probably more Mr Boston's
10 expertise than Mr Brown's, but I suspect it was also
11 because of Debra Strain's feeling about Mr Brown.
12 Q. So you think that he wasn't involved in any subsequent
13 surgery on Adam because of Adam's mother's own views
14 about that?
15 A. I think so, yes.
16 Q. So you were aware of her views about it, rightly or
17 wrongly, her views about him and his involvement in her
18 son's care?
19 A. Yes, but I don't know that I know how strongly or what
20 the level of them was.
21 THE CHAIRMAN: I think in your answer there was more to it
22 than the mother not being happy. The next major
23 operation would have been more in Mr Boston's field in
24 any event?
25 A. I think so, yes. And again, I'm not a surgeon. I think

1 that's a question that perhaps you should put to
2 Mr Brown.
3 MS ANYADIKE-DANES: Yes. I think I will. But I will ask
4 you why you think that, that the next major surgery
5 would have been something more appropriate for Mr Boston
6 to carry out than Mr Brown. On what basis do you think
7 that?
8 A. I think that Mr Boston -- that gastrointestinal surgery
9 was probably one of the things that he specialised in.
10 But again, I don't want to get into the area of
11 speculation. I am aware that Debra Strain was not happy
12 with Mr Brown. I'm aware that he didn't carry out any
13 further surgery with Adam and that suited Debra Strain.
14 Q. Yes. And that is absolutely fine. The only reason
15 I pressed at all is because I think the chairman was
16 being left with the impression that it may have been
17 something more than just Adam's mother's feelings about
18 it, but it may have been that there was actually
19 a surgical reason or a medical reason why. That's why
20 I was asking you for the basis of your view, but you've
21 now said you don't want to engage into speculation about
22 that.
23 A. Yes.
24 Q. Thank you. Sorry, just give me a moment. (Pause).
25 Perhaps, just because I'm trying to and intend to

1 continue to be fair to the witnesses, to put contrary
2 positions to them. Could we pull up witness statement
3 001/1, page 2? I think it's the third paragraph, which
4 starts "as far as the surgeon was concerned".
5 THE CHAIRMAN: This is the mother's statement?
6 MS ANYADIKE-DANES: This is the mother's statement, yes:
7 "I did not know anything at all about Mr Keane, only
8 that he was a renal surgeon from the City Hospital, so
9 I had no reason to have any misgivings. I had no idea
10 that Mr Brown was going to be present. This would have
11 been an issue for me because I had quite clearly stated
12 in the past that I did not want Mr Brown to be involved
13 in any surgery with Adam because previous experience had
14 left me with no faith in him. I only learned at
15 9.30 am, two-and-a-half hours into Adam's operation,
16 that Mr Brown was there."
17 THE CHAIRMAN: Do you remember her saying that to you,
18 professor? When she says that she had quite clearly
19 stated in the past that she didn't want Mr Brown to be
20 involved, do you remember her saying that to you?
21 A. It's quite possible she did say that to me, but I don't
22 remember her putting anything as strongly as that to me,
23 but it's quite possible that she did. I have no reason
24 ever to not believe what Debra Strain says. She
25 obviously did have an antagonism to Mr Brown, as is

1 stated here.

2 THE CHAIRMAN: Okay.

3 MS ANYADIKE-DANES: Thank you. I wonder then, if Mr Brown

4 was being included in the transplant team because he was

5 a paediatric surgeon. Does that mean that all you

6 wanted, if you like, was a paediatric -- not you

7 personally -- all that you thought would have been

8 appropriate to have was a paediatric surgeon who had

9 some knowledge of Adam to assist Mr Keane, who had no

10 knowledge of Adam, if I can put it that way?

11 A. Well, I think that what I felt would have been good

12 would be to have a senior paediatric surgeon working and

13 assisting Mr Keane. I think that was very reasonable.

14 The fact that it was Mr Brown, I'm not quite sure how

15 that came about, but obviously he was available. It

16 does seem to me at this distance that having Mr Brown,

17 who knew exactly what his internal anatomy was, was an

18 added benefit. But I have to accept that reading

19 Debra Strain's statement, that she obviously had some

20 antagonism -- a considerable antagonism -- to Mr Brown,

21 but that was not something that I probably took into

22 account that evening or indeed thought about. I was

23 just thinking about getting -- that we got a good team

24 together to take Adam safely through a transplant.

25 Q. Okay. So when I had put to you that it was somebody who

1 had previous experience of Adam's surgery, I thought you
2 answered me -- and please correct me if I'm wrong -- but
3 I thought you had answered me that that actually wasn't
4 the real reason he was being included. The reason
5 he was being included is because he was a senior
6 paediatric surgeon.
7 A. I think so, yes, but of course this is 17 to 20 years
8 ago, and again, I don't --
9 Q. I understand that.
10 THE CHAIRMAN: I think to be fair to the professor, when you
11 asked him why was Mr Brown involved, he also said,
12 "I don't know". So I think he said he didn't know.
13 He was aware that Debra Strain was unhappy with Mr Brown
14 in the past, but there was a habit or a practice to
15 include a paediatric surgeon.
16 A. For the small children.
17 MS ANYADIKE-DANES: Was there any other paediatric surgeon
18 that could have been asked if they could assist?
19 A. I'm sure there could have been, yes.
20 Q. If that's the case, why would there be included in the
21 transplant team a paediatric surgeon to whom the mother
22 had the strong feelings that she did have?
23 A. Because I probably was unaware or had forgotten or
24 wasn't involved in picking Mr Brown. I don't know.
25 I've said I don't know why Mr Brown was involved and

1 that is the truth.
2 Q. When did you first know that Mr Brown was going to be
3 part of the team?
4 A. I don't know.
5 Q. We'll find the reference, but I think you knew that
6 before consent. We'll find the reference anyway so we
7 won't speculate about it. The reason for that is -- why
8 didn't you tell her?
9 A. I don't know. I think ... I'm aware that I'm getting
10 into the area of speculation. It's better to say
11 I don't know why I didn't tell her or why Mr Brown was
12 involved. At the time, I probably thought we have
13 a senior paediatric surgeon, who's working with
14 a transplant surgeon, and this is an ideal team. The
15 antagonism between Mrs Debra Strain and Mr Brown
16 probably disappeared from my mind.
17 Q. Well --
18 MR FORTUNE: Sir, I hesitate to rise, but Professor Savage
19 seems to be tiring.
20 THE CHAIRMAN: Well, Mr Fortune -- if you can give us 15
21 more minutes, professor, thank you very much.
22 MR FORTUNE: I'm well aware of the pressure, but in fairness
23 to Professor Savage, he ought to be asked whether he is
24 tiring and, if so, does he feel able to go on. He's
25 been giving evidence all day about matters going back

1 a long time and the answers that he's been giving in the
2 last few minutes indicate that he may well be tiring.
3 THE CHAIRMAN: It also indicates that he doesn't recall
4 things, which is entirely understandable because some of
5 these are not recorded from 16 or 17 years ago and
6 I don't have a difficulty on that. Can you stay with us
7 until 4.30, professor?
8 A. Yes. I think the problem is that I'm being asked,
9 recurrently, the same question and it's difficult to
10 keep saying, "I do not know".
11 MS ANYADIKE-DANES: Yes. To some extent, you do say you
12 didn't know, but then if it is the case that you have
13 said different things in your witness statements, then
14 that's part of the reason you get asked the question.
15 A. Okay.
16 THE CHAIRMAN: Sorry, you don't need to explain this to the
17 witness. If you just move on with the next question.
18 MS ANYADIKE-DANES: Thank you.
19 Well, the question I asked you was when you would
20 have appreciated that Mr Brown was going to be part of
21 the team, and that's a question to which you say you
22 don't know. But if I can take you to witness statement
23 002/3, page 26. It's in the answer to question 22(d)
24 to (f), and if you start at (d), the question was:
25 "State when you first knew that Mr Stephen Brown

1 would act as that paediatric surgeon. I expect that
2 I knew that Mr Brown would be the paediatric surgeon
3 some time on the evening of the 26th and therefore would
4 probably have been aware when I spoke to Ms Slavin later
5 on that evening that he would be the surgeon involved."
6 Then you go, in fairness --
7 A. I think, in fairness, this was before I realised that
8 I should not speculate in answering questions because
9 I say "I expect that I knew". What I'm saying now
10 is that I don't clearly remember.
11 Q. All right.
12 A. I'm not trying to be difficult, you understand, I'm
13 trying to tell you that I don't clearly remember.
14 THE CHAIRMAN: I've got the point. Let's move on.
15 MS ANYADIKE-DANES: It's part of the protocol that you speak
16 to the paediatric surgeon, but does that mean that you
17 speak to the paediatric surgical team or just one of
18 them?
19 A. I don't know what you're referring to, I'm afraid.
20 Q. Sorry, we're going to get some help with that.
21 If we pull up witness statement 002/2, page 52:
22 "Contact transplant surgeon, paediatric surgeon."
23 So Mr Keane was the transplant surgeon, Mr Brown was
24 the paediatric surgeon; isn't that right? So does that
25 mean under this protocol that it was your responsibility

1 to contact Mr Keane and whoever was going to be the
2 paediatric surgeon? Under this protocol. I'm not
3 saying that's what actually happened on the 26th, but
4 is that what that protocol actually means?
5 A. Yes.
6 Q. Thank you.
7 A. But I don't know that, necessarily, I would have always
8 contacted a paediatric surgeon. The paediatric surgeon
9 who assisted a transplant surgeon could well have been
10 a senior registrar who was on call that night as well.
11 Q. Yes, I understand. I was simply trying to discover what
12 that meant in the protocol.
13 Mr Keane has given an explanation of why he says
14 Mr Brown was involved and you've probably seen it from
15 his witness statements, but if not, I can help you with
16 it. It's at witness statement 006/2, page 2. In answer
17 to question 1. If you look at 1(a):
18 "I was involved in setting up the Stone Service for
19 children, the continuing care ... With reference to
20 transplantation, I was involved in teaching the surgeons
21 at the RBHSC how to perform the procedure, hence
22 Mr Brown's involvement."
23 So Mr Brown came in that way.
24 And then he also says at witness statement 006/2,
25 page 4, in answer to question 4, when asked to describe

1 when, why and in what circumstances Mr Brown came to act
2 as assistant surgeon:
3 "As detailed above, I was teaching the paediatric
4 surgeons at the Children's Hospital about transplant
5 surgery and had assisted Mr Boston in one procedure.
6 Mr Brown was also interested in learning and had
7 previously operated on Adam and therefore had a personal
8 interest in his care."
9 And then just finally, witness statement 006/3,
10 page 2, question 1:
11 "Explain the connection. Paediatric surgeons as
12 a group were interested in providing the transplant
13 service in the future and were keen to be involved.
14 Mr Brown, a paediatric surgeon, was the surgeon on call
15 and he wished to be involved in Adam's care. I believe
16 that Mr Brown had operated on Adam on several previous
17 occasions. I had not requested Mr Brown to be
18 involved."
19 That's part of the reason why I've asked you some of
20 these questions because it's not entirely clear. We all
21 know that Mr Brown got involved; it's simply not
22 entirely clear how he got to be involved. But in any
23 event, maybe you can help in this way. So far as you
24 can recall, was there any discussion between you and
25 Mr Keane about Mr Brown's involvement?

1 A. Not that I remember.

2 Q. So if you didn't do it, then Mr Keane must have told you

3 so that you would have that information or now you say

4 that might be speculation, so we'll leave that.

5 So it at least has you knowing two of the members of

6 the team and potentially, although it's now speculation,

7 knowing a third member. Did you know anything about the

8 assistance for Dr Taylor?

9 A. No.

10 Q. Did you know whether he would have assistance?

11 A. No.

12 Q. It's not part of your need or your remit to know that?

13 A. No.

14 Q. He sorts that out?

15 A. Yes.

16 Q. In terms of the nurses, can you help us with that?

17 I know that you contact the theatre. At least, you

18 initially did and thereafter Dr Taylor had to when they

19 put the thing back. Part of what I think you were

20 saying that you did is that you also contacted the

21 nurses or, at least, I suppose, whichever nurse would

22 ensure there would be appropriate theatre nurses. How

23 does that work? Do you contact the sister? I don't

24 know if they're still called that.

25 A. They were probably called sisters in those days.

1 Q. Is that who you contact and that is the person who
2 organises the theatre nurses?
3 A. I had contact with the senior nurse in theatre that
4 night and said there is possibility that there could be
5 a transplant later this evening and I'm alerting you to
6 that to make sure there's a theatre available.
7 Q. Is it the task of that senior nurse to ensure that there
8 will be appropriate theatre nurses available for the
9 procedure? Or you don't know how that happens?
10 A. I don't know how the internal organisation of the
11 theatre works.
12 Q. You are just alerting them because you want to make sure
13 there's a theatre and there's going to be some nurses,
14 basically. Can you help with how the medical technical
15 officer gets involved? How does that person become
16 involved?
17 A. I don't know.
18 Q. Do you even know how that person is alerted or is he
19 part of the theatre?
20 A. I don't really know. There are medical technical
21 officers as part of the theatre and intensive care team,
22 and the organisation of theatre would be -- apart from
23 alerting them is beyond my remit.
24 Q. So you're just alerting them about the theatre so that
25 the whole package that comes with --

1 A. Is put together.
2 Q. -- the theatre is put together for a paediatric
3 transplant?
4 A. Yes.
5 Q. Would that be fair to put it like that?
6 A. Yes.
7 Q. Okay. Are you aware -- you spoke to Dr Taylor and,
8 perhaps in the light of what your counsel has said, it's
9 not fair to try and get into that level of detail now as
10 to what all your discussions were, so I won't seek to do
11 that. Maybe I can ask you this housekeeping question,
12 and then we can leave those more substantive points for
13 tomorrow. In terms of having available Adam's medical
14 notes and records, you said earlier that you obviously
15 tried to make sure you got the things you thought people
16 would want. So you got his X-rays and so forth and you
17 also have accepted that Adam's medical notes and records
18 were extensive.
19 What was the plan or what was the procedure of
20 ensuring that the transplant team could have access to
21 them? Where would they be kept?
22 A. They are kept in the medical records department and once
23 someone comes in for a major operation like that, they
24 would come to the ward.
25 Q. So the full set would be there?

1 A. I think so, yes.

2 Q. When, as you say, somebody is admitted for a procedure

3 such as that, what triggers the bringing of the notes?

4 Is it a member of the transplant team who requests it or

5 is it the mere fact of admission for a procedure like

6 that that triggers the recovery of the notes?

7 A. Yes, I think so.

8 Q. Which one?

9 A. If someone's brought in for major surgery, then the ward

10 staff will order his notes up from records.

11 Q. And do you know how long that takes to get them all

12 there?

13 A. Not very long.

14 Q. Thank you.

15 A. I mean, you'd probably get them up -- I mean, if you

16 really said, "We desperately need these notes", somebody

17 would get them immediately.

18 MS ANYADIKE-DANES: Mr Chairman, I'm wondering in light of

19 the time --

20 THE CHAIRMAN: Yes, 10 o'clock tomorrow.

21 (4.30 pm)

22 (The hearing adjourned until 10.00 am the following day)

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25

1 I N D E X

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PROFESSOR MAURICE SAVAGE (called) 2

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Questions from MS ANYADIKE-DANES 2

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