

Monday, 26 March 2012

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

(10.00 am)

(Delay in proceedings)

(11.31 am)

THE CHAIRMAN: Good morning, ladies and gentlemen. Welcome back to Banbridge. First of all, I apologise for the very late start. We've had an assortment of teething problems this morning, which I think we have now finally put behind us. This delay will not be repeated in future.

When we were last here on 20 February, inquiry counsel Ms Anyadike-Danes opened the inquiry and also there were comments by some other representatives. Since then, as you are aware, the expert witnesses in Adam's case have met twice. They met first on 22 February and then again on 9 March. The transcripts of their meetings have been circulated to the interested parties along with audio recordings of the meetings.

You will be aware that we gave the experts the opportunity to make further written statements if they wished. We have received -- and will distribute later on today to the interested parties -- a series of further reports from Dr Coulthard, one more from Dr Squier and one more from Dr Haynes. I understand Professor Gross and Professor Kirkham will have their

1 final reports with the inquiry today. You will all have
2 them by Wednesday.

3 If I could remind you that the reason for delaying
4 the oral hearings in Adam's case was that
5 Professor Kirkham's report in February had raised a new
6 and fundamental issue, namely whether Adam's death was
7 actually caused by hyponatraemia at all. This was more
8 than just an ordinary disagreement between the experts,
9 of which there are a number. Had it been just an
10 ordinary disagreement, we would have gone ahead without
11 delay. But rather, Professor Kirkham advanced,
12 effectively, an entirely new thesis about how Adam died
13 and it was necessary to investigate that. I have read
14 the transcripts of the Newcastle meetings and I have
15 seen the additional reports, which, as I have indicated,
16 you will all see later on today. As I've indicated,
17 there are two more due in. The result of that is that
18 tomorrow, assuming we have the further reports, I will
19 make some preliminary observations about what has
20 happened and what the consequences of those further
21 reports are. But for now, and effectively for the rest
22 of the day, Ms Anyadike-Danes will deliver her opening
23 address in Adam's case on the clinical issues relating
24 to Adam.

25 We had hoped to circulate this in advance, but due

1 to the stream of reports coming in from the expert
2 witnesses and the extent of their discussions in
3 Newcastle on 9 March, that has not been possible. I do,
4 however, expect that the opening address will be
5 available to you by the end of today in writing. So
6 apart from hearing it delivered over the next few hours
7 and following on the LiveNote system, the written
8 opening will be available at the end of the day.

9 As a result of some of the discussions coming out of
10 Newcastle and as a result of the fact that we still
11 don't have all of the reports and also, partly, because
12 some of the reports which we have received -- which
13 we will share with you later -- have come through very
14 recently, it will not be possible for Ms Anyadike-Danes
15 to complete every aspect of her opening today, but what
16 will happen is you will hear an extensive opening on
17 almost all of the issues with which we are concerned on
18 Adam's treatment.

19 Since this is being delivered to you without you
20 having seen it in advance and since I anticipate that
21 Ms Anyadike-Danes will take the rest of today to deliver
22 it, I will allow the interested parties overnight to
23 consider what she has said before anyone who wants to
24 give an opening address has to do so. We have
25 a specific indication from Mr Hunter and Mr McBrien, on

1 To start with, the hearing into Adam's case is going
2 to involve both clinical issues and hospital management
3 and governance issues. It has been agreed that the
4 clinical issues should be addressed first and there's
5 going to be another hearing, which will concern the
6 management and governance issues, and I'm going to open
7 separately the management and governance issues. So the
8 purpose of the opening today is to open the clinical
9 issues and the purpose of doing that, having an opening
10 at all, is to provide a context within which to consider
11 the clinical evidence and to draw attention to the
12 investigation that has been carried out and the evidence
13 that it has produced and its relevance to the revised
14 terms of reference and the list of issues.

15 There is a lot of evidence. The evidence is not
16 only that which arises in the oral hearings, so that's
17 part of the importance of drawing attention to it. And
18 then, thirdly, to highlight the main issues and
19 identify, in general terms, the areas that the legal
20 team consider requires further testing and proving
21 through questions at the oral hearing.

22 I'm conscious, Mr Chairman, that you're going to be
23 making findings and recommendations on the basis of the
24 totality of the evidence received and not just what is
25 heard during the oral hearings, important, of course, as

1 that aspect of the investigation is. So I will try and
2 set out for you some of what has been received from all
3 the categories that were described during the general
4 opening.

5 I'm not presuming to summarise everything as that
6 would be, frankly, an impossible task, as well as being
7 extremely time-consuming. Also, you will have the
8 complete set of the evidence that has been obtained, as
9 indeed will the interested parties. During the opening
10 hearing on 20 February, I explained that following the
11 establishment of the inquiry on 1 November 2004,
12 requests for information of evidence were sent out for
13 a number of bodies including and of relevance to Adam's
14 case: the Department of Health, Social Services and
15 Public Safety, the Royal Group of Hospitals, the Eastern
16 Health and Social Services Board, the Coroner for
17 Greater Belfast and, of course, Adam's family. And that
18 call for documents has been ongoing since the resumption
19 of the inquiry's work in 2008 and it is still
20 continuing.

21 The search for relevant documents has and is being
22 informed by guidance from the inquiry's advisors, from
23 its experts and from the responses that it receives to
24 witness statements. And for that matter, from some of
25 the information it receives from documents, that

1 generates a need to request further documents, so it is
2 an ongoing process. And if I start just with the
3 documents and other material. To date, the inquiry has
4 received a vast amount of material in relation to Adam's
5 case. We have, we believe, received all his medical
6 notes and records. We have received his developmental
7 records. We received reports, scans, X-rays
8 photographs, correspondence, other documents; all
9 generated by or for the Ulster Hospital, the Royal Group
10 of Hospitals and the Children's Hospital. And also the
11 depositions from the inquest into Adam's death and
12 reports commissioned by the Coroner, including perhaps,
13 most significantly, of all those documents from
14 the Coroner, obviously the statements and correspondence
15 with Debra, Adam's mother. Dr Alison Armour, she was
16 the pathologist and was required to produce a report on
17 the autopsy after she had carried out the autopsy.
18 Dr John Alexander was asked to provide an expert report
19 on Adam's anaesthetic management. Dr Sumner, he was
20 a consultant paediatric anaesthetist at Great Ormond
21 Street and he was asked by the Coroner to provide an
22 anaesthetic opinion from a paediatric standpoint.
23 Mr Patrick Keane, he was, at that time, a consultant
24 urologist and the surgeon in Adam's case. Dr Robert
25 Taylor, he was consultant paediatric anaesthetist and

1 the anaesthetist in Adam's case. Dr Maurice Savage, who
2 was a consultant paediatric nephrologist and was Adam's
3 nephrologist. Professor Jeremy Berry, he was professor
4 of paediatric pathology at the University of Bristol and
5 he was asked by the Coroner to provide a pathology
6 report concentrating on the state of Adam's kidneys.

7 In addition, we've had documents from Adam's family,
8 we have had correspondence and transcripts from UTV and
9 we have had documents from the investigations of the
10 PSNI and they are also extensive. They are their
11 witness statements from witnesses and they include
12 a transcript of an interview that Dr Taylor gave under
13 caution on 17 October. They also commissioned reports.
14 They've had a report from Dr Edward Sumner, a report
15 from Geoff Koffman, who is a consultant surgeon at
16 St Thomas's in Great Ormond Street. And there is a body
17 of correspondence and other documents that they
18 received, some from those who were offering the PSNI
19 assistance.

20 Then there are documents from other bodies and
21 organisations. There's the Department of State
22 Pathology, the National Patient Safety Agency, NHS Blood
23 and Transplant, Medical and Dental Training Agency, and
24 the NHS Greater Glasgow and Clyde. That was the
25 hospital and area involved with the donor kidney.

1 Then, of course, there has been a considerable
2 amount of correspondence from DLS as they seek to
3 provide responses to our queries for information, and
4 some of that correspondence provides information that
5 one could fairly describe as evidence.

6 So there is a lot that has been received and all of
7 that is part of the body of information and knowledge
8 about Adam's case. You can see, when I put it in that
9 way, that very important though the oral hearing is, it
10 is a part of the investigation. The investigation
11 itself has actually been going on for quite some time
12 and has also generated quite an amount of information.

13 In addition to all of that, which is essentially
14 documentary material, we've also received histological
15 slides and other material in relation to Adam, and that
16 material has been held by the state pathologist's
17 office. We have received it so that we can provide it
18 to our expert. It has been provided to the expert
19 neuropathologist, Dr Wayney Squier. She has made her
20 own slides from it and some of that material. And all
21 of that, just so assure those, has been recovered back
22 by the inquiry and is being securely held, but it was
23 necessary to obtain it so they could make other own
24 slides and form her own independent view.

25 So moving to publications. The inquiry has been

1 referred to numerous publications, not just by its
2 advisors but its experts, the witnesses and the legal
3 representatives of Adam's family. And we have been
4 grateful to all who have sought to assist us by
5 providing us with publications. We, of course, have
6 carried out our own research and we have compiled
7 a bibliography of all those publications and we update
8 it as we get new -- it's not always an instantaneous
9 update, but we do update it and that bibliography is
10 available on the inquiry website.

11 But it's there to be consulted because some of that
12 material is relied on and referred to and discussed by
13 the experts, and it forms part of the basis of their
14 view, so it's not simply there for the sake of
15 referring. Some of it is actually quite significant.
16 The majority of it concerns the condition of
17 hyponatraemia itself and some of it includes case
18 studies, references to the causative factors of
19 hyponatraemia and the role of hypotonic fluids, its
20 effects and risk of morbidity. There are other articles
21 that concern areas as disparate as the expected brain
22 weights in children, the effect of heparin on blood gas
23 analysis, the calculation of the bladder capacity, right
24 up to the development of a condition which is called
25 posterior reversible encephalopathy syndrome, or PRES,

1 as I'm going to call it so I don't have to repeat it all
2 the time.

3 As you'll be aware, the medical literature available
4 on hyponatraemia has assumed even greater prominence
5 given the debate amongst the inquiry's experts during
6 their meeting on 22 February this year and also their
7 meeting on 9 March. There was quite a debate amongst
8 the experts over what the literature actually shows
9 in relation to hyponatraemia, that condition PRES, but
10 another also, chronic venous sinus thrombosis.

11 And the issue of literature was considered
12 significantly important by the experts that it was
13 actually on the agenda for both meetings and some of
14 it is reflected in the reports that we have just been
15 receiving.

16 I turn now to background papers. In the general
17 opening, I referred to the commissioning of background
18 papers by experts in their fields to provide a context
19 for the consideration of the evidence. We are about to
20 hear that evidence and so now is the time to be
21 reviewing the context that they have in fact provided.
22 Of particular relevance to the investigation into the
23 clinical issues that are involved in Adam's case are the
24 background papers that were provided by Dr Michael
25 Ledwith, clinical director of paediatrics in the

1 Northern Trust, together with Professor Sir Alan Craft.
2 He's the emeritus professor on child health at Newcastle
3 University. They provided reports on the training and
4 continuing professional development of doctors in
5 Northern Ireland, the rest of the United Kingdom and
6 the Republic of Ireland over the period 1975 to 2009.

7 There have been some queries as to why on earth are
8 we going back to 1975. And the reason why one takes it
9 back as far as that is one is trying to get an
10 understanding of what the training and education might
11 have been for the people who were involved in Adam's
12 care, having regard to what stage they were in in their
13 professional careers. One's trying to go back to a time
14 when they were likely to have been at university and
15 being trained. So that's the reason it goes as far back
16 as 1975.

17 Professor Mary Hanratty, she is the former
18 vice-president of the Nursing and Midwifery Council, and
19 Professor Alan Glasper, professor of children and young
20 person's nursing at the University of Southampton, they
21 provided reports, really companion reports in a way, to
22 that for the doctors on the training and continuing
23 professional development of nurses in Northern Ireland
24 and the rest of the United Kingdom, and the Republic of
25 Ireland. Their report extends up until last year, 1975

1 to 2011.

2 Then there is Bridget Dolan, barrister at law, also
3 an assistant deputy coroner, and her report is on
4 systems of procedures and practices in the
5 United Kingdom for reporting and disseminating
6 information on the outcomes or lessons to be learned
7 from coroner's inquests on deaths in hospital, involving
8 hospitals, trusts, area boards, Department of Health and
9 the Chief Medical Officer.

10 And then, finally, I think of relevance to this
11 particular case is the background report from
12 Dr Jean Keeling. She's a paediatric pathologist and she
13 has provided a paper on the system of procedures for the
14 dissemination of information gained by post-mortem
15 examination following unexpected deaths of children in
16 hospital.

17 From the background reports and -- and they are all
18 experts in their own right. We have the expert reports
19 and they are experts who have been engaged by the
20 inquiry -- again, guided by the advisors -- as the to
21 need to address, in part, generally the role of
22 nephrologists, anaesthetists and surgeons and the nurses
23 involved in Adam's case. So if I go through them.

24 First is Dr Malcolm Coulthard. I don't say "first"
25 in terms of "first and foremost", but simply because

1 I started with a nephrologist. Dr Malcolm Coulthard is
2 an honorary consultant paediatric nephrologist at the
3 Royal Victoria Infirmary and his reports address issues
4 such as the roles and responsibilities of the
5 nephrologists involved in Adam's case -- those were
6 Dr Savage and Dr O'Connor -- and an explanation as to
7 Adam's renal function, as well as expert analysis of the
8 management of Adam's fluid balance and electrolytes.

9 Then there is Simon Haynes, a consultant in
10 paediatric anaesthesia and intensive care at the Freeman
11 Hospital in Newcastle. His reports concern matters such
12 as the role and responsibilities of the anaesthetists
13 involved in Adam's care -- those anaesthetists were
14 Dr Taylor and Dr Montague -- and the relationship
15 between the surgeons and the anaesthetists in the
16 operating theatre during transplant surgery.

17 If I pause there. For those of you who have seen
18 those reports, you will appreciate that it's something
19 of a team effort to have a successful transplant
20 surgery. And so it's an important area that we have
21 asked Dr Simon Haynes and Mr Forsythe and Mr Rigg, who
22 are the surgical experts -- to look at that teamwork and
23 communication and how that should work effectively. So
24 that's why he's been asked to look at the relationship
25 between surgeons and anaesthetists. He's also been

1 asked to provide an analysis of Adam's fluid balance.

2 And then there's Mr John Forsythe, he's a consultant
3 transplant surgeon at the Royal Victoria Infirmary, and
4 honorary professor of surgery at the University of
5 Edinburgh. And Mr Keith Rigg, he's a consultant
6 transplant surgeon at Nottingham University Hospital.
7 They have provided joint reports on a range of matters
8 including the role and responsibilities of surgeons
9 involved in Adam's case -- and they were Mr Keane and
10 Mr Brown -- the skills required and involved in
11 a paediatric renal transplant, including the techniques
12 used for anastomoses -- that's basically hooking the
13 kidney up -- as well the relationship between the
14 surgeons and the anaesthetists during the transplant
15 surgery. So they're the other side of that
16 relationship. We have Dr Haynes looking at it from
17 a paediatric anaesthetist's point of view and then
18 looking at it from a surgeon's point of view.

19 Then we have Mrs Sally Ramsay, an independent
20 children's nursing advisors and she has provided
21 a report on the nursing aspects of Adam's care. I will
22 refer to their views later on in this opening to try and
23 help distill some of the issues that will be addressed
24 during the oral hearing.

25 In addition, the inquiry engaged experts to provide

1 reports on some specific issues. The enquiry engaged
2 Professor Peter Gross. He's a professor of medicine and
3 nephrology in Dresden and he's provided reports on
4 hyponatraemia and an analysis of Adam's fluid
5 management.

6 Professor Fenella Kirkham is professor of paediatric
7 neurology at the Southampton Hospital and she was asked
8 by the inquiry to give a neurological opinion into the
9 effect of the infusion of fluids during surgery, what
10 effect that had on Adam's brain and the possible
11 contribution, if any, of the venous obstruction to
12 Adam's cerebral oedema. That's an issue I'll come to in
13 a little while, but basically there was a concern that
14 there had been some compromise to his venous drainage
15 and that that had resulted perhaps because his left
16 internal jugular vein was ligated or for some positional
17 reason or for something of that sort. That is one of
18 the things that she had been asked to consider.

19 Well, as you're aware, Mr Chairman, when she was
20 engaged and received the papers and considered them, she
21 had some concerns or at least she had her own views as
22 to the exact role that dilutional hyponatraemia had
23 played in Adam's death. She suggested the possibility
24 that, in fact, it was a condition called acute cerebral
25 venous thrombosis and, perhaps, PRES. They may be

1 alternative reasons for the cerebral oedema or, at
2 least, the development of it that led to his death. And
3 that issue was discussed at length by the inquiry's
4 experts in their meetings on 22 February and also on
5 9 March.

6 I'm not going to deal in great detail with that
7 today, for reasons I'm going to mention later on. Then
8 there is Caren Landes, she's a consultant paediatric
9 radiologist, and she has examined and reported on the
10 chest X-rays taken of Adam. These are all post-surgical
11 X-rays. One was taken at 13.20, on 27 November and the
12 other later on in the evening at 21.30 on 27 November.

13 Then Dr Wayne Squier, consultant neuropathologist,
14 also a clinical lecturer at the John Radcliffe Hospital
15 in Oxford. She provided an expert neuropathological
16 opinion from, as I mentioned before, the histological
17 slides that she made from the tissue blocks of Adam's
18 brain. She also examined a sequence of photographs of
19 Adam's brain that had been taken at autopsy by Dr Armour
20 and she received input from a Dr Philip Anslow on
21 a post-surgical CT scan of Adam's brain. Dr Anslow is
22 the other expert brought in at her request. He's a
23 consultant neuroradiologist at Radcliffe. He considered
24 that CT scan. He considered a CT scan that was taken of
25 Adam's brain on 7 July 1995 and then he considered the

1 post-surgical CT scan that was taken at approximately
2 13.15 on 27 November. And he explains in his report
3 what he sees there.

4 The reports of the experts received to date, barring
5 the most recent, have all been made available to the
6 interested parties and will be made available in due
7 course according to the protocols and procedures that
8 you have established, Mr Chairman.

9 Then we have the witness statements. So in addition
10 to the depositions that the inquiry received from the
11 inquest and the statements from the PSNI investigation,
12 the legal team also requested and received a large
13 number of witness statements and supplemental witness
14 statements, and in some cases further yet some witnesses
15 have had the benefit of four or five requests from
16 a variety of persons involved to varying degrees in
17 Adam's case. We have been guided in that task by the
18 inquiry's advisors, the medical notes and records and
19 other contemporaneous records and what they seem to show
20 or don't show. Previous statements that were made,
21 whether through depositions to the coroner, statements
22 taken by the PSNI or witness statements to the inquiry,
23 the statements of others, subsequent documents received
24 from the DLS and a variety of other source of documents
25 and, of course, the reports from the inquiry's experts.

1 All those have, to a certain extent, informed the
2 questions that have been put in those requests.

3 The legal team has compiled a list of all those
4 involved in the clinical case or the clinical area of
5 Adam's case from all of the information that we have
6 received. It explains their position then and now,
7 briefly summarises their role in Adam's case and whether
8 they have provided a statement, and if so, for whom.
9 Importantly, it also indicates witnesses it is proposed
10 to call to give evidence during the oral hearing.

11 I should say it's entirely possible for the evidence
12 that's provided in a witness statement to be sufficient
13 on any given issue and no more needs to be sought.
14 That's particularly the case when it's not contradicted
15 by anyone or by information from any other source, or
16 where it's clear from an expert report that further
17 probing of the witness would simply not be useful.

18 Should the evidence in a witness statement be
19 regarded as sufficient, then, as you have indicated
20 Mr Chairman, it will stand in lieu of oral evidence from
21 that witness and the inquiry witness statement, PSNI
22 statement or deposition, as the case may be, of those
23 who are not being called will be tendered as an
24 unchallenged account. And in due course, the legal team
25 will compile a schedule of all those whose evidence it

1 proposes to tender to you in that way, and it will be
2 a matter for you, ultimately, Mr Chairman, whether
3 nonetheless you wish any given witness to be called.

4 Unfortunately, there are witnesses in respect of
5 whom it has simply not been possible for the legal team
6 to obtain an inquiry witness statement or who are not
7 available to give evidence at the oral hearing. For
8 example, the Coroner reports that on 7 December 1995,
9 the pathologist, Dr Alison Armour showed histology
10 slides of Adam to Dr Denis O'Hara. He was a consultant
11 paediatric pathologist at the Royal Hospitals and this
12 was after Dr Armour had conducted the autopsy, which she
13 did on 29 November. The Coroner's note of 8 December
14 records that Dr O'Hara and a Dr Bharucha -- and we're
15 investigating exactly which Dr Bharucha is involved --
16 considered that there was clear evidence of hypoxia,
17 anoxia, anaphylactic reaction. Unfortunately, Dr O'Hara
18 is deceased and the inquiry does not have a statement of
19 him of any type since he was not called by the Coroner,
20 nor did he give a statement to the PSNI.

21 As I indicated during the general opening, all
22 we have of Dr O'Hara's views is what was recorded by the
23 Coroner in his note of 8 December 1995. If we are able
24 to locate Dr Bharucha, that will be helpful, that will
25 be an insight, but otherwise that is all that we will

1 have on that matter.

2 A further example is provided by Dr Fiona Gibson.
3 She was consultant anaesthetist at the Royal Hospitals.
4 She was asked by Dr George Murnaghan, who is director of
5 medical administration, to visit the theatres in the
6 Children's Hospital with Messrs Wilson and McLaughlin.
7 She provided -- or at least she did visit with them.
8 She provided a short report that's dated
9 4 December 1995, in which she concluded:

10 "The protocols for monitoring anaesthetic set up and
11 drug administration in this area are among the best on
12 the Royal Hospital site and I can see no reason to link
13 these very sad cases into any pattern."

14 The inquiry requested a witness statement from her
15 in 2005 and it's quite possible that she would have been
16 called to give evidence at the oral hearing.
17 Furthermore, the inquiry has subsequently received
18 correspondence from the DLS that seems to contradict
19 Dr Gibson's reference to protocols and it explains that
20 what she might have meant was "practices". The legal
21 team would have wished to pursue that issue with her,
22 both in relation to this clinical part of Adam's case
23 and that part which is going to be concerned with
24 governance, but unfortunately for us and for her,
25 Dr Gibson is not available for medical reasons. And so

1 the only information the inquiry has on her views are
2 those contained in her statement to the PSNI and her
3 very short report. It will be a matter for you,
4 Mr Chairman, to determine what weight you will afford
5 the information that we have, where the legal team is
6 unable to pursue its enquiries.

7 Let me now turn to documents that are compiled by
8 about the inquiry. It has been absolutely vital for the
9 legal team to develop ways of distilling the vast amount
10 of information that has been accumulated by the inquiry
11 into the investigation into Adam's case. Accordingly,
12 the legal team has compiled a number of schedules and
13 charts to try and provide that information to you,
14 Mr Chairman -- and for the benefit of everyone else --
15 in a more accessible way in relation to the issues. And
16 I will refer to those documents throughout the opening
17 and will explain their use and significance.

18 A list of all those compiled documents will be
19 provided to you in due course, and since the
20 investigations are continuing, it is possible that
21 further such documents will be provided, and they are
22 really only provided to try and find a way of
23 summarising or crystallising or getting to the essence
24 or being able to compare different aspects of
25 information that we're receiving. That's their function

1 and since we are still receiving information, including
2 expert reports, it is quite possible that we will
3 produce yet further documents of that type.

4 Mr Chairman, I want to move on to saying something
5 about Adam and his family. Adam was born at 10.58 on
6 4 August 1991 at the Ulster Hospital in Dundonald by
7 Caesarean section. We can see that hospital on the map,
8 if I call that reference up of 300-001-001. There
9 it is. You can see the Ulster Hospital there, it was
10 there in the Eastern Health and Social Services Board
11 there.

12 Then if you see also the Royal. They're all
13 clustered together. That's, of course, the hospital
14 where Adam was transferred. Then you can see the
15 Belfast City Hospital, while we have this map here.
16 That is the hospital from whom the surgeons come
17 in relation to paediatric renal transplant. But I'll
18 say more about that in a minute.

19 So with Adam, antenatally, cysts had been noticed in
20 Adam's abdomen and it was not clear at the time what
21 they were, but an ultrasound scan performed after his
22 birth showed that he had dysplastic kidneys with
23 bilateral large cysts. Adam's clinical history and its
24 possible relevance to what happened to him during his
25 transplant surgery on 27 November 1995 will be set out

1 in greater detail later on, but in summary, he developed
2 problems with the drainage of his kidneys related to
3 obstruction and vesicoureteric reflux and he was
4 transferred from the Children's Hospital to the
5 Ulster Hospital when he was just a few months old.

6 When he was there in the Children's Hospital, he
7 came under the care of Dr Maurice Savage and also
8 Mr Stephen Brown. Thereafter, Adam had multiple
9 operations to his urinary tract for which he was largely
10 under the care of Mr Brown. He had re-implantation of
11 his ureters on two occasions, he had nephrostomies which
12 performed during the early months of his life and, on
13 several occasions, he was critically ill and required
14 care in the paediatric intensive care unit. He had
15 a brief period of dialysis due to acute renal failure.
16 In addition, he had a fundoplication procedure that was
17 carried out in 1992 -- when he was less than a year
18 old -- to help prevent gastro-oesophageal reflux and,
19 eventually, he required all his nutrition through a
20 gastrostomy tube. In 1993, he had a cystoscopy and a
21 PEG gastrostomy.

22 Adam was subject to recurrent urinary tract
23 infections and his renal function deteriorated to the
24 point when, in August 1994, he required dialysis. And
25 his mother was trained in the home peritoneal dialysis

1 technique so he could be dialysed at home and, according
2 to Dr Savage, Adam's urine output was quite large, but
3 of poor quality and he described him as being polyuric.
4 Also, according to Dr Savage, Adam had a potential for
5 hyponatraemia and he received sodium supplements in his
6 feeds. His recorded sodium levels for 1995, the year of
7 his transplant surgery, showed one very low result of
8 124 and a number below the normal range of 135 to 145
9 millimoles.

10 Adam was put on call for a kidney transplant once
11 he was placed on dialysis. His tube feeds in the month
12 prior to the transplantation surgery were slightly over
13 2 litres per day and he passed in excess of about 1
14 litre of urine each day. All those details are
15 obviously important and will be gone into in much
16 greater detail by the witnesses and the experts, but
17 I simply put them now so that you have the context of
18 his condition and its effects.

19 But I should say that Adam, of course, was so much
20 more than a child with chronic kidney problems and his
21 mother has written a moving tribute to him in a booklet
22 provided by his family. It's called "Adam and the
23 Hyponatraemia Public Inquiry". I will just read
24 a little bit from it so that we do recall the little boy
25 that this investigation is actually about in terms of

1 his clinical case:

2 "When I had to go back to work part-time, his nanny
3 and grandad looked after him. He adored them and they
4 him. They would take him for walks along the beach and
5 he would copy the way his granda walked with his hands
6 behind his back. He enjoyed shopping with them in
7 Hollywood where he had his favourite shops and everyone
8 knew him. His manners were impeccable -- this was
9 commented on by so many people and I was proud to take
10 him anywhere.

11 "We were a very close family anyway, but Adam
12 brought us all closer. His aunties and uncles loved him
13 dearly and were always there for him. He never lacked
14 attention. No matter what life threw at him, he faced
15 it with a smile. He was such a happy little boy who
16 endured more in his four short years than most people go
17 through in a lifetime."

18 I turn now to the hospital and the clinical and
19 nursing personnel. In 1995 and today, the regional
20 paediatric nephrology service for the province of
21 Northern Ireland was provided by the Children's Hospital
22 and, at that time, the Children's Hospital was part of
23 the Royal Group of Hospitals Health and Social Services
24 Trust, which was part of the Eastern Health and Social
25 Services Board. And Mr Chairman, I have said something

1 of that in the general opening, so I don't propose to go
2 into that organisational structure again. But today,
3 the Children's Hospital is part of Belfast Trust, which
4 is part of the Health & Social Care Board.

5 However, renal transplants were originally provided
6 solely from the renal unit of the Belfast City Hospital,
7 established in 1959. In fact, the first renal
8 transplant to take place in Belfast occurred there in
9 1962. Paediatric renal transplants began in
10 Northern Ireland in 1980 when Dr Savage was appointed as
11 paediatric nephrologist and, initially, all paediatric
12 transplants were carried out at the Belfast City
13 Hospital, but from 1990 they began to take place at the
14 Children's Hospital. Nevertheless, all the surgery
15 seems to have been performed by renal transplant
16 surgeons based at Belfast City Hospital and, generally,
17 those surgeons would be adult surgeons. For example,
18 Mr Keane, who carried out Adam's transplant surgery, was
19 an adult consultant neurologist. On occasion,
20 a paediatric surgeon would be present and, actually,
21 that is what happened in Adam's case with
22 Mr Stephen Brown.

23 The location of the two hospitals can be seen on the
24 map that I've just brought up and we've already seen
25 that. You can see the distance between them. That's

1 relevant if you're bringing clinicians over from one
2 hospital to do work in another.

3 From 1982, Dr Savage, who was Adam's nephrologist,
4 acted as a consultant paediatric nephrologist for
5 regional transplants taking place in Belfast. The
6 second paediatric nephrologist, Dr Mary O'Connor, who
7 was also involved in Adam's case took up a post at the
8 Children's Hospital on 1 November 1995 and, since 1995,
9 the majority of renal transplants on children under
10 14 years have been performed at the Children's Hospital
11 rather than at the Belfast City Hospital. By 1998, 77
12 renal transplants had been carried out in Belfast
13 hospitals on patients younger than 18 years old, and
14 Adam was the 69th. Of those 77, only two have died, and
15 unfortunately, Adam was one of them.

16 The organisation of the Children's Hospital in 1995
17 can be seen in the organisational chart that the legal
18 team has compiled. If we could pull up reference
19 303-043-510. There it is. That's the structure as it
20 was at the time that Adam was admitted to hospital for
21 his surgery. So you can see, right at the top, there's
22 the chairman and you can see it's George Quigley until
23 31 December 1995. So literally as Adam was admitted, he
24 was the chairman. Then from 1 January 1996, Mr Paul
25 McWilliams. Below that, you see the chief executive,

1 Mr William McKee. And then, branching off on the
2 left-hand side, you have the non-executive directors.
3 I'm not going to say very much about them. On the
4 right-hand side, you have the executive directors. And
5 then there is a group in the middle that seem to be
6 directly connected with the chief executive in ways that
7 we will explore, doubtless, in the governance part of
8 the hearing.

9 But if you look at that middle group, we
10 see: corporate affairs, facilities, personnel, planning,
11 development and pharmacy. And then, in the middle of
12 that group of three on the right-hand side, you see
13 "medical administration". Dr George Murnaghan: his name
14 was one that I have mentioned already in this opening
15 and those of you who have read the papers will be
16 familiar with his name and his correspondence and
17 communications with the Coroner and so forth, largely
18 in relation to the inquest.

19 Then moving to the executive directors, there's the
20 director of finance, director of nursing and patient
21 services, and then the medical director, Dr Ian Carson.
22 Let's stay with the medical group for the moment.
23 Cascading down, "obs and gynae and neonatal". That's
24 Professor Toner. But just immediately below him,
25 paediatric. Dr Conor Mulholland, he was acting at that

1 time. And then "laboratories"; there will be evidence
2 and information about laboratories. That was Professor
3 Peter Toner. Medical was Professor Gary Love. We can
4 pass over the other two and come down to radiology on
5 which there are some issues. That is Dr James Laird.
6 If you go to the top of the second group, anaesthetics,
7 theatre and intensive care. Dr Gaston: his name appears
8 in an number of places in relation to Adam's case, most
9 particularly arising out of or surrounding the time of
10 the inquest. And then if we go further down we see that
11 Peter Walby is ENT and then, surgical, Mr John Hood. So
12 that's the structure as it was.

13 If we can pull up the full screen again. The
14 director of nursing was also the director of nursing and
15 patient services, so she, Miss Elizabeth Duffin, acted
16 at two levels, if I can put it that way, and there are
17 nursing issues in Adam's case and, doubtless, we will be
18 looking at that when we approach the governance part of
19 this hearing.

20 So in addition to the lists of persons compiled for
21 Adam's case, there are two companion documents which
22 I think I mentioned before. One is the nomenclature for
23 grading for doctors, 1948 to 2012, and the other is the
24 nomenclature and grading for nurses, 1989 to 2012.
25 Really, they've been provided to assist with the

1 terminology in use so that when a given grade is given
2 for a clinician, it is hoped that you will be able to
3 readily see what that means.

4 And unless it's of particular relevance to the
5 issues, I'm actually not going to go into what any given
6 grade means. But I leave you with those two documents
7 if you wish to consult them yourselves to better
8 understand.

9 Of particular note of those who are present during
10 Adam's transplant surgery. I've referred already to
11 Dr Savage and Dr O'Connor, and they were both involved
12 in Adam's transplant surgery as consultant
13 nephrologists, although I should say neither of them
14 were there for the full duration of his surgery.
15 There's Mr Keane and Mr Brown, they were involved as
16 surgeons and in addition there's Dr Robert Taylor. He
17 was the consultant paediatric anaesthetist during the
18 surgery and he had previous experience of anaesthetising
19 Adam. He was assisted by Dr Terence Montague at the
20 beginning, but not for the whole of Adam's transplant
21 surgery.

22 There are also several nurses present: staff nurse
23 Patricia Conway who prepared the theatre and the
24 instruments, but she appears to have left at 8 in the
25 morning. And then there is staff nurse Mathewson. She

1 was the runner in the operating theatre and staff nurse
2 Popplestone and she acted as scrub nurse during the
3 transplant surgery. It seems that Peter Shaw was also
4 present and he was there as a medical technical officer.

5 Then just finally of those involved, there is the
6 State Pathologist's Department. Adam's autopsy was
7 performed by Dr Armour who was, at that time, a senior
8 registrar pathologist at the State Pathologist's
9 Department. That department was headed by Dr Jack Crane
10 as State Pathologist, now Professor Jack Crane. He has
11 remained the State Pathologist throughout the period
12 from Adam's death until the present day and amongst the
13 State Pathologist's responsibilities is the provision of
14 an autopsy service to the coroners and, in 1995, the
15 state pathologist was responsible to the Secretary of
16 State for Northern Ireland. Currently, following
17 devolution, the State Pathologist is responsible to the
18 Minister of Justice.

19 In addition to the State Pathologist who acts as a
20 consultant pathologist, along with all his other duties,
21 there was a deputy and two assistant state pathologists
22 and they were all of consultant grade and they assisted
23 in the conduct of coroner's post-mortem examinations,
24 and those pathologists, we understand -- although it
25 will be a matter to be explored -- take responsibility

1 for the autopsies they perform, but the State
2 pathologist has overall responsibility for ensuring that
3 all cases are carried out to the appropriate standard.

4 And in 1995, the department employed -- that's the
5 Department of State Pathologists -- employed two
6 trainees at senior registrar grade who worked under the
7 supervision of consultant pathologists.

8 Dr Alison Armour, we understand, was one of those
9 trainees and the legal team is pursuing its
10 investigations with the State Pathologist's Department
11 to make sure we understand the structure of it and who
12 was responsible for whom and in what way.

13 If I move on now to the context of the education and
14 training that I have been mentioning that the doctors
15 and nurses had -- and other clinicians. The condition
16 of hyponatraemia, I think I described before in the
17 general opening as: this is when the blood level of
18 sodium is lower than normal either because of an excess
19 excretion of sodium over intake and subsequent water
20 intake and retention, which is hypervolemic
21 hyponatraemia, or by an excess of water intake over
22 output, diluting the serum sodium. That type of
23 hyponatraemia is referred to as dilutional
24 hyponatraemia. There is a distinction, of course,
25 between the two of them. The type that it has been

1 thought that Adam developed was the dilutional
2 hyponatraemia, and the medical literature contains
3 a number of articles published prior to Adam's
4 transplant surgery, pointing to a possible connection
5 between hyponatraemia in adults and certain effects
6 in the brain, including death, and some of those date
7 back to the late 1970s and 1980s, and they are included
8 in the bibliography. So if you want to know, so far as
9 we have been able to ascertain it, what the literature
10 was saying about hyponatraemia as early as the 70s and
11 80s -- and we hope that we have reflected some of that
12 in the bibliography.

13 In 1992, Arieff, Ayus and Fraser published an
14 article in the British Medical Journal entitled
15 "Hyponatraemia and death or permanent brain damage in
16 healthy children". That dealt with the results of their
17 study into a group of children. The object of the study
18 was to determine whether hyponatraemia causes permanent
19 brain damage in healthy children. All of the 16
20 children, both male and female, in the clinical case
21 study were hospitalised with seemingly minor illnesses
22 or who had minor surgery, and they all subsequently
23 suffered respiratory arrest with symptomatic
24 hyponatraemia, and the children either died or suffered
25 permanent brain damage. All of them were found to have

1 cerebral oedema following CT or MRI scans and nine of
2 the ten who underwent post-mortem were found to have
3 cerebral oedema with herniation. That is the process
4 where the brain literally drives down brainstem and
5 leads to -- sometime it is called "coning" -- and leads
6 to death. You will have seen that in some of the
7 literature and reports.

8 The brain weights of the patients were found to be,
9 on average, more than 10 per cent higher than the normal
10 values for children of the age range studied and the
11 conclusion drawn from that study and reported in the
12 published paper was that generally healthy children with
13 symptomatic hyponatraemia could abruptly develop
14 respiratory arrest or die or develop permanent brain
15 damage and the authors recommended that hypotonic
16 fluids -- that is fluids with sodium concentrations with
17 less than the concentration found normally in the
18 blood -- should not be used with hospitalised children
19 unless there was a clear need to do so.

20 That article is mentioned repeatedly in the papers
21 of all the cases that are the subject of this inquiry --
22 sometimes it's referred to simply as "the Arieff
23 article" -- and it has been cited in numerous
24 publications, including an article by Dr Armour on
25 Adam's case. Her article is called "Dilutional

1 hyponatraemia: a cause of massive fatal intra-operative
2 cerebral oedema in a child undergoing renal
3 transplantation". And that was published in the Journal
4 of Clinical Pathology in 1998. An issue being
5 investigated by the inquiry is the extent to which the
6 clinicians and nurses involved in Adam's case were aware
7 of the dangers of hyponatraemia in paediatric cases --
8 at the time, of course, they were involved in Adam's
9 case -- and therefore the need for appropriate fluid
10 management. And in addition, the inquiry is
11 investigating whether clinicians and nurses were
12 receiving appropriate education and training in these
13 areas at that time.

14 The legal team has compiled schedules in relation
15 to the specific clinicians and nurses who were involved
16 in Adam's case. Let me call it up. If we start,
17 please, with reference 306-005-028. There we are.
18 That is education and training of the doctors in Adam's
19 case in fluid management, in particular hyponatraemia
20 and record keeping.

21 It's a very simple depiction of what we have gleaned
22 from their witness statement requests because they were
23 all asked these questions. So on the far left is
24 a witness statement reference number, then the name of
25 the person involved, their undergraduate study and

1 we can see -- as it happens since they're all done
2 alphabetically -- there is Bhat and she tells you what
3 university she did her university training in, then any
4 postgraduate study, then a hospital induction, and you
5 see from that that she actually had an introduction to
6 hospital policies and protocols, so that was part of an
7 induction the first two days of starting training at the
8 Royal. She doesn't recall anything specific about
9 training in fluid management.

10 Then there's a CPD column and she's said what she
11 had by way of CPD. She goes on to say that she had
12 fluid and electrolyte management for paediatric patients
13 taught as part of the curriculum of those courses that
14 she attended. And then she gives her experience. That
15 has been compiled for all of those who were directly
16 involved in Adam's case, and it'll be available for you
17 and you can consult it.

18 It's not supposed to replace what they said in their
19 witness statements, but it's supposed to assist as an
20 easily-referenced guide as to the kind of education and
21 training they themselves say they had. There is one for
22 the nurses, we can call that up. 306-001-001.
23 Education and training of the nurses in Adam's case, and
24 the same thing, fluid management, and in particular,
25 hyponatraemia and record keeping. And it works in

1 exactly the same way with a reference number, name, and,
2 except for nurses, because their professional structure
3 is slightly different, so we have a pre-registration
4 column. Let's look at Susan Beattie, she's first up.
5 She talks about being a student nurse from October 1989
6 to January 1994. She says what her basic training was
7 with regard to fluid management and NMC guidelines on
8 record keeping. She doesn't recall any particular
9 training or education post-registration. She says
10 nothing about hospital -- in fact, she says she didn't
11 have any hospital induction. For CPD, she doesn't
12 recall any undertaking at that time, but -- that time
13 being at the time of Adam's admission to surgery -- but
14 since then she cites a number of courses she has been
15 involved in. Interestingly, if you go straight down to
16 the bottom of that little list, you will see the BMJ
17 e-learning module, "Hyponatraemia", March 2011. She's
18 attended that, she did in March 2011.

19 Then her experience in these matters. She doesn't
20 recall having any in particular. And that has been,
21 just as in the same way for doctors -- let's have a look
22 at some of the --

23 THE CHAIRMAN: Just pause there for one moment. The
24 guidelines which were issued after Raychel's death, her
25 death was in 2001 and the guidelines were issued in

1 2002.

2 MS ANYADIKE-DANES: March 2002, yes.

3 THE CHAIRMAN: Do any of these nurses say they were trained

4 in the guidelines?

5 MS ANYADIKE-DANES: Unless they say they are, they're not

6 reflected in this.

7 THE CHAIRMAN: Okay, thank you.

8 MS ANYADIKE-DANES: It may be that not all of the nurses

9 that are relevant for Adam's case were in nursing at the

10 time when those guidelines came out. But whoever was in

11 nursing, the question that was posed should have

12 elicited that information if they received that training

13 and guidelines.

14 THE CHAIRMAN: Miss Beattie's training covers her up to

15 2011. Mrs Dowdie covers her to 2010.

16 MS ANYADIKE-DANES: Yes.

17 THE CHAIRMAN: But then Miss Conway says fluid management is

18 not relevant to her -- so it may change from one to

19 another.

20 MS ANYADIKE-DANES: It may change, but the purpose of having

21 it is so precisely you can do that thing. Some may have

22 completed their witness statement requests in more

23 detail or greater case, but nonetheless that's what

24 they've done and when they're called to give evidence,

25 they can be asked those questions and, for that matter,

1 from the point of view of governance, it becomes
2 relevant -- I think this may be where you're going -- as
3 to what was actually being done so that anybody was able
4 to appreciate they were being taught about those
5 guidelines, but yes.

6 Just while we're there, it's worth looking at some
7 of the nurses that are involved. Patricia Conway we
8 have mentioned. Perhaps if you keep it to the
9 main thing there ... She says that during both adult
10 and paediatric nurse training she received training on
11 how to record fluid management on fluid balance sheets
12 and how to administer fluids according to the
13 prescription by medical staff. She received continuous
14 updates on the importance of record keeping. So that is
15 what she claims for herself.

16 In terms of the hospital induction, she said she was
17 told about where fluids were stored and to check and
18 correct and the volume to be delivered and the rate of
19 delivery. And then, under her CPD, she says that fluid
20 management wasn't relevant to her current practice and
21 we have already noted that she continued to receive
22 updates on the importance of record keeping.

23 I don't know if we can pull up any more of that
24 document. Are we able to pull up the next page?

25 THE CHAIRMAN: Do we need to?

1 MS ANYADIKE-DANES: Probably not. I was simply going to go
2 through some of the nurses who are directly involved.

3 THE CHAIRMAN: We can look at them another time when they
4 come to give evidence. I diverted you and I am anxious
5 to keep moving.

6 MS ANYADIKE-DANES: I didn't pick up some of the detail
7 in relation to the doctors who were involved in Adam's
8 case, but it's a similar thing: one can look and see,
9 for any given doctor, what they have claimed for
10 themselves in terms of their education. One thing
11 I should say that isn't, I believe, reflected on the
12 table for the doctors is that Dr Robert Taylor has
13 accepted that he knew about the Arieff article. One
14 finds that in his deposition to the coroner. So from
15 his point of view, there is no issue that there was
16 something going on in that article that he didn't know
17 about or appreciate. He's accepted that he knew it.

18 I should say that we have not carried out an
19 investigation to verify the accuracy of any of that
20 information. We have simply recorded in those schedules
21 what we have received by way of information. I'm not
22 sure that it would be a straightforward matter to try
23 and verify it. Therefore, as it stands, and if it were
24 to be untested in oral evidence, it would be a matter
25 entirely for you, Mr Chairman, what weight you placed on

1 it.

2 If we could go now to Adam's diagnosis and clinical
3 history. I gave a little summary of that earlier and
4 now we move into more detail. I have described Adam as
5 having dysplastic kidneys with bilateral large cysts and
6 it seems that Adam's condition developed with it a risk
7 of him developing chronic renal failure. The legal team
8 has prepared a number of visual aids to try and explain
9 further Adam's condition. Can we go to 300-027-045?
10 No. We can't. If we were going there, that would have
11 given you an outline of the organs making up the
12 standard human anatomy. But that's simply to give you
13 a context within which to appreciate his condition.
14 You will get all these documents since they are referred
15 to, they're part of the opening. There's also a diagram
16 which shows the kidneys in amongst the other organs so
17 you can see, when the transplant operation is in place,
18 what else is there in that vicinity.

19 If we move then, just to deal directly with the
20 kidneys. They, of course, form a vital part of the
21 body's renal system and -- not wishing to inform those
22 who already know this very well, but nonetheless to be
23 clear -- they have many functions. Their primary role
24 is to filter out waste products from the blood and to
25 excrete those waste products in the production of urine.

1 There are many medical terms that we are either
2 about to embark on now or will be evident from the
3 reports of the experts. Some of them are highly
4 specialist, particularly those that are in the reports,
5 the more recent reports of the inquiry's experts, and
6 the legal team has prepared a glossary of medical terms
7 with the benefit of guidance from the inquiry's
8 advisors. It is updated as we receive further documents
9 and we try to keep it current, but it's not always
10 possible to respond immediately to something.

11 It is there as a ready reckoner, really, to allow
12 people to understand what these terms mean and to avoid
13 me -- who's obviously not medically trained -- from
14 having to embark on the tricky subject of explaining
15 what some of them are. Some of the terms are very
16 important that you understand and actually are critical
17 to appreciate the way that the inquiry's experts have
18 been considering matters. When that happens, usually
19 the inquiry experts explain it themselves in their
20 reports and, if they haven't explained them adequately
21 so people can understand, I will certainly ask them to
22 expand on that when they give their evidence, because
23 it is important that people understand the basic
24 mechanisms that they are talking about and why they say
25 things do or do not have or can or cannot have

1 a particular effect.

2 But anyway, for present purposes, I'm trespassing
3 into a area I said I wasn't going to. Adam's condition
4 basically meant his kidneys were abnormally formed
5 before birth, and that caused them to be small and
6 function poorly and improperly. Can we call up -- this
7 is going to be a picture of a kidney if you're
8 squeamish.

9 THE CHAIRMAN: These are not Adam's kidneys?

10 MS ANYADIKE-DANES: No, they are not. There are going to be
11 no pictures shown of Adam in this opening and the only
12 pictures that we have directly of Adam, anatomically,
13 are scans of his brain. Some of those will have to be
14 shown, but I have spoken to his family about it. There
15 is one photograph I would like to show of Adam, but
16 subject to that, all these are just for the purposes of
17 people understanding what we are talking about.

18 So if we call that up, which is 300-085-183. There
19 it is. That's a human kidney, a normal one, so we're
20 told. And if we call up the next one, 300-030-048.
21 That is a kidney that has the kind of condition that
22 Adam had. Obviously, that is not Adam's kidney, nor can
23 I say that is exactly how Adam's kidney would have
24 looked, but that is a kidney with that kind of
25 condition, and those irregular protrusions are the

1 cysts.

2 As a result of his condition, Adam suffered with
3 renal problems with birth. And, as you've heard, he was
4 admitted to Musgrave Ward on 15 October 1991 under the
5 care of Dr Savage; he remained his nephrologist
6 throughout his life. The legal team has compiled
7 a timeline of main events of Adam, 1991 to 1995. Can
8 I call that up. 307-001-002.

9 There is a lot going on in this timeline. When you
10 receive it, I would urge you to look at it and consider
11 it. Everything on there is referenced, but if I call up
12 the next one -- sorry, let me tell you the top headings.
13 There's the timeline going down the far left, and then
14 the first block is the hospital admissions, procedures
15 and notes. Those are all taken from his records, and
16 you can see the reference to them. It's really
17 indicating every time he was admitted, and I will say
18 a little more on that in a minute, but I just want to
19 lay out the scheme of it.

20 If we go to the next block, we have fluids, and they
21 are divided into input and output. Serum sodium. Now,
22 when one gets to the serum sodium, there's a range, 135
23 to 145 millimoles, and that's considered to be the
24 normal range. You will see in there highlights.

25 Now, back to urine sodium. We have highlighted the

1 results of 25 or greater. Then if you go to the serum
2 sodium, we highlight the results of 25 or less or over
3 155 -- these are really outside the range by some
4 degree -- or a fall of 10 or more millimoles over
5 24 hours. And then the next one is a serum sodium, and
6 there's the range there: 3.5 to 5, and we've highlighted
7 the low results there of 2.5. Then haemoglobin, there's
8 the range, 11 to 15, and we have highlighted
9 particularly low range. We do indicate everything out
10 of range, but the red, if you like, are particularly out
11 of range, if I can put it that way.

12 The next block is medication, and there are
13 particular elements of his medication that we have
14 highlighted. Then the final block is dialysis,
15 prescription and cycles. That changed over time and may
16 or may not be relevant to what happened.

17 I want to show you another document before I discuss
18 slightly more detail. The other document is the summary
19 document. 307-001-001. If we can pull that up just for
20 now. This document is to try and make things a little
21 easier. That's an Excel spreadsheet with all the dates
22 down the left-hand side and what that has done is show
23 all the reds that were on the timeline, and show them
24 in relation to the colour that has been ascribed to them
25 in the timeline, or at least tried to so far as the

1 colours match up.

2 So any time there is a red point -- and we'll go
3 through the timeline and you'll see it -- that is
4 reflected in a block of colour. The purpose of doing
5 that -- because the timeline itself, when you see it, is
6 actually quite extensive. If you can imagine, it goes
7 from his birth in 1991 to his death in 1995. The
8 purpose of doing this is to try and get an appreciation
9 of when Adam had a period when he didn't have any of
10 these red events, if I can put it that way, because as
11 we go into another document that we've prepared, his
12 schedule of surgical procedures, that poor boy was in
13 and out of hospital a considerable amount of time.

14 But if you look at this, you can gain an idea of
15 when in relation to that period 1991 to 1995 there
16 appeared to be none of those red line events. If you go
17 right down to just around the time of his surgery,
18 November 1995, look in October, there's a green and
19 there's a purple. The green is medication, which is
20 actually erythropoietin, and he was given erythropoietin
21 to do with his anemia. The purple is dialysis. So even
22 though there are two references there, they're not
23 necessarily anything that is adverse, it's indicating
24 maybe a change to his medication or change to his
25 dialysis cycle.

1 And if you look before that, between July
2 and October, there's none at all. So simply on that, he
3 would appear -- and, of course, it's a matter for
4 evidence and a matter for you, Mr Chairman, to find, but
5 he would appear to have entered a period of being
6 relatively free of some of the matters that have proved
7 problematic beforehand. As I say, it's a matter of
8 evidence. This is simply a collation of information.

9 If we go back to the timeline at 307-001-002. There
10 we are. If we stay with hospital admissions, procedures
11 and notes. We have not included everything in there,
12 but the sort of thing that we have included, and are
13 highlighted in red, are operations involving central
14 lines and the use of catheters. That's not highlighted
15 up in the main block in red in the way the others are,
16 but that's the sort of thing that's put in red under
17 that block.

18 Along with this timeline, there are associated
19 documents that have been compiled. They really are
20 there to help me having to go through in detail from his
21 medical notes each and every aspect of his admission
22 before his transplant surgery, and the point is that
23 there are some key areas which the experts' details rely
24 on, and it's important for us to be able to show the
25 timeline of his care, his clinical history, so you

1 yourself can see how these arise and how they may be
2 relevant to his transplant surgery.

3 Now, if we stay with that first column, we have also
4 compiled a separate schedule of all Adam's surgical
5 procedures. We can pull that up. That is 300-060-107.
6 Is it possible to expand that a little bit? Okay. This
7 is a summary. Down the left-hand side, you see the
8 date, then you see the procedure, then you see the
9 surgeon or surgeons -- sometimes there were more than
10 one involved -- and the anaesthetist -- again sometimes
11 more than one -- and the reference and where that comes
12 from. We have tried to include all the consent forms,
13 the operation note and the anaesthetic record as the
14 basic information for what was happening. That is done
15 all the way through up to and including his transplant
16 surgery.

17 THE CHAIRMAN: These are documents, Ms Anyadike-Danes, which
18 can be made available to all the interested parties?

19 MS ANYADIKE-DANES: Absolutely, and they will be.

20 THE CHAIRMAN: But they haven't yet been?

21 MS ANYADIKE-DANES: No, they haven't.

22 There is an associated spreadsheet, and that is
23 reference 300-060-109 if we can go to that. That's the
24 first page of it that gives you the key so you can see
25 that it shows you which of those periods in hospital

1 constituted a day admission. It then shows you the
2 admission date and the discharge date, and the
3 difference between those is the period in hospital,
4 which is in pink. The reason for doing that is because
5 it makes quite clear, when you see it, just how much
6 time Adam actually spent in hospital. This is time when
7 he's being measured, assessed and recorded, and it's all
8 medical information that's in his notes and records and
9 is available to any clinician afterwards treating him,
10 or should be.

11 I'm just trying to see if we can go to the next page
12 of that. No. Well, when you see it, you'll be able to
13 see in an Excel spreadsheet form, so far as we've been
14 able to glean from his medical notes and records and
15 every other source we have, all his admissions, all his
16 periods in hospital and what they were for.

17 Can we go back to that timeline, the coloured-up
18 timeline. 307-001-002. Thank you. The next column,
19 fluids. Input and output. This is detailing all the
20 records of the fluids that Adam received during his
21 hospital admissions and all the fluids that he lost,
22 particularly as a result of diarrhoea or vomiting, and
23 they are derived from a separate schedule. If I call up
24 300-059-090.

25 There you see it. There was a timeline. The way

1 the system works is at the moment it's only pulling up
2 the first page, but since you're going to get the
3 document itself, it's enough for illustrative purposes.
4 This is recording from as early as we have been able to
5 do so, compiled from his medical notes and records, his
6 fluids -- there's his fluid intake. If we take the
7 example of 28 November 1991. The total fluid intake and
8 the reference for it. Then if you go across to urine
9 output, there you see the record of that.

10 Now, we say nothing about how accurate these things
11 are, we are simply compiling them from his medical notes
12 and records, and on it goes. And in the fluid intake,
13 we try and distinguish if the notes do in what form that
14 intake -- whether it's intravenous, whether he had any
15 orally, as he did in very early periods, and we have
16 also in the footnotes listed comments that might assist
17 in understanding or interpreting or at least queries
18 about the information we have found.

19 THE CHAIRMAN: Okay, thank you.

20 MS ANYADIKE-DANES: So that's that. Then if we go back to
21 307-001-002. The next two columns detail any
22 measurements of Adam's urine and serum sodium levels.
23 And, as I explained to you, we've taken the normal range
24 of 135 to 145 millimoles and of note are the occasions
25 when his serum sodium fell below 125 millimoles, which

1 has been defined in some places as constituting severe
2 hyponatraemia, and when the serum sodium was higher than
3 155 millimoles, which has been described in some places
4 as constituting severe hypernatraemia. And when his
5 serum sodium fell by 10 or more millimoles in a period
6 of 24 hours, it has been treated as an acute fall, and
7 all those instances are recorded in red. In fact, you
8 can see there are some there.

9 THE CHAIRMAN: Yes, okay. Thank you very much.

10 MS ANYADIKE-DANES: They derive from a comprehensive
11 schedule that records all Adam's serum sodium and urine
12 sodium levels with a graphical representation of that.
13 I think if we pull up 300-059-079. Yes. This is what
14 I want to show you. These are, in a graph, all plotted,
15 all the records of Adam's serum sodium levels
16 between August 1991 -- which was the first record we
17 could find -- to November 1995.

18 There's an intensive period of monitoring that
19 happens between August 1991 and April 1992. In fact,
20 that averaged about 15 times a month, and then there was
21 periodic monitoring thereafter. So the spacings at the
22 bottom are unequal time periods because you couldn't
23 show that with the volume of records. But the things to
24 note: the parallel red lines, they are the normal range,
25 if I can call it that, 135 to 145, so it's quite easy to

1 see the periods of time when he suffered hyponatraemia
2 and, for that matter, hypernatraemia. And you can see
3 that, in the early months of his life, he had some very
4 low values indeed. There's a value there that looks
5 about 111.

6 Then if we go to the other side, which is his
7 admission on the day of his surgery, you will see there
8 are the low values there. At the top in those little
9 magenta blobs, they're to try and indicate roughly when
10 he was in hospital for some of those periods and just to
11 get a sense of what correlates with what. But, in fact,
12 we know more accurately from the timeline exactly when
13 he was in hospital and from the surgical schedules that
14 I just showed you.

15 But that particular graph is in some of the expert
16 reports and it may be worth considering at other times
17 when the experts and the clinicians are giving their
18 evidence to try and understand what was happening when
19 those very low values were being recorded and why they
20 were happening and how they were dealt with and what the
21 implications of them are or were for the planning for
22 Adam's transplant surgery.

23 THE CHAIRMAN: Okay.

24 MS ANYADIKE-DANES: Thank you. Can we go back to

25 307-001-002? The next two columns show any measurements

1 of Adam's serum potassium levels and haemoglobin levels,
2 and the values outside the normal range are
3 highlighted -- well, the ones literally outside the
4 normal range are highlighted in their corresponding
5 colour. You have one there, 5.1 on 16 October 1991.
6 That's outside, it's slightly higher. So it's outside
7 the normal range and so it bears a colour. If you want
8 to find out where that comes from and the context of it,
9 there is a reference for the source for that
10 information.

11 The acute ones, as I said, are highlighted in red.
12 And then the final two columns, that's the medication
13 and the dialysis columns, they, if we stay with the
14 green column, "medication", that's to show some of the
15 medication that Adam received and the detail, and that
16 medication that is considered to be relevant. We have
17 confined it to sodium and iron supplements and
18 erythropoietin and the medication he received between
19 his admission for his renal transplant surgery on
20 26 November and his death. The reason that we have
21 confined it to that is really, it seems, leaving aside
22 the third one, that the sodium and iron supplements and
23 the erythropoietin, these are some of the issues that
24 the experts have been debating as being potentially
25 significant.

1 Then the dialysis is really to record the changes in
2 his cycles: when had he first started, when those cycles
3 were altered and what the prescription for it was. The
4 relevance of that really is to see, whatever happened on
5 26 November -- because he was dialysed that night -- how
6 that compared with his normal dialysis cycles and what,
7 if anything, might be the significance of that for
8 planning for his fluid management.

9 The state of Adam's health -- and I won't take you
10 back to the summary because I've shown you the summary
11 and I've commented on the implications of having
12 apparently colour-free periods just before his surgery.
13 And part of the relevance of that, of course, is that
14 Dr Armour, when she gave her evidence to the Coroner on
15 18 June, described him as:

16 "Adam was not a healthy child; he was a sick little
17 boy."

18 That may well have been evidence given in context,
19 but in the context of Adam's clinical history, you will
20 see what the experts say about his condition and, indeed
21 what Dr Savage said about his condition. Arguably, from
22 his point of view, he may have been actually in very
23 good medical condition when he arrived for his surgery,
24 but that is going to be an issue and you will hear
25 evidence about it and, Mr Chairman, you will determine

1 that. They are live issues to be heard in the oral
2 hearing, as is the significance of any of these matters
3 in relation to his condition for the cerebral oedema
4 that developed.

5 Another issue -- and I mentioned it just a little
6 while ago -- I'm just going to take you to this point
7 and then, Mr Chairman, I don't know what you want to do
8 about a break. But another issue that has taken on
9 a degree of significance is whether his left internal
10 jugular vein was ligated. That arises because
11 Dr Armour's autopsy identified, under the section on
12 "internal examination of neck", a suture in situ on the
13 left side of the neck at the junction of the internal
14 jugular vein and subclavian vein. The relevance of that
15 suture was described by her under the commentary section
16 of the report on autopsy -- and this is what she says:

17 "Another factor to be considered in this case is
18 cerebral perfusion. The autopsy revealed ligation of
19 the left internal jugular vein. The catheter tip of the
20 CVP was situated on the right side. This would mean
21 that cerebral perfusion would be less than that that in
22 a normal child. This would exacerbate the effects of
23 the cerebral oedema and would also be considered as
24 a factor in the cause of death. Therefore, the most
25 likely explanation is that the cerebral oedema followed

1 a period of hyponatraemia and was compounded by impaired
2 cerebral perfusion."

3 And she reiterated that view in her evidence before
4 the Coroner on 18 June and she said:

5 "There was impaired cerebral perfusion as there was
6 a suture on the left side and a catheter tip on the
7 right. The suture impaired the blood flow to the brain
8 and the catheter tip on the right may have had a role to
9 play. The suture had been there for some time."

10 And that might turn out to be a significant
11 observation. The structures being discussed by Dr
12 Armour can be seen in a diagram, so you know where
13 we are. It's 300-087-185. I wonder if that can be
14 enlarged just a little bit. Thank you. This is
15 a diagram which is in the expert reports of Professor
16 John Forsythe and Keith Rigg, the surgeons. But there
17 you see it, you see the left internal jugular vein and
18 the left subclavian vein, and what she says is that
19 there was a suture just at that point (indicating) --
20 at the junction, in fact, I think is the way she
21 described it. At the junction of the internal jugular
22 vein and subclavian vein, that's where she says she
23 identified a suture.

24 THE CHAIRMAN: And she suggested that may have been an
25 obstruction to something?

1 MS ANYADIKE-DANES: She does. She also says there was
2 a catheter tip on the right side. So essentially, what
3 she was saying is that that system was compromised. On
4 the right side you had the catheter tip, which had gone
5 up in the wrong direction, as Dr Taylor says was shown
6 on the X-ray, and was to have been measuring the CVP.
7 And have that on the right-hand side, and then on the
8 left, in this particular position that she says she saw
9 it, you have the suture, which she describes as
10 "ligating".

11 THE CHAIRMAN: Okay.

12 MS ANYADIKE-DANES: The inquiry has carried out
13 investigations to identify the particular surgical
14 procedure that led to the ligation of Adam's left
15 internal jugular vein. And what the inquiry received
16 back from DLS was that there is no evidence that the
17 internal jugular vein was ligated in the Children's
18 Hospital. The commentary section of the post-mortem
19 report is the only place where it is stated that the
20 internal jugular vein is ligated. Ligation is not
21 mentioned in the section on internal examination of the
22 neck. In the 1980s and early 1990s it would have been
23 considered standard practice in the children's hospital
24 to ligate the internal jugular vein during insertion of
25 a Broviac or Hickman central venous catheter. In the

1 early 1990s, a new technique was introduced whereby the
2 common facial vein was used in order to preserve the
3 patency of the internal jugular vein. The typed theatre
4 note of 29 May 1992 clearly states that.

5 "The common facial vein was used, thereby, by
6 definition, preserving the left internal jugular vein."

7 In fact there you can see it: common facial vein.
8 It's a higher position, of course:

9 "The removal of the Broviac line is a relatively
10 simple procedure, which would not have required
11 exploration of the neck. The Broviac line is simply
12 removed by traction at the exit site -- in this case,
13 the left anterior chest wall -- and the anaesthetic
14 record shows total anaesthetic time of 20 minutes and
15 this would not allow time for an unrecorded surgical
16 exploration of the neck with ligation of the internal
17 jugular vein."

18 The inquiry's experts, Messrs Forsythe and Rigg,
19 have considered the references to the insertion of the
20 central line and they identified four occasions in their
21 report of February 2012 when that is recorded as having
22 happened. In fact, you can also see it on the schedule
23 of surgical procedures. However, they say it was only
24 the insertion of a Broviac line via the left common
25 facial vein on 29 May 1992 that involved an incision

1 being made in the left side of the neck, and the
2 schedule of Adam Strain's surgical procedures shows the
3 insertion of "a Broviac line, cystoscopy and retrograde
4 pyelogram", having been carried out on that date by
5 Messrs Brown, McCallion and Stewart as surgeons and
6 doctors Crean and McCarthy as the anaesthetists. Adam's
7 medical notes and records show the removal of a Broviac
8 line on 9 February 1995 as having been carried out by
9 a Mr Saad, that's as surgeon, and Dr Chisakuta as the
10 anaesthetist.

11 So to summarise, what they're saying is the only
12 time that they can see identified when such a line would
13 have gone in is in 1992 and Adam's medical notes and
14 records show that that line was taken out in February
15 1995, which is obviously before Adam's transplant
16 surgery. The inquiry also requested witness statements
17 from those involved in the surgery on 9 February 1992,
18 and they have confirmed that the left internal jugular
19 vein was not ligated during surgery. And Mr Brown has
20 pointed out that he carried out the cystoscopy and he was
21 not involved in the insertion of the Broviac line
22 carried on the by Messrs McCallion and Stewart.

23 It is not clear whether they have accepted that, but
24 the important thing is that all three of them do not
25 accept that there was any ligation of the internal

1 jugular vein during that procedure.

2 However, the ligation of the internal jugular vein
3 is a matter that will be pursued further during the oral
4 hearing, in particular as to whether it could have had
5 any effect or the effect described by Dr Armour on the
6 development of Adam's cerebral oedema.

7 THE CHAIRMAN: The end result of that is there's
8 a considerable doubt about whether in fact there was
9 a ligation.

10 MS ANYADIKE-DANES: There is.

11 THE CHAIRMAN: And, if there was a ligation, was there still
12 a suture there in 1995?

13 MS ANYADIKE-DANES: Yes. There is a debate about that.
14 There's also a debate about: if there was a suture
15 there, how might it have got there, and if there was one
16 from some procedure -- and we will have to investigate
17 whether it's possible for that to happen. But even if
18 there was one, what is its likely effect going to be?
19 Can it have the effect or was it likely to have the
20 effect that Dr Armour has claimed for it?

21 THE CHAIRMAN: Ms Anyadike-Danes, as you've anticipated,
22 we'll stop now for lunch, largely because the
23 stenographer on my left needs a break every one-and-half
24 hours or so and that will be a recurring theme
25 throughout the oral hearings. I'm afraid that in

1 fairness to all the people who haven't seen this opening
2 in advance, we're going to have to get through it today
3 so that people have an opportunity to hear it being
4 delivered as well as seeing a written copy. That might
5 mean we end up sitting a little late this afternoon. We
6 will come back at 2 o'clock, break for 10 or 15 minutes
7 at 3.30 and then we'll have to resume until this opening
8 is finished. Thank you very much indeed.

9 (1.10 pm)

10 (The Short Adjournment)

11 (2.00 pm)

12 (Delay in proceedings)

13 (2.06 pm)

14 MS ANYADIKE-DANES: I think that I had last spoken about the
15 ligation of the internal jugular vein and said that that
16 was a matter that would be pursued further at the oral
17 hearing, apart from any other thing, as to whether it
18 could have had the effect described by Dr Armour or
19 could in any way have affected the development of Adam's
20 cerebral oedema.

21 I now want to move on to the transplant experience
22 at the Children's Hospital. This is a question of the
23 experience of the clinicians and the nurses at the
24 Children's Hospital and the Belfast City Hospital in
25 handling paediatric renal transplant surgery. The

1 inquiry sought and received extensive statistical data
2 from the NHS Blood and Transplant and the DLS on the
3 performance of renal transplant centres across the UK,
4 including Belfast, since 1980 when renal transplants
5 were first performed in Belfast. And the legal team
6 compiled two schedules from that data and three charts
7 to represent the information graphically and hopefully
8 make it more readily accessible.

9 If I call up 300-021-033. This is UK paediatric
10 kidney-only transplants -- of course, they deal with all
11 transplants -- deceased and living. So that is
12 cadaveric transplants and also from living donors at
13 dedicated paediatric units, by transplant year,
14 transplant unit and age group.

15 So across the top, you've got the transplant
16 centres. Belfast is a single centre, in fact, but I'll
17 say something more about that. Belfast, Newcastle,
18 Leeds, Nottingham, London Guy's, Bristol, Birmingham,
19 Manchester, Glasgow, and Great Ormond Street, and we've
20 highlighted, in blue, 1995.

21 They're broken down into two. That's younger than
22 14 and then between 14 and 17. It can be seen if one
23 looks at Belfast, that Belfast, in general, has a lower
24 number of transplants than any other centre. The
25 closest one having a small number of transplants is

1 actually Newcastle, but you can see there that they
2 started in the Children's Hospital because although
3 Belfast is a single transplant centre, we have got these
4 figures that relate just to the Children's Hospital
5 separate from Belfast City to make comparisons on the
6 paediatric side.

7 So you can see they started in the Children's
8 Hospital in 1995, three. Sorry, they started in 1990
9 with two, and there's one in 1991, one in 1992, one in
10 1993 and three in 1995 and so on. I'm not going to go
11 through the whole thing; it's there to see the
12 comparisons that can be made. You can see some very
13 high values for other centres.

14 If I can call up chart 300-082-178. This, in
15 figure 1, is a chart we compiled from the information
16 that we got, and you can see the blue is for the
17 under-14s and then the magenta is the 14 to 17
18 year-olds. This is actually all paediatric renal
19 transplants from 1990 to 2012. You can see that the
20 over-14s actually is pretty constant over the period.
21 Then you can see that the under-14s bobble about
22 a little bit more, but, relatively speaking, they're
23 constant by the time we get to 1998 in terms of numbers.
24 Then you can see for yourself the peaks and troughs.
25 That's the overall picture.

1 Then if we go to 300-082-179, now you can make
2 a comparison with the centres. There's Belfast,
3 Newcastle. That's Belfast in total, Newcastle, Glasgow,
4 and so forth all along the bottom. We've got the
5 magenta, which are the 14 to 17 year-olds and the much
6 larger figure, usually, of the under-14s, the blue. You
7 can see how Belfast compares over time with the others.

8 THE CHAIRMAN: This must relate significantly to the size of
9 population of Northern Ireland.

10 MS ANYADIKE-DANES: Oh yes, it does. It does. But the
11 relevance of it though is to talk about the experience
12 that any given clinician is likely to have if you have
13 only a certain number of transplants being done.

14 In fact, actually, precisely that point,
15 Mr Chairman, was made by Dr Haynes, who's the inquiry's
16 expert on paediatric anaesthetics for transplants. He
17 provided a report for the inquiry in August 2011. He
18 said:

19 "It has been increasingly recognised that there is
20 a need to concentrate specialist services into a smaller
21 number of centres, each with a greater throughput. This
22 is for two reasons. Firstly, such that those involved
23 in the provision of such services have a greater
24 exposure to the difficulties encountered, allowing
25 meaningful audit, research, development of skills and

1 retention of skills. And secondly, so that any one
2 centre does not become only dependent on a very small
3 number of individuals."

4 A similar point actually was made by Mr Forsythe and
5 Mr Rigg in their joint report for the inquiry
6 on October 2011, and they refer to the report of the
7 working party of the British Association of Nephrology,
8 "The provision of services in the UK for children and
9 adolescents with renal disease", which incidentally is
10 dated March 1995. In that report they talk about
11 3 million being the minimum size of population to
12 accumulate and maintain expertise so as to sustain
13 a comprehensive paediatric renal service.

14 It is going to be a matter for experts and others to
15 consider what one does about providing such a service
16 when you don't have a population of that size and,
17 indeed, concerns over the sustainability of the
18 paediatric renal service remain today. As you know,
19 Mr Chairman, an extract was provided to the inquiry from
20 the 2011 review of renal transplantation services in
21 Northern Ireland by the DLS. That document indicates
22 that there remain concerns about that and the inquiry is
23 investigating the relative experience as at the time of
24 Adam's transplant surgery of the surgeons in Belfast
25 City Hospital and the anaesthetists at the Children's

1 Hospital in carrying out paediatric and renal
2 transplants on young children.

3 But as a starting point to that, we have the
4 information from the Freedom of Information request that
5 was made to Belfast City Hospital. There was a response
6 on 29 July 2005, which showed that between
7 1 January 1990 and 31 December 1994, there were a total
8 of 49 paediatric transplants involving surgeons from
9 Belfast City Hospital, of which 30 were performed at the
10 Children's Hospital, and the response identifies a total
11 of 14 surgeons who were involved in these transplants,
12 but makes it clear that some cases involved two surgeons
13 and not all the surgeons were consultants. I think
14 we can see that, in fact. Can we pull out 094-013K-082?

15 No, sorry, we can't see it. In any event, that is
16 what that the Freedom of Information response shows.
17 That will be in the papers.

18 When you see the response, which is in the papers
19 and it's available to you, the names of the surgeons
20 have been redacted, save Mr Keane and Mr McCallion.
21 They were two surgeons both associated with Adam.
22 Nonetheless, it can be seen -- to some extent you don't
23 need the names of the surgeon to see it -- that there
24 was at least one other surgeon who had performed as many
25 transplants as Mr Keane, but it's also clear that none

1 had what you might call extensive experience.

2 The position in relation to the anaesthetists is, at
3 present, less clear-cut because the figures that have
4 been provided so far -- so far as I'm aware -- by the
5 DLS have been provided for period 1 April 1993 to
6 13 October 2010, but without any annual breakdown. So
7 the difficulty with that is that although it shows that
8 Dr Taylor, in that period, had been involved in seven
9 paediatric renal transplants and Dr Chisakuta had been
10 involved in 11, it is not possible to compare their
11 relative experience as at Adam's transplant surgery
12 in November 1995 because you don't know how many of
13 those had been performed before Adam's surgery. But
14 that is an issue which is still being investigated by
15 the inquiry.

16 Indeed, that whole question of the team, if I can
17 put it that way, and the experience is something that is
18 an issue to be addressed in relation to the information
19 that was given to Adam's mother and the options that
20 were explained to her and it's also an issue that will
21 be considered from the governance perspective.

22 If we go to another schedule that we were able to
23 compile from the data that we received, if I call that
24 up, that's 300-022-034. That relates to cold ischaemic
25 time. That's just the plain data as we got it. Median

1 cold ischaemic time by hour of UK deceased kidney-only
2 transplants. The reason for that is there's very little
3 point in concerning yourself about the cold ischaemic
4 time of a live donor because usually there's not much
5 time between the two. So this is cadaveric donors and
6 only transplants at dedicated units by transplant year,
7 transplant unit and age group.

8 That's how it's provided in the sense that they're
9 grouped together in those three periods. And we have
10 tried to make that a little bit more accessible with
11 a chart that we prepared, and that is at 300-082-180.
12 There we are. There's an awful lot of colour involved
13 there. Each centre has its own colour. You can see
14 that with the exception of that middle period of 2003 to
15 2006, Belfast was quite a bit higher in terms of cold
16 ischaemic time than anywhere else. Even so, in that
17 period, it is high, and for some reason, which I can't
18 see by interrogating the data, Newcastle also had a blip
19 that year. But in any event, generally speaking,
20 Belfast is high, and as you indicated, one can envisage
21 various reasons for that, geographic reasons.

22 THE CHAIRMAN: Not quite getting the kidney to the Royal for
23 the transplant?

24 MS ANYADIKE-DANES: Of course. The smaller a population
25 you have, I presume, the less likely you are that that

1 population can generate the kidneys that are needed for
2 cadaveric transplants, which means that your kidneys are
3 coming from elsewhere. And if they're coming from
4 elsewhere, if you happen to be in Northern Ireland, then
5 there's strong likelihood that they're coming over the
6 water or for some distance, and that of course adds to
7 the time. The first thing I should mention is that this
8 only starts in 1998 because they're the earliest values,
9 so we don't actually have data for the time of Adam's
10 transplant. But nonetheless, you can see even with the
11 Belfast centre having to deal with those geographic
12 constraints, they are still below 22 hours on that. And
13 in fact, the cold ischaemic time for Adam's donor
14 kidney, the kidney for Adam, the time it was
15 transplanted, was somewhere in about 32 hours. So there
16 is no value on that chart which even approaches the cold
17 ischaemic time for Adam's donor kidney.

18 How that 32 hours for Adam's case is worked out
19 is that you take 1.42 on 26 November 1995 when the donor
20 kidney was perfused with Baxter's solution until
21 approximately 10.30 on 27 November 1995 when the
22 vascular anastomoses are unclamped. The experts and
23 others providing information to the inquiry advise that,
24 generally, the shorter the ischaemic time, the more
25 likely the kidney is to work immediately and the better

1 the long-term outcome.

2 That whole question of the cold ischaemic time of
3 the donor kidney that was offered to Adam is something
4 that is an issue to be addressed, not just in terms of
5 the decisions to accept the donor kidney and proceed
6 with Adam's transplant surgery, but also part and parcel
7 of the information that was given to Adam's mother.

8 Moving then to the Children's Hospital facilities.
9 The inquiry had photographs taken of the Royal Hospital
10 site, showing layout and interior of the principal
11 buildings involved. Those photographs were taken over
12 the past year and, frankly, an awful lot has changed
13 from 1995 when Adam was admitted for his transplant
14 surgery. In particular, a new building was opened in
15 1999 to provide and, as I understand it, upgrade
16 accommodation, including for theatres and the intensive
17 care unit. Nevertheless, the original structures and
18 rooms remain, albeit that their use has changed.

19 So to that extent, the photographs are still useful
20 for showing location and distances, and indeed there is
21 a set that's been compiled effectively as
22 a walk-through, starting from the old and new disused
23 entrance and ending with the main laboratory that would
24 have been used during the first part of Adam's
25 transplant surgery before. That main laboratory is used

1 because Adam's surgery started before the laboratory for
2 the Children's Hospital opened at 9.30 in the morning.

3 THE CHAIRMAN: Ms Anyadike-Danes, I don't want to rush you
4 because I know this general opening is important in
5 Adam's case, but this next section, I had the advantage
6 over most people here of having the draft copy. Is
7 there a particular issue about the facilities in the
8 hospital which you need to develop or can you move on?

9 MS ANYADIKE-DANES: I can move on except for, I think it
10 might be worth just seeing if we can look at the layout
11 to see how the buildings are arranged. The main thing
12 is to do with the layout in terms of the operating
13 theatres and also the laboratories.

14 So if we go to 300-003-003. I think that should be
15 a layout. Yes. Okay. Etched in red is the Children's
16 Hospital. It's losing a little bit of definition, but
17 you can see, I think, "Musgrave" and that's a ward where
18 Adam was. Then you can see the theatres and then if you
19 come down to the sort of bottom right-hand side, you can
20 see the main laboratories. So that's the sort of
21 distance if, for any reason, children's surgery -- in
22 this case Adam's -- was taking place at a time before
23 the laboratory for the Children's Hospital was open.

24 THE CHAIRMAN: Okay.

25 MS ANYADIKE-DANES: Bearing in mind what you said, I'm

1 trying to see if I can condense this a bit.
2 300-006-006. That's the route to the lab from the
3 operating theatres. That's not quite the one I wanted.
4 I'm trying to see if I can find you one. Can we go to
5 300-084-182? Can we try that? And then I'll just move
6 on if I can't find it. No? Okay.

7 THE CHAIRMAN: Just to reassure everyone, all of these
8 diagrams and plans are in the papers which have been
9 circulated; right?

10 MS ANYADIKE-DANES: Yes.

11 THE CHAIRMAN: Later on today, when your written opening is
12 distributed, they will see from paragraphs 86 to 98 the
13 points that you set out in some more detail about the
14 facilities in the Children's Hospital.

15 MS ANYADIKE-DANES: Well, I can explain, which might be
16 faster than trying to go through the photographs.
17 You will have the photographs available to you so you
18 can effectively do a walk-through with them, and there
19 are, I suppose, four important things to bear in mind in
20 terms of location. One is where the theatre was. Two
21 is where the adjoining theatre was and the relevance of
22 that is that there was a consultant anaesthetist and
23 a trainee anaesthetist, Dr Campbell and Dr Hill, who
24 were working in that adjoining theatre, and as we'll
25 come to shortly, Dr Hill's recollection was that

1 Dr Campbell was called into Adam's theatre because Adam
2 was slow to wake up. So that's where that theatre was,
3 and you can see the two of them.

4 Then there is a picture of -- if you bear this in
5 mind -- the dirty room, and that's where they would have
6 been cleaning and disposing of instruments and Adam
7 would have passed through that. And then there is also
8 an anaesthetic room, which wasn't actually used as an
9 anaesthetic room, and there's a room where Dr Montague
10 was working, so these are all key areas for you to see.
11 And when you're provided with a copy of this opening,
12 you'll be able to look at that, and when you get all the
13 supporting documents, in conjunction with that, and see
14 where all these places that were important at the time
15 for Adam actually are located.

16 One of the site diagrams that I would like to take
17 you to is the one that shows you where the blood gas
18 machine is. But I'm not sure we have that one available
19 to us. Do we have 300-005-005? No? Okay. Well, as
20 you read the opening when you get it, you will see where
21 that blood gas machine was and that, of course, is the
22 blood gas machine that they used to test Adam's blood at
23 about 9.32 during the course of the surgery.

24 Actually, I think we can see that. We can see
25 a photograph of it. That probably doesn't illuminate

1 you much further.

2 The Children's Hospital had its own laboratory, as
3 I've just mentioned, which, when you get the lower
4 ground floor plan, you'll be able to see it on there.
5 That was actually very close to the operating theatres
6 in the Children's Hospital, but unfortunately it was
7 only available during the hours of 9 and 5. You will be
8 able to see its proximity from those walk-through
9 photographs. Adam's transplant surgery was scheduled to
10 start at 6, so whenever it was scheduled to start at 6,
11 it would have been appreciated that they would not have
12 access to the Children's Hospital's laboratory. It was
13 then postponed to 7, and they would still have
14 appreciated that they would not have access to that
15 laboratory. So undoubtedly, it started considerably
16 outside the hours of operation of the Children's
17 Hospital's laboratory.

18 And should the need have arisen, as it did, to use
19 the laboratory, then -- well, should the need have
20 arisen before 9 o'clock, then they would have had to
21 have gone to the main laboratory for the general Royal
22 complex, and that laboratory is in the Kelvin Building
23 and its route and its distance from the operating
24 theatre is shown on that site plan, which is the first
25 one I pulled up for you. There's a set of photographs

1 that literally walk you down there, and you gain, just
2 by looking at them, some appreciation of what would have
3 been involved if you suddenly decided in the operation
4 that actually you needed urgently to receive
5 a laboratory result of a particular sample, what that
6 would have involved in terms of somebody getting that
7 sample from you, getting it to the lab, getting the
8 result through phoned through to you or taken to you.

9 So the equipment and the facilities that are
10 provided by a paediatric renal transplant centre are
11 commented on by Dr Haynes in his report of
12 2 August 2011. And he particularly identifies access,
13 24 hours a day, to a blood gas machine within the
14 operating theatre suite or in close proximity, adequate
15 portering services for tasks such as the transport of
16 specimens to the laboratory, the transport of blood for
17 blood transfusions to the operating theatre, adequate
18 numbers of suitably located telephones to allow easy
19 contact with the laboratories and other hospital
20 resources. And the significance of all of that is that,
21 until February 2012, Dr Taylor consistently gave the
22 lack of adequate facilities and services as a reason or
23 an explanation for the absence of any electrolyte
24 results before the transplant surgery began and before
25 the blood gas machine result at 9.32. And he pointed

1 out that the test -- in fact, actually, in relation to
2 the blood gas machine results, he pointed out that that
3 test wasn't intended for Adam's electrolytes because he
4 regarded the blood gas machine as incapable of providing
5 accurate results. In fact, he claims he was warned not
6 to rely upon it for that very purpose. Rather, the
7 reason he was testing Adam's blood at that time was to
8 enable him to check his haemoglobin levels, which had
9 fallen to 6.1.

10 But that is the significance and now that we have
11 Dr Taylor's statement. There will be issues in relation
12 to what he described as the constraints in terms of
13 earlier testing of electrolyte results and they will be
14 pursued in the oral hearing.

15 THE CHAIRMAN: And your general point is that,
16 until February 2012, Dr Taylor said: we didn't have
17 adequate facilities and services and that's why I didn't
18 seek electrolyte results and I didn't carry out other
19 tests? And on 1 February 2012, he volunteered
20 a statement in which he said that he should have sent
21 the electrolyte sample in before the operation started,
22 he should also have sent other samples as necessary and
23 used those results to adjust the rate and type of
24 intravenous fluids. So he changed the position which
25 he'd held from 1995 until 2012.

1 MS ANYADIKE-DANES: He has certainly changed his position.
2 Whether or not he still regarded -- and any of the other
3 clinicians regarded -- there to be a time issue in terms
4 of getting results back is another question. He
5 certainly took the view that he hadn't taken before,
6 that it's something he should have done.

7 THE CHAIRMAN: Yes.

8 MS ANYADIKE-DANES: If we turn now to putting Adam on the
9 transplant list. Adam's renal function deteriorated to
10 a level where he needed peritoneal dialysis. That is
11 a form of dialysis for children like Adam with severe
12 chronic kidney disease. The process uses the patient's
13 peritoneum in the abdomen as a membrane across which the
14 fluids and dissolved substantials -- whether it's
15 electrolytes, urea, glucose and albumin -- are changed
16 from the blood and fluids are introduced via a permanent
17 tube in the abdomen and flushed out either every night
18 while the child sleeps, which is called automatic
19 peritoneal dialysis, or via regular exchanges throughout
20 the day, and that's continuous ambulatory peritoneal
21 dialysis.

22 Dr Savage discussed Adam's deteriorating renal
23 function and his need for dialysis with his mother
24 during a dialysis clinic on 2 November 1993. And it was
25 his plan, so he has said, to have Adam registered for

1 a transplant at the same time as he went on dialysis,
2 and he explained that in a letter of 3 November 1993 to
3 Dr Scott, who I believe was Adam's GP:

4 "Certainly, if we get to the point where I feel
5 he needs dialysis in the near future, my plan would be
6 to put him on call before he needs dialysis or
7 a transplant."

8 And as can be seen from the schedule of Adam's
9 surgical procedures, which I pulled up this morning --
10 but I'm not going to pull it up now -- Adam did have a
11 continuous ambulatory peritoneal dialysis catheter
12 inserted in July 1994. And Dr Savage arranged to have
13 Adam's tissue typing carried out with a view to putting
14 him on call for a renal transplant and he was registered
15 as a possible recipient with the United Kingdom
16 Transplant Support Service Agency on 14 July 1994.

17 Sorry, I'm being assisted by my junior. I think
18 he had the catheter inserted on 23 March 1994 and then
19 he had the peritoneal dialysis catheter inserted
20 in July 1994.

21 It seems that Dr Savage may have been the only
22 consultant clinician involved in the process of having
23 Adam placed on the transplant register and the inquiry
24 witness statement from Adam's mother, which is dated
25 10 January 2012, indicates that the provision of

1 relevant information to her on renal transplantation for
2 Adam was provided by Dr Savage. She states that
3 Dr Savage was the person involved in assessing Adam
4 before he went on the transplant list. That is an issue
5 to be pursued during the hearing as to the process by
6 which Adam was placed on the transplant register, who
7 should have been involved in it and what should have
8 been explained to his mother. They are all issues that
9 we will be pursuing.

10 Adam was fully registered in November 1994 after the
11 tissue typing and that registration form is a detailed
12 document. It makes provision for matters such as his
13 blood group, his type, his HLA data, the level of
14 acceptable mismatching that would be tolerated, the
15 sensitisation status and the person responsible for the
16 information on the form. In fact, we can see that form,
17 057-070-131.

18 This form has more than one page, and I think,
19 unfortunately, only one page is here. But in any event,
20 you can see -- this is page 2 -- the sort of detail.
21 And if you go up to the top there, under "ABDR", that is
22 the degree of mismatching to be accepted. And then the
23 sensitisation status. There it is there. Then
24 you have, at the bottom, the date of it and that the
25 form was checked by Dr Savage. The first part of it

1 would have given his HLA data.

2 This information is what allows the transplant
3 centre to consider the donor kidney -- or at least the
4 kidney that was being offered to Adam from the Glasgow
5 Southern General Hospital -- was a sufficiently good
6 match to offer it at all for him. That's where they're
7 getting their information from. And Dr Savage states in
8 his inquiry witness statement of 14 April 2011 that he
9 explained the system of being on call for a kidney
10 transplant to Adam's mother and the need for a fast
11 response and immediate tissue cross-matching for the
12 donor kidney, if one became available. And he also says
13 that she received an explanatory booklet, "Kidney
14 transplantation in childhood, a guide for families",
15 which is dated 1993. That particular document is
16 compiled by the paediatric renal unit at the City
17 Hospital in Nottingham. And the guide states under
18 "What assessment is necessary":

19 "Placement on the transplant waiting list follows
20 discussion with the kidney specialist and transplant
21 surgeon."

22 In any event, Adam's mother states in her inquiry
23 witness statement that none of the information given to
24 her on renal transplants by Dr Savage or anybody else,
25 for that matter, was provided in written form. That's

1 obviously an issue that needs to be pursued as to
2 exactly what she got and what she could have been
3 expected to understand from it.

4 THE CHAIRMAN: And in terms of the Nottingham guide, the
5 kidney specialist would have been Dr Savage?

6 MS ANYADIKE-DANES: Yes.

7 THE CHAIRMAN: And it says "transplant surgeon". That may
8 or may not have been Mr Keane. It didn't have to be --

9 MS ANYADIKE-DANES: No, it didn't have to be.

10 THE CHAIRMAN: -- as long as it was a transplant surgeon?

11 MS ANYADIKE-DANES: A transplant surgeon.

12 Can we go to the timeline again at 307-001-033?

13 This is a different page of it, this is now page 32 of
14 it. And if you go on to the dialysis prescription and
15 cycles, you can see that on 24 August 1994, he commenced
16 his Pac X, that's his dialysis, this afternoon, and it
17 gives you the number of the cycles.

18 Incidentally, if you look across you can see what
19 else was happening. There it shows you the insertion of
20 the peritoneal catheter for his PD line and the central
21 line being inserted. That's relevant, as I had spoken
22 before about how many central lines he had.

23 If you look at the top, another issue being flagged
24 there: anaemia. That is one of those issues that the
25 experts consider a relevant thing to know about Adam's

1 condition and there it's being recorded there.
2 If we look at this, we can see over these pages there
3 are a number of these red-line issues. So he's just
4 under on haemoglobin, so that's 23 August 1994, which
5 probably is to be expected given that he's being
6 recorded as anaemic. And if you look at the top, you
7 see the actual range is 11 to 15, so he's 7.9 and he's
8 recorded as that again on 25 August and on 2 September.
9 And then if you just go a little bit down, still
10 2 September, you can see that there's education, how to
11 use that dialysis machine.

12 The dialysis he was receiving was 11 cycles, using
13 300 ml of 1.36 solution. Initially, actually, right
14 at the start when he started he was receiving six cycles
15 of 300 ml of volume overnight, five days a week. That
16 then went up to eight cycles and that was then increased
17 to ten cycles of 600 ml. And by the time of his
18 transplant, 14 months after he was initially placed on
19 the transplant list, he was receiving 15 cycles of
20 peritoneal dialysis overnight using 750 ml fills of 1.36
21 per cent Dianeal solution. That's relevant in terms of
22 what was the actual dialysis that he received the night
23 before his surgery and what is the relevance of whatever
24 it was.

25 In the months leading up to his transplant, Adam

1 received feeds through his gastrostomy tube, and they
2 consisted of three bolus feeds for the day. I know
3 Adam's mother is here and she was intimately, of course,
4 involved in all of this. But for everybody else who
5 doesn't know how Adam was being cared for, some of these
6 details, I think, are helpful to recite, and I don't
7 intend to cause any concern, if that's what this is
8 doing.

9 So three bolus feeds per day each in the morning,
10 early afternoon and evening and then 1200 ml over
11 approximately 8 hours overnight, and they were made up
12 as a prescription of 1,000 ml of Nutrison, 50 grams of
13 Maxijul, 50 ml of Calogen and 100 ml of saline made up
14 to 2,100 ml by water. And he would receive sodium and
15 iron supplements in his feed to prevent him from having
16 these episodes of anemia and low sodium.

17 As I indicated to you from the timeline, Adam's
18 mother was trained in the use of the automatic dialysis
19 cycle machine some time around the beginning
20 of September 1994. She maintained a detailed record of
21 Adam's dialysis at home in a dialysis book and that book
22 and all its records is attached to her second witness
23 statement for the inquiry. That contained details of
24 Adam's weight before and after dialysis, first drain,
25 the manual drain, ultra filtrate, and she recorded his

1 blood results, feeds as well as queries and observations
2 of Adam, such as she recorded temperature drops, if he
3 were to get at all shaky with them. And Dr Savage
4 considered Adam's mother to be absolutely meticulous in
5 her approach to Adam's home dialysis.

6 Adam's admission and his pre-surgical events. From
7 photographs taken of Adam just over a fortnight before
8 his renal transplant, show him looking happy and well,
9 and I'm just going to pull one up because how he
10 presented his condition before surgery has proved to be
11 something that is -- something to be considered.
12 That is reference 300-079-150.

13 That's Adam to the bottom left, just crouching there
14 by the table.

15 THE CHAIRMAN: It looks like party time.

16 MS ANYADIKE-DANES: I think it was party time, actually.

17 His mother described him at that stage, notwithstanding
18 his renal problems, as being back on top form again.
19 He was really well.

20 So receiving the offer of a kidney. This now is the
21 key period with regard to Adam's case. And it starts
22 with the offer of a donor kidney on 26 November 1995.
23 And unfortunately, it ends with his death on
24 28 November 1995. But during that period there are key
25 events of Adam's admission to Musgrave Ward at

1 2000 hours, his arrival at theatre at 0700 hours on
2 27 November for his renal transplant surgery, his
3 admission to paediatric intensive care unit at the end
4 of his surgery at around 12 noon and the withdrawal of
5 ventilatory support at 11.30 on 28 November. And the
6 vast majority of issues relating to Adam's case occurred
7 during that period, particularly the management of his
8 fluids during perioperative stage.

9 We have compiled a chronology of events, clinical
10 matters, that detail the clinical events that occurred
11 over that period. Can we have, please, 306-003-006?
12 There it is. A very simple chronology: just the date
13 and a time, if it's relevant, and given that we're only
14 talking about two days, it almost always will be. There
15 are some events for which we just don't have a time, but
16 we sometimes have the order, in which case we just put
17 them in that order. Then you have the event itself
18 described and then, as always, if we can do it, we put
19 the reference of a source of the information for
20 whatever is stated in the event.

21 In the footnotes, we have clarification points just
22 so that if you're unsure what "perfusion with Baxter's
23 solution" means, then you go to the glossary of terms.
24 If you're not sure who the relevant person is, then
25 you're directed to the list of persons. And if there is

1 some other query or observation, then it's recorded
2 in the footnotes.

3 It is compiled almost exclusively from Adam's
4 medical notes and records. It does include some matters
5 from other sources such as the depositions or PSNI
6 statements, but that's generally where there is no other
7 source and the information in question has not been
8 queried or challenged. We have tried to ensure that the
9 details in the chronology are not contentious and that
10 it can therefore act as a useful reference document when
11 considering the various issues in Adam's case. To that
12 end, the inquiry's sent the chronology out to all the
13 interested parties on 5 January 2005 -- I don't think it
14 was 2005; I suspect it was 5 January 2012 -- for comment
15 and, since then, the chronology has been updated to
16 reflect the subsequent receipt of documents.

17 An example of that, 306-003-008. An example of
18 that is to do with the chest X-ray. If you see, there's
19 the second box down, a question mark. Then you can see
20 the pre-surgery chest X-ray was requested by Dr O'Neill,
21 and, if you go to the reference section, you can see the
22 reference for the actual request form. But then, if you
23 go down to the note, footnote 28, you will see that no
24 chest X-ray has been provided that corresponds with that
25 request. So we don't actually have a chest X-ray that

1 corresponds with that request. We sought it, obviously,
2 and there is now a query in the correspondence from the
3 DLS whether such an X-ray was actually performed. And
4 that letter that addresses that is referenced: it's
5 in the documents, so you should be able to see it.

6 That's an issue that will have to be pursued as to
7 whether it actually was and it's simply been lost, or it
8 wasn't and, if it wasn't there will be an issue as to
9 why wasn't it when the request was there. And a further
10 example is -- we can see that at reference 306-003-009.
11 If you see that second box before midnight: a further
12 blood specimen was taken for biochemistry and hematology
13 analysis, and it's given the reference for that. The
14 actual lab result came back some time, presumably in the
15 early hours, of 27 November, and what's there under
16 "event" is actually the results from it. And you can
17 see it bears the same reference as the information on
18 the blood specimen.

19 That lab result is from a blood specimen that was
20 taken before midnight on 26 November and therefore on
21 26 November 1995. It shows, assumed sodium level of 133
22 millimoles, which is lower than the previous value from
23 the blood specimen that was taken at 2100 hours. That
24 value was 139 millimoles.

25 This is an issue to be pursued in terms of record

1 keeping, but the 139 serum sodium level is not
2 accompanied by any lab result. We have sought it and
3 we haven't been given it. Some of these, as you may
4 recall, Mr Chairman, were mislaid in some way. What
5 we have is we have a blood specimen that seems to be
6 taken probably, we think, around about 11 o'clock. And
7 that shows a serum sodium level of 133. But because
8 that laboratory result was not in Adam's clinical notes
9 and records -- in fact, it's only very recently that we
10 knew it existed -- so all that anybody would have seen,
11 unless they'd seen it earlier and hadn't noted it in
12 these notes and records, is the one from 9 o'clock at
13 139 millimoles.

14 So as I say, Mr Chairman, that's going to be
15 an issue as to the recording and how that occurred.
16 It's also going to be an issue as to what, if anything,
17 is the significance of that fact. Anyway, I don't
18 propose to go through the chronology and all that it
19 shows in detail because it's there, Mr Chairman, and I'm
20 conscious of the issue of time. It's just so far as
21 we have been able to do it, goes through all the timed
22 and recorded events for Adam from the -- actually, it
23 starts, as I said, with perfusion of blood, in 142, in
24 Glasgow, and then it ends with the removal of
25 ventilatory support. So everything that we have been

1 able to glean from his medical notes and records is set
2 out there in the order and with the time that we believe
3 it happened and reference to the document from where we
4 got the information. It's something that we hope will
5 be useful and that we can turn to it through the oral
6 hearing just to reference ourselves as to what was
7 actually happening and who was involved in it.

8 Let me go now to deal with another issue, which is
9 the issue of the trainee anaesthetist. The anaesthetic
10 record for Adam's transplant surgery shows that
11 Dr Taylor was assisted by Dr Montague for the renal
12 transplant. Dr Montague was senior registrar in
13 anaesthesia at that time. However, whilst the
14 anaesthetic record might suggest he was there for the
15 duration of the surgery -- well, it might do; it simply
16 has him there as the assistant -- he claims that that
17 wasn't the case. Dr Montague states in his PSNI
18 statement of 30 November 2007 that he had been on call
19 for the night of 26 November 1995, and that although
20 he was present at the start and assisted with preparing
21 Adam, including the epidural, Dr Taylor sent him home
22 just before the start of the transplant surgery.

23 Dr Taylor accepts Dr Montague's account of events.
24 In his inquiry witness statement of 16 May 2011. So
25 after the statement by Dr Montague. He states:

1 "After the start of the surgery, another trainee,
2 whose name I cannot remember, came on duty to assist me,
3 and I was able to let Dr Montague go home as he had been
4 on call for 24 hours, as he confirms in his statement."

5 The precise time at which Dr Montague left is
6 uncertain. It seems that it was prior to 9.32 when the
7 blood gas result was obtained, and it may have been
8 around 8.30 to coincide with the anaesthetist
9 registrar's coming on duty. Dr Taylor is quite clear in
10 his evidence to the inquiry that Dr Montague was
11 replaced in the operating theatre. As he states in his
12 statement, dated 3 October 2011:

13 "I would not have allowed [Dr Montague that is] to
14 leave unless an appropriate substitute replaced him."

15 Dr Montague made no reference to a substitute in his
16 statement to the PSNI, but the inquiry asked him about
17 the possibility of him being replaced by another
18 registrar and he stated in his statement:

19 "There would have been some of the other
20 anaesthetist registrars starting work in theatres at the
21 Children's Hospital at approximately 8.30 and one of
22 those registrars would have been available to assist
23 Dr Taylor."

24 And then he says:

25 "I don't know which registrar replaced me."

1 None of the other members of the transplant team and
2 neither of the consultant paediatric nephrologists has
3 mentioned the presence of a trainee anaesthetist during
4 the transplant surgery other than Dr Montague itself.
5 And the correct identification of all those in the
6 operating theatre, particularly anyone present from
7 about 9.30 onwards, is a matter of considerable
8 importance to the inquiry and it has pursued its
9 investigations into that as far as it can.

10 The inquiry subsequently received a letter dated
11 17 August 2011 from the DLS, and that letter provided
12 a list of junior anaesthetic trainees who were attached
13 to the Royal Group of Hospitals on the date of
14 Adam Strain's transplant operation on 27 November. And
15 they formed the pool of potential trainee anaesthetists
16 from which to identify the person who Dr Taylor says
17 assisted him in the operating theatre after
18 Dr Montague's departure.

19 All of those on the list were identified and the
20 inquiry sent each of them witness statement requests to
21 ascertain, just in the first instance, whether any of
22 them could have been present in the operating theatre on
23 27 November 1995 during Adam's transplant surgery.
24 Witness statements were received from all of them, but
25 none of them have claimed to have been there.

1 We have produced a schedule of that group and what
2 they say. I can call it up now. It starts at
3 306-002-004, "Schedule of possible trainee anaesthetists
4 assisting Dr Robert Taylor in Adam's transplant
5 surgery". Down the left-hand side are their witness
6 statement numbers and they go sequentially. That's to
7 locate them if anybody should have a query about
8 anything. Those are their names and this is what they
9 say. It's not all that they necessarily said, but it is
10 a summary of what they said in relation to this
11 particular issue. It can be seen that for the most part
12 they confirm they were not involved and for some of them
13 it's quite easy: it's because they were out of the
14 jurisdiction or they were not working for the trust.
15 In that category are doctors McNamee, Gilliland,
16 Bunting, Trinder, Kelly, Kumar. They are all in that
17 sort of category.

18 Then there's doctors O'Neill, Bedi and Kerr, and
19 they just don't recall Adam's case, although Dr Kerr
20 goes so far as to say she believes she would remember it
21 if she had been involved.

22 Dr Bedi identified a Dr McBrien as possibly being
23 the on-call trainee, so we sought further information
24 from Dr McBrien. He was contacted and he's provided two
25 inquiry witness statements, one dated 30 September 2011

1 and the other, 14 February 2012. The first one, he
2 states that the theatre log for 27 November 1995 --
3 a theatre log is a document, which you all have, and in
4 fact it's exhibited to one of the witness statements,
5 the witness statement of Dr Rosalie Campbell in a sort of
6 A3 -- a bit like a spreadsheet -- but it's much easier
7 to read in that way and you can see across it who was
8 in what theatre, with whom, and at what time and with
9 which surgeon or anaesthetist and the procedure that was
10 involved, so it's quite a useful document for seeing in
11 what order people were meeting each other over that
12 particular day. It says that:

13 "The theatre log shows that I anaesthetised two
14 cases at 18.30 and 20.05. It is my recollection that on
15 a weekday such as this, the trainee anaesthetist on call
16 overnight came on duty at 13.00. This would indicate
17 that I was not in hospital that morning."

18 In his second witness statement request, he explains
19 that.

20 "The trainee anaesthetist on-call overnight went off
21 duty some time between 8 am and 9 am as it was deemed
22 not safe for him to continue working after a night on
23 call. The trainee anaesthetist starting at 13.00 was
24 routinely allocated to an elective list for the
25 afternoon, taking over emergency duties in the evening

1 after that afternoon list had finished."

2 The theatre log referred to by Dr McBrien shows the
3 date of each operation carried out in that particular
4 operating theatre, as well as the patient's details, the
5 diagnosis, the nature of the procedure, whether the
6 classification of the operation was major or minor, the
7 name of the surgeon, the name of the anaesthetist, the
8 particular ward, the namely of the scrub nurse, and the
9 times of arrival and departure. That does include, in
10 certain instances, the names of those who assisted, so
11 it is possible to see one name/another name. However,
12 although that's exactly how the column with "surgeon" is
13 entered for Adam's surgery in the sense that you see
14 "Keane/Brown", the name under the anaesthetist column
15 shows only Dr Taylor's name. So it's not slash with
16 Montague or, for that matter, anybody else; it just
17 bears his name. So it's unknown whether there was
18 a trainee anaesthetist who assisted Dr Taylor in the
19 operating theatre after Dr Montague's departure and if
20 so, who it was. What you have though is a very strong
21 assertion from Dr Taylor that he was assisted in that
22 way.

23 Mr Chairman, the fact that we don't actually know
24 exactly who was in an operating theatre when the end
25 result of the procedure, or whatever happened during

1 that process, is that a child dies, is something that
2 we will look at in the course of governance or we'll
3 look at it from the governance perspective.

4 THE CHAIRMAN: But before moving on to governance, if you
5 look at it in the clinical perspective, we also know
6 from the figures that it's very unusual for a child to
7 die in transplant.

8 MS ANYADIKE-DANES: We do know that.

9 THE CHAIRMAN: We know from a number of reports and
10 statements from those involved that Adam's death was
11 totally unexpected, so it's very hard to understand how
12 any trainee anaesthetist who was there could possibly
13 have forgotten the event.

14 MS ANYADIKE-DANES: Well, I understand that, and given, as
15 you say, how few transplants happened, it's very
16 possible that it would have been the trainee
17 anaesthetist's first, and if you're trying to see
18 something of that sort and it ends in the way it ended,
19 I understand, it's difficult to see how you might forget
20 that. But even if that's -- and that is a real
21 question, and it will be so as we -- when the witnesses
22 are called and you will see references in their witness
23 statements as to whether they recall this or they recall
24 that. Doubtless, Mr Chairman, you'll be bearing in
25 mind, how much an outcome like that is likely to have

1 stayed with somebody.

2 THE CHAIRMAN: Yes.

3 MS ANYADIKE-DANES: So yes. And it is definitely an issue
4 from the clinical perspective and we will definitely be
5 looking at it and pursuing it in the hearing on clinical
6 matters, but I simply wanted to indicate also that it
7 has other implications for governance: the fact that you
8 can't know that and therefore one can't, if one's
9 engaged in the process that we are doing -- or for any
10 purpose for lessons learned -- know exactly who was
11 involved.

12 Dr Hill, I had mentioned him earlier, was also
13 a trainee anaesthetist at the time, and he has provided
14 a witness statement to the inquiry dated
15 12 October 2011. He wasn't able to assist further the
16 investigation of who was the likely trainee, he didn't
17 know, and it certainly wasn't him. But he did open up
18 the prospect of another person being in the operating
19 theatre whilst Adam was still there. He described
20 working with Dr Rosalie Campbell. She was the locum
21 consultant anaesthetist in the adjoining operating
22 theatre to the one where Adam's transplant surgery was
23 taking place. That's why, when one looks at the site
24 plans and the photographs, it is worth bearing in mind
25 quite how close those two operating theatres were.

1 He said in his witness statement that:

2 "My recollection is that at some stage during our
3 work on the day in question, which was in an adjacent
4 theatre, the consultant anaesthetist who appears to have
5 been Dr Rosalie Campbell left to assist Dr Taylor
6 because a patient, who I now to be Adam Strain, was slow
7 to wake up."

8 Well, we asked Dr Campbell to provide a witness
9 statement, which she did. She's provided two, in fact.
10 The first one was dated 7 April 2011; the second one is
11 dated 8 October 2011. The first one, as you will
12 appreciate is before we had the witness statement from
13 Dr Hill, and we were asking her, as we have asked all
14 those who in any way were involved with Adam, for
15 a description of the nature of their involvement with
16 him. And in fact, the only issue in relation to Adam
17 which she raised in her first witness statement was that
18 with reference to assisting Dr David Webb. She was the
19 second doctor in the performance of the first set of
20 brainstem testing. She deals with the operating theatre
21 issue in her second witness statement request and
22 because we're asking her about it.

23 In the main, she responds -- and it is there are for
24 you to see -- to all such queries by stating that she
25 has no recollection. That's a matter that will be

1 pursued in the oral hearing.

2 Turning now to the anaesthetic nurse. This is
3 another identification issue. And also one raised by
4 Dr Taylor. This time, in relation to the presence of an
5 anaesthetic nurse during Adam's transplant surgery. He
6 stated in his inquiry witness statement dated
7 18 July 2005, which he made just before the inquiry's
8 work was suspended, that:

9 "At 0700, I worked closely with Dr Montague and the
10 anaesthetic nurse to induce anaesthesia and provided all
11 the technical skills necessary to secure the airway
12 breathing, access to intravenous lines, arterial access,
13 central venous access and epidural catheter placement."

14 The issue was raised during the course of the PSNI
15 investigations, which started in Adam's case in
16 about July 2005 and Dr Taylor was asked about his
17 statements on the presentation of an anaesthetic nurse
18 during the course of his interview under caution on
19 17 October 2006. He stated that:

20 "My knowledge is that there has to be three nurses
21 present before an anaesthetic is commenced."

22 As a result of Dr Taylor's evidence, both staff
23 nurse Popplestone and staff nurse Mathewson made PSNI
24 statements. You'll recall that both of them were in the
25 operating theatre at the time. Staff nurse Popplestone

1 was the scrub nurse and staff nurse Mathewson was
2 runner. Staff nurse Popplestone stated in her
3 statement for the PSNI:

4 "I cannot be certain. However, from my experience,
5 it is possible that the anaesthetists had the assistance
6 of a nurse and, possibly, an operating technician."

7 And staff nurse Mathewson said:

8 "I can say from my experience that in an operation
9 such as a renal transplant on a child, as well as the
10 surgeons and anaesthetists, I would have expected
11 a scrub nurse, a runner and a theatre technician with
12 probably an anaesthetic nurse as well."

13 We know that there was a scrub nurse: that was staff
14 nurse Popplestone. There was a runner: that was staff
15 nurse Mathewson herself. And there was a theatre
16 technician: that was Peter Shaw. What we don't know is
17 what happened about the suggestion or the evidence from
18 Dr Taylor that there was an anaesthetic nurse. So the
19 inquiry pursued the matter. We asked the DLS, and
20 in September of last year, 5 September, the DLS provided
21 a list of theatre nurses employed by the Royal Group of
22 Hospitals trust as at 27 November 1995.

23 Mr Chairman, I should say something a little bit
24 about this. There is an issue as to whether there is
25 anybody called an anaesthetic nurse. So whether that is

1 a title or whether it is actually a role.

2 THE CHAIRMAN: Is that in the sense of it is something
3 that's now a title, but which was not necessarily
4 a title in common use in 1995?

5 MS ANYADIKE-DANES: Well, that's one of the things we will
6 have to explore. Certainly, without any particular
7 prompting, so far as I can see, staff nurse Mathewson
8 refers to an anaesthetic nurse. Whether she was
9 referring to that meaning somebody who carries out the
10 role or function of an anaesthetic nurse or whether she
11 was referring to that as somebody who has the title of
12 anaesthetic nurse, it's something that we are exploring.
13 But I think, sir, there may be something in that, that
14 what was essentially being talked about was somebody who
15 had the training of a theatre nurse and could perform
16 those sorts of functions. And when they were doing
17 that, then they were acting as an anaesthetic nurse.
18 But in any event, it's one of those issues that we're
19 going to clarify.

20 It didn't make any difference whatsoever to how we
21 pursued the investigation because we simply asked for
22 a list of everybody who was a theatre nurse, and pursued
23 all of them. We located them all. Well, we located all
24 those that were provided to us on the list. We have no
25 other independent way of knowing, so everybody that was

1 provided on the list we located, and we sent out inquiry
2 witness statement requests to ascertain whether they
3 could have acted as an anaesthetic nurse for Dr Taylor
4 during Adam's transplant surgery. We did receive
5 responses from all of them, but none of them claim to
6 have been the anaesthetic nurse or to have performed
7 that role.

8 We have compiled a schedule of all of that. Of
9 course, their statements are there and you can look at
10 each and every one of those statements, but the schedule
11 can be seen at 306-002-003, "Schedule of possible
12 anaesthetist nurses". Here they all are and it's
13 exactly the same structure as the one for the trainee
14 anaesthetists. Some of them, of course, say they are
15 not in the jurisdiction or they were actually
16 auxiliaries, and they couldn't have done that. 217 is
17 in that position, as is 215. But there are their
18 responses and a few of them say they don't recall. Some
19 of them are positive, saying they definitely weren't
20 there, and some of them say it couldn't have been them.
21 Well, Mr Chairman, it'll be a matter for you ultimately
22 to determine where we stand on the anaesthetic nurse
23 point, but after we have pressed that matter further
24 in the oral hearing.

25 As I indicated to you before, in terms of the

1 trainee anaesthetists, it's also not just a clinical
2 matter, it's a governance matter. If I can go to fluid
3 balance.

4 The management of fluid balance and the choice and
5 administration of the intravenous fluids, that is a key
6 element of the terms of reference. In fact, it's
7 a specific element of the terms of reference. And it
8 has been the subject of detailed queries from the
9 inquiry in witness statement requests, as well as briefs
10 to the inquiry's experts. And it is an area which is
11 far from straightforward and the arguments made by the
12 clinicians and the experts are to a large extent
13 dependent on the assumptions that they have made about
14 the clinical information, which is not available. Some
15 of that information that is not available, about which
16 they have to make assumptions, is Adam's serum sodium
17 level at the start of the anaesthetic and his urine
18 output during the surgery. And furthermore, the
19 clinicians and the inquiry experts -- well, when we
20 started to investigate it with them, did not all present
21 their calculations in a way that easily permitted
22 comparison, and that was a difficulty because it wasn't
23 possible to know whether there were real differences or
24 they were just proceeding upon different bases.

25 So in an effort to bring some consistency to all

1 their various approaches and permit them to be more
2 readily seen or permit us to see where the differences
3 really lie and why, with the guidance of the advisors,
4 we developed a standard table to display the essential
5 elements of the fluid balance calculations. And we sent
6 that table to Dr Taylor and to the inquiry's experts,
7 Dr Coulthard, Dr Haynes, Professor Gross, and they all
8 were asked to display the calculations that they had
9 already made, and either, in the terms of Dr Taylor,
10 were reflected in witness statements, or in the case of
11 the inquiry's experts, were reflected in their reports.
12 They were asked to display their calculations on that
13 standard table.

14 The completed tables for Dr Coulthard and Dr Haynes
15 are provided as part of their further reports.
16 Professor Gross provided the data, and that was
17 subsequently inserted into a chart, and Dr Taylor's
18 completed table is provided as part of his witness
19 statement, dated 9 January 2012.

20 Then we had a series of these tables with all their
21 calculations and what we then did is we compiled
22 a comparison table. In fact, you can see that at
23 300-077-141. The object of that was to try and put in
24 one place the calculations that they all made. So let
25 us start with the display of Adam's daily fluid balance,

1 which is what that is. This shows the position of each
2 of the inquiry's expert witnesses -- so that's
3 Dr Haynes, Professor Gross, Dr Coulthard -- and actually
4 we include Dr Sumner in that because he had calculations
5 as well and he was an expert witness at Adam's inquest.
6 And then also we added Dr Taylor and Dr Savage
7 in relation to what each of them believed to be Adam's
8 daily input and output of fluids prior to his surgery.
9 So we were really trying to get at their starting
10 assumptions.

11 So firstly, there's the assumption for each of them,
12 by each of them, as to his weight and surface area. You
13 can see that if you look at the -- weight's not too
14 difficult to see. They don't really deviate very much.
15 The surface area, there's not very much difference there
16 either. They're used in the calculation of losses.
17 They all agreed that Adam's daily fluid intake was 2,100
18 ml. His fluid losses are divided into four areas: the
19 losses from perspiration and water vapour in breath, and
20 that's known as insensible losses, and can't be
21 accurately measured, they're just estimated. Secondly,
22 there's a fluid loss in the course of dialysis.
23 Thirdly, faecal loss, and finally there's urine output,
24 which can be seen in the substantial loss per day.

25 Each of the experts and witnesses calculates the

1 urine output by subtracting the insensible dialysis and
2 faecal losses from the daily intake of 2100 ml, and it
3 can be seen the estimated urine outputs vary from
4 approximately 55, Gross and Haynes, to approximately 80
5 from Dr Taylor. So he's slightly to the right of them.
6 Dr Taylor's calculation of urine output here is
7 significantly -- this is, I think, important to note.

8 THE CHAIRMAN: Dr Taylor, box B, urine output?

9 MS ANYADIKE-DANES: Yes, I am. This is compiled from his
10 own chart, which he sent on 9 January 2012, so we've had
11 an awful lot about Dr Taylor's calculations from when he
12 gave evidence to the Coroner, when he gave evidence to
13 the PSNI, and when he gave previous witness statements.
14 This is him now being asked to record his calculations
15 in this kind of format. This is the first time it
16 happens, this is the beginning of this year. His
17 calculation of urine output is significantly reduced
18 from his earlier assertion that Adam would pass around
19 200 ml per hour of dilute urine.

20 He commented in his last witness statement to the
21 inquiry -- that's the one of 1 February -- I think
22 Mr Chairman, you were reading from it a while ago.
23 1 February this year -- that he has reflected on this
24 and he now recognises that Adam had a fixed urine output
25 of around 70 to 80 ml per hour and he further stated

1 that the intraoperative fluid that I administered was
2 based on this incorrect assumption and I therefore
3 administered a hypotonic fluid at a rate in excess of
4 his ability to excrete it, particularly in the first
5 hour of anaesthesia."

6 THE CHAIRMAN: His incorrect assumption was 200 ml an hour,
7 and that's reduced, as you have indicated in this chart,
8 to 78.1?

9 MS ANYADIKE-DANES: That's correct. The rate of
10 administration of the first hour, we'll come to that in
11 a minute, and we'll see just how much was administered
12 in that first hour. So now, the remainder of the
13 comparison table shows Adam's fluid balances between
14 2200 on his arrival in theatre to 0700 hours on
15 27 November, and during the course of his surgery until
16 its conclusion and his admission to PICU at 12.15.

17 The calculations and assumptions for each of the
18 inquiry expert witnesses mentioned, plus Dr Taylor, in
19 each of the time periods is displayed, and you'll see
20 the entire chart, Mr Chairman. Each of the experts and
21 Dr Taylor also gave their comments on the concentration
22 of sodium in each of the solutions that Adam received,
23 and any reasons why planned fluid infusion, whether its
24 content or the infusion rate, should change due to
25 changes in estimated loss.

1 And an important additional factor to consider here
2 is that of blood loss. Dr Taylor calculated Adam's
3 blood loss during surgery to be 1,128 ml. He did that
4 by examining the blood loss record and the swab count
5 and this figure is based on the difference in weight
6 between dry and blood-soaked swabs -- and they are 411
7 ml -- and the volume of liquid in the suction bottle --
8 that was 500 ml -- and also what he referred to as
9 a visual estimation of the amount of fluid on the
10 surgical towel. That differs from Mr Keane. He has
11 subsequently estimated the blood loss to have been only
12 468 ml, and he bases this on the fact that 600 ml would
13 have been made up of urine, peritoneal dialysis fluid
14 and slush dialysis, which is used to pool the kidney
15 until the vascular anastomoses were complete. That
16 reference to urine, Mr Chairman, you'll recall that one
17 of the issues that we are pursuing is why the urine
18 wasn't measured or couldn't have been measured in any
19 way. So part of the reason why these assumptions have
20 to be made or are being made is that there is important
21 recording information that we simply don't have. We
22 don't have it and they didn't have it at the time,
23 it would appear. The issue of what the surgical blood
24 loss was and whether Dr Taylor's -- whether he estimated
25 that appropriately during the surgery and responded

1 appropriately to it regarding Adam's fluid management
2 that is something that we will investigate during the
3 oral hearings. We're also going to investigate if
4 whatever blood loss there was was reasonable in the
5 circumstances.

6 If I move now to the next stage, which is inducing
7 anaesthesia and Adam's transplant surgery. I had
8 mentioned before about Adam's condition going into his
9 surgery, but I had done that from the point of view of,
10 when we looked at the timeline or the summary of it, he
11 seemed to have had a period where he was relatively free
12 of some of those matters that had been causing concern,
13 and then I presented you with a photograph of how he
14 looked physically and also his demeanour and his
15 mother's description of it. Now we look at his
16 condition from a clinical point of view going into the
17 surgery.

18 We have summarised the information that was known
19 about Adam's condition going into surgery from his
20 medical notes and records in a chart on his pre-surgical
21 state, and that's at 306-006-040. There is a second
22 page to this chart, which shows the sources for all that
23 information and when you have it, you will obviously
24 have all of that. So the fact that there aren't
25 sources, as there are on all our other compiled

1 documents, doesn't mean that we just developed these
2 ourselves.

3 THE CHAIRMAN: Okay.

4 MS ANYADIKE-DANES: So what it includes is, as you can see,
5 the pre-admission details. So his last diet sheet,
6 that's him coming in, and that's what his diet was made
7 of. We know what his normal dialysis was, so that's
8 part of that. We know when his last prescription of
9 erythropoietin was, and we know what it was. We know
10 his sodium bicarbonate and how that was provided. We
11 know about his Fersamal -- he had 4 ml daily. We know
12 the level of his serum potassium. At least we know the
13 dates of when those things were last measured and we
14 know his last surgical procedure and the date of it.
15 And if we want to, we can go and look at the records and
16 see what is said about it.

17 So then from admission through to the surgery
18 itself, we have these observations of him and along the
19 time, so there's an observation, "Chest clear, alert and
20 well". Round about there is where one would be wanting
21 to look at the chest X-ray, I suspect. Some of these
22 things will be an issue as to how people knew those
23 things. And then we know that at 7, he was still
24 polyuric. We know his weight because it's recorded. We
25 know his height, we know his temperature on those

1 particular times. We know his heart rate at those
2 particular times, and what it was, and respiration and
3 so on. In terms of his fluids, that's an important one.
4 We see that his gastrostomy stopped, because it tissued,
5 at around 130. He was taking -- sorry, the IV tissued,
6 so they had to add his fluids through the gastrostomy.
7 Then we see his dialysis, we see his blood pressure,
8 haemoglobin. These things are quite important for his
9 condition, the haemoglobin and white blood count and we
10 see the serum sodium and we see the 139 and what we
11 think was the sample taken round about 11 o'clock. We
12 see it's 133 at that stage. So that's what's known of
13 Adam.

14 When one moves into the operating theatre time,
15 we have compiled schedules of the results of the
16 recordings made during what's called the perioperative
17 period, and that's a period from his arrival in and
18 departure from, between those times, the operating
19 theatre. And we have shown his vital signs, the drugs
20 administered, the temperature, the central venous
21 pressure and the fluids administered and lost, his
22 oxygen saturation and end tidal carbon dioxide, and his
23 serum sodium and haemoglobin levels, all taken from the
24 records that were made at the time. In fact, can we
25 look at 307-006-063.

1 That's the data, that comes from his records. You
2 can see chart 1 showing his vital signs -- that's his
3 heart rate, blood pressure -- and chart 2 is going to
4 show his drugs. They're relevant -- at least we are
5 told that they're relevant when one looks at the debate
6 amongst the experts as to actually what he received and
7 when he received it and how much of it he received.

8 Can we go to the next page, which should be 064.
9 This is chart 1 that corresponds to that and there's his
10 heart rate, his blood pressure. You can see how that
11 moves in terms of his heart rate, which is blue, it
12 moves about. You can see the periods when it falls and
13 the periods when it rises, and it'll be for the experts
14 and clinicians to see why you can see those changes over
15 the period. If you look at the timeline at the bottom,
16 we're starting at 7 and going up to 12 noon, and
17 plotting all the information that we had from his
18 records. And then you can see along the bottom the
19 times when he was prescribed certain drugs. It'll be
20 a matter for the experts and clinicians to be able to
21 discuss what the effects of the prescription of those
22 drugs is likely to be, but that is the information
23 graphically presented.

24 Can we see the next page? That's the temperature
25 and central venous pressure. Can we go to the next

1 page? There you see it mapped out there. The pink or
2 magenta is his central venous pressure, and you can see
3 where it's -- well, this is from the information that
4 we have. There was an issue as to how accurate it is,
5 of course, but all that we've done here is to plot what
6 it is. It'll be a matter for the oral hearing as to how
7 much reliance one can place on it, and if you were
8 placing reliance, what its significance would be. But
9 just as a matter of what it does, you can see where it
10 starts roughly, and you can see where it takes an
11 absolute hike. That's roughly corresponding to round
12 about 9.30. Then it starts to come down. And you can
13 see the temperature as well. His temperature does
14 appear to go up a little bit, although it flattens out.

15 THE CHAIRMAN: It's the CVP reading that Dr Taylor felt he
16 couldn't trust?

17 MS ANYADIKE-DANES: That's it. That's exactly what it is.

18 THE CHAIRMAN: So he ignored them?

19 MS ANYADIKE-DANES: No, he didn't ignore them entirely.

20 What he said was he was using them for benchmarks, so
21 he was looking for relative change as opposed to
22 absolute value.

23 If we look at the next page. This is an interesting
24 one. These are the fluids. Solution No. 18, the human
25 plasma factor, cells, Hartmann's, that's all "in". Then

1 we can look at "out": swabs, suction, towels, urine, and
2 so forth. We haven't provided -- because it isn't
3 provided in the records -- insensible losses. That is
4 a calculation that the anaesthetist would make, just
5 assess what he believed his insensible losses would be.
6 But this is what's actually being measured.

7 Can we look at the next page? We tried to find
8 a way of getting to grips with how to reflect the fluids
9 going in and out. And so if you see that zero,
10 Mr Chairman, everything above there is positive and
11 everything below there is negative. Below the line is
12 the losses and above the line is what's being
13 administered, if you like. And it's not too difficult
14 to see, there's an awful lot more going in than there is
15 going out. The type of fluid is described there by
16 different colours and you can see the key along the
17 side. Therefore, that allows you to see where different
18 types of fluids were administered.

19 THE CHAIRMAN: One of the key issues is the amount of
20 Solution No. 18 administered in the first hour of the
21 operation from 7 am.

22 MS ANYADIKE-DANES: That's exactly that. When I was reading
23 that bit out from Dr Taylor's statement and when he was
24 conceding about the amount, there you have it. Those
25 two measurements, nothing was coming out at that stage.

1 Well, at least nothing was recorded as coming out at
2 that stage. But that is what was going in. That is
3 an issue that the experts and the clinicians are very
4 alive to and is the core of a debate as to what is the
5 significance of that: not just the type of fluid, not
6 just how much fluid, but how quickly it was
7 administered, the rate of administration.

8 Along that bottom, the negative side, some of those
9 things are estimates in terms of -- you see there
10 "urine". Right at the end, you have urine. That is
11 actually the amount that was collected, but that's when
12 it was collected then and nobody's entirely clear, but
13 it's something we're going to investigate, as to what
14 happened about his urine production over the course of
15 that time. Certain estimates are made about it, there
16 are certain views as to what was happening about his
17 urine production, but given that it wasn't actually
18 recorded, it's an issue and it's one that we've had the
19 benefit -- or I will have the benefit of it when I've
20 had time to consider it from Dr Coulthard, who has
21 expressed the view just recently -- and for those who
22 have read the transcript or listened to the DVD, they
23 will know that he expressed the view at the experts'
24 meeting on 9 March that it's possible that he didn't
25 produce any urine at all during the period of his

1 surgery because the effect of the surgery may have been
2 such that he just didn't produce any. That's a factor.
3 It's not one that has yet entered the debate other than
4 at that stage, but it's something that obviously we're
5 going to have to pursue.

6 Next page, please. This is an important one. This
7 is to try and get the cumulative balance of his fluid.
8 If you pass on from the chart, it's much easier seen
9 from that. This is the amount of fluid that is staying
10 in his system, if I can put it that way. All we have
11 done here is, as I say, record information and present
12 it. There are a number of issues to do with how much
13 did he already have in his system when he came in and so
14 on. These charts can't help with that. That is
15 a matter for the experts and the clinicians to address.
16 But looking simply on what was administered and what was
17 lost, you can see his hourly cumulative fluid balance
18 and how it rises. So this graphically shows that
19 although he did have losses, none of those losses were
20 able to make any real impression on the amount of fluids
21 that were being administered. There is also an issue as
22 to what kinds of fluids in the sense of how much of that
23 was free water and what is the significance of that.
24 This has not gone into distinguishing free water from
25 total fluids; this is just total fluids into his system.

1 THE CHAIRMAN: Okay. Shall we take a break at that point?
2 We'll start again at 3.55 and when we come back at 3.55,
3 we'll give an indication as to how late we can sit on
4 this evening.

5 (3.40 pm)

6 (A short break)

7 (4.10 pm)

8 THE CHAIRMAN: Can I outline what's happening at my end and
9 then ask the various interested parties their plans?
10 The stenographer can do another session up to about
11 5.30, but not beyond. That will allow Ms Anyadike-Danes
12 to progress her opening, but the reality is now that it
13 will not finish this afternoon. But we should, over the
14 next hour and 20 minutes, be able to provide you with
15 a written copy of it so that you'll have that to take
16 home with you this evening, as the interested parties,
17 so that you can read back over what she has already said
18 and what she will finish with tomorrow morning.

19 I know Mr McBrien, that you have already indicated
20 you want to make an opening address tomorrow morning and
21 that's still the case.

22 MR McBRIEN: It won't be that long. I don't think it'll be
23 anything like an hour. I suspect it will be of similar
24 duration to the one I made in the general nature.

25 THE CHAIRMAN: Thank you very much. For the trust,

1 Mr McAlinden? Is there anyone who will be making an
2 opening address tomorrow morning after Mr McBrien on
3 behalf of Adam's mother? Okay. That eases the pressure
4 a little. I apologise again. Things haven't gone as
5 smoothly at our end as I hoped and this will not be
6 repeated in the future. So we'll sit today until coming
7 up to 5.30, whenever there's a convenient break.
8 I think, at lunchtime, the additional reports from
9 doctors Coulthard, Squier and Haynes were circulated;
10 is that right? No? If anybody who hasn't received one
11 would speak to Mrs Conlon today. I think most people
12 seem to have got one and we'll catch up on anyone who
13 hasn't. If we can then resume with Ms Anyadike-Danes.

14 MS ANYADIKE-DANES: Thank you.

15 Before I do resume, I'd just like to make one point.
16 It relates to the comparative table of fluid
17 calculations and assumptions made.

18 THE CHAIRMAN: Is that the table you were referring to just
19 before the break?

20 MS ANYADIKE-DANES: No, it's the comparative table of the
21 responses from Professor Gross, Coulthard, Haynes and
22 Dr Taylor and Dr Savage.

23 THE CHAIRMAN: Okay. The parties will get this later. In
24 your opening at what paragraph is that?

25 MS ANYADIKE-DANES: It is paragraph 140, but I wonder if

1 I can take you to reference 300-077-141.

2 THE CHAIRMAN: Okay.

3 MS ANYADIKE-DANES: What I had said before was that this
4 information came from the information that was provided
5 to us by the various parties, so out of a table produced
6 by Dr Haynes, Professor Gross, Dr Coulthard, Dr Sumner
7 and so forth. But in relation to Dr Savage, we put the
8 information that we had from him already into a table.
9 We subsequently -- I think that might just have sort of
10 fallen through the cracks to make sure that he had
11 confirmed that it was accurate. But in any event, it
12 was that information which went into a table in that
13 way, which then has found its way, because we put it,
14 into this compiled table.

15 THE CHAIRMAN: Is that under the heading "Inquiry WS"?

16 MS ANYADIKE-DANES: Yes, in terms of -- well, that's the --
17 if you look at his weight, for example, that's where
18 we've got that weight in relation to Dr Savage. If you
19 look at surface area, that's where we've got it. And if
20 you look at "WS", that tells you the precise place we
21 got it from and so on. So that's what those references
22 are to. But having said that, we wanted to make sure
23 that what we put into the table for him was accurate and
24 we set out a table for his confirmation. What I had not
25 appreciated is that when we had this compilation table,

1 that we had not, at that stage, received the
2 confirmation from Dr Savage that what we had put in the
3 table was accurate. In fact, what happened is that
4 Dr Savage has produced his response, which was e-mailed
5 to the inquiry on 21 March, and in that he does complete
6 his table. There are differences between the table that
7 he has completed and the information that is shown on
8 this comparative table. That's the first thing to say.
9 So obviously we will be amending that to reflect it.

10 The other thing to say is that this table is turning
11 into a bit of a moveable document because the recent
12 reports that we have received from the experts have
13 indicated some shifting in their own calculations,
14 leading to maybe different assumptions, I don't know.
15 I haven't had an opportunity to consider their reports
16 to see how this arises and what its importance is. It may
17 not be terribly significant; on the other hand, it may
18 be. But the end result of that is -- and those who have
19 received the reports today will see it's Dr Coulthard
20 who has gone in and made certain changes. It's not
21 clear to me that the other experts have seen those,
22 particularly if they relate to them, and seen whether
23 they accept them or they don't. So there is a process
24 to update this schedule, but its benefit, leaving aside
25 what Dr Savage says about the representing of his

1 position, the benefit was it showed a particular period
2 of time when people thought certain things about their
3 calculations and assumptions being made.

4 If those things are changing, then that in and of
5 itself is relevant because it goes to show that these
6 things do, to some extent, not entirely, turn on
7 judgment made on certain assumptions. So we will have
8 to update this table. I regret the fact that Dr Savage
9 may feel that he was included in this as if he had
10 provided the completed table himself. So I hope that
11 the correct position is now out there, and his table
12 will be put into an updated version of this along with
13 anybody else who wants to revise their figures. But
14 this was the starting place.

15 THE CHAIRMAN: Okay.

16 MS ANYADIKE-DANES: What I'm essentially doing is traversing
17 the evidence that we have got under these various
18 sections. So the next section to traverse in the sense
19 of, "What have we got?", relates to Adam's death and the
20 investigations that were made into it.

21 There were three photographs of Adam that were taken
22 on 28 November, and a fourth photograph was taken just,
23 as we understand it, after the life support was switched
24 off. I'm not showing those photographs, obviously,
25 although they are there in the papers.

1 The significance of them for this inquiry really is
2 to enable the experts and others to factor Adam's
3 appearance into their views on the extent to which
4 he was, if I may put it this way, fluid overloaded at
5 his death, notwithstanding the fact that he had received
6 treatment since the surgery to try and address his
7 hyponatraemia.

8 So if we start then with the report to the coroner
9 and the autopsy as the first stage in the investigations
10 into the cause. Adam's death was reported by Dr Savage
11 to the coroner on 28 November. He stated, as you, sir,
12 have mentioned, that the death was totally unexpected.
13 On the instructions of the Coroner, a post-mortem was
14 carried out on 29 November in the mortuary by Dr Armour.

15 At that stage, Dr Armour was a trainee forensic
16 pathologist at senior registrar grade. One has to look
17 at the meanings of that nomenclature because the word
18 "trainee" sometimes has a rather pejorative sound to it
19 if you're an experienced person. As we understand it,
20 you are a trainee until you are a consultant and she
21 wasn't a consultant, she was a senior registrar.

22 She was employed within the State Pathologist's
23 Department, and worked, as we understand it, under the
24 supervision -- and I use that word simply in its literal
25 sense because she wasn't a consultant itself -- of

1 pathologists within the State Pathologist's Department.
2 The consultant-grade pathologist took clinical
3 responsibility for the autopsies they performed and the
4 state pathologist, Jack Crane, had overall
5 responsibility for ensuring that all cases were carried
6 out appropriately and to a high standard.

7 Dr Armour had available to her ten files of medical
8 notes and records and clinician's notes, and she refers
9 to this in her communications with the Coroner. She
10 summarised Adam's clinical history, particularly the
11 fluids he received during the first 90 minutes of
12 surgery and she noted that there was a blood loss of
13 approximately 1200 ml by the end of surgery, that the
14 blood gas result at 9.32 showed a serum sodium of 123
15 millimoles and a haematocrit of 18 per cent, and that
16 his CVP during surgery rose to 30 and she not that had
17 after surgery, he had a CT scan at 1.15, which showed
18 gross cerebral oedema and a chest X-ray revealed
19 pulmonary oedema with a CVP catheter tip in the neck
20 vessel evident.

21 She then performed an external examination of Adam's
22 body and Adam's weight. Let's just pull that up because
23 there are some points there to look at. 011-010-037.
24 There you see the needle puncture mark in the midline
25 and the neck, needle puncture mark in the left side,

1 healed operation scar, 3 centimetres long on the left
2 side, two further healed operation scars on the right.
3 She generally describes his external appearance. And
4 weight there, interestingly enough, is noted at
5 20 kilos, which was roughly his weight when he was
6 admitted. The significance of that is something that we
7 might pursue.

8 There is a diagrammatic representation of those
9 details and we can pull that up at 300-090-189. There
10 we are. Can we enlarge that a little bit? This
11 actually is compiled from the report of Dr Simon Haynes.
12 He has a diagram where, instead of these typed boxes, he
13 has written them out, and that didn't seem to come up
14 well on the screen, so we've typed them. So this is
15 essentially his work in transcribing the description
16 that Dr Armour provided in her report on autopsy.

17 So if you look at the neck, you can see that he has
18 described those scars, healed scars, the puncture marks
19 and so on. Leaving aside the bruising, you can see that
20 he has described essentially what Mr Forsythe and
21 Mr Rigg were matching up with his surgical procedures to
22 see what could be learned about previous central lines.
23 So these are the outward manifestations, they saw this,
24 they were looking at his medical notes and records, and
25 trying to understand exactly what he had experienced by

1 way of those things. From one point of view, to try and
2 understand when the suture may or may not have been
3 inserted and, from another point of view, to see to what
4 extent the repeated use of central lines may have, in
5 and of themselves, led to some sort of constriction.

6 So that's what Dr Armour was looking at. We don't
7 have a photograph of it, but that's the translation into
8 a diagram so far as we're guided.

9 She then commenced an internal examination and that
10 has important features. That's at -- sorry, I should
11 have mentioned that. When I mentioned his weight, she
12 weighed him. What I should have said is when she
13 describes him externally, she doesn't note any external
14 appearance of swelling at all. I haven't shown those
15 photographs, but they're there for people to see. She
16 certainly hasn't noted anything.

17 So can we go to 011-010-038. This is the internal
18 examination of the neck area. One point is the heart
19 there, 120 grams. It was taken for transplantation, we
20 understand, for the valves, but we are seeking guidance
21 as to the significance, if any, of its weight. Then if
22 you go down and you look at the native kidneys. There
23 is a description there and, perhaps significantly, both
24 ureters were hugely distended and dilated. Then the
25 transplanted kidney was in situ in the right pelvis, the

1 ureter drained freely and the vascular attachments were
2 intact.

3 I think we can go on to the next page. She weighed
4 the various organs, the liver and the lungs.
5 Interestingly enough, although she did that, you won't
6 see on the report on autopsy any reference to the weight
7 of the lungs. The brain on autopsy has to be fixed
8 before it can be examined and the contemporaneous notes
9 of her autopsy show that she recorded the unfixed weight
10 of the brain initially at 1,302 grams, and that seems to
11 have struck out and replaced by 1320. And then the
12 lungs at 190 for left, I believe, 290 for the right.
13 But none of those weights, the unfixed weight of the
14 brain or the lungs, appear in the report on autopsy.
15 She internally examined the neck and I think we can go
16 to that, 011-010-039.

17 Right at the top:

18 "There was no evidence of congestion or obstruction
19 of the major blood vessels or the carotid arteries and
20 jugular veins. There was no evidence of superior vena
21 cava obstruction. The carotid arteries were normal.
22 There was a suture in situ on the left side of the neck
23 at the junction of the internal jugular vein and the
24 subclavian vein."

25 So there is an issue as to what exactly that means,

1 in particular the first sentence in relation to the
2 third sentence.

3 Then if we go down and look at the description of
4 the organs after fixation, and the external examination.
5 Of course, she does that first. So she has the fixed
6 weight of the brain as 1,680 grams and then weighs
7 various parts. What she doesn't record there is what
8 the unfixed weight was, although she's got that in her
9 notes. And she describes the brain as.

10 "Grossly swollen with loss of sulci and uncal
11 swelling and this was symmetrical."

12 She says:

13 "There was no uncal necrosis, there was swelling of
14 the cerebellar tonsils, but no necrosis. There was no
15 cortical venous thrombosis and the anatomy of the circle
16 of Willis was normal."

17 Then she cuts and she notes that there was a massive
18 brain swelling and constriction of ventricles.

19 "There was no ventricular haemorrhage. There was no
20 asymmetrical lesion. There was severe white matter
21 congestion and marked congestion of the blood vessels in
22 the basal ganglia, white matter and deep grey matter.
23 There was no necrosis of the mid-brain or brainstem."

24 Then she says that she's taken blocks from there and
25 the brain was photographed sequentially. And we do have

1 those photographs. I don't propose to put them up now,
2 but we have them and we have considered them, the
3 inquiry's experts have considered them -- particularly
4 the neuropathologist, Dr Squier and the neurologist,
5 Professor Kirkham.

6 Then, under microscopy, she says, in relation to the
7 lungs:

8 "There was congestion of the capillaries and
9 moderate numbers of ovular macrophages and there was no
10 evidence of embolism or infarction."

11 She examined the histological slides of the organ
12 under a microscope and, in relation to the kidney, she
13 records:

14 "Revealed complete infarction of the transplanted
15 kidney."

16 And as I said before.

17 "Massive cerebral oedema of the cortex and white
18 matter of the brain, but no evidence of terminal
19 hypoxia."

20 In her commentary at the end of the report,
21 Dr Armour referred to Arieff's 1992 article, the one
22 that I have mentioned before, and she sought to
23 distinguish it as referring to healthy children
24 undergoing operations, minor operations like
25 tonsillectomies, who therefore had normal functioning

1 kidneys, which was not the situation in this case.

2 However she stated that:

3 "The most likely explanation for Adam's death was
4 cerebral oedema, followed by a period of hyponatraemia
5 and was compounded by impaired cerebral perfusion."

6 And she recorded the cause of Adam's death as:

7 "1(a) cerebral oedema due to 1(b) dilutional
8 hyponatraemia and impaired cerebral perfusion during
9 renal transplant."

10 She had available to her the opinion of Professor
11 Jeremy Berry. He was professor of paediatric pathology
12 as I indicated right at the beginning and he had the
13 histological slides or at least some of them. He was
14 engaged by the Coroner and the slides he was sent
15 related to a number of parts of Adam's anatomy, but in
16 particular his native kidneys and the donor kidney. And
17 he concluded in his report that the transplanted kidney
18 was dead, infarcted, and he thought that had happened at
19 or before the time of transplantation.

20 Dr Armour claims to have also sought an opinion on
21 the brain and related material from a Dr Mirakhur, who
22 was a consultant neuropathologist, and she says that she
23 sent the brain, spinal cord and histological slides and
24 tissue blocks and claims that Dr Mirakhur's views
25 in relation to the brain were consistent with her

1 report, that is Dr Armour's report on autopsy,
2 in relation to that description and the comments that
3 she made there on the brain.

4 However, the inquiry has sought a formal request or
5 a new pathological report in respect of Dr Mirakhur and
6 it seems that there was no such formal request and it
7 seems that there was no such report provided by her. In
8 fact, Dr Mirakhur denies any knowledge of her opinion
9 having been sought or seeing any slides and she claims
10 not to have seen the report on autopsy until the inquiry
11 provided it when it was seeking a witness statement. So
12 we have not really been able to advance matters as to
13 Dr Mirakhur's views on the histological slides
14 in relation to Adam's brain at that time.

15 In addition to that, there was a note made by
16 the Coroner, and that's dated 8 December 1995. The note
17 refers to Dr Armour also showing slides to Dr O'Hara --
18 no relation, as I think the chairman's mentioned last
19 time -- Dr Denis O'Hara, who was a consultant paediatric
20 pathologist, and a Dr Bharucha. We're not entirely sure
21 which Dr Bharucha it is. There was a time when we
22 thought it might be a Dr Chitra Bharucha, who is a
23 haematologist, but that may not prove to be the case.
24 In any event, we are pursuing the enquiry to find out
25 which is the appropriate Dr Bharucha that is referred to

1 in the Coroner's note.

2 But whenever that happens, what the note records
3 is that both of them, Dr O'Hara and the Dr Bharucha,
4 stated that there was clear evidence of hypoxia. As
5 I've just taken you through the relevant parts of the
6 report on autopsy, Dr Armour concluded that there was no
7 evidence of hypoxia. Unfortunately, Dr O'Hara is no
8 longer available to us -- he is dead -- and we are
9 trying to find where Dr Bharucha is in order to ask the
10 question. But given that there is no reference to
11 Dr O'Hara or Dr Bharucha in the report, there is no way
12 of understanding how it came to be that the Coroner has
13 referred to them taking that view and Dr Armour has
14 concluded differently. She's entitled to conclude
15 differently. All I'm explaining is that we don't know
16 how that came about.

17 Dr Armour wrote to Professor Jack Crane, though, on
18 8 December. That was before she produced her report.
19 She said that she had been dealing with the case of Adam
20 and:

21 "I am willing to attend any meeting about this case,
22 including a meeting of clinicians, administrative staff,
23 HM Coroner and whoever else wishes to attend. As I was
24 the pathologist who carried out the autopsy, I feel my
25 opinion on the case is relevant to such a meeting and,

1 as such, the case could be discussed in full."

2 We don't actually know, at least so far as I'm
3 aware, what prompted that letter. It was provided to
4 a number of people, including Dr George Murnaghan, who's
5 the hospital administrator; it was provided also to the
6 coroner. It's not clear whether anyone at the State
7 Pathologist's Department actually saw Dr Armour's
8 report, which was subsequently produced after this, and
9 before it was sent to the coroner, but we know that both
10 Drs Savage and Taylor, at least from their own evidence,
11 were present at some time while the autopsy was carried
12 out.

13 The Coroner's papers also indicate that Dr Armour
14 discussed Adam's death and its possible causes with
15 doctors Taylor, O'Hara and Bharucha. As I say, this is
16 what the Coroner's papers indicate. It's also clear
17 from her subsequent evidence at the inquest that the
18 extent of Adam's cerebral oedema was something with
19 which she was quite unfamiliar.

20 The autopsy report is undated, so while it's known
21 that a copy of it was sent out by the Coroner on 22
22 April 1996 to Adam's mother, the Coroner's experts
23 Dr Sumner, Dr Alexander and to Dr George Murnaghan
24 at the Royal, it's not entirely clear when Dr Armour
25 finalised her autopsy report.

1 However, the way in which she carried out the
2 autopsy and prepared her report is something that is
3 going to be addressed in the oral hearing and will be
4 also be considered from a governance perspective.

5 So moving to the Coroner's investigation because
6 that was just the autopsy. The Coroner wrote to
7 Dr Alexander. He was a consultant anaesthetist.
8 The Coroner wrote to him on 30 November and asked him to
9 prepare an anaesthetist's report on Adam's case for use
10 at the inquest. And he stated that Dr Armour informed
11 him that she found gross cerebral oedema, the worst she
12 had ever seen in an autopsy on a child. And he
13 identified the clinicians as Dr Taylor, Messrs Brown and
14 Keane, and he stated that the child was healthy and
15 considered to be an ideal candidate for transplant
16 surgery, no complications were anticipated.
17 Dr Alexander confirmed that he would produce a report
18 and the Coroner contacted George Murnaghan asking for
19 statements from the clinicians involved as soon as
20 possible. He also stated:

21 "It would be useful to have a statement from the
22 technician responsible for the equipment in the theatre,
23 confirming that it was functioning properly. The
24 statement should cover the frequency of checks and
25 whether such checks were carried out before and after

1 surgery in this instance."

2 Dr Armour contacted the Coroner on
3 1 December 1995 -- so that's quite soon after she had
4 carried out her autopsy -- and indicated that she was
5 becoming ever more convinced that there was a question
6 mark over the anaesthetic equipment used, as nothing in
7 the anaesthetic readings during surgery had indicated
8 a problem. The Coroner spoke to Dr Murnaghan and asked
9 that the equipment used during Adam's surgery should be
10 independently examined.

11 Messrs Wilson and McLaughlin were the medical
12 technical officers employed by the Children's Hospital.
13 They carried out an inspection of the Siemens monitor on
14 2 December 1995. That's the monitor that had been
15 purportedly used in Adam's surgery and they provided
16 a report. They said that they were not told the purpose
17 of their investigation. The inspection was carried out
18 in the presence of Dr Fiona Gibson. As I've said
19 before, she was consultant cardiac anaesthetist at the
20 Children's Hospital, and she'd been asked by
21 Dr Murnaghan and Dr Gaston -- if you remember, he's the
22 clinical director of intensive care. She had been asked
23 by them to review and report on the processes and
24 equipment used in Adam's operating theatre. And
25 Dr Taylor was present during the inspection.

1 The report that was provided to the Coroner as part
2 of the inquest on Adam's death indicated that all
3 cylinders were removed from the Lamtec and five pins
4 were discovered to be loose and could be removed. The
5 report further states:

6 "The anaesthetist using the machine is also expected
7 to sign the log before commencing the list, but this
8 does not happen on most occasions and a reason for this
9 should be requested."

10 That particular part of the report is something that
11 will be considered from a governance perspective.

12 Dr Gibson stated in her report, which she provided
13 to Dr Murnaghan:

14 "The protocols for monitoring anaesthetic set-up and
15 drug administration in this area are amongst the best on
16 the Royal Hospital site."

17 The inquiry has since been advised that there aren't
18 such protocols -- at least there weren't such protocols
19 at the time and that Dr Gibson will have been referring
20 to her perception of clinical practice in the Children's
21 Hospital and not to any written document. That
22 information is gained from letters dated 24 February of
23 last year and 21 July of last year from DLS.

24 Quite how that could be the case is something that
25 will be considered in the governance part or at least

1 from the governance perspective. But matters moved on.
2 During enquiries by the PSNI in 2006, it turned out that
3 they had all been inspecting and reviewing the wrong
4 Siemens monitor. The correct one had been out for
5 repair shortly after Adam's surgery and was on test
6 in the department. In fact, that possibility that they
7 might be looking at the "wrong" monitor -- I say "wrong"
8 in inverted commas because they claim they didn't
9 actually know why they were investigating the equipment.
10 But the possibility that they weren't looking at the one
11 that was used in Adam's case was actually raised in that
12 report of Messrs Wilson and McLaughlin.

13 The conduct of the investigation of the equipment
14 for the Coroner by them and Dr Gibson's review for
15 Dr Murnaghan and Gaston are all matters that are going to
16 be pursued from a governance perspective.

17 The Coroner met with Drs Murnaghan, Gaston and Lyons
18 on 3 December and Dr Lyons suggested that it would be
19 important to have another paediatric anaesthetist's
20 opinion apart from Dr John Alexander because he didn't
21 have extensive paediatric experience. And that might be
22 relevant when one is considering his report.

23 The Coroner subsequently telephoned Dr Sumner, whose
24 name you'll have seen throughout the papers, who agreed
25 to provide an opinion for the inquest. And Professor

1 Jeremy Berry also agreed, at that stage, to provide
2 a report on the transplanted kidney.

3 Dr Alexander's report was sent to the Coroner on
4 3 January and he claimed that there was very little
5 available information concerning dilutional
6 hyponatraemia in children. He referred to Arieff's
7 paper, which was dealing with death or permanent brain
8 damage in healthy children, and referring to how
9 generally healthy children with symptomatic
10 hyponatraemia had abruptly developed respiratory arrest
11 and either die or suffer permanent brain damage. He
12 summarised his opinion in this way:

13 "The complex metabolic and fluid requirements for
14 this child having major surgery led to the
15 administration of a large volume of hypotonics [that is
16 number 18 solution] which produced a dilutional
17 hyponatraemia and subsequent cerebral oedema."

18 That conclusion, at least how it's arrived at, that
19 the complex metabolic and fluid requirements led to
20 that, is something that is obviously a matter of debate
21 amongst the experts, and indeed the other clinicians.
22 Then he went on to say:

23 "Dr Taylor is to be commended on the detailed notes
24 and records he kept throughout the anaesthetic."

25 THE CHAIRMAN: Just stop for a moment. You have referred to

1 Dr Alexander's report. He says the requirements led to
2 the administration of a large volume of number 18, which
3 produced dilutional hyponatraemia. Is he on his own in
4 it? Dr Taylor has now moved away from that position,
5 hasn't he, to the extent that he now says he
6 administered a large volume of number 18 because of
7 a miscalculation or a misunderstanding --

8 MS ANYADIKE-DANES: Yes.

9 THE CHAIRMAN: -- of what Adam's output could be?

10 MS ANYADIKE-DANES: Yes, he does say that.

11 THE CHAIRMAN: Now that Dr Taylor has changed his position,
12 there's nobody that said, apart from Dr Alexander, that
13 this large volume was required?

14 MS ANYADIKE-DANES: No, but in fairness to his position, one
15 would want to find out more about how he arrived at
16 that, why he thought that the complex metabolic and
17 fluid requirements and major surgery led to that. That
18 may be a fact. In other words, it's not that he
19 necessarily thought that's how you approached it, but it
20 may be that he thought that that had been the problem
21 for Dr Taylor, that Adam was a complicated situation and
22 he had been led into that error, if I can put it that
23 way.

24 THE CHAIRMAN: Okay.

25 MS ANYADIKE-DANES: So we will have to look more as to what

1 he was actually saying therefore and to see whether
2 he was expressing his own view that "I could have fallen
3 into that error" or "That's how I think that error
4 arose".

5 THE CHAIRMAN: It may be we don't need to follow
6 Dr Alexander's line.

7 MS ANYADIKE-DANES: It may be that we don't need to, but
8 these things are important as to what they thought
9 at the time. What the state of knowledge was, what
10 experienced consultant people, clinicians, could
11 conclude was going on. Those things are important, and
12 the question is, which is really sort of an education
13 and training issue is: how could that be the case?

14 THE CHAIRMAN: Okay.

15 MS ANYADIKE-DANES: Dr Sumner produces his report on
16 22 January. So all these reports are really coming in,
17 so far as we understand, before the report on autopsy.
18 And he refers to Arieff's article, and he says:

19 "I believe that on the balance of probabilities,
20 Adam's gross cerebral oedema was caused by the acute
21 onset of hyponatraemia from the excess administration of
22 fluids containing only very small amounts of sodium,
23 dextrose, saline and plasma and this state was
24 exacerbated by the blood loss and possibly by the
25 overnight dialysis."

1 And if I pause there: there are issues about that
2 that the experts are considering, as to whether that is
3 indeed the case or might be the case. He then goes on
4 to say:

5 "A further exacerbating cause may have been the
6 obstruction to the venous drainage of the head. With
7 drugs such as antibiotics which are administered through
8 a venous line in a partially-obstructed neck vein, then
9 it is possible that they could cause some cerebral
10 damage as well."

11 So there's a lot going on in his report as to what
12 he thinks might have contributed to it. And that's
13 worth bearing in mind because, very often, the issue is
14 telescoped down to a relatively simple proposition as to
15 what he thought had happened. In fact, when one reads
16 his conclusion, he has a number of hypotheses, and it's
17 those hypotheses added to by the hypotheses of others
18 that have made this, in recent weeks, quite a complex
19 area.

20 THE CHAIRMAN: But he leads with dilutional hyponatraemia
21 with other exacerbating factors?

22 MS ANYADIKE-DANES: Yes.

23 THE CHAIRMAN: Which is in, very broad terms, the decision
24 of all of the experts save for Dr Kirkham, who thinks
25 it's other factors that take the lead?

1 MS ANYADIKE-DANES: Well, those would be extremely broad
2 terms because there are real differences amongst the
3 experts as to the extent to which they felt that the
4 overnight dialysis was relevant at all, and could even
5 have been an exacerbating factor. There is a real
6 difference amongst the experts as to whether they
7 believe that there was any obstruction of venous
8 drainage of the head and, if there was, whether it was
9 caused or could have been caused by the suture that
10 Dr Armour identified in her report on autopsy. And then
11 it's not clear at all what people think about the effect
12 of having drugs being administered through a venous
13 line.

14 So if you say in broad terms that they agree that
15 dilutional hyponatraemia was a main factor, then one
16 would say yes, but the trouble is that not all of them
17 have such a straightforward line. There are all these
18 issues as to whether any of that was exacerbated,
19 whether it needed anything else to produce that terminal
20 event and so forth. And that is precisely the area of
21 debate where the experts are at the moment and the only
22 reason for reading this out is to show you that that had
23 started as far back as 1996, ie the fact that there
24 wasn't just one factor, even so far as Dr Sumner was
25 concerned.

1 And of course, if an expert talks about an
2 exacerbation of a condition through blood loss, that
3 becomes an issue, and that's a very important issue to
4 see whether that did happen, could happen, and what does
5 that mean about our procedure. And just on the
6 straightforward learning, what do we do about that? So
7 these things are actually quite important, these
8 alternative or additional hypotheses or elements to the
9 hypothesis. Certainly the overnight dialysis is also
10 an important question.

11 Professor Berry sends a letter to the Coroner, dated
12 25 March, and he encloses his report, and he says:

13 "I am unable to throw any light on the cause of this
14 child's death. I suspect the answer lies in the precise
15 details of his clinical management and the examination
16 of his brain. I doubt this kidney would ever have
17 functioned."

18 It's very interesting that he refers to the
19 examination of the brain because it's the examination of
20 the brain that we don't have at that time anyway, didn't
21 have a full report on, and so one's trying to do it now
22 from a remove, as it were.

23 He then goes on to say in his report that he noted:

24 "On microscopy [the transplant of the kidney, that
25 is] the kidney shows also complete infarction, and that

1 the transplant kidney was infarcted [these are his
2 words] dead. The extent of the change suggested that
3 this occurred at or before the time of transplantation."

4 Which I think was reflected in Dr Armour's report.

5 So if we move now to the inquest itself, Adam's
6 inquest was opened on 18 June, evidence was heard.
7 Amongst others, Dr Sumner, Dr Alexander,
8 Dr Patrick Keane, and I understand Professor Berry
9 wasn't called because he had expressed himself as being
10 unable to throw any light on the cause of the child's
11 death.

12 It was adjourned to 21 June when the evidence was
13 heard from Dr Taylor and Dr Savage, and the only
14 relevance of saying that is that it means that Dr Sumner
15 didn't hear Dr Taylor's evidence at the inquest, or for
16 that matter Dr Savage, but principally didn't hear
17 Dr Taylor's evidence.

18 Of the team that were involved in Adam's transplant,
19 the rest of the team -- Dr Montague, Mr Brown, Peter
20 Shaw -- or any of the nurses, none of them were called
21 so far as I understand it, to give evidence at the
22 inquest. And the Coroner didn't have available to him
23 the expertise of a paediatric neurologist.
24 Dr Armour in her evidence to the coroner was that she found
25 massive cerebral oedema and she said that she had never

1 come across anything of similar degree. She also stated
2 that Adam had experienced substantial blood loss. And
3 that issue about whether he did or he didn't -- and I've
4 already identified the views of Mr Keane on that point
5 and why he has those views. That is obviously an issue
6 because people are attributing the blood loss in part or
7 at least are considering it as a potential contributory
8 factor. So he had experienced substantial blood loss
9 and that he was a sick little boy. She further stated
10 that:

11 "There was impaired cerebral perfusion as there was
12 a suture on the left side and a catheter tip on the
13 right."

14 And this is a new matter that was not in her report.
15 In her autopsy, she said that the suture had been there
16 for some time. That's going to be an issue.

17 Dr Alexander said in his evidence that there was
18 a fluid deficit between 5 am and 7 am, and that he would
19 not have been particularly alarmed with the drop to 123
20 millimoles, and he did not entirely concur with
21 Dr Sumner's concern that a compromised renal function is
22 not a factor in the onset of hyponatraemia.

23 One has to look at his report carefully to see what
24 he means about the fluid deficit between 5 and 7 because
25 in some ways of looking at it, there was because he

1 didn't have any fluids. But as I was explaining before,
2 and as the experts do discuss, clinicians -- it rather
3 makes a difference what the starting point is. So it's
4 not just as simple as saying whether anyone has any
5 fluids or experiences any losses between a given point
6 in time. It rather depends, as I understand it, on what
7 their position is before you enter that period of no
8 fluid.

9 So Dr Sumner, in his evidence, stated -- and this is
10 also an interesting point because he develops that issue
11 of the venous drainage:

12 "Without the venous drainage problem, Adam may have
13 survived, provided the level did not drop below
14 123 millimoles. Fluid balance in paediatrics is a very
15 controversial area with a variety of views."

16 But his first point is an interesting one of note:
17 he was of the view that so long as you didn't get that
18 serum sodium level below 123, he could have survived
19 without that venous drainage problem, and that means
20 it is important to find out exactly what was happening
21 about the suggested venous drainage problem by
22 Dr Armour.

23 As I say, when he gave evidence, he didn't have an
24 opportunity to hear and comment upon Dr Taylor and
25 Dr Savage.

1 THE CHAIRMAN: An expert witness coming to give evidence
2 could see the statements of the doctors who were
3 involved in the treatment of the dead child, wouldn't
4 he?

5 MS ANYADIKE-DANES: I don't know whether he actually saw
6 them.

7 THE CHAIRMAN: Well, he should have seen them.

8 MS ANYADIKE-DANES: I'm not suggesting that they wouldn't
9 have been made available to him; I'm just not sure
10 whether he saw them. In answer to your question,
11 I don't know. We can look and see what was made
12 available because we will be able to look at the
13 Coroner's files and see where they were sent and that's
14 something that we will do. But as I stand here, I can't
15 tell you whether he saw them or not.

16 What Dr Taylor says is that he spoke to Dr Sumner
17 and Dr Savage at a lunch break in the Coroner's inquest
18 and explained that Adam had high-output renal failure
19 and so could not respond by ADH, by concentrating urine
20 and retaining water. And the ADH is the antidiuretic
21 hormone. He had earlier made that very plain in a PSNI
22 statement under caution on 17 October. This is what he
23 said:

24 "They both acknowledge that the cause of the papers
25 on dilutional hyponatraemia couldn't have happened to

1 Adam; yet, in court, they said it did."

2 And he was frustrated that they said in court that
3 it could happen in that way. Unfortunately, Dr Sumner
4 is not available to us, but it's an issue to be pursued
5 so far as it can be as to what exactly Dr Taylor meant
6 by that conversation that he says he had.

7 In any event, the cause of Adam's death was recorded
8 on the verdict on inquest and you've seen it
9 before: cerebral oedema due to dilutional hyponatraemia,
10 impaired cerebral perfusion during renal transplant,
11 operation for chronic renal failure. So in essence, the
12 Coroner has accepted the other factors that were
13 referred to by Dr Armour and developed by Dr Sumner in
14 his report. And in fact, if you look at page 10 of
15 Dr Sumner's report, what he says is:

16 "The acute onset of hyponatraemia from excess fluids
17 containing very small amounts sodium exacerbated by
18 blood loss and possibly also exacerbated by overnight
19 dialysis and obstruction of the venous drainage to the
20 head."

21 That coroner's verdict was not accepted by Dr Taylor
22 and he disagreed with -- at least, at that stage, he
23 disagreed with Dr Sumner's principal finding. What he
24 said was:

25 "I cannot understand why a fluid regime employed

1 successfully with Adam previously, led on this occasion,
2 to dilutional hyponatraemia. I believe that the
3 underlying cause of the cerebral oedema was
4 hyponatraemia -- not dilutional -- during the renal
5 transplant operation. Adam was the only child with
6 polyuric renal failure I have anaesthetised for renal
7 transplant. He needed a greater amount of fluid because
8 of the nature of the operation. I believe the fluids
9 given were neither restrictive nor excessive. The new
10 kidney did not work, leading to a re-assessment of the
11 fluids given. This made us think that we had
12 underestimated the fluid."

13 And he gave a bolus at 9.32.

14 It's important to note that what is recorded
15 there is Dr Sumner's responses in his deposition and
16 Dr Taylor's responses to questions during the inquest.
17 And you don't have the benefit of the questions, you
18 simply have his answers. So one has to interpret that
19 with care and a particular area to be careful about is
20 the last two sentences where he says:

21 "The new kidney did not work, leading to
22 a re-assessment of fluids given. This made us think we
23 had underestimated fluid and we gave a fluid bolus at
24 9.32."

25 It's easy to run those things together and believe

1 that the effect of him looking at the condition or the
2 lack of performance of the kidney was to lead him to
3 increase the fluids. If that were true, that connection
4 would actually be quite important, but we have
5 questioned Dr Taylor about that in terms of witness
6 statement requests and his evidence to us in the
7 statements is that those two sentences should not and
8 cannot properly be linked together; they were simply
9 answers to questions and that statement is available for
10 people to consider. I just say that, and that's a point
11 to consider when one reads all the depositions and the
12 evidence to the coroner: recognising that you're only
13 getting the answers, not the questions.

14 So Dr Taylor set out his objections to Dr Sumner's
15 report and Dr Armour's autopsy in correspondence, and
16 we can see that in 2 February 1996 and 8 May 1996 and
17 he was fairly trenchant over quite a period of time as
18 to his differences with them and why.

19 The verdict on inquest, it's fair to say, is not
20 entirely accepted by the inquiry's experts, and the
21 reasons for that have been addressed in their debate and
22 will be reflected, I trust, in their reports. When
23 I say that, it is not that they are considering whether
24 they accept the verdict on inquest. They're not
25 thinking about the inquest in that way; they are looking

1 at the causes and linkages and seeing whether they agree
2 with them. So the implications of the views that they
3 are expressing is that, for some of them, they don't
4 accept the verdict on inquest in relation to the
5 dilutional hyponatraemia. I think they all accept it
6 was cerebral oedema. It's the "B" that causes the
7 problem. The dilutional hyponatraemia causes a problem
8 for some, the impaired cerebral perfusion causes
9 a problem for others.

10 Moving then to the PSNI investigation carried out.
11 I don't want to go any more into that because I have
12 already drawn from it in terms of statements that people
13 made. The principal large statement looked at is the
14 transcript of the interview under caution of Dr Taylor.
15 It is a very lengthy document and it bears some
16 scrutiny, Mr Chairman, particularly in the light of the
17 statement that Dr Taylor submitted on 1 February of this
18 year.

19 As you know, Mr Chairman, the revised terms of
20 reference, although they were revised, hadn't really
21 affected Adam in any way because the things that this
22 inquiry has to investigate in relation to him were there
23 from the outset and they have remained unchanged
24 throughout. The list of issues for Adam -- one thing
25 I could say, actually, although they haven't changed for

1 Adam, I think it's the case that the fact that Claire's
2 death has been added to the investigation and that her
3 death is so proximate to both -- well, in terms of her
4 death being proximate to Adam's, there's almost a year's
5 difference, but there's something like four or five
6 months' difference between her death and the inquest
7 into Adam, and that proximity is something that we are
8 looking at very carefully in relation to governance. So
9 it has had an impact in that case, but from the clinical
10 point of view it hasn't had an impact on what we're
11 looking at for Adam.

12 So then if we look at the list of issues or consider
13 the list of issues. As you know, Mr Chairman, they were
14 published on 14 February 2012. And in relation to the
15 clinical area, which is what this hearing is going to be
16 about, there are really four areas that they fall into.
17 One is the investigation into the relevance of the care
18 and treatment that Adam Strain received at the
19 Children's Hospital. Another is investigating into the
20 care and treatment that he received on specific days,
21 the 26th, 27th and 28th, in relation to the management
22 of his fluid and electrolyte balance, and then there's
23 an investigation into the quality of information that
24 was provided to and received from the next of kin and
25 from when the possibility of placing Adam on the renal

1 transplant list arose in 1994 until the announcement of
2 the inquiry in 2004.

3 Then finally, there is an area to be investigated
4 into the experience of the transplant team, including
5 the surgeons, anaesthetists and nurses. So the list of
6 issues, of course, is in great detail. I'm simply
7 trying to put them into four main categories, but all
8 those issues we are looking at, of course.

9 That moves me exactly on to issues to be addressed
10 through the oral hearing. All the evidence, as I said
11 before, that's received by the inquiry, the categories
12 of which I've already described, form part of the
13 material for you, Mr Chairman, on which you in due
14 course make your findings. And as I've taken you
15 through it, I think it can be seen that it is
16 a substantial volume of material and, as one might
17 expect, not all of it is consistent; there are also gaps
18 in the information. In some places, it seems clear that
19 those gaps cannot be filled. For example, the inquiry
20 has been informed by the DLS that they no longer have
21 a complete set of staff rotas. So if there is an issue
22 that relates to that, well, they don't have them. After
23 being told that, I believe we have had some documents,
24 but in a piecemeal fashion, and I think the reality of
25 it is that they don't have a comprehensive or complete

1 set of them.

2 Now, we are going to seek to have a witness address
3 the policy on destruction of documents, but that's
4 an issue that we will more conveniently deal with from
5 a hospital management and governance point of view, and
6 it's unlikely that it's going to assist us in any event
7 in learning better what actually happened in relation to
8 Adam, but it is an issue from the governance
9 perspective.

10 Some gaps may be filled by evidence. For example --
11 and I gave you the example before when we were looking
12 at the chronology -- it's unclear whether the chest
13 X-ray that Dr O'Neill has recorded in Adam's notes as
14 having been ordered was actually carried out. We just
15 don't know that. What we know is we don't have it, but
16 we don't know whether it was actually carried out and,
17 if it was carried out, whether anyone ever saw it, so
18 where there are references to "chest clear", what that
19 means.

20 If it wasn't actually carried out, then we don't
21 know why not, and that's something that we hope can be
22 clarified and that gap filled for you during the oral
23 hearing. If it can't and it's all left unsatisfactory,
24 then I suspect it's going to be part of a governance
25 issue or a hospital management issue.

1 In addition to providing missing elements of the
2 narrative, if I can put it that way, the matters to be
3 addressed during the oral hearing are essentially going
4 to concern four categories of as yet unresolved issues,
5 dealing with the differences between the documents and
6 the evidence of a witness, the evidence of witnesses,
7 whether between the accounts that they themselves have
8 given, some witnesses' evidence is internally
9 inconsistent, if I can put it that way, or between the
10 accounts of one witness and another.

11 The evidence of a witness and the views of an
12 expert, where those differ, those are issues to be
13 explored. And then the views of the experts themselves
14 on a particular issue, especially where those experts'
15 views diverge, and particularly where they diverge on
16 something that is considered to be an important
17 question.

18 Those categories of as yet unresolved issues apply
19 to the entire period that is relevant to Adam's case,
20 but they particularly apply from 14 July 1994, when the
21 arrangements were made to put Adam on call for renal
22 transplant simultaneous with the start of dialysis, up
23 until the autopsy on 29 November 1995. And for the
24 purposes of this opening, what I would wish to do is to
25 highlight the main issues leading up to that report on

1 autopsy in relation to four periods, if I can put it
2 that way. One is the preoperative period, and that
3 spans quite a large period. That is a period from he
4 when was put on the register right up until the morning
5 of his transplant surgery, so it takes into account that
6 important period of the evening of his admission on
7 26 November.

8 Then there's the perioperative period, which deals
9 with the period from the start of anaesthesia for his
10 surgery until his transfer to paediatric intensive care,
11 so that's roughly seven in the morning of the 27th to
12 noon, roughly.

13 The post-operative period -- and that deals with the
14 period from Adam's transfer to paediatric intensive care
15 up until his death and then the period following his
16 death, which deals with the autopsy until the verdict on
17 inquest. So those are the four periods. And the events
18 that took place in those periods are to a certain extent
19 reflected in some of the documents that have been
20 compiled by the legal team, and I will refer to them
21 when it's appropriate to do so. But in particular, as
22 you'll have already seen, there is the timeline of the
23 main events and the schedule of surgical procedures, the
24 charts on serum sodium levels and urine sodium levels,
25 all in relation to the entirety of the period. Then we

1 have the chronology of events that you've seen from the
2 26th to 29th. Then we have his pre-surgical state from
3 the time of his admission to 7 am, and then the charts
4 of the perioperative period covering that 7 to 12, and
5 what was being measured and what could have been
6 understood from what was happening to Adam during that
7 period.

8 Now, I have to say I'm anxious not to compromise the
9 evidence that's going to be given during the oral
10 hearing, particularly where there's an issue concerning
11 differences in the versions of those who were directly
12 involved with Adam's case or queries over some part of
13 his management over that period of the 26th to 28th. So
14 I'm going to try and address those issues with care and
15 sometimes I may not address them at all, simply to try
16 and preserve the best evidence for you.

17 But an example that I can give without compromising
18 matters concerns the differences and inconsistencies
19 in the evidence of Dr Taylor, and I have already touched
20 on that, and in particular the explanations that he
21 gives in his interview under caution on 17 October
22 in relation to his preparation for Adam's transplant
23 surgery and his management of Adam during it.

24 The PSNI have provided the inquiry with a transcript
25 of that interview, and that's part of the papers and

1 everybody has access to it. As I said before, it really
2 is a very lengthy document. But it is worth looking at,
3 notwithstanding -- well, maybe because of Dr Taylor's
4 most recent inquiry witness statement on 1 February,
5 which was welcome, but nonetheless, when he says and
6 acknowledges a number of errors that led to a lower
7 standard of care for Adam than he would normally give,
8 it gives rise to issues as to exactly the basis for the
9 explanations he was given, what he understood could and
10 was happening to Adam by comparison to what he now says
11 was the case, and those two things are worth comparing.

12 There are also issues other than matters arising out
13 of Dr Taylor's evidence, especially in relation to his
14 most recent witness statement, that relate to
15 governance, and that will be looked at there.

16 The reports of the experts that were engaged in
17 previous investigations into Adam's case, whether by
18 the Coroner for the purpose of the inquest or by the
19 PSNI, they've all been published. And furthermore, the
20 reports received to date from the experts engaged by the
21 inquiry have been provided to the interested parties and
22 will in due course be published. And you can see,
23 Mr Chairman, that there are clear differences between
24 the experts and Adam's clinicians in some respects and
25 there are also clear differences amongst the experts

1 themselves, not just the inquiry's experts but the
2 experts previously engaged and the inquiry's experts and
3 I'm going to try and highlight some of those differences
4 for you. There is a very important area of disagreement
5 between the experts that is worth especially mentioning.

6 THE CHAIRMAN: Shall we save that special mention for
7 tomorrow?

8 MS ANYADIKE-DANES: Yes.

9 THE CHAIRMAN: I've been looking around and I'm conscious of
10 the fact that you've been on your feet from 11.30 and
11 everybody's been following it from the screens from
12 11.30 and there's a limit to how much detail can be
13 absorbed. I now know from the response when we came
14 back in shortly after 4 o'clock that when you finish,
15 Mr McBrien's going to speak tomorrow morning. There
16 will be other opening addresses so we should be able to
17 get your opening finished comfortably tomorrow morning
18 and Mr McBrien, and also sort out some other bits and
19 pieces of business because I think there are other bits
20 and pieces to be tidied up. So unless anyone has any
21 objections, we'll stop now for the day.

22 We will resume tomorrow morning at 10 o'clock,
23 I promise. If you would hold on for a few minutes, I
24 understand that the script from which Ms Anyadike-Danes
25 is working is going to be available in the next few

1 minutes. It's probably helpful for you to see overnight
2 what she has been referring to, what she will say
3 tomorrow, and also that gives you a chance to look at
4 the additional reports which were circulated at
5 lunchtime. So unless there is anything that has to be
6 dealt with immediately, that brings us to a conclusion
7 today. Thank you for your patience. Thank you very
8 much indeed.

9 (5.20 pm)

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

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1	INDEX
2	
3	Opening by MS ANYADIKE-DANES4
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

