Witness Statement Ref. No. 011/3

NAME OF CHILD: Adam Strain

Name: Victor Boston

Title: Consultant Paediatric Surgeon

Present position and institution: Retired

Previous position and institution:
[Since your Witness Statement of 9th April 2011]

Membership of Advisory Panels and Committees:
[Identify by date and title all of those since your Witness Statement of 9th April 2011]

Previous Statements, Depositions and Reports:
[Identify by date and title all those since your Witness Statement of 9th April 2011]

OFFICIAL USE:
List of previous statements, depositions and reports attached:

Ref:	Date:	
011/1	21.07.05	Inquiry Witness Statement
011/2	09.04.11	Second Inquiry Witness Statement

IMPORTANT INSTRUCTIONS FOR ANSWERING:
Please identify clearly any document to which you refer or rely upon for your answer. If the document has an Inquiry reference number, e.g. Ref: 049-001-001 which is 'Chart No.1 Old Notes', then please provide that number. If the document does not have such a number then please provide a copy of the document.

I QUERIES ARISING OUT OF YOUR SUPPLEMENTAL WITNESS STATEMENT

With reference to your witness statement dated 9th April 2011, please provide clarification and/or further information in respect of the following:

(1) Answer to Question 2(a) at p.3:

"On 04-12-92 [Adam's] mother requested of Dr Savage to obtain a second surgical opinion and to be referred to myself. (054-057-151)"

(a) State what occurred to lead Adam's mother to request on 4th December 1992 that Dr. Savage obtain *"a second surgical opinion"* from you.

Response: I do not know and cannot ascertain the reason from the notes. It is not unusual in difficult cases to seek a second opinion from a colleague.....this is common practice which reassures the physician and the parent concerning management.

(b) State when your opinion was actually sought.

Response: As stated in my last statement this according to the notes was on 04-12-92

(c) If it was not until shortly before 30th March 1993, state whether you know why there was a delay from December 1992 until March 1993 and if so what the reason was for it.

Response: There is nothing in the record which indicates the reason for the delay other than to surmise that the second opinion was not judged to be urgent and a delay of 3 months would not have been unusual for non urgent out- patient appointments at that time.

(d) Explain why, in the interim, Mr. Brown carried out a retrograde pyelogram on Adam on 8th February 1993.

Response: Adam was still primarily under the surgical care of Mr Brown. I had only been asked for a second opinion, not to take over his care.

(2) Answer to Question 2(b) at p.3:

"I saw Adam at the mother's request on the 30-03-93. I recommended an urgent cystoscopy to investigate the lower end of the right ureter which appeared from the evidence available at that time, to be obstructed, at least in part. (055-053-116)"

(a) You refer to Adam's medical notes and records at Ref: 055-053-116. Please transcribe the notes at 30th March 1993 culminating in *"before"* (a copy is attached for your convenient reference).

Response: *This is written in short hand which summarised his relevant surgery to date and my recommendation based on the available evidence. There were concerns that the uretero-ureterosotmy was partially obstructed, based upon the RUS of the 30-03-93 and this could be contributing to the renal failure causing elevation his plasma creatinine to 396. The subsequent retrograde pyelogram on the 21-04-93 indicated no obstruction to either ureter.*

Nov '91 Bil Reimplant
Nov '91 T Tubes both sides for renal failure
Dec '91 Necrosis L lower ureter ureterostomy
Dec '91 L Ureteroueterostomy
Jan '92 Nephrostomy
March '92 Fundoplication
Jan '93 Attempted retrograde failed
Creat 396
Board URGENT Cystoscopy Arrange RUS before

(b) In relation to each of the procedures shown at November 1991, December 1991, January 1992, March 1992 and January 1993, explain: (i) the purpose of the procedure; and (ii) its outcome.

Response: Operation 23-11-91 by Mr Brown. I was not involved and cannot comment.

Operation 28-11-91 by Mr Brown. I was not involved and cannot comment.

Operation 08-12-91 by Mr Boston. I was involved because I was on call that week end and the operation was sufficiently urgent to justify my involvement as an emergency in the absence of Mr Brown. Indication.....Continued apparent obstruction to lower ends of both ureters. Initial plan to insert stent across the obstructed region of the ureters but this was not possible. Exploration of the bladder suggested necrosis of the lower end of the left ureter which was exteriorised as a ureterostomy. The apparent obstruction to the right ureter was thought to be related to postoperative oedema.

Operation 20-12-91 by Mr Brown. I was not involved and cannot comment.

Operation January '92 referred to in my note. I can find no record of this in the notes available to me. There was a further bladder exploration on 24-12-91 by Mr Brown. I was not involved and cannot comment.

Operation 16-03-92 (indicated in error on the type written operation note as 13-03-92) by Mr Stewart then senior registrar. Purpose of the procedure.....to correct gastro-oesophageal reflux which was causing problems with feeding and weight gain. Outcome....control of GOR.

Operation 08-02-93 (not January '93 as indicated in my hand written note) by Mr Brown. I was not involved and cannot comment. However, at this point the mother asked Dr Savage for a second opinion to see me.

(c) State if you carried out the urgent cystoscopy that you recommended on 30th March 1993 (a copy of the consent form is attached for your convenience - Ref: 055-056-242). If not, please identify (if you can) the person who carried it out.

- Response: I carried out the procedure as indicated in the type and hand written note on the 21-04-93. Both ureters were patient and no further surgical intervention was necessary at that time. On the 23-03-94 I was asked by Dr Savage to replace Adam's feeding Gastrostomy and under the same anaesthetic inserted a peritoneal dialysis catheter Ref: 055-010-017 and 056-037-089. Further on the 24-08-94 I was asked by Dr Savage to replace the peritoneal dialysis catheter which had ceased to function Ref: 057-102-181. Following

this I had no further involvement in Adam's care which was undertaken by Dr Savage and Mr Brown.

(3) Answer to Question 4 at p.5:

"What we discovered is that Hyponatraemia is a complex multifactorial condition but that injudicious use of 0.9% saline / dextrose was an important aetiological factor. The NPSA committee (referred to above) which I attended and gave evidence to in 2005/2006, came to the same opinion but for reasons never disclosed to me, never published their guidelines. With regard to those children where I had direct involvement in their management the majority (percentage unknown) survived. Part of the management which will reduce morbidity / mortality is to recognize patient groups at risk in advance, such as septic neonates and only cautiously employ IV fluid replacement avoiding dextrose saline where possible."

(a) Explain the significance of the *"injudicious use of 0.9% saline / dextrose"* in relation to the issues in Adam's case over the use of 0.18% saline / dextrose.

Response: My reference to 0.9% saline/dextrose should read 0.18% saline/dextrose.....this was a typo. I cannot comment on the use of 0.18% saline/dextrose in Adam's case in that I was not involved.

(b) State the basis upon which you state that *"injudicious use of 0.9% saline / dextrose was an important aetiological factor"* in relation to Hyponatraemia.

Response: Because of my typo, this should read 0.18% saline /dextrose. Using this solution appears to exacerbate the underlying problem of intracellular over hydration and secondary hyponatraemia in at risk patients. We were able to observe this clinically and demonstrate it in a laboratory model of sepsis. We concluded that if saline dextrose IV solutions have to be used in at risk patients this should be done with caution.

(c) Identify the *"patient groups at risk"* which you recognised, and state when you became aware that those groups were at risk.

Response: The at risk groups are mostly patients with sepsis....particularly neonates. There are other rarer causes such as inadequate sodium intake, pulmonary related conditions, tumours and intracranial lesions stimulating anti-diuretic hormone production. Renal conditions resulting in renal failure where body fluid homeostasis is severely impaired, such as in Adam, is another uncommon potential cause of hyponatraemia. I first became aware of the risk of hyponatraemia in sepsis as a senior registrar during the early 1970's and my interest in this subject resulted in a wider appreciation of the other potential causes during the late 1970's and early 1980's.

(d) State whether Royal Belfast Hospital for Sick Children (RBHSC) recognised in November 1995 that those patient groups were at risk of Hyponatraemia and please provide the basis for your statement.

Response: The clinicians with which I worked, were aware of hyponatraemia as a complication in the above conditions. It was a frequent topic of teaching by the senior staff in our unit at that time to both under and post graduates working in our department at clinical meetings and ward rounds. I cannot comment on whether this was at induction because I was not involved in that exercise.

(e) Explain what you mean by *"cautiously employ IV fluid replacement"*.

Response: I have addressed this in my statement above.

(f) Clarify to which fluid(s) you refer when you state *"avoiding dextrose saline"*.

Response: I mean avoid using saline/dextrose intravenous replacement solutions where possible. It is usually possible to provide adequate maintenance, particularly of vascular fluid volume, without using the above. There are special circumstances where nutrition is important as well as delivery of adequate fluid volume maintenance. In this circumstance (typical of intravenous feeding) it may not be possible to avoid using saline/dextrose solutions.

(g) Describe and explain the evidence: (i) that you gave to the NPSA committee; and (ii) was received by that committee (so far as you are aware from your attendance on it in 2005/2006).

Response: I cannot state exactly what role I played in the eventual production of the draft document to which I referred, other than to say that I was part of the production of evidence and the debate which led to the formulation of a draft recommendation by NPSA on the use of such intravenous fluids. If you need further detail you should contact the chairman of that committee, the current president of the Royal College of Paediatrics and Child Health, Prof Terence Stevenson.

(4) Answer to Question 6(a) at p.6:

"I cannot comment on Adam's care from 26th to the 28th November because I was not involved."

(a) State whether you were contacted, at any time prior to 27th November 1995, in relation to Adam's transplant surgery. If so, state: (i) who contacted you; (ii) when; (iii) to what purpose; (iv) and what happened about that contact.

Response: I was not contacted about Adam's Care during November 1995.

(5) Answer to Question 6(b) at p.6:

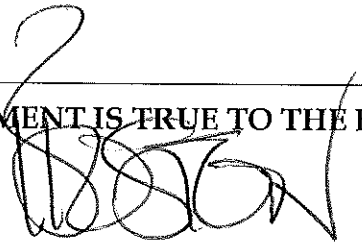
"The record keeping is often not very detailed, hard to read because of the hand writing and because the volume of notes were so gigantic, notes relating to one episode are often not chronologically recorded. This is often in my experience due to the whole body of notes in such chronic patients not being immediately available from the medical records department. It is not that a case note has not been recorded but it is often filed in the wrong place in the notes. This is a possible source of confusion. Most of the detailed record is contained in the letters between consultants who are involved in the care of the child and in correspondence to GPs."

(a) Identify where, in your experience, the *"whole body of notes"* in Adam's case was kept.

Response: As far as I am aware when the child was not in the hospital, the notes were kept by the medical records department, otherwise they would have been kept in the ward to which Adam was admitted. I cannot comment specifically on Adam's case because so much time has elapsed and I cannot remember whether this applied to him. However, I frequently encountered other patients who had multiple volumes of notes, that only the current chart was presented.....particularly at out-

patients clinics and where an urgent opinion was being sought.

THIS STATEMENT IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF

Signed: 

Dated: 14.07.11