Witness Statement Ref. No. 013/1

NAME OF CHILD:

Name: **Joe Gaston**

Title: Doctor

Present position and institution:

Retired 31st May 2005. On retirement I was employed by the Royal Hospitals Trust as a Consultant Anaesthetist and Associate Medical Director (part-time).

Previous position and institution:
[As at the time of the child's death]
Consultant Anaesthetist and Clinical Director of Anaesthesia, Theatres and Intensive Care, Royal Hospitals Trust.

Membership of Advisory Panels and Committees:
[Identify by date and title all of those between January 1995-December 2004]

Previous Statements, Depositions and Reports:
[Identify by date and title all those made in relation to the child's death]
19/06/96 – In consultation with the Consultant Paediatric Anaesthetists I wrote a draft report on the prevention and management of hyponatraemia arising during paediatric surgery.

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

Ref:	Date:	

Particular areas of interest
[Please attach additional sheets if more space is required]

1. **Describe your input into the assessment of and/or comments on the likely cause of Adam's death, including:**
   (i) to whom you communicated your views; and
   (ii) when and where.

I do not remember exactly when I was informed about the case but I did express my views at a number of meetings to discuss the management of the case. It is my memory that at least some of those meetings were attended by Dr G Murnaghan, Professor M Savage, Dr B Taylor and me. I had worked in a number of renal failure units and had anaesthetised a number of renal transplants (last in 1990). None were in children as young as Adam. I expressed my view that Adam's "high output renal failure" was extremely rare, that his surgery had been complicated, that while the patient did suffer from hyponatraemia it was simplistic to assume that Adam had too much fluid – particularly low or non salt containing fluid.

2. **Describe any recommendations drawn up following the Inquest on Adam for the prevention and management of hyponatraemia, including:**
   (i) who participated in the process;
   (ii) what changes were made to any previous guidelines and the dates of those guidelines; and
   (iii) the date when the recommendations were produced and to whom they were circulated.

As stated earlier I wrote a draft document on a policy for managing hyponatraemia in children having surgery. This was written in consultation with the Consultant Paediatric Anaesthetists. I do not remember which consultants assisted me but from Dr Munaghan's fax to Brangam Bagnall & Co Solicitors (060-014-025 – redacted) it is recorded that it was Dr Taylor, Dr McKaigue with subsequent approval of Dr P Crean. The report was forwarded to Dr G Murnaghan and Mr G Brangam. This report was written on 19th June 1996 (060-018-035,036). The development of hyponatraemia around Adam Strain's surgery was unique and not something which would be encountered by the non paediatric anaesthetists.

Other points you wish to make including additions to any previous Statements, Depositions and or Reports
[Please attach additional sheets if more space is required]

At the request of the Coroner following the death of Adam and two other children I arranged for a report on the equipment used during the operations in the operating theatres in Royal Belfast Hospital for Sick Children. The report was prepared by Mr B McLaughlin, MTO, Mr J Wilson, MTO and Dr F Gibson, Consultant Cardiac Anaesthetist. This report was forwarded to the Coroner (059-068-157 to 160 and 059-069-161,162).

Shortly after the death of Adam Strain – though I do not know when – hours or days, Dr Taylor came to speak to me about the case and how upset he was about his death and we talked through the circumstances and I assured him of my support and understanding of what had been a very complex and challenging anaesthetic.

I highlighted the importance of detailed documentation of fluid management in patient's notes at the ATICS Audit meeting on 10th December 1996 (ref RGH 2.2, copy enclosed). At this meeting I particularly identified that the excellent record keeping of Dr Taylor was of considerable assistance in the Coroner's investigation of Adam Strains death.

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

Signed: JMGaston **Dated:** 15th July 2005.

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CONFIDENTIAL

ROYAL GROUP HOSPITALS

ANAESTHETICS DIRECTORATE CLINICAL AUDIT MEETING

Date: 10 December 1996

Venue: Lecture Theatre 2 School of Radiography

Attendance: See Register

Morbidity & Mortality

Two cases were presented: Atypical Ventricular Fibrillation
Airway obstruction in a child

Education

Sevoflurane Update was presented.

Audit

Topic: *Anaesthetic Record Keeping*

Two problems were identified - Inadequate Records and no records at all.
The two obvious reasons for good record keeping are medicolegal and Clinical.
Common areas of inadequate information were found to be in:

- Pre-op assessment
- Difficult intubation
- Drug and Fluid administration
- Untoward Events

Taking one of the above areas ie Difficult intubation, the presenter showed how improvements could be made eg. *Why was intubation difficult*
How difficult was it
How was the patient intubated
Other information - was airway easy to maintain
was saturation maintained
any cuts to lips - was everything okay when completed
were there any special precautions when extubating the patient.

A handout titled Anaesthetic Record Set - Suggestions as to a reasonable content was given to everyone present. This document had been jointly produced by the Association of Anaesthetists of Great Britain & Ireland and the Society for Computing & Technology in Anaesthesia.

The Anaesthetic Chart Review which is ongoing will tie into this and will be discussed further at a later date.

Topic: *Review of Acute Pain Service*

The Acute Pain Service in the main hospital of the Royal Hospitals oversees the use of patient-controlled analgesia (PCA) for some 1,500 patients per year. This audit relates to 2,300 patients seen by the Pain Control Nurse between April 1995 and September 1996. Morphine was administered in 99% of cases, with an initial PCA dose of 1mg for 97.5% of patients. Only 0.5% of these patients required a subsequent increase in the PCA dose to 1.5mg

T .4hr consumption of morphine was less than 50mg for over 50% of patients and between 51 and 100mg for approx. 30% during the first 2 days of PCA and thereafter tended to decrease. Eight percent of patients consumed more than 100mg in 214 hrs. Possible reasons for this included major complex surgery, chronic opoid intake preoperatively and a history of drug dependence or misuse.

Regardless of surgical speciality 40-60% of all patients required PCA for 2-3 days, and only 1% of patients continued with PCA for 8-18 days. Early discontinuation of PCA was recorded for 19% of all patients but was as high as 42% for those patients who had had spinal surgery. The indications for early cessation of PCA in the latter group were: - no need for potent analgesia (25%), nausea (20%), vomiting (13%), inadequate patient use of PCA (15%) and inadequate analgesia, despite satisfactory use of PCA (14%).

The overall incidence of postoperative nausea/vomiting for patients on pCA was 16% on day 1 and 8% by day 2. Other complications which occurred within the first 48hrs of PCA use included pruritis (3%), urinary retention (2%) and hallucinations (1%). These complications were associated with a relatively high mean 24hr consumption of morphine. The incidence of CNS depression , sedation or bradypnoea was less than 1%. Of note 4/14 patients had bradypnoea were significantly sedated and only 4/16 oversedated patients had bradypnoea.

Over 90% of general surgical patients had satisfactory analgesia at rest during the first 3 postoperative days. However, pain relief on movement was inadequate for 70% of patients on day 1 and over 30% of patients on day 2.

Epidural analgesia was employed for 122 patients between January 1996 and November 1996. The average duration of its use was 2-3 days. The mean infusion rate of fentanyl (5mcg/ml) and bupivacaine 0.1% was 6ml/hr for both lumbar and low thoracic epidurals. Hip flexion was preserved in 63% of patients and only 1 patients was restricted to ankle flexion during the first 24 hrs postoperatively. On day one pain scores were satisfactory for 90% of patients at rest and 66% of patients on movement. The incidence of nausea or vomiting was 20%. Only 3 patients with lumbar epidurals became hypotensive during the first 24 hrs, the upper level of sensory block being T7-T12. Respiratory depression occurred in 2 patients, but only 1 patients required intravenous naloxone. One patient developed hallucinations. There were no major complications of epidural analgesia.

Comments:
The use of both PCA and epidural analgesia are well established methods of postoperative analgesia for adult patients in the Royal Hospitals, the latter technique providing superior analgesia on movement. there is a low incidence of respiratory depression with either method of analgesia and no other major complications of epidural analgesia have occurred. Nausea and vomiting are the most common undesirable complications associated with these perioperative analgesic techniques