REPORT OF EXPERT ON ANAESTHESIA: DR. SIMON HAYNES
ADAM STRAIN

FURTHER SUPPLEMENTARY BRIEF

There are some specific queries arising out of your Report and we would be grateful if you would address the following matters and provide your response in a fully referenced Supplemental Report.

1. Please describe in detail the process by which a paediatric renal transplant patient would normally be transferred from theatre to paediatric intensive care unit (PICU) in or about November 1995, and which clinicians and nurses would normally carry out that transfer.

2. Identify by either name or job title the personnel (medical, nursing, other) that you would have expected to have:

   - Taken over the care of Adam in PICU
   - Conducted the handover of Adam to the PICU staff
   - Received and recordedthe information provided in the handover of Adam to PICU

   on 27th November 1995 on his transfer from theatre, and state the reasons why.

3. State what information you would have expected to have been given during the handover to PICU staff on 27th November 1995 about:

   - Adam
   - His renal transplant surgery
   - The reasons for his failure to breathe spontaneously and his fixed dilated pupils post operatively
   - Adam's serum sodium concentration
   - Adam's fluid regime during the transplant procedure
   - Central venous pressure readings

4. Please describe the process of managing a CVP line when admitting a child to PICU from theatre, including:

   (a) How a central venous pressure line would have been transferred over to a PICU monitor

(b) The normal practice for managing a CVP line when admitting a child to PICU from theatre and how the accuracy and reliability of the CVP measurements would be ensured.

(c) What you would have expected to have been communicated in Adam's case in the handover to PICU, and to whom this ought to have been communicated, regarding:

(i) the position of the CVP line during the transplant procedure
(ii) the position of the CVP line on completion of the transplant procedure
(iii) the CVP readings during the transplant procedure
(iv) the explanation for those CVP readings
(v) any concerns relating to the CVP line
(vi) whether the CVP line was functioning effectively and reliably

(d) Identify any guidance or protocols that existed in November 1995 on the management by staff of CVP lines.

(e) Identify any guidance or protocols that exist now on the management by staff of CVP lines.

(f) Please review the recordings of the CVP measurements from the last measurement on the print out in the operating theatre onwards in the light of Dr. Taylor's explanations about the inaccuracy of the CVP measurements. In particular, state your explanation for the change from the last recorded CVP of about 18mmHg (Ref: 058-008-023) in theatre at approximately 11:20 to the CVP of about 11mmHg (Ref: 058-035-136) in PICU at approximately 12:05.

(g) Once Adam's chest X-ray was performed in PICU, please state what action you would have expected to have been taken arising from the X-ray, identifying by whom and explaining your reasons.

5. State whether you would have expected Dr. David Webb (Consultant paediatric neurologist) to have been informed of Adam's serum sodium concentration in theatre and PICU when he was asked to consider an explanation for Adam's brain swelling and if not, why not.

6. It is noted by Dr. Webb in Adam's clinical notes at that Adam's cerebral oedema *"may have occurred on the basis of unexplained fluid shifts – 'osmotic disequilibrium syndrome'"* (Ref: 058-035-140). This view is repeated further by Dr. Webb in a letter to Dr. George Murnaghan (Director of Medical Administration) dated 12th December 1995 (Ref: 059-061-147) and in his Inquiry Witness Statements (WS-107-1, p.3-4, Answers 3(a)-(d) and WS-107-2,

p.2-3, Answers 1(c) and 3(a)). It is also mentioned on Adam's autopsy request form (copy attached). The author of this document is currently unknown.

(a) Please explain what you believe is meant by *'osmotic disequilibrium syndrome'*

(b) Please comment on Dr. Webb's view that Adam's cerebral oedema *"may have occurred on the basis of unexplained fluid shifts – 'osmotic disequilibrium syndrome'"*

7. Please find attached a blank table regarding Adam's fluid balance. We would be grateful if you could fill in the table as follows:

(a) What you believe to have been Adam's daily fluid intake prior to his admission to RBHSC on 26th November 1995

(b) What you believe to have been Adam's daily fluid output prior to his admission to RBHSC on 26th November 1995

(c) What you believe to have been Adam's fluid losses at each of the indicated stages on 26th and 27th November 1995, including your calculations and losses due to:

(i) Insensible losses

(ii) Urine output

(iii) Blood loss

(iv) Dialysis loss

(d) What fluid was actually received by Adam at each of the indicated stages on 26th and 27th November 1995

(e) Given what you believe the fluid losses to have been and what fluid was actually received by Adam, what you believe his fluid excess/deficit was at each of the indicated stages on 26th and 27th November 1995

(f) Any comments and relevant information regarding the sodium content of the input fluids and losses

(g) Any reasons why planned fluid infusion (content or infusion rate) should change due to changes in estimated loss