THE INQUIRY INTO HYPONATRAEMIA-RELATED DEATHS:

Adam Strain

WRITTEN SUBMISSIONS ON BEHALF OF DR TAYLOR

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The Inquiry into Hyponatraemia-related Deaths

Written Submissions on behalf of Dr Taylor:

Adam Strain

Preliminary

1. These submissions are necessarily provisional in light of the outstanding evidence of Professor Kirkham, Dr Carson, and Dr Mullan. It is anticipated that supplementary submissions will be made on behalf of Dr Taylor, once Professor Kirkham's evidence has been heard.

2. Dr Coulthard made a number of observations about Dr Taylor's actions in his written reports. To avoid unfairness, it is submitted that such observations should not be relied upon by the Chairman. Dr Coulthard was instructed by the Inquiry as an expert nephrologist – his proper role should be to offer expert opinion on the actions of Professor Savage. In the context of the expert evidence, it is the opinion of Dr Haynes, and Dr Haynes alone, which is relevant to the Inquiry's assessment of Dr Taylor's actions.

The evidence of Dr Taylor

3. A large proportion of these submissions are underpinned by the evidence given by Dr Taylor about the devastating effect which the death of Adam Strain had upon him:

> Adam died on the operating table. It's very unusual for a patient of any age to die on the operating table and has a devastating effect on the operating department. When a child dies on the operating table, which is an uncommon -- I know he didn't die, in fact, that he was taken off the ventilator in the operating department, but, effectively I ... I had expected Adam to have died during or after his operation and that was a devastating experience, primarily for his mother and his family. I don't mean to try to put the devastating effect of myself with the operating staff in the same league --
> THE CHAIRMAN: I understand.
> A. -- as the loss to the family. That's not what I'm

trying to establish.
THE CHAIRMAN: I understand that. But in essence, you're saying --
A. Sorry, it left me personally very disturbed. As I say, not to the degree of his loved ones. The other thought that, in some way, I was responsible for the condition and the death of Adam was another blow. I have found over the years, with the questions that I've been asked and the statements I have made, that it is difficult to cope with my thought processes, going over such a devastating event. I think that has permitted me to say things that are clearly irrational, wrong, disturbed, confused, and I offer that as an explanation for making such really outrageous statements.[1]

4. This evidence was endorsed by almost every relevant clinical witness who came before the Inquiry to give oral evidence, with many referring to how devastated Dr Taylor was by Adam's death.[2]

5. The effect of these events on Dr Taylor, and his frank acceptance of how they had led him in the past to make inaccurate comments, was quite properly never challenged in evidence. There would have been no logical basis for such a challenge – the death of Adam Strain was plainly a devastating event in the life of Dr Taylor and no expert witness, lay witness, or lawyer in the hearing chamber would be capable of sensibly disputing the effect which Dr Taylor explained it had upon him, and the fact that it caused him to make certain "irrational" statements. Upon receipt of a huge volume of expert evidence from the Inquiry, and at 16 years remove from the tragedy, Dr Taylor was able to start to come to terms with the errors which he made.[3]

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[1] Evidence of Dr Taylor; 19/4/12: pp 57-58
[2] Dr Gaston's principal memory of his meeting with Dr Taylor in the aftermath of Adam's death was "the fact that he was so upset" [18/6/12; pp128(13)], while Professor Savage described Dr Taylor as being "in a state of shock" [22/6/12; pp 16(8-9)]
[3] Evidence of Dr Taylor; 19/4/12; pp33(4-11)

Events prior to surgery

6. Dr Taylor did not seek in evidence to offer excuses or place the blame elsewhere for the errors he accepted. However, it is submitted that the following evidence represents relevant background to any fair analysis of those errors:

6.1. Dr Taylor was a lynchpin of the anaesthetic department at the Royal Belfast Hospital for Sick Children ["RBHSC"], working long hours in a discipline which was understaffed.[4] Dr Taylor, Dr Crean and Dr McKaigue (who had only recently taken up his post) were the only consultant paediatric anaesthetists in Northern Ireland at that time. Dr Gaston observed in evidence that the removal of Dr Taylor from anaesthetic duties would probably have led to the "*collapse of anaesthesia and ICU in Northern Ireland*"[5];

6.2. Dr Taylor's workload encompassed both intensive care and paediatric surgery. The Inquiry heard evidence from Dr Haynes that this dual role has now been abolished, as a result of the workload which it created:

> The second part, when he refers to being responsible both for the intensive care unit and the operating theatre anaesthesia, that is something that we as a department, in my personality [sic] experience, have addressed such that, barring illness and extreme circumstances, one individual is no longer asked to take responsibility for both areas.
> Q. When would that change have happened?
> A. That is within the last decade. From what Dr Taylor says and what you have read out to me, it appears to me as if it's something that they were thinking of and looking towards developing as a safer way of functioning as a group of clinicians.[6]

6.3. Tiredness will have played a role in events – Dr Taylor had been on call for 72 hours (from Friday through to Sunday), before he was notified on Sunday evening of the proposed transplant. He can have had only a few hours of

[4] "In regard to anaesthetists, I think it was well recognised, both within anaesthetics and paediatrics, that there was a shortfall there and people were doing their utmost to try and improve that." – Evidence of Dr Crean; 20/6/12; pp7(8)
[5] Evidence of Dr Gaston;19/6/12; pp138
[6] Evidence of Dr Haynes; 2/5/12; pp65(10)

sleep on the Sunday night before the surgery, which sleep was itself disturbed by a telephone call from the Hospital, from Dr Montague[7];

6.4. Such tiredness was not the fault of Dr Taylor – it was the consequence of the rota and staffing circumstances which prevailed at the time, which placed an enormous amount of responsibility on Dr Taylor;

6.5. There was no multi-disciplinary meeting prior to Adam's surgery. Such meetings were not normal practice at this time in RBHSC, and would only become so over subsequent years. However, Dr Haynes confirmed in his evidence that they were normal practice in some other UK hospitals:

> It's a long-established way of working in cancer services. It was also clearly evident as a way of working in the paediatric nephrology department when I spent my month as a trainee there. And it's long been the way of practice in congenital cardiology and cardiac surgery.
> So the straightforward, or straightforward as I can make it, answer is, yes, there are many examples in 1995 when multidisciplinary meetings were held, but they were not held invariably with the same rigour and expectation as they are nowadays.[8]

6.6. Dr Haynes' period as a trainee in paediatric nephrology, referred to in the above extract, was between 1992 and 1994;[9]

6.7. Such a meeting would have had important consequences for the morning of surgery. For example Dr Taylor felt that the readings from the CVP line were not accurate, because of the location of the tip. Dr Haynes's evidence was that the difficulty in obtaining central venous access was something that could have been anticipated and planned for at such a meeting: *"Central venous drainage and CVP measurement: This has been discussed at length by the Inquiry. Numerous central lines had been placed in Adam, some at a very early age. It is my opinion as previously stated that this almost certainly means that there was some narrowing of the great veins draining his head and neck. It would therefore have been sensible to have arranged for ultrasound examination of these vessels when Adam was placed on the transplant waiting list, and a plan made for gaining central venous access at*

[7] Evidence of Dr Montague; 11/5/12; pp31(16)
[8] Evidence of Dr Haynes; 2/5/12; pp49-50
[9] 306-032-002 [Curriculum Vitae of Dr Haynes]

the time of transplantation depending on the findings. As detailed in my reply clarifying points raised by the Inquiry team following the meeting on 9 March 2012, I am absolutely certain that the CVP reading obtained during Adam's transplant operation could not be relied on either as an absolute number or as a trend monitor".[10]

6.8. The 1990 Renal Transplant Protocol[11] at RBHSC was of little or no benefit to the anaesthetist with conduct of the surgery. Indeed its function remained unclear even after oral evidence. Dr Haynes observed that relevant information listed in the "Notes" section of the Protocol had not been summarised into bullet points in the way he would have expected[12], and Dr O'Connor observed that the Protocol was not even observed by Professor Savage, because the immunosuppressive drugs he prescribed for intra-operative use on the eve of surgery were different to those recommended by the Protocol[13]. Thus another opportunity was missed for information to be set out in writing in an organised fashion in advance of the surgery. Dr Taylor was not aware of the Protocol and no evidence was heard which suggested it was brought to his attention. In any event, it is submitted it would have been of limited use to him – its function appeared to be to act as an "aide-memoire" for Professor Savage, and the junior doctors preparing Adam on the ward.

7. Dr Taylor was notified of the surgery on the Sunday evening. He had been on-call since Friday. A decision was taken for the surgery to be carried out the next morning so that the key clinicians would be able to be fresh (as pointed out by the Chairman, "fresh" in this context represents a relative term[14]). Dr Taylor tried to get some sleep, and did not go into RBHSC to examine Adam and speak to Adam's mother – he intended to do so in the morning. It is submitted that such decisions are a matter of judgment, taken in challenging circumstances. Dr Taylor has nonetheless accepted that he should have gone to the hospital for these

[10] Report of Dr Haynes; 204-013-395.
[11] W/S 002/2 [Professor Savage]; Page 51-56
[12] Evidence of Dr Haynes; 2/5/12; pp42
[13] Evidence of Dr O'Connor; 25/4/12; pp7(11-23)
[14] Evidence of Dr Haynes; 2/5/12, pp62(11-15)

purposes (as opposed to attempt to get some rest, to be fresh for the surgery).[15] It is submitted that his decision was made in an attempt to act in the best interests of the patient. But the judgment was wrong. Dr Haynes stated that the decision meant that when Dr Taylor arrived at RBHSC the next morning, "he put himself on the back foot"[16]. He was confronted with many volumes of medical notes and records.

The surgery itself

Attendance at the surgery

8. It is submitted that any doubt about whether a third nurse with the designated duty of assisting Dr Taylor was present at the surgery was removed by the oral evidence. That a third nurse (now unidentified) was in attendance is beyond dispute in light of:

8.1. The fact that there is a large amount of unidentified writing above that of Nurse Matthewson on the blood loss form [058-007-021][17]. Such writing can only have been written by the third nurse present during the surgery (it not being the writing of Nurses Conway, Poppplesone, or Matthewson – or of Mr Peter Shaw - as confirmed by each during their evidence);

8.2. Nurses Conway, Popplestone, and Matthewson were all implacable in their view that at surgery such as that undergone by Adam Strain, there should and would have been a third nurse present;

8.3. All of the nurses stated that a third nurse would have been present at the surgery – by implication, had one not been present in breach of standard procedure and their expectations, one of them would have remembered that fact;

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[15] Evidence of Dr Taylor; 19/4/12; pp102(24)-103(5)
[16] Evidence of Dr Haynes; 2/5/12; pp61(5)
[17] Nurse Matthewson confirmed in evidence that it is her writing from the figure of "160.7" in the far right column, continuing downwards. Nurses Conway and Popplestone confirmed that the writing above this figure was not theirs: Evidence of Nurse Conway; 30/4/12; pp21(3-12); Evidence of Nurse Popplestone; 30/4/12; pp94(8)-95(5).

8.4. Mr Brown in his evidence also confirmed that it would have been standard practice to have three nurses present, and did not suggest such standard practice was departed from in Adam Strain's surgery;[18]

8.5. That the third nurse can no longer be identified is no great surprise, given;

8.5.1. The fact that the rota has been lost;

8.5.2. The passage of time; and

8.5.3. The problems the Inquiry has encountered in other areas of its work when trying to ascertain which individuals were on duty during any given time period.

9. There has been confusion in the papers as to who replaced Dr Montague (the trainee anaesthetist / Senior Registrar) when he left theatre. Indeed, the suggestion that he might not have been replaced at all has been explored by the Inquiry. It is submitted that in light of the evidence of Dr Haynes, the Inquiry's expert paediatric anaesthetist, the question is of little significance. Dr Haynes' view was as follows: "*The "anaesthetic team" required for a renal transplant is the same as for any major operation in a child. Two people are required; a consultant anaesthetist and a clearly identified, suitably skilled anaesthetic nurse or ODP at all times. The anaesthetic assistant must not have other concurrent duties. A trainee anaesthetist may be present if available, but it is not essential. In practice... the anaesthetic nurse may have had suitable in-house training and be competent without having completed either the ENB 182 or a postgraduate course in operating theatre practice.*"[19]

10. This view was reiterated by Dr Haynes during his oral evidence:

> THE CHAIRMAN: But if Dr Montague was there to start and left, then it was safe to continue with Dr Taylor and a nurse who was identified as fulfilling the role of an anaesthetic nurse?
> A. Yes. Providing that nurse had no other distracting duties.[20]

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[18] Evidence of Mr Brown; 1/5/12; pp59(15)
[19] Report of Dr Haynes; 204-004-147
[20] Evidence of Dr Haynes; 2/5/12; pp170(5-10)

11. Thus Dr Haynes' evidence was that "*two people are required*" and that a "*trainee anaesthetist may be present if available*". Given the undoubted presence of a nurse to assist with anaesthetic duties (as submitted above), the replacement of Dr Montague was not mandatory in any event. This is before one considers the additional presence of Mr Peter Shaw, the Medical Technical Officer. While the specific role of the Medical Technical Officer appears to have been sui generis to RBHSC at that time, it was plain from Mr Shaw's evidence that his role involved a large amount of further assistance to the anaesthetist – for example with regard to CVP technology.

12. Thus, in light of the presence of a third nurse, Dr Montague, and Mr Shaw, the suggestion that the anaesthetic team was short of hands during the surgery is insupportable, even had Dr Montague not been replaced.

13. It is nonetheless further submitted that, at the conclusion of the oral evidence, the evidence had established on the balance of probabilities that Dr Montague was in fact replaced, and with the passage of time his replacement has been unable to be identified. Further to this submission:

    13.1. Dr Taylor remained implacable in his view that in accordance with his practice he would not have allowed Dr Montague to leave (Dr Montague was at the end of his shift) without a suitable replacement. It is immediately apparent that Dr Taylor had no interest, and nothing to gain, from letting Dr Montague leave. Further, given his candid evidence in a number of other areas, Dr Taylor would surely have offered unvarnished evidence on this point, in the same manner which he offered unvarnished evidence on other points, had Dr Montague in fact not been replaced;

    13.2. Dr Montague recalled that at the time of his departure (around 9am, with Dr O'Connor confirming that she saw Dr Montague in theatre, after her arrival), his fellow Registrars would have been beginning their duties. He stated there were four trainee anaesthetists working at that time, and that the

practice was to consult the whiteboard in the theatre complex, and decide which list to join[21];

13.3. Thus Dr Montague's evidence about the practical reality of the system for registrar replacement was consistent with the position of Dr Taylor, which was that other potential registrars would have been available from 9am, and it was in the context of that knowledge that he would have allowed Dr Montague to leave;

13.4. Dr Haynes confirmed in oral evidence that he would not have expected the name of the replacement registrar to have been recorded on the theatre log, once he took over from Dr Montague;[22]

13.5. That the Inquiry has not been able to identify the specific individual is unsurprising, given the passage of time;

13.6. Dr Montgaue was asked by Counsel to the Inquiry whether he would have been surprised if Dr Taylor released him, even if there had been no replacement available. The import of his answer was that he would not have been. It is submitted that this exchange did not create any relevant evidence – it merely offered speculation from one individual as to what his view of another individual's hypothetical actions would have been. The Inquiry in fact has the clear and unshaken evidence of that individual himself (Dr Taylor), as to what his thought process at the time would have been;

13.7. Of the potential trainee anaesthetists contacted by the Inquiry, none had a recollection of the surgery. Dr Bedi simply stated "I have no recollection of this case"[23] (meaning simply that he has no recollection, one way or the other). This is <u>not</u> the same as positively confirming that he was not the anaesthetist in question, and the two should not be confused. This state of knowledge is hardly surprising – while the events surrounding Adam Strain's death were tragic for all concerned, and while the Inquiry has had the benefit of being able to consider matters in detail, many of the clinicians involved were being asked to recall a proportion of a working day nearly 16 years after the event (Dr Bedi, and the other potential trainee anaesthetists, were not written to by the Inquiry until September 2011). Clearly the Inquiry

[21] Evidence of Dr Montague; 11/5/12; pp15(16-24)
[22] Evidence of Dr Haynes; 2/5/12; pp178(12-15)
[23] WS-192/1 [Dr Bedi]; pg 2(1)

was correct in not calling witnesses such as Dr Bedi simply to ask them to confirm that they have no recollection of these matters. To have done so would have been disproportionate. But it is submitted that it is plainly flawed to suggest that as a result of the tragic outcome of the surgery, an individual involved would necessarily remember it. That that conclusion would be flawed is plain from a large proportion of the oral evidence, for example:

13.7.1. The evidence of Peter Shaw – the Medical Technical Officer – who has no recollection of these matters at all, despite being present throughout the surgery[24];

13.7.2. The evidence of Dr Rosalee Campbell – who has no recollection of being called in to assist Dr Taylor[25];

13.7.3. The evidence of Staff Nurse Beattie, who does not remember being present when Debra Strain was told that her son would not recover.[26]

13.8. Thus it is submitted it is unsurprising it has not proved possible to identify the trainee anaesthetist / Registrar who replaced Dr Montague. To conclude otherwise would be contingent upon a process of reasoning that has no basis in the evidence before the Inquiry (the unreasoned assertion that one would automatically remember involvement in the event because of its tragic outcome). Indeed, such reasoning is expressly contradicted by the evidence before the Inquiry.

14. Dr Taylor's fluid calculations were incorrect, and specifically his urine output estimate of 200ml per hour. During his oral evidence to the Inquiry, Dr Taylor did not seek to make excuses or cast blame elsewhere, No doubt a number of factors will have played a role in this error, specifically:

14.1. Adam was the first paediatric renal transplant patient Dr Taylor had anaesthetised since his appointment to the post of consultant in 1991. It is submitted that while Dr Taylor frankly accepted he would have expected the anaesthetic to be within his capabilities, this does not preclude the parallel

[24] WS106/1 [Peter Shaw]; pp2
[25] WS 117/2 [Dr Campbell] pp4
[26] WS118/1 [Nurse Beattie]; pp2; and 058-38-180 (counselling record)

acknowledgement that the surgery and its anaesthetic were unusual and challenging;

14.2. The fact that Adam Strain was polyuric, and the particular ramifications of this condition for a child in end-stage renal failure[27]. It is clear that Dr Taylor misunderstood the particular effect of the condition upon Adam's urine output. However it should also be recognised that the condition added another level of complexity to the anaesthetic. Dr Haynes stressed this fact during his oral evidence:

> Q. The question is whether it's something he should know, that Adam's chronic renal failure meant that his kidneys had a fixed urine output. Is that something that he, as a consultant paediatric anaesthetist, should know or is that something that he could and should be legitimately seeking information from Dr Savage about?
> A. The latter is the answer. He should have sought confirmation or explanation from Professor Savage about Adam's urine output and likely urine output during the operation.
> Q. He's conceded that in fact he got the information, he just misinterpreted it. What I was seeking from you is whether he should have been relying on Dr Savage or whether he should have understood sufficiently about the consequences of renal failure to have known that that would mean that the kidneys would have a fixed urine output.
> A. No, I think it is unfair to expect Dr Taylor or any other paediatric anaesthetist to have a complete in-depth knowledge of paediatric renal medicine, and it was quite appropriate and correct that the anaesthetist should seek advice, information, fact, from the nephrologist in charge of Adam's case.[28]

14.3. The contributing factor of having to calculate Adam's fluid deficit in theatre. Both Dr Taylor and Professor Savage estimated that Adam was in deficit, by up to 500ml. Dr Haynes endorsed the view that the correct

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[27] Evidence of Dr Montague; 11/5/12; pp56(15)-57(14)

[28] Evidence of Dr Haynes; 2/5/12; pp125 (5-25); See also, pp126(4-11):
THE CHAIRMAN: Is it inevitable that there's a fixed urine output, or is that -- sorry, I will keep it short. Is it inevitable that there's a fixed urine output?
A. In end-stage renal failure like this?
THE CHAIRMAN: Yes.
A. My answer to that is that you would be better to get a definitive answer from a paediatric nephrologist on that.

approach in such circumstances was for this deficit to be "caught up" rapidly – Dr Haynes' view was that working with a deficit of 300ml, he would want the deficit replaced prior to surgery and would "be keen myself to ensure that that was replaced fairly quickly within 10-15 minutes"[29];

14.4. The preoccupation of Dr Taylor with ensuring that there was enough circulating blood volume to allow the new kidney to properly perfuse.

15. Other decisions taken by Dr Taylor were scrutinised during the evidence. For example, Adam Strain was not catheterised at the outset of the procedure. The evidence on this point confirmed:

15.1. That it was a surgical decision, taken by Mr Keane[30];

15.2. Dr Taylor would today have handled the situation differently. He stated he would "make my arguments to the surgeon" and would be "assertive enough to ensure that my arguments were understood and listened to", but if the surgeon remained against catheterisation, "I would document the reasons and defer to the surgeon"[31];

15.3. That there exists no presumption that a paediatric renal patient should be catheterised – different practice exists on this point, as confirmed by Dr Haynes.[32]

16. It is submitted that poor communication and poor teamwork is evidenced by the absence of the catheter, as opposed to any prima facie clinical error. Dr Haynes' opinion was that poor communication was a feature of Adam's surgery:

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In terms of hard, objective fact, it is very
difficult, but being given the documents I have been and
being asked to read through it and look back at the
events that happened, I would have expected some
indication somewhere in the text of one or more than one
statement of a collaborative approach to the whole
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[29] Evidence of Dr Haynes; 2/5/12; pp146(7-24)
[30] Evidence of Dr Taylor: 19/4/2012; pp45(24) – 47(13)
[31] Evidence of Dr Taylor; 19/4/12; pp55(19)-56(5)
[32] Dr Haynes described there being a "*strong indication ... but not an absolute indication*" for catheterization in Adam's case – 2/5/12; pp156(24-25). In his report, he had stated that catheterization "would have been preferable" [204-013-394]

thing, and I have not seen this. We have not been able to ascertain when the operation was actually scheduled to start, why it started at 7 rather than 6, who discussed it with whom, and there is conflict in the statements between the interpretation of Mr Keane and Dr Taylor on the amount of blood lost during the operation, for example.
Q. Sorry, how do you interpret that?
A. Well, that they didn't communicate effectively with one another about what was actually happening.[33]

17. It is submitted that Dr Haynes' criticism of the communication in theatre (from both Mr Keane and Dr Taylor's perspective) is likely to be fair. It is further submitted that this theme runs through the Adam Strain chronology. Professor Forsythe, in an exchange with the Chairman, noted as follows:

THE CHAIRMAN: Which all emphasises just how much is involved in the whole process?
PROFESSOR FORSYTHE: I've often said that transplantation is the best example of multidisciplinary care and absolutely as you say.[34]

18. Due to the combination of circumstances which occurred in the Adam Strain case, this multidisciplinary approach appears to have been absent (with each clinician doing his best on his own terms). It is accepted that Professor Savage was available to Dr Taylor by telephone. Nonetheless it is submitted that a reasonable conclusion to be drawn from the above evidence is that it was not necessary for Dr Taylor to shoulder so much responsibility himself, in such an unusual set of circumstances.

19. Dr Taylor did not obtain further blood results at the outset of surgery, or in response to the 0932am blood gas reading. He once again accepted in evidence that it was a mistake not to do so[35], and stated that he had previously "belaboured" the problems with the laboratory 'turnaround' times on the Royal site. He stated that they were an "irritation" which "should not have impacted upon the reason why I did not do a sample"[36].

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[33] Evidence of Dr Haynes; 2/5/12; pp113(3-18)
[34] Evidence of Professor Forsythe; 4/5/12; pp15 (19-23)
[35] Evidence of Dr Taylor: 19/4/12; pp72(4)-(8); 20/4/12 pp42(1);
[36] Evidence of Dr Taylor: 20/4/12; pp41 (23)-42(1)

20. These submissions do not seek to undermine that regret, repeatedly expressed by Dr Taylor during evidence. However it is submitted that there were plainly problems with the speed of the turnaround of out of hours blood results in RBHSC:

20.1. Dr Taylor's recollection was that there was only one porter available to collect samples, across the whole of the Royal site, until 8 or 9am on Monday mornings[37];

20.2. As a result, he estimated that turnaround times (depending on the location of the porter) could be "between 30 minutes and two hours;"[38]

20.3. Dr Taylor's estimation is plainly accurate, because from the clinical notes it is possible to determine that for the blood sample that was taken at 1130am (and so during normal hours), the results were not received until 1.20pm (by which time Adam was in PICU)[39];

20.4. Professor Savage's recollection was that at "around that time the Children's Hospital Biochemistry facility was withdrawn", with the service being concentrated on the alternative, Kelvin site.[40] Thus the porter had to take the sample to the Kelvin site, even after 9am;

20.5. During the Clare Roberts' stage of the oral hearings, Dr Heather Steen confirmed the problems with out of hours blood results which existed at this time: "I think it was recognised there were lots of difficulties and it was dependent on various factors about availability of porters, et cetera. And certainly we have now changed it. We now have a chute system and it's much more rapid"[41]. Dr Steen stated:

> The porter had to be available to come and take the sample to the technician. The technician would then put it through and it would depend how busy they were, how quickly you got your sample put through. They may have had several more to do as well as your own and then they would phone. I would think if you're really needing it

[37] Evidence of Dr Taylor; 20/4/12; pp41 (8-22)
[38] Evidence of Dr Taylor; 20/4/12; pp41(4)
[39] 058-035-138
[40] Evidence of Professor Savage; 17/4/12; pp18(14)-19(23);
[41] Evidence of Dr Steen; 15/10/12; pp15(14)

done and you really phone and phone and phone, you usually get it through in about an hour, maybe an hour and a half.[42]

20.6. Dr Coulthard was therefore severely critical of the length of time it took to receive blood results in RBHSC in 1995. He described the above durations as "unacceptable".[43] Discussing the sample which was taken at 1130am in theatre, for which the results were returned at 1.20pm, he stated:

I would consider that unacceptable. I would consider that degree of service unacceptable.
THE CHAIRMAN: You have said that you need the results within an hour, if not less.
A. If not less. What I would want is to expect them all to come back within an hour. But in reality what happens if you're really worried about a child, if you've got some indication that you've got a seriously abnormal result or the possibility of so, you would expect to phone the laboratory and make sure to get it back within a quarter of an hour. That's the kind of times I would expect: half an hour at the outside and an hour to be the maximum ever if you're sending it from theatre. Two hours is not acceptable because things change so quickly as we've seen in Adam's case. But it's not untypical of managing small children. Things happen quickly and you need services better than that.[44]

21. In summary, it is submitted that Dr Taylor's evidence had matters in a proper perspective in that:

21.1. there were deficiencies with the blood results service, both out of hours and during main hours – these problems were real and not imagined, and severely hindered the utility of a fundamental part of the service, but that;

21.2. Dr Taylor should nonetheless have requested the blood results, and chased them repeatedly, in case such chasing could have produced results more quickly than experience had taught the clinicians to expect.

[42] Evidence of Dr Steen; 15/10/12; pp14(23)
[43] Evidence of Dr Coulthard; 8/5/12; pp 57(11)
[44] Evidence of Dr Coulthard; 8/5/12; pp57(11-)

22. With regard to Dr Taylor's belief during surgery that the 0932am blood gas analyser result carried with it a risk of inaccuracy:

22.1. Dr Taylor accepted and agreed with the view of Dr Haynes that he should have responded to the reading by ordering blood investigations through the laboratory, despite the problems with 'turnaround' times;

22.2. There was nonetheless identifiable logic in Dr Taylor's reasoning, in that his understanding at the time was that the addition of liquid heparin in 1996 had the concomitant risk of artificially lowering the sodium reading in the result. The Inquiry heard evidence which established that this was a factor which a competent clinician was perfectly entitled to keep in mind:

22.2.1. Dr Campbell's oral evidence to the Inquiry was that she was "cautioned against relying on sodium results" whilst working in the Royal Group of Hospitals[45];

22.2.2. Dr Gaston told the Inquiry that his perception was that the "blood gas analyser was not a reliable place to get sodium from"[46];

22.2.3. Mr Shaw, the MTO, endorsed Dr Taylor's recollection that he and Mr Tommy Ryan (also an MTO) had warned the anaesthetists not to rely on the blood gas analyser for sodium results, and stated this advice followed a circular which was distributed prior to 1995. After 1995 the machines were changed so that liquid heparin was no longer used[47];

22.2.4. The point was further evidenced by the journal article put forward by Dr Taylor in evidence.[48]

22.3. It was thus correct for Dr Taylor to keep in mind that the reading carried a risk of inaccuracy, but the prudent response would nonetheless have been to request further blood investigations (as accepted by Dr Taylor);

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[45] Evidence of Dr Campbell; 17/5/12; pp31(8-10)

[46] Evidence of Dr Gaston; 19/6/12, pp 143: "One theory was the fact -- and this was certainly my perception on the main site -- that the blood gas analysis machine was not a reliable place to get sodium from, apart from the fact that if you used heparin with sodium in it -- which was what was available most of the time -- that would screw the results up. So I can understand why there was some perception that this wasn't an accurate way to do it."

[47] Evidence of Mr Peter Shaw; 17/5/12; pp89(16)-95(9)

[48] 306-037-001

22.4. Prior to the Hearings, the Inquiry took a witness statement from a Mr David Wheeler - the business manager of a company called "Instrumentation Laboratories". Mr Wheeler agreed that liquid heparin had the effect of rendering the sodium result inaccurate, but stated his belief that its effect would have been to artificially raise the sodium level.[49] This view was contradicted by the journal article from 1995 produced by Dr Taylor, which stated the effect of the liquid heparin would have been to artificially lower the sodium result[50]. Dr Haynes' evidence was of limited relevance on this question, because he simply narrated an experiment he had carried out in 2012, comparing point of care samples with samples sent to the laboratory for serum electrolyte assay. Thus his evidence did not engage with the issue of the effect of liquid heparin, because liquid heparin was not used in his 2012 test.[51]

22.5. It is in any event submitted that seeking an academic answer in 2012 to the question of the true effect of the liquid heparin is nothing to the point. It is plain that there existed, in RBHSC in 1996, a body of opinion which was aware of the suggestion that it could artificially lower the result, and Dr Taylor's initial thought process was thus explicable and justifiable.

23. Much oral evidence was heard about the CVP level (evident from the CVP trace[52], which Dr Taylor himself ensured was printed out after the surgery, and added to the medical notes), and the implications of that level. Dr Taylor could feel the CVP catheter in Adam's neck and therefore concluded that as it "was not in continuity with the great veins draining to the heart[53]", its readings could not be relied upon. Dr Haynes agreed that the initial reading of 17, and the subsequent readings of 30, would not have been accurate.[54] Dr Taylor therefore used the results as a baseline (by implication he would have reacted differently if the CVP value had risen by a sharper gradient). Dr Taylor stated during oral evidence that with the benefit of hindsight he would not have proceeded in this fashion. No

[49] WS 180/1 [Mr David Wheeler]; pp3
[50] 306-037-001
[51] Evidence of Dr Haynes; 2/5/12; pp196(23)-202(24).
[52] 058-008-023
[53] WS 008/6 [Dr Taylor]
[54] Evidence of Dr Haynes; 3/5/12; pp122(17)- 124(12)

doubt the factors mentioned elsewhere in these submissions (his awareness of the cold ischaemic time, the unusual nature of the surgery, and a desire to ensure a viable kidney was not lost, out of consideration for the best interests of the patient) will have formed a role in his decision-making process. Dr Haynes' criticism of the decision was again rooted in a criticism of the communication levels in the theatre:

> In my opinion, it should have provoked a discussion with Mr Keane, the surgeon, saying, "I'm having a problem here, what shall we do?" There's already pressure of time and we've got the added pressure -- or Dr Taylor had the added pressure of having difficulty getting a meaningful central venous pressure and the correctly placed central venous line. And at that point, I believe that they were faced with the option of either proceeding with the transplant without a central venous line and no measure of pressure, no means of giving drugs into the central venous compartment, or saying, "This is a problem. We have to resolve it. How are we going to solve it? Bearing in mind it would take probably at least another 30 or 40 minutes to rectify it.[55]

24. During the oral evidence a conflict arose regarding the recollection of Mr Keane. He asserted that, while he could not remember the actual exchanges, his expectation would have been that he would not have started the surgery, or continued it, unless he had received a specific number from Dr Taylor which satisfied him that the CVP was at a level between 3 and 5. He stated that his usual practice was to discuss the importance of the CVP level with the anaesthetist prior to the commencement of surgery. Dr Taylor disputed this recollection in his witness statement [008/8], in which he stated: "*I cannot ever remember a surgeon asking me for a CVP reading on 10-20 occasions. I cannot remember what CVP readings Mr Keane asked for or what numbers I told him. I would not have misled Mr Keane about the CVP. If a surgeon asked for a specific number it would be my usual practice to give it and I cannot accept that I would have deviated from that practice. If asked for a number I would give the number that was displayed on the monitor and offer an explanation, as was the case with Dr O'Connor... I would not have misled him about the reliability of the CVP when I knew that the tip of the CVP line had directed itself up into the neck. It was and is my usual practice*

[55] Evidence of Dr Haynes; 2/5/12, pp188(2-16)

to ensure that the surgeon has a clear view of the anaesthetic monitor which would have been turned towards the surgeon before the start of the surgery. Mr Keane confirms that he could see the monitor when he looked sideways."[56] It is submitted that Dr Taylor's evidence on this point is plainly more reliable than that of Mr Keane, for the following reasons:

24.1. Mr Keane's evidence about requesting and receiving a "specific number" was offered for the first time orally to the Inquiry, when in the witness box. It directly contradicted the written evidence he had offered in his witness statement, where he stated his customary practice for conversations about the CVP would not involve "specifically a number";[57]

24.2. Mr Brown, having heard Mr Keane's evidence on this point, stated he had no recollection of any such discussions;[58]

24.3. Nor did Dr Montague remember any such exchange[59];

24.4. Dr O'Connor gave evidence that she had a conversation with Dr Taylor in theatre, in which the CVP reading of 30 was discussed. Dr O'Connor stated she was informed by Dr Taylor that the readings were not accurate because of the line's position.[60] The evidence of this conversation is incompatible with Mr Keane's recollection of events. Dr O'Connor recorded the figures she had discussed with Dr Taylor in Adam's medical notes.[61]

24.5. Mr Koffman, one of the Inquiry's expert surgeons, did not recognise Mr Keane's description of his normal practice (in other words, he did not recognise such an approach as being typical of normal practice)[62];

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[56] WS 008/8 [Dr Taylor]; pp2-3

[57] WS 006/3 (Mr Keane); pp17, at 33(b): "*My customary practice is to ask if the CVP is up not specifically a number, as the anaesthetist may need time to give a bolus of fluid. I tell the anaesthetist when I anticipate taking the clamps off (10-15 minutes before release).*"

[58] Evidence of Mr Brown; 1/5/12; pp77(21) -79(21)

[59] Evidence of Dr Montague; 11/5/12; pp103(18)-104(3)

[60] Evidence of Dr O'Connor; 25/4/12; pp87-89

[61] 058-035-135

[62] Evidence of Mr Koffman:16/5/12, pp68(16-20);

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I wanted to ask you, in your experience, what, if
any, discussion do you have with the anaesthetist before
you actually commence the knife to skin surgery about
the CVP?
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24.6. Mr Keane's description of events is inherently implausible given the fact he would have been able to see the actual CVP reading on the monitor at any time he wished;

24.7. Unfortunately Mr Keane's recollection proved highly unreliable at a number of points during his oral evidence, specifically:

24.7.1. He offered evidence to the Inquiry, both in his witness statement and on his first day of oral evidence, that he was so upset at the death of Adam Strain that he refused to carry out any further paediatric transplants at RBHSC, and that as a result the surgery on Adam Strain was the last occasion that he carried out such surgery. In response, the Inquiry made further inquiries of the DLS, and it materialised from theatre ledgers that Mr Keane had in fact carried out further paediatric renal transplants at RBHSC. One such transplant (on a 7 year old patient) took place at RBHSC within 6 months of Adam's death;[63]

24.7.2. He suggested to the Inquiry that he recalled checking "little things like the nappy, the catheter"[64]. Adam Strain was not catheterised until the later insertion of a suprapubic catheter;

24.7.3. Having recorded in his witness statement that his involvement with the decision to accept the kidney was "nil"[65], Mr Keane altered his

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A: Virtually none.

See also: Evidence of Mr Koffman; 16/5/12, pp70(23):

A: I was really confused by Mr Keane's evidence because it seemed to be giving -- there were several ... I mean, the evidence seemed to change from the original statement to the evidence he gave in this investigation.
THE CHAIRMAN: There was a lot of evidence he gave orally which was entirely missing from his written statements.
A: Yes. So I don't really know whether this was a retrospective view of what he would normally have said under those circumstances or it was actually what he did say under those circumstances. I don't know, but that's just totally speculation on my part. All I can say is I don't really routinely ask what the CVP is before I start and I wouldn't stop the operation because the CVP was rather high.

[63] 301-127-001; Correspondence from DLS. See also: Evidence of Mr Keane; 24/4/12; pp1-7.
[64] Evidence of Mr Keane; 23/4/12; pp96(17-18)
[65] WS 006/003 [Mr Keane]; pp 23, Q42

recollection in oral evidence and stated he was certain he would have had relevant conversations with both Professor Savage and with the transplant coordinator from UKTS, prior to the kidney's acceptance, because "this was the system";[66]

24.7.4. Mr Keane's original evidence (in written and oral form) about the circumstances of his departure from RBHSC, prior to the conclusion of the surgery, also had to be corrected after further information was received from the DLS. In response to the new information, Mr Keane was again forced to apologise for his faulty memory: "I made incorrect statements to the Inquiry, but I wish to apologise and assure you I have not been attempting to obstruct or impede."[67]

24.7.5. Mr Keane relied upon a description of his normal practice to state that he would have asked for and received a specific CVP number, yet it was clear from the evidence that he did not follow what he categorised as his "normal practice" on a number of occasions on the morning in question. For example, Mr Keane did not speak to Adam's mother, Debra Strain, in advance of the operation, despite stating that it would be his normal practice to do so[68]. He described this deviation from his normal practice as "an inexplicable lapse"[69];

24.7.6. It is submitted that a reliance upon proclaimed "normal practice" is in any event flawed, as Mr Keane had only been appointed to a consultant post in 1994. In short:

24.7.6.1. An insufficient period of time had elapsed for him to develop a "normal practice" in paediatric renal transplants for which he had consultant responsibility;

24.7.6.2. It is more likely that any normal practice – for example with regard to checking the level of the CVP – would have developed in response to, and been influenced by, the formative experience of the challenges which were encountered during Adam Strain's surgery.

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[66] Evidence of Mr Keane; 24/4/12; pp 16
[67] Evidence of Mr Keane; 26/4/12; pp162(13-16)
[68] Evidence of Mr Keane; 22/4/12; pp102-106.
[69] Evidence of Mr Keane; 22/4/06; pp104(18).

Thus Mr Keane may be conflating his actions from before and after the death of Adam Strain.

25. The above submission is not intended as a criticism of Mr Keane. As with Dr Taylor, the impact of these events upon him was clear. It is, however, submitted that such impact, combined with the passage of time, has left his recollection unreliable, and that his presentation and overall demeanour in the witness box during his three days of clinical evidence was not suggestive of a recollection which could be relied upon. If Mr Keane's recollection was demonstrably flawed on the fundamental question of whether a paediatric renal transplant was ever again carried out by him, it plainly cannot be relied upon to recall the detail of CVP readings which were requested and received, some sixteen years after the event.

Governance

26. Dr Taylor was unable to accept that dilutional hyponatraemia featured in Adam's case. It is submitted the suggestion that this stance somehow stymied the response of RBHSC to Adam's death is impossible to intellectually sustain. This conclusion is apparent from the oral evidence heard by the Inquiry, and specifically:

    26.1. The fact that Adam had suffered dilutional hyponatraemia was immediately apparent to all of the clinicians involved (save for Dr Taylor). Dr O'Connor wrote "*? Dilutional*" on the medical records within a matter of hours[70], a view which Professor Savage stated in evidence that he concurred with;

    26.2. Mr Keane offered evidence that as soon as he heard the fluid calculations, he formed the view that Adam would have had "no chance[71]", and that he communicated this view to Professor Savage the next day[72];

[70] 058-035-138
[71] Evidence of Mr Keane; 23/4/12; pp29(20-25)
[72] Evidence of Mr Keane; 23/4/12; pp31(7-20)

26.3. In light of the relevant records (which Dr Taylor himself had kept with rigorous detail[73], and which included the CVP wave form which he printed out after the operation and added to Adam's medical records) the Coroner's expert, Professor Sumner, was able to conclude that Adam had suffered dilutional hyponatraemia;

26.4. So, unsurprisingly, was the Coroner, whose verdict at Inquest was unequivocal.

27. It is submitted that the above chronology demonstrates how no-one was misled. This is not a case where the true treatment delivered was obscured or hidden, as a result of Dr Taylor's detailed (and commendable) records, and as a result of Dr Taylor printing out the CVP trace and ensuring it was added to the records. Rather, the clinicians (save for Dr Taylor) were all aware of the likelihood of dilutional hyponatraemia. The failure to act upon this awareness was not the fault of Dr Taylor.

28. The evidence heard by the Inquiry instead demonstrated a clear chronology, in that:

28.1. Dr Gaston and Dr Murnaghan were aware of Dr Taylor's views. Dr Gaston recalled his meeting with Dr Taylor in the aftermath of Adam's death, at which Dr Taylor was saying, "looking at this anaesthetic I can't see what I was [sic] done wrong."[74] At the consultation meeting held on 14 June 1996 (where the clinicians, save for Mr Keane and Mr Brown, met with Mr Brangham in preparation for the Inquest), Dr Taylor can be seen to still be vigorously opposing the suggestion that his fluid administration had caused dilutional hyponatraemia. This was a view he repeated at the Inquest;

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[73] Evidence of Dr Haynes; 3/5/12; p71(18-24);
"A. Given the detail on this chart, I think it unlikely that anything has been omitted to have been recorded. It's a detailed record of what was given and what happened, so I think it would be safe to put that to one side.
THE CHAIRMAN: Because it's not obviously lacking in --
A. It's not lacking in other areas so it's unlikely to be lacking in this area."

[74] Evidence of Dr Gaston; 19/6/12; pp25(22-23)

28.2. Dr Murnaghan's intention was to await the outcome of the Inquest, and act accordingly[75];

28.3. Dr Murnaghan misunderstood the powers, and likely actions, of the Coroner, in that he felt the "Draft Statement" written by the anaesthetists would be circulated appropriately by the Coroner;[76]

28.4. In light of the evidence heard at the Inquest, and in light of the Coroner's unambiguous findings, it was felt that "the next step[77]" was for a seminar to be convened "asap," at which the true lessons of the case could be learned. Dr Murnaghan's note, made while in attendance at the Inquest, evidences this.[78] Dr Murnaghan described the purpose of the seminar as being "so that we could review all that had happened, particularly regarding Adam's care leading to his death and what had come out at the inquest."[79]

28.5. That the seminar did not happen was not the fault of Dr Taylor;

28.6. Instead, Dr Murnaghan gave evidence that he went on holiday, and upon his return was ill. Upon his return to the office;

> I regret to this day that I forgot totally about this important issue. And there was a pile, as you would know, awaiting me on my desk and that overtook me. It's an explanation, it's not an excuse. And all I can do is say, hands up, I'm sorry.[80]

29. Similar evidence was offered by Dr Gaston:

> THE CHAIRMAN: Sorry, you were expecting it to happen? I think it was to take place, wasn't it?
> A. Yes, it was.
> THE CHAIRMAN: And when it didn't take place, did you suggest or say to Dr Murnaghan, "Look, we do need this"?
> A. I cannot -- I mean I know from Dr Murnaghan's statement and I know that there was an issue because it was very close to holiday time. Pulling things together like this is quite difficult given that a lot of these doctors were working in different places and then it came into holiday time, which made it even more difficult. Then Dr Murnaghan had gone ill, had been off ill. It

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[75] Evidence of Dr Murnaghan; 25/6/12; pp185(15)-186(3)
[76] Evidence of Dr Murnaghan; 25/6/12; pp186(21)-187(16)
[77] Evidence of Dr Murnaghan; 25/6/12; pp211(13)
[78] 059-001-001
[79] Evidence of Dr Murnaghan; 25/6/12; pp206 (10-12)
[80] Evidence of Dr Murnaghan; 25/6/12; pp 209 [1-5]

didn't happen after that. I think it's a -- one of the issues is that so much of your time was taken up with what was going on day by day that eventually it went out of my mind. It shouldn't have done, but it did.[81]

30. Thus the lack of a more satisfactory governance response to the death of Adam Strain was not the fault of Dr Taylor. It is submitted that he was in reality the least well-placed individual to take control of governance matters and ensure that lessons were learned. Dr Taylor was plainly in denial, and plainly struggling to cope with the tragedy that had occurred. This will have been obvious to his fellow clinicians, with Dr Gaston recommending he speak to a separate senior colleague because of "the fact that he was so upset"[82] and Professor Savage describing Dr Taylor as being in "a state of shock"[83] in the aftermath of the surgery. It is submitted the evidence disclosed beyond any doubt that the response of RBHSC was not reliant upon, or impeded by, Dr Taylor's views. It proceeded along a separate track. The seminar should have taken place and that it did not was entirely unconnected to Dr Taylor's actions.

31. Indeed, one can go further and observe that Dr Taylor would have benefitted enormously from the seminar, and was ill-served by the fact that it was forgotten about. This point was made by Professor Savage: "I think this is the difficulty, that Dr Taylor fell into. He was ill-advised both by some of his anaesthetic colleagues and the legal team who were representing him."[84]

32. The evidence further disclosed that Dr Taylor took the steps that were asked of him, at all stages. For example:

    32.1. Dr Taylor went to see Dr Gaston in the aftermath, to discuss the death. Dr Gaston's principal recollection of the meeting was "the fact that he was so upset"[85]. Dr Gaston referred Dr Taylor to a more senior clinician, suggesting

[81] Evidence of Dr Gaston; 19/6/12 (pp117-118)
[82] Evidence of Dr Gaston;18/6/12; pp128(13)
[83] Evidence of Professor Savage; 22/6/12; pp 16(8-9)
[84] Evidence of Professor Savage; 10/9/12; pp125(7-10)
[85] Evidence of Dr Gaston; 18/6/12; pp128(13)

he contact either Dr Lyons or Dr Coppel. Dr Gaston did not speak one-on-one to Dr Taylor about the matter again[86];

32.2. In response to this referral, Dr Taylor did indeed make contact with Dr Coppel[87];

32.3. Dr Taylor responded to all requests from RBHSC, and from RBHSC's solicitor, Mr Brangam, for information;

32.4. It is submitted that Dr Taylor's stance throughout this period was best described by Dr Armour:

> THE CHAIRMAN: I have to ask you, doctor: did it come across to you that Dr Taylor just genuinely didn't believe that this was dilutional hyponatraemia as opposed to him scouring around desperately to find some explanation which might not reflect on his management of the operation?
> A: That was my view. He couldn't come to terms with -- yes, it was dilutional hyponatraemia, yes. I never got the impression that he was trying to cover anything up, that he was trying to sort of like shake me in my opinion or anything that I said to him. I just thought he just could not believe it, is probably the right word.
> ...
> Again, I just don't think he could, yes, believe it, come to terms with it, whatever you want to say. Even though I appreciate what you're asking me, the evidence was overwhelming. The evidence was overwhelming, but he still couldn't believe it.[88]

33. It is submitted that when confronted with a clinician who was not able to come to terms with matters, it is axiomatic that the attitude of that clinician should not be allowed to be a roadblock to the learning of meaningful lessons. Nor was it such a roadblock in Adam's case. This is a statement of common sense. Hospitals or Trusts would be incapable of responding properly to a huge number of clinical incidents, if full insight was needed before action could be taken. Hospitals and Trusts take appropriate measures in response to clinical incidents up and down the land, week in and week out, without a full understanding of the incident being evidenced by the clinicians involved. That this common sense proposition applied

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[86] Evidence of Dr Gaston; 18/6/12; pp129(3-12); 19/6/12; pp137(8-24);
[87] 122-048-001 [response of Dr Coppell, dated 23 February 1996]
[88] Evidence of Dr Alison Armour; 13/6/12; pp113-114

in Northern Ireland in 1996, as much as it does today, was made plain by Dr Mulholland:

> THE CHAIRMAN: But the other doctors involved did accept it. Would you agree that in that situation it is necessary for the dissenting doctor, if I can describe Dr Taylor as that, to either persuade his colleagues that the coroner's got it completely wrong or else accept the verdict and then enable everybody to move forward on the basis of that verdict?
> A. I think that that would be the best possible solution. But it could be that the Trust took a view that this is something that needs to be acted upon -
> THE CHAIRMAN: Okay.
> A. -- and therefore go ahead.[89]

34. It is further submitted that the true consequences of there not being a more structured response to Adam Strain's death were limited. This conclusion is plain once the nature of Dr Taylor's error in fluid administration is properly appreciated. All witnesses (including Dr Haynes) stated in evidence that the potential for dilutional hyponatraemia was clear to them as a result of the volume and type of fluid that was administered. The consistent import of their evidence was that too much low sodium fluid (in this case, "solution 18") was administered, and that it should not have been administered as replacement fluid, during renal transplant surgery, at the rate given. Had the post-Inquest seminar in fact been convened, it was apparent from the evidence that this conclusion would not have come as a surprise to, or altered the received opinion of, any clinician present. Nor would it have altered the view of any consultant paediatric anaesthetist in the UK. It would not have provided any relevant new learning, or in itself created any doubt over the use of solution 18. The relevant learning from the case was of a different type, and in a different sphere, to later concerns about the administration of low sodium fluid at maintenance rates, in other cases.

The Brangam Bagnall Consultation Note

35. All of the relevant clinicians were recalled to provide further evidence about the Brangam Bagnall consultation note of 14 June. It is submitted that its emergence

[89] Evidence of Dr Mulholland; 21/6/12; pp183(16)

emphasised the consistency of Dr Taylor's position. The note, which was solely for Brangam Bagnall's purposes, discloses Dr Taylor advocating, in front of fellow clinicians:

35.1. That Adam's bladder was like a colander, which needed to be filled up;

35.2. That dilutional hyponatraemia had not occurred;

35.3. That Adam's bladder had been opened early in the procedure (if this part of the note is Dr Taylor speaking, which is unclear). If this was said, it was said in spite of the knowledge that such simple detail could be checked with the surgeon, and despite that fact that it makes little sense and would be highly unusual. It was apparently also said by Dr Taylor at the Inquest, despite the fact that Professor Savage was present, and despite the fact that the Coroner would be able to check such detail with the surgeon;

35.4. Such assertions are supportive of Dr Taylor not being in a rational frame of mind. They are certainly far more supportive of this conclusion, than they are of there being any attempt to mislead (such attempts would plainly have to be less outrageous in order to carry any sensible prospect of success).

36. It is further submitted that neither the evidence, nor the note itself, support the conclusion that Dr Taylor made the much scrutinised comments about the "needle in the kidney", or the "performance of the kidney" not being "relevant" at that stage. This is because:

36.1. The author, Ms Neill, meticulously detailed the occasions when Dr Taylor was speaking – this is her style throughout the note "[Dr Taylor said"], and care is taken to distinguish the alternative scenario, when it is instead written "the Doctors said", or "the Doctors pointed out". The "Dr Taylor said" formulation does not appear anywhere near the comment about the needle, and the authorial formulations which precede the alleged comment are "the doctors considered" and "the doctors pointed out".[90] The written style of the note is therefore not supportive of it being Dr Taylor who made the remark (if it was made);

[90] 122-001-005

36.2. The mere fact that Dr Taylor had been present at the surgery would not represent a sound basis for concluding the remark had been made by him. Such reasoning would only be of potential merit if the meeting constituted a factual debrief in the immediate aftermath of the event. The reality of the meeting under scrutiny is entirely different – it being a meeting held many months after the event, and populated by people who had had numerous conversations about events with all of the key players (including the surgeons). Any of the clinicians present could have made the remark, as indeed could Mr Brangam;

36.3. Other matters said by Dr Taylor at the meeting find echoes in his other statements (because Dr Taylor was consistent in his position of rejecting dilutional hyponatraemia). For example, the colander remark is said by Dr Taylor elsewhere. The "needle in the artery" remark, however, was never said by Dr Taylor in any other form or forum;

36.4. Had the performance of the kidney no longer been relevant at the conclusion of surgery, Dr Taylor would have been the individual most interested in this fact being ventilated and explored (because it provided an alternative explanation to that of dilutional hyponatraemia). Instead, the meeting note suggests the matter was put to one side;

36.5. It is submitted that a more likely explanation is that there has been confusion in the transcription of the note, for example in the manner suggested by Professor Savage[91]. That this is the more likely scenario is supported by:

36.5.1. The fact that the clinical witnesses – for example Dr O'Connor, and Professor Savage - all pointed to errors in transcription in the note. That is not to criticise Ms Neill – she is not a medic and it would be extraordinary if such a note were to be taken without errors being made in transcription;

36.5.2. Had the remark been made, it is surely likely that Professor Savage would have rejected the suggestion, or queried it;

36.5.3. The fact that during evidence Professor Savage was adamant there is a fundamental error in the Note. In a sentence attributed to Professor

[91] Evidence of Professor Savage; 10/9/12; pp62(4-23)

Savage, he is recorded to have stated, "*there was correct logic in how the fluid calculations were done*"[92]. Thus, unless Professor Savage's evidence is rejected and he is found to have been arguing at the meeting that correct logic was used in the fluid calculations, it follows that there must be a significant error in the note. In light of that reality, it would require fundamentally contradictory findings to conclude that the note was inaccurate and unreliable as far as Professor Savage's remark is concerned, and yet remains accurate and reliable as far as the "needle in the kidney" remark is concerned.

37. In conclusion it is submitted that Dr Taylor offered no meaningful obstruction to RBHSC's response to the death of Adam Strain. The significant issue was the failure to convene a seminar after the conclusion of the Inquest – which failure Dr Taylor had nothing to do with. Further, the nature of his miscalculation was apparent to all in the immediate aftermath of the surgery (thanks to Dr Taylor's widely commended record keeping), and the Coroner himself was able to make a finding of dilutional hyponatraemia. Dr Taylor would himself have been the prime beneficiary of a more adequate governance response, had there been one.

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18/10/12

[92] 122-001-004 [Consultation Note, 14 June 1996]