Witness Statement Ref. No. 049/2

NAME OF CHILD: RAYCHEL FERGUSON

Name: Ann Noble

Title: Ms.

Present position and institution:
S/N BAND 5 Altnagelvin Area Hospital

Previous position and institution: E Grade Staff Nurse, Altnagelvin Hospital
[As at the time of the child's death]

Membership of Advisory Panels and Committees:
[Identify by date and title all of those since your Witness Statement dated 30th June 2005]

Previous Statements, Depositions and Reports:
[Identify by date and title all those made in relation to the child's death since your Witness Statement dated 30th June 2005]

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

Ref:	Date:	
049/1	30.06.2005	Inquiry Witness Statement

IMPORTANT INSTRUCTIONS FOR ANSWERING:

Please attach additional sheets if more space is required. 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 an Inquiry reference number, then please provide a copy of the document attached

I. QUERIES ARISING OUT OF YOUR INITIAL STATEMENT TO THE INQUIRY (WS-049/1)

(1) Please provide the following information:

(a) Describe your career history before you were appointed to Altnagelvin Hospital.

Whilst attending Grammar School I held a part time position in the catering industry as a waitress between the ages of 15 and 17 and a half, I then went on to complete my Nurse Training at Altnagelvin Hospital L/Derry from April '82 to April '85, and qualified as a Registered Nurse.

Following my registration I then worked as a Temporary Staff Nurse within Altnagelvin in an orthopaedic Ward for six months from June to November '85.

Following the Birth of my Twins and then my fourth Child, I was employed as a temporary Staff Nurse at the Waterside Hospital's Infectious Fever Unit for Children from February to the end of March 1989.

I returned to Stradreigh Hospital (Mentally & Physically Handicapped Adults and Children) temporarily for a period of two weeks in April 1989.
In June 1989 I obtained a permanent position as a Staff Nurse in the Waterside Hospital's Infectious Fever Unit for Children. The Infectious Fever Unit subsequently closed and amalgamated within Altnagelvin Hospital and I was transferred to their Paediatric Ward in May 1990.

(b) State the date on which you were appointed to Altnagelvin, and the grade at which you were employed?
May 1990 as a Grade 'D' Staff Nurse

(c) When were you appointed as an E grade Staff Nurse?
October 1999

(d) Describe your work commitments to the Altnagelvin Hospital from the date of your appointment to the 7th June 2001, stating the locations in which you worked and the periods of time in each department/location.
I remained in the paediatric Ward Nursing children up to and including the age of thirteen, and had a six-month rotation to the infant unit nursing infants up to six months of age.

(e) By June 2001 quantify the experience you had gained of nursing for children who had undergone surgery?
On any given day, there could have been between two and four Surgical Patients in our forty-two bedded unit.

(f) By June 2001 quantify the experience you had gained of working with patients on a paediatric ward?
The majority of in-patients that I encountered were children with Paediatric conditions.

(2) At the time of your appointment to Altnagelvin Hospital as a Staff Nurse were you provided with training or induction and if so,

(a) Describe the training or induction which you received.
I was given an informal introduction to the ward at that time by Senior Staff nurses, Sister and the Ward Manager

(b) State the date or the approximate date when you received any training or induction.
Training was an ongoing and informal process.

(c) Identify the person(s) who delivered this training or induction.
Senior Staff nurses and ward sisters Little and Millar.

(d) Indicate if you received any documentation at this training or induction.
I did not receive any documentation.

(3) You have identified in your witness statement the training which you received between October 1992 and May 2004 (WS-049/1 Page 1).

Provide full details of any advice, training or instruction which was provided to you at Altnagelvin Hospital in order to inform you about any of the following issues:

- Hyponatraemia
a) I had received no specific training or instruction in relation to Hyponatraemia prior to 2001.
In 2002, Senior anaesthetic Consultant, Doctor G Nesbitt and Patrick Stewart (senior Paediatric Anaesthetist) as representatives of Altnagelvin Trust, provided training on IV fluid management following the Trust's introduction of the Hyponatraemia guidelines from DHSSPSNI issued in 2002.and posters were put up on Ward 6 highlighting the dangers and explaining the procedures to follow in the prevention and management of Hyponatraemia.
In-house training days that I attended on paediatric Resuscitation also incorporated training regarding fluid and Electrolyte management
Hyponatraemia guidelines from DHSSPSNI issued in 2002.

- Post Operative Fluid Management
Pre 2001 - The training at that time ensured that children received intravenous fluids until they were able to drink and pass urine
Post 2001 – It was ensured that children did not receive Solution 18. Rather an isotonic solution was commenced after the child's weight and electrolytes had been checked before hand.
This policy has been updated regularly – the most recent update was in February 2012. Hartmann's Solution and 3% Dextrose was decided as the appropriate solution of choice.

Children now have pre or intraoperative Electrolyte Profiles carried out.
The Anaesthetist is responsible for children's intravenous fluid management for the first twelve hours post operatively. + EP checked then also.

- Record keeping regarding fluid management
  Prior to 2001 - Children had a daily intake and output chart plus an intravenous fluid sheet if receiving parenteral fluids. The nurse's responsibility was to ensure that this was completed during their shift.

  Post 2001 - Sister McKenna arranged a talk from a Barrister regarding the importance of accurate record keeping in medico-legal cases.
  At Nursing Handovers, Sister and Senior Nurses highlighted the importance regarding strict fluid intake and output and accurate recording of same.
  The Fluid balance sheet has changed radically. This is now an A5 double-sided sheet, incorporating, daily intravenous fluid prescription, oral intake, capillary blood glucose records, urinary output, fluid losses (vomitus, aspirations, defecations, drainage,) Daily electrolyte result record, weight, and calculation of fluid requirement according to weight Signs were made for all Rooms to inform parents and children that they should inform us about their child's eating, drinking and any fluid loss.

And address the following -

(a) Who provided this advice, training or instruction to you?
Dr Geoff Nesbitt, Dr P Stewart. Sister McKenna, and Ursula McCollum the Resuscitation Training Officer for the Trust

(b) When was it provided? It was provided March 2002.

(c) What form did it take? Formal study days

(d)

Post Operative Fluid Management talk by Dr G Nesbitt. When the Hyponatraemia guidelines from DHSSPSNI issued in 2002.
Posters on Ward.
Paediatric Resuscitation Days - Presentation, Scenarios, Group Discussion.

(e) What information were you given? Handouts and verbal instruction on IV Fluid Management, highlighting the Risks, dangers and signs to look for.

(f) In particular what information were you given in relation to the allocation of responsibility for prescribing intravenous fluids for post-operative children?
Anesthetist will prescribe fluids for the first twelve hours post operatively

(4) *"[Staff Nurse Daphne Patterson] informed me that Mr. Makar Surgical SHO had prescribed Intravenous Hartman's Solution for Raychel. As this was not in keeping with common practice on the ward I informed Mr. Makar who then changed the prescription to Solution 18 (see page 020-021-040)."* (WS-049/1 Page 2)

(a) Provide full details of what you mean by the phrase, "common practice on the ward," with regard to the prescription of intravenous fluids?
When I arrived on Ward 10 (Paediatrics) May 1990, Solution 18 was prescribed for pre and post surgical and medical patients and it was the practice of both medical and surgical doctors to prescribe solution 18 and was commonly used as the first solution of choice

(b) How were you made aware of this *"common practice"*?
I was made aware by Senior Staff Nurses and Ward Sisters. Surgical doctors usually prescribed this fluid.

(c) Were you ever given an explanation so that you understood why the use of Solution 18 was to be regarded as the *"common practice"* on the ward?
I was told Solution 18 was appropriate as this fluid contained glucose and prevented fasting children from going hypoglycemic.

(d) So far as you are aware, was Mr. Makar unaware of this *"common practice"*?
I did not ask him if he was aware, therefore this is outside my knowledge

(e) What did you say to Mr. Makar in order for him to change the prescription to Solution 18?
I do not recall the exact conversation but I told Mr Makar that Solution 18 was the usual fluid children received and would he change the prescription, and he did.

(f) What did Mr. Makar say to you when you informed him of this *"common practice"*?
He changed it without any discussion.

(g) Did Mr. Makar give any explanation in support of his intial decision to use Hartmann's Solution?
No - not as far as I can recall.

(5) *"The fluids were in progress until Raychel was going to theatre, then discontinued and recommenced when she returned to Ward 6. (See page 020-020-039)"* (WS-049/1 Page 2)

(a) Insofar as you are aware, identify the person who decided that Raychel should be recommenced on Solution 18 upon returning to the ward from theatre?
I do not recall the person who decided that Solution 18 was to be recommenced on return to the ward. It was noted on the recovery area care chart (Ref. 02-014-022) and this would have been our usual practice.

(b) Did you receive an instruction to recommence Raychel on Solution 18 upon her return from theatre? No

If so,

(i) Who gave you that instruction?

(ii) Was that instruction given verbally or in writing?

(iii) Was a prescription written in respect of Raychel's post-operative fluid management?

(iv) If a prescription wasn't written in respect of post-operative fluid management, please comment on whether this was unusual or whether this was standard practice?

(v) If you did not receive a verbal or written instruction in relation to the type of fluid to give Raychel, on what basis did you give her the fluid which you gave her when she returned from theatre?

(vi) Who erected/connected the intravenous fluids for Raychel upon her return to the ward?

(vii) Did you give consideration at any time to whether it was appropriate to infuse Solution 18 at a rate of 80ml/hr to a child of Raychel's weight, post operatively?

(6) *"At the nursing handover in the morning I informed the staff on duty that Raychel had not micturated, had received rectal "flagyl" 500 mgs and "voltarol" 25mgs for pain at 07:00 hours and appeared comfortable on reporting. (See pages 020-017-033 and 020-017-036)."* (WS-049/1 Page 2)

(a) At what time (approximately) did you deliver the handover in relation to Raychel?
Sometime after 07.50 hours.

(b) Who was present at the handover?
I am unsure of the names and cannot recall.

(c) Had the surgical ward round taken place by the time you delivered the handover?
Surgical handover had not taken place as far as I was aware – if anyone did see any of the children, then nurses who remained on duty during handover would relay any changes.

(d) Were you aware if Raychel had vomited by the time you delivered the handover? If she had vomited, was this information disclosed at the handover?
I was not aware.

(e) At what time did you go off duty?
I am unsure of the exact time.

(7) *"I returned to night duty on Friday 8th June, and took charge of the main ward for the duration of my shift. As I was in charge I did not fill in any observations on Raychel. At handover, Staff Nurse Michaela McAuley reported that Raychel had micturated but had vomited a few times during the day, and later requiring Parenteral "Zofran" at around 17:30 hours, parenteral Solution 18 was infusing at 80mls/hr and her parents were present."* (WS-049/1 Page 2)

(a) What time did night duty commence?
Night duty started at 19.50 hours approx.

(b) What impression did you form of Raychel's condition on the basis of the information suplied to you at the handover?
My impression was that Raychel had post operative nausea and vomiting and that this was not in any way unusal. -

(c) When you took charge of the main ward did you allocate a nurse to the care of Raychel? If so, identify that nurse?
The 3 night nurses worked as a team - no speciific nurse was allocated to Raychel's care. I was distibuting medications to all the patients and the other nurses performed the hands-on care and carried out the observations

(d) If you did allocate a specific nurse to Raychel's care, what factors did you take into account when making that allocation decision?
N/A - see response at 7 (c) above

(e) What steps, if any, did you take in relation to the care of Raychel when you received the report on her condition from Staff Nurse Michaela McAuley?
I did not take any initial steps regarding Raychel as my colleagues were in the process of carrying out the observations and hands on care to all the patients including Raychel and if they had any specific concerns regarding her they would report these to me . My initial encounter with Rachel was when I administered her medications

(f) What steps, if any, did you direct the allocated nurse to take in relation to the care of Raychel when you received the report on her condition from Staff Nurse Michaela McAuley?
N/A- see response at 7(d) above

(g) What arrangements did you have in place on the evening of the 8 June 2001 to ensure that there was effective communication between staff with regard to changes in Raychel's condition?
The arrangements were that the nurses would work as a team on night duty and update each other of any eventful episodes requiring any intervention.

(h) Whilst you did not fill in any observations on Raychel, what observations did the care plan indicate should be carried out?
Observations should have been four hourly Temperature , Pulse, Respirations,blood pressure. Pain assessment, wound check intravenous fluid volume infused and cannula site

(i) Were the observations indicated on the care plan actually carried out?
No blood pressure was carried out.

(j) What consideration, if any, was given to changing the nature or regularity of the observations for Raychel, in light of her condition?
It was not an unusual occurrence (Ref. 020-015-029) for children to display these signs and symptoms post-operatively (?) so I did not increase frequency of observations.

(8) *"Between 21:00 hours and 21:15 hours Staff Nurse Gilchrist reported that Raychel was still nauseated and had vomited coffee ground material, she informed the Surgical JHO so that an antiemetic could be prescribed and administered. I reached Raychel's bed with the medicine trolley at 21:25 hours informed her father that Raychel was due to receive rectal "flagyl." He informed me that Raychel had a headache and – although she was asleep – was not settled."* (WS-049/1 Page 2-3)

(a) Apart from receiving the information that Raychel was still nauseous and had vomited coffee ground material, did you and Staff Nurse Gilchrist discuss Raychel's condition?

If so,

(i) What did you discuss?
Discussed that Raychel needed to be examined by a Doctor and by that time the Nurse had already called the Surgical JHO. I personally felt that Raychel had a Mallory Weiss Tear and that could have accounted for the coffee ground vomit.

(ii) What conclusions were reached?
That the Zofran had not worked from 17.30 hours and another anti-emetic might be more beneficial.

(iii) Was any decision made to take any particular action on foot of your discussion and if so what action was taken?
No decision was reached. We knew Raychel should be seen by the Surgical Doctor (JHO).

(iv) What consideration, if any, was given to requesting a more senior member of the surgical team than a JHO to examine Raychel and to review her condition?
I felt that if the JHO had further concerns about Rachel then he would have in turn consulted a senior colleague.

(v) What consideration, if any, was given to identifying the cause of Raychel's ongoing vomiting?
From my previous experience I assumed the cause was post operative nausea and vomiting with coffee ground vomit secondary to a mallory weiss tear. which are tears in the mucosal layer at the junction of the oesphagus and stomach where the presentation is one of haematemesis after a bout of wretching and vomiting

(vi) Did you give any consideration to whether the conditions existed which placed Raychel at risk of suffering an electrolyte imbalance?
No. Not at this time as Raychel was receiving intravenous fluids replacing her fluid losses from vomiting and I did not suspect that an electrolyte imbalance was contributing to her symptoms as these could have been due to reaction to the anaesthetic medication or post operative nausea and vomiting that some children had experienced in the past

(vii)

(viii) If you did give consideration to the risk of an electrolyte imbalance in Raychel's case, what conclusions did you reach? – refer to answer 8 (vi)

(ix) What consideration, if any, was given to asking a member of the surgical team to take blood in order run electrolyte tests for Raychel?
refer to 8(vi)

(b) How would you describe Raychel's condition when you saw her at 21:25, and state,

(i) What view did you form of the seriousness of her condition?
I found Raychel coherent and she answered my questions appropriately. I knew she was tired and in view of her vomiting probably needed to sleep.and I did not suspect that she was acutely ill.

(ii) What factors did you take into account when forming that view?
This was the end of a 1st day Post-op. and vomiting was not unusual.

(c) Did you advise Staff Nurse Gilchrist that Raychel was now suffering from headache?
Personally I did not, but note that S/N Gilchrist had documented that Raychel had a headache. (Ref. 020-015-029).

(d) Did you speak to the surgical junior house officer when he attended with Raychel?

I do not recall speaking with him at that time.

If so,

(i) What did you discuss? N/A.

(ii) What conclusions were reached? N/A.

(iii) Was any decision made to take any particular action on foot of your discussion, and if so what action was taken? N/A.

(iv) Did you make any request or suggestion to the surgical junior house officer with regard to Raychel's care? N/a

(v) Insofar as you are aware, was the surgical junior house officer asked to do anything apart from prescribe/administer an anti-emetic? If so, what else was he asked to do?
I was not aware of any further requests.

(e) Even if you did not speak to the surgical junior house officer, please explain the following:

(i) What was your understanding of Raychel's condition after the surgical junior house officer had seen Raychel?
That Raychel would hopefully settle having had her intravenous Cyclizine and rectal paracetamol

(ii) Was there any plan to monitor Raychel after she had been seen by the surgical junior house officer, and if so, what was that plan?
Plan was to continue to observe her.

(iii) What was the treatment plan for Raychel after she had been seen by the surgical junior house officer?
To monitor the effects of medication which had been administered and report any change in condition.

(iv) What notes or records, if any, were made in relation to the attendance of the surgical junior house officer and the steps taken by him?
No notes were made and I only realized this retrospectively.

(9) Was paediatric medical advice and assistance available upon request to the nursing staff caring for surgical patients on Ward 6?

If a request was made to paediatric medical staff by nurses,t he medical staff would have requested that the nurses tto liaise directly with them regarding the concers contact the surgical doctors

If so, please address the following:

(i) How was a nurse expected to make a request?
I would have initally expressed my concerns to a surgical Doctor and advise him ,to seek a Paediatric opinion.

(ii) To whom was a request to be directed?
referrals should have been directed from senior registrar to senior registrar

(iii) On what matters could paediatric medical advice or assistance be requested by a nurse?
From personal experience I would have asked paediatric medical advise regarding. Eg. Deteriorating respiratory condition., evolving skin rashes, doages and frequency of prescribed medication

(iv) How were you informed of the arrangement by which you could make a request for paediatric medical advice or assistance?
This was usual practice as paediatric medical staff were more readily available, and,more often than not usually present on the ward.

(v) During the night of the 8th June 2001 when Raychel was continuing to vomit, was a member of the paediatric medical team on duty at or near Ward 6?
Yes.

(vi) On the night of the 8th June 2001 would it have been possible to contact a member of the paediatric medical team to examine Raychel?
Yes.

(vii) On the night of the 8th June 2001, what consideration, if any, was given by you or others to asking a member of the paediatric medical team to examine Raychel?
Post operative nausea and vomiting was the responsibility of the surgical staff.

(viii) If no consideration was given to making a request for paediatric input in Raychel's case prior to Dr. Johnston's involvement at 3.00am on the 9 June 2001, please explain the reasons for this?
refer to 9(vii)

(10) *"At 22:15 hours Staff Nurse Sandra Gilchrist informed me that Raychel had received "Cyclizine" for nausea: then at approximately 23:30 hours her parents informed us they were going home and asked that we telephone them if there were any problems."* (WS-049/1 Page 3)

(a) Were you informed of Raychel's further vomiting recorded on the fluid balance chart (020-018-037) at

- 22:00 "vomited small amount x 3," and
- 23:00 "small coffee ground vomit"?
  I was informed on both occasions : Yes.

(b) If you were informed of this further vomiting please address the following:

(i) Who informed you about this further vomiting?
I cannot recall – either S/N Gilchrist or S/N Bryce.

(ii) When were you informed?
I cannot recall the specific time

(iii) Did you discuss the implications of this further vomiting?
No. As I felt Raychel would eventually settle.

(iv) If so, what was the nature of this discussion and what conclusions were reached?
n/a

(v) Was any decision made to take any particular action on foot of this further vomiting, and if so what action was taken?
Not at this time.

(vi) What, if any, consideration was given to informing the surgical team about this ongoing vomiting?
I cannot recall.

(vii) If the surgical team was not informed about this further vomiting, please explain why they weren't informed?
As this would not have been unusal and that Raychel was receiving IV fluids.

(11) *"At 00:35 Staff Nurse Bryce noted that Raychel was becoming restless and as I was going on my break with Nursing Auxiliary (N/A) Lynch, Nurses Gilchrist and Bryce were going to attend her. On returning from my break, Staff Nurse Gilchrist gave me a report on the patients, she informed me that Raychel had "vomited a mouthful" had her pyjamas changed but went back to sleep: she had no other concerns about her."* (WS-049/1 Page 3)

(a) Was this further episode of vomiting being documented in any note or record? If so, please refer to the note or record?
No as it was an insignificant and unmeasurable amount.

(b) Did you discuss the implications of Raychel's restlessness and this further episode of vomiting?
No, Raychel appeared more settled at this time.

If so,

(i) What was the nature of this discussion and what conclusions were reached?
n/a see answer at (b) above

(ii) Was any decision made to take any particular action on foot of her restlessness and this further episode vomiting, and if so what action was taken?
n/a

(iii) What, if any, consideration was given to informing the surgical team about Raychel's restlessness and this further episode of vomiting?
n/a

(iv) If the surgical team was not informed about her restlessness and this further vomiting, please explain why they weren't informed?
As Raychel appeared to settle.

(12) *"In my fourteen years experience as a Staff Nurse, I had not knowingly encountered hyponatraemia as a post-operative complication, though vomiting postoperatively is not uncommon. I was aware that Raychel had been sick earlier in the day and I felt that her losses were being compensated by her intravenous fluid therapy.*

I was aware of the difference between 'Hartman's Solution' and 'Solution 18'." (WS-049/1 Page 4)

(a) In June 2001 were you aware of the factors that could cause an electrolyte imbalance in a Paediatric patient following surgery?
No.

(b) If so, please identify the factors that you were aware of that could cause an electrolyte imbalance in a Paediatric patient following surgery?
n/a

(c) Were any of those factors present in Raychel's case? If so, what were they?
n/a

(d) Has your understanding of this issue changed in any way since 2001?
Yes.

(e) At that time (2001) what was your practice in terms of managing and caring for children suffering from postoperative vomiting?

Usually fluid replacement, anti-emetics and doctors would have been requested to review patients.They would have been informed of any detrioration.

(f) Was that practice applied to Raychel?
Yes.

(g) Has that practice changed in any way since 2001?
Yes. Accurate fluid Balance is measured where possible. Regular electrolyte profiles are taken initially 12 hourly post-op, then 24 hourly or sooner if indicated.

(h) What was your understanding of the differences between 'Hartman's Solution' and 'Solution 18'?
That Solution 18 contained dextrose and Hartman's did not.

(i) What was your understanding (in 2001) of the appropriate fluid to use in order to replace gastric losses?
Solution 18.

(j) Has your understanding of the appropriate fluid to use in order to replace gastric losses changed since 2001?
Yes, as per DPHSSPSNI guidelines post 2002. Now Normal saline (0.9%) is used to replace gastric losses

(13) *"At approximately 03:30 hours on 09/06/2001 I tried to phone the parents but was unable to get a response initially, but following a few attempts I spoke to Mr. Ferguson to inform him that Raychel had fitted and asked him if there was any family history of seizures, to which he replied 'No'. He then asked me if he should rouse his wife, whereupon I left the decision to him. Mr. Ferguson came to the hospital alone."* (WS-049/1 Page 5)

(a) Did you convey to Mr. Ferguson that Raychel was now seriously ill?
I told him Raychel had fitted but I did not state she was seriously ill as I was unaware of the Sodium Level at that time.

(b) If so, what language did you use to convey this message?
n/a

(c) In that Raychel was now seriously ill, did you give any consderation to encouraging Mr. Ferguson to arrange for Mrs. Ferguson attend the Hospital with him?
No, as I was unaware of the seriousness of her condition.

II. QUERIES ARISING OUT OF YOUR DEPOSITION TO THE INQUEST **(Ref: 012-043-211)**

(14) At the Inquest into Raychel's death your deposition recorded the following:

"I have been a nurse for 14 years – I had never heard of hyponatraemia. When Raychel vomited coffee grounds we were not alarmed at that or the amount." (Ref: 012-043-211)

(a) Please confirm whether your evidence has been accurately recorded?
No.

(b) If it has not been accurately recorded please state the respects in which it hasn't been accurately recorded.
This has been misquoted as what I actually said was "I had not knowingly encountered Hyponatraemia as a post operative complication (W/S 049/1 Page 4).

III. QUERIES ON THE ISSUE OF FLUID MANAGEMENT

Please provide clarification and/or further information in respect of the following:

(15) Explain fully any action that you took in relation to the following aspects of Raychel's fluid management:

(a) Checking the appropriateness of the fluid that she was receiving;

I felt it was the doctor's responsibility to prescribe the fluid type, volume and rate

(16)

(a) .Checking the appropriateness of the rate of infusion;
refer to 15(a)

(b) Monitoring her oral intake;
As I was on night duty, Raychel had not been drinking and either had nil taken overnight or she'd be sleeping.

(c) Addressing the replacement of her gastric losses;
I was of the opinion that the intravenous fluid volume she was receiving would replace her fluid losses.

(d) Monitoring her urine output;
It was not uncommon that a patient would not pass urine while sleeping.

(e) Monitoring her vomiting.
My colleagues recorded her fluid losses that night.

(17) In 2001, what did you regard as the appropriate nursing approach to a child who was still experiencing episodes of vomiting more than 12 hours after surgery, and who was in receipt of hypotonic intravenous fluids? Please set out all the steps that a nurse should have taken in those circumstances.
In 2001 I was not aware of the term Hypotonic – therefore I was unaware of the dangers of frequent vomits.

(18) In 2001, what did you understand were the possible dangers for a child who was experiencing prolonged vomiting after surgery and who was in receipt of hypotonic intravenous fluids?
I was aware of dehydration, aspiration, paralytic ileus and peritonitis

(19) In June 2001 who in Altnagelvin Hospital was responsible for organizing the structure and allocation of responsibilities for post-operative fluid management for paediatric cases?
The Surgical Team.

(20) Prior to 9th June 2001:

(a) State your knowledge and awareness of the cases of Lucy Crawford, Claire Roberts, or Adam Strain, and the issues arising from those cases.
I was not aware of any of above cases prior to 2001.

(b) State the source(s) of your knowledge and awareness and when you acquired it.
refer to 20(a)

(c) Describe how that knowledge and awareness affected your care and treatment of Raychel.
refer to 20(a)

(21) Since 9th June 2001:

(a) State your knowledge and awareness of the cases of Lucy Crawford, Claire Roberts or Adam Strain, and the issues arising from these cases.
I am aware that there were three other children who succumbed to Hyponatraemia but I was unsure of the full details of the cases.

(b) State the source(s) of your knowledge and awareness and when you acquired it.
Dr Nesbitt, the Media, internal Hospital communication.

(c) Describe how that knowledge and awareness has affected your work.
I follow the policy and protocols as per Trust and DHSSPSNI guidelines.

(22) Prior to Raychel's death were you aware of the literature which highlighted the dangers posed by the administration of hypotonic fluids to children during the immediate post operative period? eg. Arieff AI, Ayus JC. British Medical Journal 1992: 304; 1218-1222. Hyponatraemia and death or permanent brain damage in healthy children, or Halberthal M, Halperin ML, Bohn D. British Medical Journal 2001: 322; 780-782. Lesson of the week: acute hyponatraemia in children admitted to hospital: retrospective analysis of factors contributing to its development and resolution.
No, I was not aware.

(23) Describe in detail the education and training you have received in fluid management (in particular hyponatraemia) and record keeping, to include any particular training relating to fluid management in children, and provide dates and names of the relevant institutions/bodies, by reference to the following:

(a) Undergraduate level..

(b) Postgraduate level.
-

(c) Hospital induction programmes.
-

(d) Continuous professional development.
Since 2002 - Paediatric Resuscitation Training Days now incorporate fluid and electrolyte management (Resusitation Training Team at Altnagelvin)
Since 2006 -Paediatric Immediate Life Support is now mandatory on a yearly basis..
IV Fluid Management training 4/11/2008

(24) Prior to 9th June 2001, describe in detail your experience of dealing with children with hyponatraemia, including the:

(a) Estimated total number of such cases, together with the dates and where they took place.
I had not encountered or was made aware of any children that had suffered Hyponatraemia post operatively.

(b) Nature of your involvement.
refer to 24(a)

(c) Outcome for the children.
refer to 24 (a)

(25) Since 9th June 2001, describe in detail your experience of dealing with children with hyponatraemia, including the:

(a) Estimated total number of such cases, together with the dates and where they took place.
Yes I have encountered children with hyponatraemia on Ward 6 Paediatrics but am unable to quantify the numbers

(b) Nature of your involvement.
Applying topical anaesthetic cream to facilitate ease of phlebotomy taking an electrolyte profile, Checking the laboratory system for the electrolyte profile result, Informing the medical / surgical staff that the results are available, carrying out Central Nervous System Observations, checking the fluid requirement in accordance with the patient's weight, erecting prescribed fluids in accordance with DPHSSPSNI guidelines post 2002 ,recording of fluid intake and output

(c) Outcome for the children.
No adverse outcomes were noted and sodium levels normalised

IV. GENERAL

Please address the following:

(26) The Inquiry has been provided with observation sheets in respect of Raychel for the 7th June (Ref: 020-016-031) and the 9th June 2001 (Ref: 020-016-032)? Do you know whether an observation sheet was completed for the 8th June 2001?

If an observation sheet was completed for the 8th June 2001, please address the following matters:

(a) Do you know what has become of that document?
It is present. (Ref. 020-015-028)

(b) Did you make any entries in that document?
I don't believe I did.

(c) If you did make entries in that document are you able to provide any indication of the content of those entries?
n/a

(27) In terms of the episodic care plan for Raychel (Ref: 020-027-056 to Ref: 020-027-065), please address the following:

(a) Was the care plan available at the bedside, and if not, how was it accessed?
No. It was accessed on computer at that time on a system entitled 'DM Nurse .'

(b) During the period when you were on duty what arrangements were in place for evaluating the care provided under the care plan and state,

(i) How was this task performed?
A registered Nurse evaluated the care plan on the DM Nurse System.

(ii) Who was responsible for evaluating the care provided under the care plan?
The Staff Nurses allocated to Raychel's Area in the Ward during the day and any one of the three staff nurses on duty at night would have evaluated the care given

(iii) At what time, or in relation to what events, was evaluation to be carried out? The evaluations were to be carried out following the 2am observations

(c) During the period when you were on duty what arrangements were in place for updating the care plan and state,

(i) How was this task performed?
Due to the acuteness of Raychel's deterioration there was no time to update a care plan.

(ii) Who was responsible for updating the care plan?
n/a

(iii) At what time, or in relation to what events, was updating the care plan to be carried out?
As soon after event as possible.

(d) The care plan records *"observe/record urinary output"* (Ref: 020-027-063). How were nurses expected to comply with this aspect of the care plan and state:

(i) In what document should urinary output have been recorded?
Fluid Balance Sheet (Ref. 020-018-037)

(ii) What was the purpose of recording urinary output?
To ensure no post operative urinary retention.

(iii) For how long should urinary output have been recorded?
For the duration of Raychell's hospital stay

(iv) Was this aspect of the care plan fully complied with?
As far as I was aware, it was.

(v) If not, in what respect was it not complied with and why was it not complied with?
n/a

(e) The care plan records, *"encourage oral fluids, record"* (Ref: 020-027-059). How were nurses expected to comply with this aspect of the care plan and state:

(i) In what document should intake of oral fluids have been recorded?
Feed Chart or IV Fluid Balance Chart.
Ref. 020-018-037
Ref. 020-015-027

(ii) What was the purpose of recording intake of oral fluids?
So that intravenous fluids could be reduced or withdrawn.

(iii) For how long should intake of oral fluids have been recorded?
During the entire stay in hospital.

(iv) Was this aspect of the care plan fully complied with?
As far as I was aware.

(v) If not, in what was respect was it not complied with and why was it not complied with?
n/a

(f) The care plan records *"take/record vital signs ¼ hourly x 2 hours"* (Ref: 020-027-063), followed by half hourly for 2 hours etc.

Please address the following:

(i) Was this aspect of the care plan complied with?
refering to observation charts 020-014-022 and 020-015-029 I would have to say yes with the exception of the 6am observations on 7th june

(ii) If so, where is the record of the taking of vital signs?
Post Op. Record Ref. 020-014-022.
Observation Sheet Ref. 020-015-029.

(iii) If vital signs were taken/recorded on a less regular basis, please explain why the care plan was departed from and why was it departed from?
The observations were recorded four hourly following the initial 4 hours of quarter and half hourly observations up until 2am on 9th June

(iv) If applicable, was any record made of the decision to depart from the care plan in this respect?
No, as her Observations had been stable overnight.

(28) After Raychel's death were you asked to take part in any process designed to learn lessons from the care and treatment which she received and your role in it, to include any issue about her fluid management? If so,

(a) Describe the process which you participated in.
I attended an incident review meeting 12th June 2001.

(b) Who conducted it?
Dr Raymond Fulton.

(c) When was it conducted?
12th June 2001.

(d) What contribution did you make to it?
I contributed how I felt things could be improved for all other surgical children so that this would not happen again. Namely; 1) Electrolyte profiles should be performed at regular intervals whilst a child is receiving intravenous fluids; 2) I felt that more senior Doctors should be responsible for overseeing the fluid management of surgical children 3) I felt that the evidence gained from this experience should be shared with all the Trusts

(e) Were you advised of the conclusions that were reached, and if so, what were they?
The main conclusion was Solution 18 should not be used for surgical patients.

(f) Were you advised of any issues relating to your role in Raychel's care and treatment?
No.

(g) Describe any changes to fluid management practice that you were made aware of at Altnagelvin Hospital following Raychel's death.
A new Trust policy was implemented based on the DPHSSPSNI guidelines post 2002

(29) Provide any further points and comments that you wish to make, together with any documents, in relation to:

(a) The care and treatment of Raychel in Altnagelvin Hospital between the 7th - 9th June 2001.
It was unfortunate that the Senior Surgical Doctor was unavailable to guide us in relation to the possibility that Hyponatraemia could be causing her symptoms as opposed to post operative nausea and vomiting

(b) Record keeping.
There has been a marked improvement in the Standard and quality of record keeping on

the children's ward fluid balance chart has been changed accordingly. Care Planning and Evaluation is in written format and easier accessed.

(c) Communications with Raychel's family about her condition, diagnosis, and care and treatment.
Had I been aware that Hyponatraemia was contributing to Raychel's deteriorating condition I would have been better informed to communicate the severity of her condition.

(d) Working arrangements within the surgical team and support for junior doctors.
Surgical SHO, Registers and Consultants only allowed to participate in children's care. No junior house officers are now involved with the care of surgical paediatric patients in Altnagelvin's paediatric Ward

(e) Lessons learned from Raychel's death and how that affected your practice at Altnagelvin or elsewhere

1) The importance of baseline Blood Analysis - an Electrolyte Profile - prior to intravenous fluids being commenced

2) The regular monitoring of the electrolyte profile post operatively in children receiving intravenous fluids

3) The prescription of intravenous fluids must be in accordance with hospital policies and protocols reflecting the DPHSSPSNI guidelines 2002

4) The anaesthetist and senior physicans are now the designated persons responsible for the prescription of intravenous fluid presriptions for surgical children

5) Every effort must be made to document accurate records of a childs total fluid intake and output. An updated A5 double-sided more comprehensive record sheet has now been adopted

6) Accurate documentation and effective communication between children, parents nursing, medical and surgical staff The nursing documentation tool has changed from computer based to hand-written format post 2001

7) Mainaining ones professional development regarding clinical updates policies and procedures

8) The recognition of the clinical signs of hyponatraemia

9) The use of Hypotonic intravenous infusions with surgical children have been replaced with isotonic solutions, and hypertonic intravenous fluids are now readily available

(f) Current Protocols and procedures.

There are now clear and transparent clinical guidelines in respect of hyponatraemia ((DPHSSPSNI guidelines 2002) which are also available via the Trust intranet and it is my

sole responsibility to keep my knowledge base updated in respect of current and future policies protocols and procedures

(g) Any other relevant matter. no

Comment [a13]: Please say 'none' if no further comment

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

Signed: Alun Noble Dated: 22/6/12.