Witness Statement Ref. No. 029/2

NAME OF CHILD: RAYCHEL FERGUSON

Name: Jeremy Johnston

Title: Mr.

Present position and institution:

Consultant Emergency Medicine, Cavan General Hospital

Previous position and institution:
[As at the time of the child's death]

Senior House Officer, Paediatrics, Altnagelvin Hospital

Membership of Advisory Panels and Committees:
[Identify by date and title all of those since your last Witness Statement 029/1, undated]

Previous Statements, Depositions and Reports:
[Identify by date and title all those made in relation to the child's death since your last Witness Statement 029/1, undated]

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

Ref:	Date:	
012-013-113	21.12.2002	Statement
012-040-198	05.02.2003	Deposition at the Inquest into the death of Raychel Ferguson
029/1	01.07.2005	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 to your statement.

I. QUERIES IN RELATION TO YOUR MEDICAL QUALIFICATIONS, EXPERIENCE, TRAINING AND RESPONSIBILITIES

(1) Please provide the following information:

(a) State your medical qualifications as of the 9th June 2001.

MB BCH BAO MRCS

(b) State the date you qualified as a medical doctor.

JULY 1997

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

1 year Pre-registration House Officer, Altnagelvin Hospital

6 months Emergency Medicine, Senior House Officer, Altnagelvin Hospital

6 months General Surgery, Senior House Officer, Mater Hospital, Belfast

6 months Fractures and Orthopaedics, Senior House Officer, Musgrave Park and Royal Victoria Hospitals

6 months General Medicine, Senior House Officer, Craigavon Hospital

A further 6 months Emergency Medicine, Senior House Officer, Royal Victoria Hospital

(d) **Describe your work commitments to the Altnagelvin Hospital from the date of your appointment to the 9th June 2001, stating the locations in which you worked and the periods of time in each department/location.**

From February 2001 until June 2001 I worked as a Senior House Officer in Paediatric Medicine. This involved assessment of paediatric medical children with history, examination, investigation and management. This involved duties on the Paediatric Ward and Special Care Baby Unit. I also attended deliveries in the Delivery Unit and delivered resuscitation to newborn babies. I also did examinations of newborn babies prior to discharge, screening for any health problems or anatomical deformities.

(e) **Describe your duties as Senior House Officer at Altnagelvin Hospital on the 9th June 2001.**

I was the Senior House Officer on duty for Paediatric Medicine which involved the duties outlined in my answer to 1 (d) above.

(f) **How much experience did you have of working with patients on a paediatric ward by the 9th June 2001?**

4 months (from February 2001).

(g) **How much experience did you have of working with post surgical patients (children) by the 9th June 2001?**

I had gained some experience of working with post-surgical patients (children) as a Pre-registration House Officer only.

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

(a) **Describe the training or induction which you received.**

One day of neonatal resuscitation training in Belfast (RBHSC).

There was teaching in the first week of the attachment in early February 2001 regarding paediatric medical conditions and neonatal resuscitation.

(b) **State the date or the approximate date when you received any training or induction.**

In the first week of the job early in February 2001.

(c) **Identify the person(s) who delivered this training or induction.**

The Neonatal Course in Belfast was taught by a number of paediatric consultants and registrars. I am unable to recall all their names but I do remember Dr Brown, Consultant Paedicatrician, Altnagelvin Hospital was present.

The Departmental Induction Programme was delivered by the Paediatric Consultants and Senior Registrar in Altnagelvin Hospital.

(d) **Indicate if you received any documentation at this training or induction.**

I remember receiving a Certificate of Achievement for neonatal resuscitation but do not currently have a copy.

(3) **Provide full details of any advice, training or instruction which was provided to you at Altnagelvin Hospital in order to inform you of any of the following matters:**

- **Hyponatraemia**

I cannot remember receiving any advice, training or instruction on hyponatraemia.

- **Post-Operative Fluid Management**

I cannot remember receiving any advice, training or instruction on post-operative fluid management

- **Record keeping regarding fluid management**

I cannot remember receiving any advice, training or instruction on record keeping regarding fluid management.

And address the following:-

(a) **Who provided this advice, training or instruction to you?**

Not applicable – see above.

(b) **When was it provided?**

Not applicable – see above.

(c) **What form did it take?**

Not applicable – see above.

(d) **What information were you given?**

Not applicable – see above.

(e) **In particular what information were you given in relation to the allocation of responsibility for prescribing intravenous fluids for post-operative children?**

I was not given information in relation to the allocation of responsibility for prescribing intravenous fluids for post-operative children, however, as I understood it, the surgical paediatric patients were fully managed by the surgical team of doctors in all aspects of their care, including fluid management.

II. QUERIES ARISING OUT OF YOUR INITIAL STATEMENT TO THE INQUIRY (WS-029/1)

(4) **What time had you started working on the 8th/9th June 2001?**

I believe that I started working at 1700 on 8th June 2001. I believe that the shift was until 0900 on 9th June 2001.

(5) **In what locations had you been working when you came on duty on the 8th/9th June 2001?**

The Special Care Baby Unit, the Delivery Ward and the Paedatric Medical Ward.

(6) **Had the case of Raychel Ferguson been referred to you by either nursing staff or any member of the surgical team at any time before 0305 on the 9th June 2001?**

No

(7) **If you had been asked would you have been available to be consulted in relation to Raychel's condition at any time before 0305 on the 9 June 2001?**

Yes, but I had many other children to assess and other duties as well. The usual procedure would be that a junior surgical doctor would be called and assess a surgical patient.

(8) **"I *did a brief examination which showed no abnormality to account for the seizure while I obtained the history from the nursing staff.*" (WS-029/1 page 2)**

(a) **What steps did you take as part of this examination?**

I did a cardiovascular, respiratory, neurological and abdominal examination.

(b) **Insofar as you can recall, identify the nurses who provided you with Raychel's history?**

Staff Nurse Noble.

(c) **What were you told about Raychel's history in terms of any of the following matters:**

(i) **Raychel's presenting condition;**

Abdominal pain which lead to an appendicectomy operation.

(ii) **Developments in her condition leading to the deterioration;**

She had vomited that day.

(iii) **The treatment which she had received;**

She had an antemetic or antisickness medication.

(iv) **Her fluid management;**

I do not remember.

(v) **Medication she had received.**

She had an antiemetic or antisickness medication.

(9) ***"At 0315 I made a note in the chart while I bleeped the on call surgical pre-registration house officer, Dr. Curran. I explained to Dr. Curran that the patient had no history of epilepsy and was afebrile, I advised him to contact his surgical registrar and senior house officer urgently."*** **(WS-029/1 page 2)**

(a) **In order to avoid any misinterpretation, please set out verbatim the note you wrote at 0315, which can be found at (Ref: 020-007-013).**

9.6.01.1.1 JJOHNSTON 0315

Called to see regarding fit

Day 1 postop appendicectomy.

Unresponsive for 5-10 minutes [with] contraction [and] flexion of upper limbs

Not classical tonic-clonic

Associated urinary incontinence

Unresponsive to 5[miligrams] diazepam [per rectum]

Given Diazemuls 10 [miligrams]

[On examination] Apyrexic 36

Still unresponsive due to diazepam

[Pulse] 80 [beats per minute] regular rhythm normal character [and] volume.

[Jugular Venous Pulse] [not elevated]. [Heart sounds] I + II + nil

Chest clear good [air entry] vesicular [Breath Sounds]

Nb No known history of epilepsy.

Fit postop complication

? [secondary to] vomiting + electrolyte abnormality.

[Discussed with] [PreRegistration House Officer] check [Electrolyte Profile], [Calcium], [Magnesium], [Full Blood Picture] [] ECG [].

[Review] by [registrar]/consultant

[signature] JEREMY JOHNSTON SHO

(b) Did you make the calculation written on the top of the document at (Ref: 020-019-038)?

No

(c) Why did you want the surgical registar or senior house officer to attend?

I was concerned that Raychel had a serious post-operative surgical cause for her fit and deterioration. I wanted more senior surgical doctors from her team to assess and manage her condition.

(d) In what circumstances would the Consultant Surgeon be asked to attend a patient?

If the Surgical Registrar needed a more senior opinion or if s/he did not have the knowledge, skillls or expertise to manage a situation.

(e) Why did you not request the attendance of the Consultant Surgeon?

The Surgical SHO and Registrar were in the hospital and I believed had been made aware of the situation and were en route. The blood results were not back yet and I believed that these results may have directed the next step in management, investigation and treatment. It is not normal procedure for a SHO to contact a consultant expecially in a different team.

(10) *"...Dr. Curran arrived and I asked him to send samples to the laboratories urgently as I suspected that an electrolyte abnormality would be likely cause of the fit in this post-operative patient. Electrolyte profile, calcium, magnesium and full blood picture were sent urgently by the shute system."* **(WS-029/1 page 2)**

(a) **In relation to your suspicion that an electrolyte abnormality was the likely cause of the fit in Raychel, please address the following:**

(i) **Explain fully what you mean when you refer to *"an electrolyte abnormality"* in this context.**

An abnormality in the salts or electrolyte concentrations in the blood. This could be low or high levels of sodium, calcium, magnesium or potassium.

(ii) **What information did you receive which led you to the suspicion that *"an electrolyte abnormality"* was the likely cause of the fit in Raychel?**

The most common cause of fits in children are febrile convulsions but I thought this was unlikely for two reasons; First as Raychel had no temperature and second febrile convulsions normally occur in younger children. The other common cause is underlying epilepsy but this was also unlikely as Raychel had no known history of previous epilepsy. There were a number of other causes that I considered, for example, sepsis, meningitis, encephalitis and brain tumour but as Raychel was post operative, I thought an electrolyte abnormality was more likely.

(iii) **What was the source of that information?**

My general medical knowledge from my undergraduate studies as well as self study for post graduate examinations.

(iv) **If applicable, what other factors (apart from the information you received), did you take into account and which led you to suspect that *"an electrolyte abnormality"* was the likely cause of the fit?**

Explained in (ii).

Not applicable.

(b) **In circumstances where before obtaining the biochemistry results you suspected that *"an electrolyte abnormality"* was the likely cause of the fit, what consideration, if any, did you give to taking the following steps:**

(i) **Administering mannitol; and/or**

I did not think that I had enough information until the biochemistry results were available to do this. Raychel's sodium could have been higher than normal (hypernatraemia) and this would have had an exacerbating effect.

(ii) **Stopping Solution 18 and administering a hypertonic saline solution.**

I did not think that I had enough information until the biochemistry results were available to do this. Raychel's sodium could have been higher than normal (hypernatraemia) and this would have had an exacerbating effect.

(c) **Did you give consideration, then or subsequently, to what it was that could have caused this electrolyte problem in Raychel?**

Yes, the effect of surgery and subsequent vomiting.

(d) **If so, what factors did you consider could have caused the electrolyte problem in Raychel's case?**

Poor oral intake, having had an operation and subsequent vomiting.

(e) **Did you discuss the causes of the electrolyte problem in Raychel's case with anyone else, then or subsequently, and if so,**

(i) **Who did you discuss these issues with?**

Dr Trainor my registrar on duty and Dr Curran, the surgical Pre-registration House Officer.

(ii) **When did you discuss these issues?**

At approximately 0315 with Dr Curran and approximately 0330-0345 with Dr Trainor.

(iii) **What did you discuss?**

I discussed with Dr Curran that there was a likely serious cause for the fit, most likely an electrolyte abnormality so urgent electrolyte profile, calcium, magnesium and full blood picture should be sent to the laboratory. In view of this, I requested that he call his Registrar and SHO to see the patient urgently.

I discussed with Dr Trainor Raychel's presentation, fit, treatment and possible causes, including an electrolyte abnormality. I explained that it was discussed with her because fo the delayed response from the surgical team. I explained the fact that blood tests had been sent and the results were not yet available.

(iv) **What conclusions did you reach?**

The Surgical Team had to be contacted again to assess the child urgently.

I would try to get the biochemistry results as soon as possible to confirm or exclude an electrolyte abnormality.

(v) Did you take any action on foot of the conclusions that you reached?

I tried to get the biochemistry results as soon as possible to confirm or exclude an electrolyte abnormality. I contacted the biochemistry laboratory again regarding the biochemistry tests and they said that they had not received them. I contacted Dr Curran and confirmed with him that the samples had been sent and at that time I, again, requested that Dr Curran contact both his SHO and Registrar to see Raychel as soon as possible as they had not yet arrived. I phoned the laboratory reception and the haematology laboratory. The laboratory worker in the haematology laboratory confirmed that the biochemistry sample was in the haematology laboratory, I requested he send it to the biochemistry laboratory. As a result of this, I telephoned the biochemistry laboratory again and suggested they look for the sample in the laboratory reception and haematology laboratory as we needed the test results urgently. I then contacted the laboratory another time when it was confirmed that the sample had been found and was to be processed urgently.

(11) *"I again strongly advised Dr. Curran to contact his senior colleagues, he bleeped Mr. Zafar who told Dr. Curran that he was in the casualty department and would come to the ward soon to see the child. The full blood picture result became available but I was more concerned about the biochemistry results which were not yet available so I buzzed the on call biochemist again. While awaiting the senior members of the surgical team and the biochemistry results I did a 12 lead ECG... I decided to discuss the case with my paediatric medical registrar, Dr. Trainor as the biochemistrry results were not yet available and the surgical team had not yet arrived..."* (WS-029/2 Page 2)

(a) Please explain why you had to speak to Dr. Curran "again" about contacting his senior colleagues?

I wanted senior surgical input as soon as possible and I felt that both the Registrar and SHO should come to see Raychel urgently. I had been informed that they had been contacted but yet they still had not yet come to Ward 6.

I was busy assessing Raychel and trying to get as much information as possible and chasing the biochemistry laboratory to ensure the samples were being processed.

Having been advised that Dr. Zafar's attendance would be delayed, was consideration given to contacting any other member of the surgical team?

I was under the impression that both Dr Zafar, Surgical SHO and Mr Bhalla, Surgical Registrar had been contacted regarding the situation and would be coming soon.

It would not be normal practice for a junior of another team to contact a surgical consultant.

I discussed the case with my medical Paediatric Registrar.

(b) Did you ascertain whether the Surgical Registrar had been contacted?

Yes, I confirmed this with Dr Curran.

(c) Were you given any explanation for the Surgical Registrar's non-attendance at that time?

I am unable to remember any explanation for his delay in attending.

(d) What time (approximately) did members of the senior surgical team arrive to see Raychel?

I am unsure but I think at approximately 0500.

(e) Why was it important for senior members of the surgical team, to attend?

Raychel was a patient under the care of their team/consultant. They had operated on her and had the clinical resposibility and clinical experience to manage post operative complications and plan any further investigation and treatment. I was concerned that there was a serious cause for the fit and most likely a post operative complications of electolyte imbalance.

(f) Did any delay in attendance by senior members of the surgical team effect,

(i) Your decision making; or

No.

(ii) Your management of Raychel?

No.

(g) Was there a delay in producing the biochemistry results? If so,

(i) Were you given an explanation for that delay?

When I telephoned the biochemistry laboratory they said that they had not received the sample. I contacted Dr Curran and he confirmed that the sample had been sent. I again telephoned the biochemistry laboratory to request that they look again for the sample as it might be in the laboratory reception or haematology laboratory. I telephoned the laboratory reception and haematology laboratories and asked them if the sample was there. The haematology laboratory staff confirmed that the sample was in the haematology laboratory so I requested they give it to the biochemistry

laboratory for processing. I again telephoned the biochemistry laboratory and asked them to get the sample from the haematology laboratory. I later again telephoned the biochemistry laboratory and it was confirmed the sample was later retreived and was going to be processed urgently.

(ii) **Did that delay effect your decision making or management in Raychel's case?**

It delayed the diagnosis, hence treatment of the electrolyte abnormaltity.

(h) **Who remained with Raychel when you left ward 6 to discuss Raychel's case with Dr. Trainor?**

Staff Nurse Noble and Dr Curran.

III. INTERRACTION WITH NURSING STAFF AND SURGICAL STAFF

(12) **In 2001, how many members of the paediatric team would have been based at or near Ward 6 of Altnagelvin Hospital, and what were their grades?**

7 Senior House Officers, 5 Registrars, 1 Staff Grade, 4 Consultants

(13) **In your experience of working as a paediatric medical SHO in Altnagelvin, clarify whether a member of the paediatric team would have been a constant presence on or near Ward 6?**

If not,

(a) **Explain how the paediatric team worked by reference to location;**

There would not be a constant paediatric medical doctor on the Ward. The Senior House Officer had duties in many other areas eg Special Care Baby Unit and Delivery Ward. The Senior House Officer would only be on the ward if they had a patient to assess or a patient they were required to attend to.

(b) **Explain the circumstances in which a member of the team could come to be present on Ward 6;**

When called to assess a paediatric medicine admission or when called by nursing staff to attend to any of the paediatric medical admitted children.

(c) **Specify where the team would generally be located if not in Ward 6;**

On the Special Care Baby Unit, in the Delivery Ward or in the oncall room.

(d) **Clarify how a member of the team could be contacted if not in Ward 6?**

By bleep.

(14) Was there any practice or policy in operation in Altnagelvin in 2001 which would have prevented nursing staff from asking a member of the paediatric team,

(a) To advise in relation to a surgical patient;

There was no specific policy but, as with every hospital, surgical patients are generally managed by surgical doctors and medical patients by medical doctors especially when they had already been admitted under a surgical or medical consultant; even more so a post operative patient. Similarly, paediatric doctors are requested to attend children and obstetric doctors, obstetric patients. Any decision to get an opinion or help from another team is usually at a senior doctor level usually registrar or consultant.

(b) To examine a surgical patient.

Please see (a) above.

(c) To prescribe for a surgical patient;

Please see (a) above.

(d) To carry out tests, such as to take bloods for electrolytes or to investigate for the cause of vomiting.

Please see (a) above.

(15) Was there any practice or policy in operation in Altnagelvin in 2001 which would have prevented surgical staff from asking a member of the paediatric team,

(a) To advise in relation to a surgical patient;

Please see 14 (a) above.

(b) To examine a surgical patient.

Please see 14 (a) above.

(c) To prescribe for a surgical patient;

Please see 14 (a) above.

(d) To carry out tests, such as to take bloods for electrolytes or to investigate for the cause of vomiting.

Please see 14 (a) above.

(16) **In 2001 what was your experience, if any, of being asked by nursing staff or surgical staff,**

(a) **To advise in relation to a surgical patient;**

I do not remember having any involvement with any of the surgical patients prior to Raychel.

(b) **To examine a surgical patient.**

I do not remember having any involvement with any of the surgical patients prior to Raychel.

(c) **To prescribe for a surgical patient;**

I do not remember having any involvement with any of the surgical patients prior to Raychel.

(d) **To carry out tests or investigations with a surgical patient.**

I do not remember having any involvement with any of the surgical patients prior to Raychel.

IV. QUERIES ON THE ISSUE OF FLUID MANAGEMENT

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

(17) **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 of doctors.

(18) **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 unaware of these cases.

(b) **State the source(s) of your knowledge and awareness and when you acquired it.**

Not applicable. Please see (a) above.

(c) **Describe how that knowledge and awareness affected your care and treatment of Raychel.**

I did not have this knowledge prior to this.

(19) **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 issues with fluid management and electrolyte abnormalities.

(b) **State the source(s) of your knowledge and awareness and when you acquired it.**

After June 2001 through media coverage.

(c) **Describe how that knowledge and awareness has affected your work.**

I am very aware of the danger of hyponatraemia.

(20) **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.**

I was not aware of this paper prior to this case.

(21) **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.**

I had informal training by more senior doctors regarding general fluid management in PRHO and SHO jobs.

I had no specific training on hyponatraemia or post operative fluid management in children

(b) **Postgraduate level.**

No formal training. Self learning by reading.

(c) **Hospital induction programmes.**

Not that I can remember.

(d) **Continuous professional development.**

Not that I can remember.

(22) **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.**

None

(b) **Nature of your involvement.**

Not applicable – see above.

(c) **Outcome for the children.**

Not applicable – see above.

(23) **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.**

None

(b) **Nature of your involvement.**

Not applicable – see above.

(c) **Outcome for the children.**

Not applicable – see above.

V GENERAL

Please address the following:

(24) **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 was not involved in any such process.

(b) **Who conducted it?**

Not applicable – see above.

(c) **When was it conducted?**

Not applicable – see above.

(d) **What contribution did you make to it?**

Not applicable – see above.

(e) **Were you advised of the conclusions that were reached, and if so, what were they?**

Not applicable – see above.

(f) **Were you advised of any issues relating to your role in Raychel's care and treatment?**

Not applicable – see above.

(g) **Describe any changes to fluid management practice that you were made aware of at Altnagelvin Hospital following Raychel's death.**

Not applicable – see above.

(25) **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.**

(b) **Record keeping.**

(c) **Communications with Raychel's family about her condition, diagnosis, and care and treatment.**

(d) **Working arrangements within the surgical team and support for junior doctors.**

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

(f) Current Protocols and procedures.

(g) Any other relevant matter.

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

Signed:  Dated:27/1/13