Witness Statement Ref. No. 356/1

NAME OF CHILD: CONOR MITCHELL

Name: Dr. Catherine Elizabeth Quinn

Title: Medical Senior House Officer, Craigavon Area Hospital

Present position and institution:

Consultant in Geriatric Medicine
Wollongong Hospital
Wollongong, NSW 2500
Australia

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

Senior House Officer General Medicine, Craigavon Area Hospital

Membership of Advisory Panels and Committees:
[Identify by date and title all of those between January 1995-August 2013]

Falls and Pressure Injury Committee- Wollongong Hospital
Radiology Clinical Advisory Committee- Wollongong Hospital

Previous Statements, Depositions and Reports:
[Identify by date and title all those made in relation to the child's death]

Statement of Dr Catherine Elizabeth Quinn 087-014-079
Deposition of Dr Catherine Elizabeth Quinn 087-015-081

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

Ref:	Date:	

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. QUALIFICATIONS, TRAINING AND EXPERIENCE

(1) Please address the following matters:-

(a) State your medical qualifications and the date you qualified as a medical doctor.

(b) Provide a detailed account of your career history post qualification

(c) State whether you have any qualifications or experience in the field of paediatrics.

(d) Describe your work commitments to the Craigavon Area Hospital from the date of your appointment as a Medical SHO, stating the locations in which you worked and the periods of time in each department/location.

(e) Describe your duties as a Medical SHO in the medical ward of Craigavon Area Hospital as of the 8 May 2003.

My qualifications include Bachelor of Medicine (MB BCh BAO), Doctor of Medicine (MD), Membership of the Royal College of Physicians of Edinburgh (MRCP), and Fellowship of the Royal Australasian College of Physicians (FRACP).

I qualified as a doctor with a Bachelor of Medicine from Queen's University, Belfast in 1999. I then spent 4 years in General Medical training in various hospitals around Northern Ireland. I became a Member of the Royal College of Physicians in 2002. In 2003 I commenced Specialist Registrar training in Geriatric and General Medicine which I completed in 2009. During this time I gained a research Doctor of Medicine degree from Queen's University. I then spent 2 years as a Registrar in Geriatric Medicine in Sydney, Australia, before commencing a Consultant post in Geriatric Medicine at Wollongong Hospital, NSW in 2011.

I have no qualifications or experience in the field of paediatrics.

I was appointed as a Medical SHO in Craigavon Area Hospital from August 2002 to August 2003. I spent 3 months each in the specialties of Rheumatology, Geriatric Medicine, Haematology and Endocrinology.

On the morning of 8th May 2003, I was working on the Medical Assessment Unit as the SHO on call for admissions. I was responsible for assessing new medical patients requiring admission from A&E. This included history taking, examination, ordering of investigations and formulating a management plan for the patients.

(2) Describe in detail the education and training you have received in fluid management, the prevention of hyponatraemia and record keeping in relation to fluid balance, 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.

I had some general education on fluid balance in adults as a medical student, and may also have had a lecture on fluid balance in babies and young children during my paediatric term, although I am unable to remember this. As a junior doctor I received teaching on fluid balance in adults which was provided during hospital educational meetings, including at Craigavon Hospital. I had no training related to fluid management in children at postgraduate level.

II. QUERIES ARISING OUT OF YOUR DEPOSITION TO THE CORONER

With reference to your deposition to the Coroner dated 26 May 2004, please provide clarification and/or further information in respect of the following:

(3) "I was on duty on Thursday 8 May 2003 and it would have been my responsibility to clerk in any new patients to the medical ward. I was responsible for clerking in Conor Mitchell." (Ref: 087-015-081)

(a) Identify who was responsible for deciding that Conor should be admitted to the medical ward rather than a paediatric ward.

(b) State whether you were advised that Conor was not suitable for admission to the paediatric ward? If so, who advised you of this?

(c) State whether you gave any consideration to the appropriateness of the decision to manage Conor in a medical ward rather than under the supervision of a paediatric team?

(d) What was the hospitals admissions policy at that time and how should it have applied to a 15-year-old boy with the body *habitus* of an 8 year old?

(e) What was your understanding of the reasons behind the decision to manage Conor in a medical ward rather than under the supervision of a paediatric team?

(f) Did you discuss the decision to admit Conor to an adult ward with any of your colleagues and if so with whom, and what was discussed?

The paediatric team decided Conor should be admitted to the medical ward rather than the paediatric ward. I received a telephone call from the A&E doctor to inform me they were admitting Conor to the MAU and to give a brief summary of his clinical history and condition. The A&E doctor informed me they had contacted the paediatric team who had declined to admit Conor under their care as he was older than 14 years which was the upper age limit for paediatric patients. This seemed to be a reasonable decision at the time as he was not under the care of a Paediatrician as an outpatient. I was not aware he had the body habitus of an eight year old until I met him in the MAU. I contacted the Medical Registrar on call (Dr Murdock) to discuss Conor's case after I had carried out my initial assessment in the MAU. He attended promptly to review Conor. The discussion included review of the history and examination, necessary investigations and plan of management including IV fluid and antibiotic therapy. I do not remember if the decision to admit him to the adult ward was specifically discussed.

(4) *"My impression was that he was suffering from a urinary tract infection. The plan on admission was to carry out a full blood test, administer IV fluids, administer IV Cyproxin which is an antibiotic, perform a mid stream urine sample, chext x-ray and abdominal x-ray and provide analgesia PR."* (Ref: 087-015-082)

(a) Did you decide that IV fluids should be included as part of the plan on admission? If not, identify the clinician who formulated this part of the plan.

(b) If you did decide that IV fluids should be administered, state precisely the factors that led you to conclude that IV fluids were a necessary part of the plan.

(c) What was your objective when prescribing IV fluids as part of the plan for Conor?

I decided the IV fluids commenced in A&E should be continued in view of the recent history of vomiting and reduced oral intake as per GP referral letter and A&E notes (088-004-039 and 088-004-040), and probable infection. The aim was to rehydrate Conor and improve his clinical condition as dehydration was noted on examination and supported by a blood urea level at the upper limit of normal.

(5) *"He had three syringes of fluid in A&E and this continued on admission to the Admissions Unit."* (Ref: 087-015-082)

(a) Provide full details of the three syringes of fluid which Conor received in A&E specifying,

(i) The type of fluid administered in A&E;

(ii) The volume of fluid administered in A&E;

(iii) The rate of infusion of the fluid administered in A&E;

(iv) The time fluids commenced and ended in A&E;

(v) Your understanding of why these fluids were administered to Conor in A&E and the source of your understanding;

(vi) The source of your information for how fluids were managed in A&E, to include any relevant documentation.

Please refer to any relevant document or record in support of the answers that you provide.

As per the A&E notes (088-004-040), 2 (not 3) syringes of 110ml Hartmann's solution were prescribed and administered as per fluid balance chart (088-004-063) at 11.20 and 11.45. The fluid prescription chart (088-004-064) states this 220ml was given over half an hour. This was for purposes of rehydration as Conor was likely to be dehydrated. This was suggested by the history given on the A&E sheet (088-004-040) of vomiting and poor intake. My plan was to continue fluids in the MAU as I prescribed on the fluid prescription chart (088-004-064).

(6) *"I prescribed 3 litres over 24 hours of normal saline."* (Ref: 087-015-082)

(a) Fully explain Conor's fluid needs when you were responsible for his care. If you recorded a fluid plan for Conor and/or the reasons for that plan, please refer to the document.

(b) Describe the steps which you took or the calculations that you made before deciding that it was appropriate to prescribe 3 litres of normal saline over 24 hours. If you made a record of the steps that you took or the calculations which you made, please refer to the document.

(c) What factors or information did you take into account when concluding that the IV fluids which you prescribed were a necessary part of Conor's treatment plan?

(d) Explain the objective(s) of prescribing 3 litres of normal saline over 24 hours.

(e) State precisely why you prescribed normal saline.

(f) State precisely why you prescribed a volume of 3 litres.

(g) State precisely why you prescribed the fluids at a rate of 1 litre every 8 hours (125ml/hr).

(h) Did you discuss Conor's fluid management with any other doctor or nurse before prescribing 3 litres of normal saline over 24 hours, and if so, what did you discuss?

(i) Did you discuss Conor's fluid needs and management with Conor's relatives, and if so, what did you discuss?

The aim of the IV fluid was to continue fluid replacement and maintain hydration. I was concerned Conor was dehydrated in view of the history of vomiting, poor intake, dehydration noted on examination in A&E and blood urea level at the upper limit of normal (087-015-082). My fluid plan was recorded on the fluid prescription chart (088-004-064). My first fluid

prescription (3 litre normal saline over 24 hours, or 125ml/hr) was based on a usual fluid regime for an adult patient. I did not make any additional calculations. This fluid prescription was not appropriate for Conor's size. This was highlighted by Dr Murdock during his review and I subsequently changed the prescription to a reduced volume and infusion rate on his advice, as shown on the fluid prescription chart (088-004-064). The 1 litre bag had not yet been adminstered by the nurse looking after Conor on MAU, so none of this original prescription was infused as confirmed by the record on the fluid balance chart (088-004-063). I explained the need for fluid replacement as part of the overall treatment plan to Conor's mother during my assessment. I cannot recall exactly what I said to her.

(7) *"About 1.30pm following discussion with Dr. Murdock I changed the fluid to 250mls over 4 hours – again normal saline. This meant a lower rate of infusion."* (Ref: 087-015-082)

(a) Provide a full account of the discussion with Dr. Murdock and specify the conclusions that were reached as a result of that discussion, particularly with regard to Conor's fluid management plan.

(b) Why was a reduced rate of infusion considered necessary?

(c) What factors or information did you and Dr. Murdock take into account when concluding that it was necessary to change Conor's fluid regime from 3 litres of normal saline over 24 hours to 250mls over 4 hours?

(d) Explain the objective(s) of prescribing 250 mls of normal saline over 4 hours, followed by 250mls over 6 hours, followed by 250mls over 8 hours?

(e) If you made any calculation or used any formula before deciding that it was appropriate to prescribe 250mls of normal saline over 4 hours, followed by 250mls over 6 hours, followed by 250mls over 8 hours, please set out that calculation or formula. Please refer to any note or record which you may have made in this respect.

(f) Following your discussion with Dr. Murdock, state precisely why it was thought normal saline was the appropriate type of fluid.

(g) Following your discussion with Dr. Murdock, state precisely why the volume/rate was prescribed as it was (250mls of over 4 hours, followed by 250mls over 6 hours, followed by 250mls over 8 hours).

(h) Did you take any steps or make any calculations before changing the fluid to 250 ml of normal saline over 4 hours (followed by 250mls over 6 hours, followed by 250mls over 8 hours)?

(i) Having made the decision with Dr. Murdock to change Conor's fluid management plan, did you discuss the changes to Conor's plan with any other doctor or nurse, and if so, what was discussed?

(j) Please set out in detail your understanding of how Conor's fluid management needs (including his fluid balance) would be monitored after you left him?

The treatment plan was discussed with Dr Murdock including the fluid prescription which was amended as above. I am unable to recall the exact details of the conversation regarding the IV fluids, although I remember Dr Murdock had explained the volume of fluid and infusion rate were too great for a person of Conor's size and advised the new prescription detailed on the fluid chart (088-004-064). The volume of fluid and infusion rate were reduced. The first 250ml was given over 4 hours (giving a rate of 62ml/hr) to continue with rehydration. The next bag was given more slowly over 6 hours (rate of infusion 42 ml/hr) to maintain hydration, as was the next 250ml over 8 hours (rate 31 ml/hr). I do not recall a calculation being carried out to arrive at these volumes. Normal saline was used with the intention of rehydrating Conor without dropping his sodium levels, which could occur with another type of fluid such as dextrose. I informed the nurse looking after Conor of the new fluid prescription. The original prescription had not yet been administered. Fluid input and output during the rest of the day would be recorded on the fluid balance chart (088-004-063) by nursing staff, and the medical staff covering the MAU in the afternoon would be notified of any deterioration in urine output or change in Conor's condition.

(8) Before you changed the fluid management plan following your discussion with Dr. Murdock, had Conor's fluid administration commenced under your original fluid prescription, and if so, state,

(a) How much volume of normal saline had he received before the change was made.

(b) Whether a record made of the amount of normal saline given, before the change was made. If so, please identify the document in which the record was made.

The original 1 litre bag I prescribed on the fluid prescription chart (088-004-064) before I cancelled it had not been connected by the nurse and therefore none of the fluid was administered. As per the fluid balance chart (088-004-063), the first fluid to be administered in MAU was the 250ml bag of normal saline (over 4 hours).

III. QUERIES ARISING OUT OF CONOR'S CAGHT HOSPITAL CASENOTES: FILE 88

With reference to the content of Conor's CAGHT Hospital Casenotes, please provide clarification and/or further information in respect of the following:

(9) Were you responsible for making any of the entries contained at Ref: 088-004-064 - *Particulars of Intravenous Fluids to be Taken?* If so, refer to each of the entries that you were responsible for making and explain what each such entry means.

Yes- The first 3 lines refer to 1 litre of normal saline over 8 hours. A line was drawn through these by myself to cancel the prescription, and the revised prescription is given below: 250ml normal saline over 4 hours, followed by 250ml over 6 hours, then 8 hours.

(10) You are referred to the note at Ref: 088-004-045. Clarify whether you made that note.

No

(11) The note at Ref: 088-004-045 includes the following entry in the context of the fluids which were to be given to Conor: "*D/W paeds re rate.*" Did you or any of your colleagues discuss with any

member of the paediatric team, the rate at which fluids were to be infused to Conor? If so, provide a full description of that discussion.

I do not remember discussing this with the paediatric team.

(12) There is an entry at Ref: 088-004-063. indicating that 200ml of Ciproxin had been erected. State as precisely as you can, how this entry is to be interpreted? In particular, clarify how or whether this note indicates that 200mls of Ciproxin was administered?

This entry was not made by me. I had prescribed 200 grams of Ciproxin IV on the medication chart (088-004-061) to treat probable urinary tract infection.

(13) In her deposition to the Coroner, Ms. Joanna Mitchell gave the following evidence (Ref: 087-002-018) in relation to the fluid management of Conor when he was being cared for in the Accident and Emergency unit of Craigavon Hospital:

"I asked the nurse how much fluid Conor was receiving and was told that Conor was receiving 110ml of fluids from the IV drip every 15 minutes. I remember looking at the syringe drip and thinking how fast it seemed to be emptying compared to other drips that I had seen. Conor's grandmother stated that the IV drip emptied very quickly and was replaced by another. She said to me that she thought that Conor's face looked swollen and puffy. Conor received approximately 440ml of IV rehydration fluids in one hour."

Please address the following matters arising out of the evidence of Ms. Mitchell:

(a) What was your understanding of the volume of fluids which had been given to Conor in Accident and Emergency?

From the A&E notes (088-004-040): 220ml Hartmann's solution in total was prescribed. This was also recorded on the fluid balance chart (088-004-063).

(b) What was your understanding of the rate at which fluids had been administered to Conor in Accident and Emergency?

As per the fluid balance chart (088-004-063), the first 110ml was given at 11.20 and the second at 11.45. The total was given over half an hour (088-004-064).

(c) Did you observe Conor's face looking swollen and puffy at or about the time when you clerked Conor into the medical ward?

No

IV. QUERIES ARISING OUT OF THE 'GUIDANCE ON THE PREVENTION OF HYPONATRAEMIA'

With reference to the *Guidance on the Prevention of Hyponatraemia* (Ref: 007-003-004) which was issued by the Chief Medical Officer in March 2002, please provide clarification and/or further information in respect of the following:

(14) Was the Guidance brought to your attention and if so state,

(a) Who brought the Guidance to your attention?

(b) When was it brought to your attention? In particular were you aware of the Guidance before you had any dealings with Conor?

(c) In what way was the Guidance brought to your attention?

I was not aware of the Guidance before seeing Conor.

(15) Have you ever received training in the use or application of the Guidance and if so state,

(a) Who provided you with training?

(b) When and on how many occasions have you been provided with such training?

(c) What form did the training take?

(d) What did you learn from the training?

(e) Was the training of an adequate quality or standard for the work that you do?

Having never worked in paediatrics or A&E, I have never received formal training on application of the Guidance.

(16) Have you ever received written information in relation to the use or application of the Guidance and if so please provide a copy and state,

(a) Who provided you with the written information?

(b) When did you receive it?

(c) What did you learn from the written information?

(d) Was the written information which was given to you of an adequate quality or standard for the work that you do?

I do not remember receiving written information on use of the Guidance

(17) Please address the following matters:

(b) The Guidance was reproduced as an A5 poster. Please clarify to the best of your knowledge whether the Guidance was displayed in the Medical Admissions Unit of Craigavon Hospital on the 8 May 2003?

(c) If you are aware of any other location(s) within the Hospital where the poster was displayed, please indicate.

To my knowledge, the Guidance was not displayed in the MAU at Craigavon Hospital. I am not aware of the poster being displayed in any other location in the hospital.

(18) In the context of fluid management in Conor's case, was the Guidance applicable?

Yes

(19) If the Guidance was applicable to fluid management in the circumstances of Conor's case, did you apply the Guidance when dealing with Conor's fluids? If so, and where applicable,

(a) Describe the steps you took under 'Baseline Assessment'.

(b) Describe the steps that you took under 'Fluid Requirements'.

(c) Describe the steps that you took under 'Choice of Fluid'.

(d) Describe the steps that you took under 'Monitor'.

(e) State whether you applied the Guidance in all respects that were relevant to your duties and responsibilities.

(f) If you did not apply the Guidance in all relevant respects, identify the respects in which the Guidance was not applied.

(g) In respect of any part of the Guidance that you did not apply, explain why you did not apply it.

I did not apply the Guidance as, having never worked in paediatrics, I was not aware of it.

V. GENERAL

Please address the following:

(20) After the death of Conor Mitchell in the Royal Belfast Hospital for Sick Children on the 12 May 2003 (following his treatment in the Craigavon Area Hospital) were you asked to take part in any process designed to learn lessons in relation to any issue relating to his fluid management? If so,

(a) Describe the process which you participated in.

(b) Who conducted it?

(c) When was it conducted?

(d) What contribution did you make to it?

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

No

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

(a) The care and treatment of Conor on 8th May 2003.

(b) The Guidance on the Prevention of Hyponatraemia.

(c) Fluid management.

(d) Record keeping in association with fluid management.

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

Signed:  **Dated:** 10/10/13