Witness Statement Ref. No. 032/4

NAME OF CHILD: RAYCHEL FERGUSON

Name: Brian McCord

Title: Consultant Paediatrician

Present position and institution:

Previous position and institution: Consultant Paediatrician, Altnagelvin Hospitals H&SS Trust
[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 of 20th June 2013]

Previous Statements, Depositions and Reports:
[Identify by date and title all those made in relation to the child's death since your Witness Statement 20th June 2013]

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

Ref:	**Date:**	
031/1	01.07.2005	Inquiry Witness Statement
031/2	20.06.2013	Supplemental Inquiry Witness Statement

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25 March 2013

I have been asked by Mr O'Hara, QC, Chairman of the Inquiry into Hyponatraemia Related Deaths to make a supplementary statement.

In anticipation of my verbal evidence at Banbridge Court House on 13.03.2013 I had what I thought was a useful idea in presenting a visual illustration of fluid volumes.

I brought along a number of water bottles which I thought might illustrate the issue to all concerned.

On discussion with Counsel on the morning of 13.03.13, the presentation was considered of help but contrary to Inquiry protocol.

Therefore I am grateful to have a further opportunity to present some illustrations in support.

Three photographs are presented.

Photograph A - Illustrates total fluid volume at an appropriate rate for body weight of 65mls/hour over a 24 hour period (i.e. 1560ml).

Photograph B - Illustrates total additional volume administered over this same time period (15ml x 24 = 360ml).

Photograph C - Illustrates a standard resuscitation fluid volume (20ml/kg) for a 25kg child.

I would hope this illustration would be helpful to the Inquiry Team and parents alike in having a clearer perspective and understanding of the fluid volume issue.

Furthermore on closer examination of recorded fluid volumes some comment is worthwhile.

Raychel attended A & E department around 8.00pm on 07.06.01 having last had a meal 2 hours earlier at approximately 6.00pm.

Following assessment she was transferred to the ward where intravenous fluids were commenced at 22.15 in ward 6.

60ml of intravenous fluids were infused prior to transfer to theatre for surgery.

In theatre 200ml of I.V. fluids were administered.

I.V. fluids were recommenced in ward 6 at 2.00am on 08.06.01 and continued at a constant rate of 80mls/hour until 05.00am on 09.06.01 when fluid volumes were reduced.

Calculation of total fluid volumes administered over this time period totals (60 + 200 + [80 x 27]) = 2420ml.

By contrast, assuming Raychel was receiving no significant oral fluid intake then basic fluid requirements for the period from 6.00pm on 07.06.01 until 05.00am on 09.06.01, a period of 35 hours would have been a total of (65 x 35) = 2275ml.

If these calculations are correct, then the part played by "fluid overload" in the complex interplay of biochemical processes leading to Raychel's deterioration and death is difficult to comprehend.

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