Peer Reviews Comments

Advisor's Consolidated Report on Raychel Ferguson.

Northern Ireland Inquiry into Hyponatraemia Related Deaths

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I have read the advisor's consolidated report dated 15th May 2013, as well as the opinions of the inquiry's experts. The report is entitled Raychel Ferguson (Preliminary) but deals mainly with the death of Lucy Crawford.

The report is very comprehensive and highlights the key issues. I do have a few issues that I would like to highlight.

1. Communication

When adverse events occur in medicine poor communication is invariably part of the problem. There are many examples in Lucy's case. There was poor communication between the two hospitals involved in her care both at clinical and administrative levels. The same applies to communication between among clinicians involved in her care, the corner's office, the Erne Hospital and Lucy's parents. When things go wrong what grieving parents want is an explanation, apology (where appropriate) and reassurance that measures have been taken to prevent a recurrence of the problem. Communication with parents take place as soon as an adverse event has been identified, even before the investigation is complete, to re-assure them that their concerns are being addressed.

During the preparation of this report it is very encouraging to read that a formal apology was made by the hospitals to the families of Conor Mitchell, Adam Strain and Claire Roberts.

2. The role of the RBHSC as the lead paediatric centre in Northern Ireland

One issue that comes through very clearly in the advisor's report is the question of what is the role of the RBHSC, as the only tertiary care paediatric centre in Northern Ireland, to be leaders in the quality of the care of children (report 1.3, 1.5.1, 2.3, 2.5.1). At the time of Lucy's death there had been 3 other cases of hyponatraemia related deaths in the province, all of whom were admitted to the PICU at RBHSC. In my opinion the ICU group should have been more vigilant in alerting their colleagues in the province to these adverse events before Dr. Taylor eventually took the lead on this issue. I can't help but think there was a missed opportunity here.

3. Morbidity and mortality reviews, the investigation of adverse events

There was a lack of a thorough and transparent process for reviewing adverse outcomes in the PICU at RBHSC. This process needs to take place at regular intervals with the expectation that

all medical staff should attend and the meeting should be minuted as regards the discussion and conclusions. There needs to be a clear process for any recommendations reached to be reported through a risk management process to the hospital leadership. I always regarded the that well conducted M&M process, such as the one we have used in Toronto, as one of the most important forms of continuing medical education we had in our programme.

I also found the lines of responsibility for reporting and acting on clinically significant adverse events between RBHSC, Erne Hospital, the various trusts, public health in Northern Ireland and the Department of Health very confusing. This was a major barrier to the dissemination of important information on the adverse effects of acute hyponatraemia across the health care system.

4. The role of the coroner's office in investigating sudden and unexpected deaths in children

It is very concerning to read of the actions of the coroner's office and the assistant state pathologist after Lucy's death. I do not understand why a pathologist, who is an expert on morbid anatomy and not a clinician, should be consulted about the issuing of a death certificate. I realize that many of the coroners do not have a medical background and little knowledge of diseases in children. As has been pointed out by more than one medical expert, deaths from gastroenteritis in children in Lucy's age group are very rare events and should have raised questions as to the appropriateness of the diagnosis. It is also illogical to put cerebral oedema, dehydration and gastroenteritis on a death certificate of a child of this age and with this clinical history. Only the first of these is correct and gives no insight as to cause.

Deaths in children should be reviewed by physicians and pathologists with paediatric expertise This can be done without the need for a formal inquest following a process referred to as clinicopathological correlation, which marries the clinical history with the pathology findings. This is why coroners and medical examiners in various parts of the world have established paediatric death review committees. The additional advantage of the process is that it is independent of the hospital which provides reassurance to families that the hospital is not investigating itself. The review process followed by Erne Hospital into Lucy's was flawed as well as reaching the wrong conclusion.

5. The responsible physician in the PICU at RBHSC

In my opinion the PICU consultant on call in the PICU at the time of Lucy's admission should have been designated as the responsible physician. She had no prior hospital admission or

involvement with subspecialty paediatric services with brain dysfunction that required life support. This falls under the domain of the PICU consultant rather than a paediatric neurologist. If that designation had been followed it is likely that a lot of the communication problems with death certification and dealings with the coroner's office could have been avoided. Establishment of brain death and withdrawal lies within the area of expertise of the paediatric intensive care specialist.

6. Nursing knowledge and understanding of issues in iv fluid administration in children

Much of this inquiry has rightly focused on the gaps in physician's understanding of the principles of iv fluid administration in children and the potential complications, which are being addressed by this inquiry. My expectation is that these same issues are being addressed with nursing staff who care for children. It is very concerning to read of instances where junior medical staff, were being requested (obligated) by nursing staff to order or re-order significant amounts of iv fluid as a routine task without any patient assessment of whether this was necessary or not.

Based on the published literature, this is clearly not a problem that only occurs in Northern Ireland and why the findings of this inquiry are important and relevant to the whole of the United Kingdom.