Scottish Parliament Region: Highlands and Islands

Cases 201200405: Highland NHS Board

Summary of Investigation

Category

Health/Hospitals – Paediatrics; clinical treatment; diagnosis

Overview

The complainant (Ms C) raised a number of concerns about the care and treatment her late daughter (Miss A) received at Raigmore Hospital (Hospital 1). Miss A was seen by an out-of-hours GP at Hospital 1 and thereafter returned 24 hours later where she was admitted as her condition had seriously deteriorated. The following day, Miss A was transferred to the Royal Hospital for Sick Children in Edinburgh (Hospital 2) and sadly died two days later.

Specific complaints and conclusions

The complaints which have been investigated are that:

(a) the receptionist failed to obtain appropriate assistance when Miss A presented at Accident and Emergency with soiled clothing (*upheld*);

(b) Miss A was inappropriately discharged by the out-of-hours GP on 5 March 2011 (*not upheld*); and

(c) staff failed to adequately monitor or provide timely treatment to Miss A when she was admitted to Accident and Emergency on 6 March 2011 (*not upheld*).

Redress and recommendations

The Ombudsman recommends that the Board:	*Completion date*
(i) provide the Ombudsman with evidence to support that they have reviewed their gown supplies in Accident and Emergency and informed relevant staff of the procedure to follow when alternative clothing is required;	10 July 2013
(ii) remind the out-of-hours GP of the GMC's guidance in relation to record-keeping;	10 July 2013
(iii) draw to the attention of relevant staff the comments by Adviser 2 and Adviser 3 regarding documenting	10 July 2013

more detailed information on intubation in this case; and

(iv) conduct a review of their Significant Event Analysis procedures to ensure that a detailed and robust investigation is carried out in all cases. 7 August 2013

Main Investigation Report

Introduction

1. On 5 March 2011 Ms C attended Raigmore Hospital (Hospital 1) with her eight year old daughter (Miss A) who was unwell with sickness, diarrhoea, earache and a sore throat. At this time Miss A was seen by the out-of-hours (OOH GP) and was diagnosed with gastroenteritis (inflammation of the stomach and intestine) and otitis media (inflammation of the middle ear). The OOH GP prescribed medication and said that she advised Ms C to return with Miss A if her symptoms worsened.

2. As Miss A's condition deteriorated, Ms C returned to Hospital 1 with her daughter the following day. On arrival, Miss A collapsed and suffered a cardiac arrest. She was subsequently transferred to the Royal Hospital for Sick Children (Hospital 2) on 7 March 2011 and died two days later. The primary cause of death was hypoxic brain injury (lack of oxygen to the brain) and secondary to this was cardiac arrest, Influenza B and staphylococcus aureus (bacteria that can be found in the human respiratory tract and on the skin) in the lungs.

3. Ms C complained that the reception staff at Hospital 1 had been rude and unhelpful when she asked for assistance in cleaning up Miss A after she had been sick and soiled herself. Ms C also complained that her daughter's death could have been prevented had she been admitted to Hospital 1 on 5 March 2011 after seeing the OOH GP and that when she was admitted the following day, staff failed to monitor her properly.

4. Ms C complained to Highland NHS Board (the Board) on 28 September 2011. A meeting was initially held on 19 January 2012 to discuss Ms C's concerns and the Board responded in writing on 14 February 2012. Ms C remained unhappy with the Board's response and thereafter raised the complaint with the Ombudsman.

5. The complaints from Ms C which I have investigated are that:

(a) the receptionist failed to obtain appropriate assistance when Miss A presented at Accident and Emergency with soiled clothing;

(b) Miss A was inappropriately discharged by the out-of-hours GP on 5 March 2011; and

(c) staff failed to adequately monitor or provide timely treatment to Miss A when she was admitted to Accident and Emergency on 6 March 2011.

Investigation

6. My complaints reviewer examined copies of Miss A's medical records and the complaints correspondence provided by the Board and the information supplied by Ms C. Independent specialist advice was also obtained from a general medical practitioner (Adviser 1) and an emergency medical consultant with experience in paediatrics (Adviser 2). In line with our process, a draft copy of this report was sent to Ms C and the Board to comment on any factual inaccuracies. In response to the comments received, my complaints reviewer also sought further advice from a consultant cardiothoracic anaesthetist (Adviser 3) on the intubation of Miss A.

7. I have not included in this report every detail investigated but I am satisfied that no matter of significance has been overlooked. Ms C and the Board were given an opportunity to comment on a draft of this report.

(a) The receptionist failed to obtain appropriate assistance when Miss A presented at Accident and Emergency with soiled clothing

8. Ms C was unhappy that Miss A had to sit in dirty clothing while waiting to see the OOH GP. Ms C said that an auxiliary nurse then helped by providing wipes and a gown for Miss A to change into.

9. The Board met with Ms C on 19 January 2012 and explained that normal practice would be to make a patient as comfortable as possible by providing, for example, a gown for them to change into as alternative clothing. The Board advised Ms C that they had spoken with the receptionist involved and that she was sorry for the distress this had caused. The Board acknowledged that Ms C's experience was unacceptable and that as a result, they would review their gown supplies held within the Accident and Emergency department and ensure staff are informed of the procedure to follow when alternative clothing is required.

(a) Conclusion

10. Given the Board have accepted that Ms C's experience with the reception staff was unacceptable and that there is a procedure to follow when alternative clothing is required, I uphold the complaint.

(a) Recommendation

11. I recommend that the Board:	*Completion date*
(i) provide the Ombudsman with evidence to support that they have reviewed their gown supplies in Accident and Emergency and informed relevant staff of the procedure to follow when alternative clothing is required.	10 July 2013

(b) Miss A was inappropriately discharged by the out-of-hours GP on 5 March 2011

12. Ms C was dissatisfied that Miss A was diagnosed with gastroenteritis instead of the flu and had not been admitted to Hospital 1. In addition, Ms C was concerned that Miss A had been wheezing and had to ask the OOH GP to examine her chest.

13. In response to the complaint, the Board outlined that it was reasonable for the OOH GP to have diagnosed Miss A with gastroenteritis as she had presented with diarrhoea, vomiting and abdominal pain, which would indicate a problem with the gastro-intestinal tract. In addition, Miss A had also been diagnosed with an ear infection. Therefore, there was nothing to suggest that an incorrect diagnosis had been made at this time. The Board also advised that whilst there was no note in Miss A's medical records that her chest had been examined, the OOH GP had done so and found it to be clear.

14. As set out in paragraph 6, independent advice was obtained from a general medical practitioner (Adviser 1). Adviser 1 was surprised that the Board had not carried out an investigation, or sought the opinion of a GP experienced in out-of-hours service, in relation to the consultation that took place between the OOH GP and Miss A. Adviser 1 said that the clinical work of the OOH GP had only been commented on by an Accident and Emergency consultant.

15. Adviser 1 reviewed the care and treatment Miss A received from the OOH GP on 5 March 2011. Adviser 1 noted that the OOH GP had written an adverse incident report on 8 March 2011 in addition to the contemporaneous consultation record that was made on 5 March 2011. The adverse incident report expanded on the consultation record and included information that Miss A's chest was clear upon examination.

16. My complaints reviewer noted that Sections 3(f) and 3(g) of guidance issued by the General Medical Council (GMC) entitled 'Good Medical Practice (November 2006), sets out that doctors must keep clear, accurate and legible records when reporting the relevant clinical findings or as soon as possible after an event, such as an examination. Adviser 1 considered that, whilst it would have been good practice for the OOH GP to have noted the findings of the chest examination, Miss A had been assessed and treated appropriately on the basis of her symptoms.

17. Adviser 1 also explained that the clinical condition of children with infections can change very quickly, but it is often impossible to identify those children that are going to deteriorate and need more intensive treatment. Therefore, at the time of Miss A's consultation with the OOH GP on the morning of 5 March 2011, Adviser 1 was of the opinion that admission to Hospital 1 would not have been appropriate at this time and that there was a risk Miss A's infection could have spread to other children and staff.

(b) Conclusion

18. I recognise that Miss A was admitted to Hospital 1 on 6 March 2011 after her condition severely deteriorated. However, given the symptoms Miss A presented with on 5 March 2011, including sickness, diarrhoea, abdominal pain and earache, I consider there is insufficient evidence to support that it would have been more appropriate for Miss A to have been admitted to Hospital 1 at this time. Based on the advice I have received, I do not consider the OOH GP assessment and diagnosis to be unreasonable. Therefore, I do not uphold the complaint.

(b) Recommendation

19. I recommend that the Board:	*Completion date*
(i) remind the OOH GP of the GMC's guidance in relation to record-keeping.	10 July 2013

(c) Staff failed to adequately monitor or provide timely treatment to Miss A when she was admitted to Accident and Emergency on 6 March 2011

20. Ms C raised concerns about the monitoring of Miss A's condition after she was admitted to Hospital 1 on 6 March 2011. Ms C was concerned that her daughter had an oxygen mask on whilst on her back and vomiting, and that the medical notes stated she may have inhaled vomit into her lungs. Ms C outlined

that she had to move Miss A onto her side to prevent her choking as staff in the room had not responded. Ms C felt that, had her daughter been intubated when she arrived at Hospital 1, this could have prevented her from being sick and minimised the risk of vomit entering the lungs.

21. My complaints reviewer noted that, in view of Miss A's death, a significant event analysis (SEA) was carried out by Hospital 1 in order to examine the care that was provided to Ms C's daughter and to identify any learning points or necessary recommendations. There were two formal discussions held to consider the care that she received. The first meeting involved staff that had cared for Miss A and the second meeting involved a joint audit meeting of the Paediatric Intensive Care Unit retrieval team and the Hospital Paediatric and Anaesthetic teams.

22. In response to the complaint about Miss A vomiting while on her back, the Board advised Ms C that several members of staff had repositioned her daughter but that a patient can be managed on their back if different tests and procedures are needed to be carried out.

23. As set out in paragraph 6, independent advice was sought from a Emergency Medical Consultant (Adviser 2). Adviser 2 reviewed the care and treatment Miss A received on 6 March 2011 at Hospital 1. Overall, Adviser 2 considered that there was evidence to support that Hospital 1 followed the appropriate national guidance, that is, the Advanced Paediatric Life Support (APLS) guidelines for an unwell child with breathing difficulties who subsequently went into cardiac arrest. Adviser 2 was doubtful that Miss A's outcome would have been any different had she been treated in another emergency department. I will explain Adviser 2's reasoning for this below.

24. Adviser 2 outlined that Miss A first presented at Hospital 1 on 5 March 2011 with a three day history of headache, sore throat and abdominal pain as well as developing a temperature with diarrhoea and vomiting. When Miss A returned to Hospital 1 at 14:35 the following day, staff immediately recognised that she was severely unwell and a paediatric crash call was put out. At this time, Miss A was noted to be 'floppy and cyanosed' but was able to converse. Adviser 2 explained to me that the senior Emergency Doctor noted that Miss A's oxygen saturates were low at 90 percent and that she required oxygen via a mask to increase this to 98 percent. Fluids were then appropriately administered intravenously and it was noted that Miss A started

vomiting around half an hour later. Miss A then became bradycardic (had a slower than normal heart rate) and then asystolic (her heart stopped). Adviser 2 explained that Miss A went into cardiac arrest because of a lack of tissue hypoxia (a lack of oxygen supply) and stated that:

> 'She had presented with poor tissue perfusion, causing cellular acidosis, exacerbated by the fact that she had respiratory compromise from her influenza infection. When she vomited, this made her even more hypoxic and acidotic causing her to become bradycardic and then asystolic. This is the commonest sequence of events in children leading to asystolic arrest and requires immediate improvement in oxygenation and tissue perfusion. However even with corrective action the outcome is often poor as the child is so desperately unwell to begin with and organ injury has already occurred.'

25. Adviser 2 explained that the hypoxia and tissue perfusion were recognised by the hospital staff when Miss A first presented to Accident and Emergency on 6 March 2011 and that every effort was made to correct this promptly. In addition, cardiopulmonary resuscitation (CPR) was thereafter carried out promptly. Adviser 2 also commented that it was appropriate the Intensive Treatment Unit (ITU) Anaesthetist (the Anaesthetist) and the Paediatric Consultant were both in prompt attendance and that Miss A received appropriate antibiotics, a Computerised Tomography (CT) scan of her head and an ultrasound of the abdomen.

26. Adviser 2 noted that when Miss A was given three doses of adrenalin, she was also given two doses of atropine (a drug that can be used to regulate the heart rate). Whilst Adviser 2 did not have any significant concerns of the use of atropine, he questioned whether all members of the paediatric crash team were up-to-date with the APLS certification because the APLS guidelines no longer recommend the use of atropine in cardiac arrest. Although Adviser 2 was certain that the use of this drug caused no harm to Miss A, he was surprised that this was not picked up in the debrief or the SEA as it often indicates that one or member of the crash team are not currently APLS certified.

27. In response to Adviser 2's comments regarding the use of atropine, my complaints reviewer asked the Board whether they were satisfied that the paediatric team, who treated Miss A, were up-to-date with their APLS certification. The Board provided information on both the APLS and another similar certification, the European Paediatric Life Support (EPLS). The EPLS is

valid for four years and the Board confirmed that the paediatric team who treated Miss A all had valid certificates.

28. In response to Ms C's concerns that Miss A was wearing an oxygen mask despite episodes of vomiting and lying on her back, Adviser 2 commented that a tight fitting mask delivering oxygen was essential as any degree of worsening hypoxia could have led to cardiac arrest. Adviser 2 highlighted that the masks are transparent so that it can be readily seen if a patient vomits. Furthermore, in relation to Ms C's concerns about her daughter lying on her back, Adviser 2 highlighted that there would have been no other option in such an unwell child other than nursing her on her back. This was standard practice in all emergency departments during initial assessment and resuscitation. Miss A was still undergoing initial assessment when she arrested around 25 minutes after arriving at Hospital 1.

29. Adviser 2 considered Ms C's concerns about whether earlier intubation may have prevented Miss A from vomiting and minimised the risk of inhaling vomit into her lungs. Adviser 2 explained that Miss A was initially ventilated using a mask and then intubated by the Anaesthetist. The ITU consultant (who was not the Anaesthetist who intubated Miss A) recorded in the medical records that there was vomit in Miss A's airway and the first intubation tube had to be changed as it was blocked with vomit. However, Adviser 2 did not consider that intubation should or could have been done any sooner as it was recognised that Miss A was able to talk on arrival at Hospital 1 and she also had respiratory distress. Adviser 2 considered that, had her oxygen saturates not increased after supplemental oxygen had been given shortly after her arrival to Accident and Emergency, he would have expected intubation to be considered earlier, but this was not the case as Miss A's oxygen saturates had improved.

30. Whilst Adviser 2 commented that earlier intubation would have prevented aspiration, he advised that no reasonable clinician would have attempted to use Rapid Sequence Intubation until more aggressive resuscitation with fluid and oxygen had been carried out. Adviser 2 explained that, had the latter not been carried out, then this would have made tissue hypoxia (inadequate oxygen supply to tissue) even worse and caused cardiac arrest. Although Adviser 2 considered that intubation could not have been done any sooner, he highlighted that Miss A's clinical records should have contained more detailed information regarding the tube becoming blocked with vomit. Adviser 2 explained that the SEA lacked any depth in this respect and has not questioned the Anaesthetist

who changed the blocked tube. Whilst the intubation tube was referred to in the SEA, Adviser 2 would have expected to have seen more detail in relation to whether there was a possibility that the tube could have been misplaced, that is, placed in the oesophagus and not the trachea. Adviser 2 pointed out that there was clear evidence in the medical records to show that the initial intubation had failed (as documented by the ITU Consultant) because it was blocked with vomit but that the Anaesthetist had not documented anything in the notes about the airway problem. According to Adviser 2, this is slightly unusual as it would be good medical practice to record a failed event in the notes by the practitioner who performed the procedure and that the note should have included the amount of vomit present and degree of difficulty of the intubation together with how long it took to change the tube.

31. As set out in paragraph 6, further advice in relation to intubation was obtained from a consultant cardiothoracic anaesthetist (Adviser 3) after receiving comments from the Board and Ms C. Adviser 3 said that it would have been helpful if there had been more detail about intubation in the medical records but did not consider there were serious omissions in this respect or in the description of events. Adviser 3 was of the view that it was enough that it was noted that there was more than one intubation attempt and concluded that the record was not misleading. Adviser 3 was of a similar view to Adviser 2 that, as the first tube was blocked sufficiently with vomit to require replacing, it may have been misplaced in the oesophagus rather than the trachea, although there is nothing to prove this definitively. Adviser 3 explained that the initial intubation was a failed attempt in that the Anaesthetist realised that he had not secured a safe airway. However, Adviser 3 said that even with a properly placed tube, aspiration of vomit could always be a risk. Adviser 3 further explained that:

> 'It is not a gross failing even if the tube was misplaced given the context of the situation. Intubation with a mouth full of vomit in the midst of on-going chest compressions will increase the chance of inadvertent misplacement due to a poor view and awkward positioning. The gross failing would have been to not have recognised the misplacement or any failing to secure a safe airway. The anaesthetist appears to have correctly followed the maxim of 'if in doubt take it out' which is impressed on all anaesthetists. I.e. if any doubt as to the position or patency of the tube it should be immediately removed and replaced.'

32. Adviser 3 concluded that the replacement of the blocked tube would only have taken seconds due to the readiness of the Anaesthetist to replace the tube rather than suck out and clear the blockage. Adviser 3 said that the action to replace the tube suggests that the Anaesthetist had a low suspicion that the tube was misplaced and rapidly changed it for that reason.

(c) Conclusion

33. I have considered Ms C's complaint and the comments from my advisers very carefully. I recognise that Ms C had concerns that staff did not respond to her daughter when she began vomiting on her back. However, I have not seen sufficient evidence to support this. Taking into account the advice from Adviser 2, I consider that there is evidence to support that senior staff were promptly involved in the care and treatment of Miss A upon her arrival at Hospital 1. In addition, the paediatric team appear to have followed the APLS guidelines in terms of carrying out appropriate assessments and investigations, with the exception of the use of atropine.

34. Whilst the clinical record of the intubation and SEA could have contained more detail, I accept the advice that there is no evidence to support that there was an unreasonable delay in the blocked tube being replaced by the Anaesthetist. However, I have concerns that the SEA does not explore this, nor whether there was a possibility that the intubation tube could have been misplaced, particularly given the advice I have received that the clinical records could have provided more detail. I accept the advice I received regarding atropine not having any significant effect on Miss A, however, this was not identified or explored in the SEA. All Boards have a statutory obligation to protect patients and staff from risk and a SEA is a structured way of investigating incidents in order to improve patient care and minimise risk where relevant.

35. When Miss A presented at Hospital 1's Accident and Emergency department on 6 March 2011, she was seriously ill with poor tissue perfusion and dehydration due to fluid loss and fever. In view of the advice I have received, I conclude that Miss A was given appropriate and timely treatment. After being admitted to Hospital 1 on 6 March 2011. Therefore, I do not uphold the complaint. Given the lack of detail of the intubation in the clinical records, I am critical that the SEA did not explore in detail this aspect of the treatment, including the possibility of the intubation tube being misplaced.

36. This has been a finely balanced decision in which I have sought more than the usual amount of clinical advice. On the basis of further advice, I revised my findings as set out in the initial draft report that was sent to all interested parties. Reaching a decision would have been easier and more importantly, the family of Miss A would have been clearer about this critical period in their daughter's care, had the SEA been conducted in a more thorough fashion. I recognise the impact this whole process will have had on Miss A's family.

37. I make the following recommendations.

(c) Recommendations

38. I recommend that the Board	*Completion date*
(i) draw to the attention of relevant staff, the comments by Adviser 2 and Adviser 3 regarding documenting more detailed information on intubation in this case; and	10 July 2013
(ii) conduct a review of their SEA procedures to ensure that a detailed and robust investigation is carried out in all cases.	7 August 2013

Annex 1

Explanation of abbreviations used

Ms C	the complainant
Hospital 1	Raigmore Hospital
Miss A	the complainant's daughter
OOH GP	out-of-hours GP
Hospital 2	The Royal Hospital for Sick Children in Edinburgh
The Board	Highland NHS Board
Adviser 1	a general medical practitioner
Adviser 2	an emergency medical consultant with experience in paediatrics
Adviser 3	a consultant cardiothoracic anaesthetist
GMC	General Medical Council
SEA	Significant Event Analysis
ITU	Intensive Treatment Unit
The Anaesthetist	ITU anaesthetist

Annex 2

Glossary of terms

Acidosis	inadequate excretion of carbon dioxide from the lungs
Advanced Paediatric Life Support (APLS)	is an emergency paediatric life support course. The course provides the knowledge necessary for effective treatment and stabilisation of children with life threatening emergencies
Asystolic	no heart beat
Bradycardic	Slower than normal heart rate
Cyanosed	a bluish discoloration of the skin and mucous membranes resulting from inadequate oxygenation of the blood
European Paediatric Life Support (EPLS)	similar to APLS
Gastroenteritis	inflammation of the stomach and intestine normally caused by a virus or bacterial infection
Hypoxia	inadequate oxygen supply to tissue
Intubation	insertion of a tube into the respiratory or gastrointestinal tract through the mouth
Otitis media	inflammation of the middle ear
Significant Event Analysis	is a structured way of investigating incidents in order to improve patient care and minimise risk where relevant

Staphylococcus Aureus	bacteria that can be found in the human respiratory tract and on the skin
Tissue perfusion	the passage of a fluid through a specific organ or an area of the body
Trachea	windpipe

Annex 3

List of legislation and policies considered

The Advanced Paediatric Life Support guidance

The General Medical Council's Good Medical Practice guidance (November 2006)