Scottish Parliament Region: North East Scotland

Case 200503209: Tayside NHS Board

Summary of Investigation

Category

Health: Hospital; Extravasation Injury

Overview

Mr C raised a complaint with Tayside NHS Board (the Board) on behalf of his mother (Mrs A) about an extravasation injury she received following an IV infusion. Mr C also complained that his mother had not received proper or adequate follow-up after the injury causing several months of pain and distress before having the injury treated by plastic surgery.

Specific complaints and conclusions

The complaints which have been investigated are that:

(a) the Board failed to properly manage an IV infusion, resulting in an extravasation injury (*not upheld*); and

(b) the Board failed to follow the appropriate policy and procedures with respect to such an injury (*upheld*).

Redress and recommendations

The Ombudsman recommends that the Board:

(i) make a written apology to Mrs A for the failure to properly follow the appropriate procedures following her injury and for failing to adequately ensure appropriate follow-up by plastic surgery while Mrs A was still an in-patient at the Hospital and following her discharge; and

(ii) revise the current procedure for referral of extravasation injury in-patients to the Plastic Surgery Team with particular regard to ensuring continuity of review while an in-patient and appropriate follow-up action on discharge (in particular the giving of follow-up advice to GPs).

The Board have accepted the recommendations and will act on them accordingly.

Main Investigation Report

Introduction

1. On 20 February 2006 the Ombudsman received a complaint from Mr C on behalf of his mother, Mrs A. Mr C complained that Mrs A had suffered an extravasation injury following an IV infusion at Ninewells Hospital, Dundee (the Hospital) on 16 August 2004. Mr C also complained that his mother had not received proper or adequate follow-up after the injury causing several months of pain and distress before finally having the injury treated by plastic surgery almost 12 months after the original event. Mr C complained to NHS Tayside Health Board (the Board) but was not satisfied that his mother had received an adequate apology or that action had been taken to avoid a recurrence of the longer term problems suffered by his mother.

2. The complaints which have been investigated are that:

(a) the Board failed to properly manage an IV infusion, resulting in an extravasation injury; and

(b) the Board failed to follow the appropriate policy and procedures with respect to such an injury (upheld).

Investigation

3. Investigation of this complaint involved reviewing Mrs A's medical records relevant to the events and the Board's complaint file. I have also spoken with Mr C and sought the views of a nursing adviser to the Ombudsman (the Adviser). The Board provided me with additional information requested following receipt of the Adviser's views, this included copies of all the relevant policies and protocols.

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

5. The broad facts of this case are not in dispute. Mrs A was admitted to the Hospital on 12 August 2004 with chest and arm pain. Mrs A was gravely ill and her condition deteriorated such that she was transferred first to the high dependency unit and then to the intensive care unit (ICU) on 16 August 2004. Mrs A suffered an extravasation injury on 16 August 2004 from an intravenous (IV) infusion of

Potassium Chloride into her lower left leg. Mrs A's overall condition improved and she was transferred to Ward 10 of the Hospital on 22 August 2004 and finally discharged home on 31 August 2004. Once discharged she continued to have great difficulties walking and was admitted to a convalescent hospital. Mrs A was re-referred to Plastic Surgery by her GP and seen on 29 August 2005. A skin graft was subsequently performed in October 2005.

6. Mr C told me that his mother continued to recover her general health but that the injury to her leg continued to cause her considerable pain and anguish. Mr C complained to the Hospital on 16 October 2005. Mr C told me that within a week Mrs A received a call from the Hospital asking her to attend the Burns Unit to have a skin graft on the affected area. The skin graft was performed in October 2005. Mr C told me that the family were very grateful for the efforts that had been made by staff while their mother was critically ill but were concerned that no-one had ever apologised for the injury she had suffered to her leg and that not enough had been done to follow-up her injury and alleviate the on-going pain.

7. In response to the draft report the Board commented that the Specialist Registrar in ICU became aware of Mrs A's injury at 8:00 on 17 August 2004 and noted the need to discuss it with Mrs A's family that day, which he duly did. An explanation of the injury was given to Mrs A's daughter and although there is no formal record of an apology in the record the Board apologised if Mr C did not feel an adequate apology was made at the time of the injury.

(a) The Board failed to properly manage an IV infusion, resulting in an extravasation injury

8. In his complaint to the Board dated 16 October 2005, Mr C asked for an explanation of what had happened to cause his mother's injury, what procedures and policies were in place to prevent such an occurrence and had they been followed. Mr C received a written response from the Medical Director (designate) of the Board on 22 December 2005. In this response the Board explained that because of Mrs A's poor physical condition there were difficulties in gaining venous access for all the infusions she required and after discussion it was decided to administer an IV infusion of dextrose and strong potassium over five hours (between 6pm and mid-night) via a large bore cannula sited in Mrs A's left foot. The Board stated that IV infusions are checked every hour but only problems are

documented. Four hours after the IV commenced the nursing staff noted a query of a bruise on Mrs A's left shin and the notes for two hours later, after the infusion was finished, indicate a bigger bruise and that Mrs A's skin was cooler. The duty doctors discussed this and considered that an extravasation injury had occurred and a decision was made to mark the skin for monitoring and remove the cannula. Mrs A was reviewed the next morning by a specialist registrar who confirmed that an extravasation injury had occurred and who discussed the matter with Mrs A's family and arranged for input from Plastic Surgery.

9. The Adviser commented that there was a considerable degree of difficulty experienced by staff in securing venous access to support the complex treatment regime Mrs A required and that in this situation the fact she experienced an extravasation injury was deeply regrettable but also understandable.

(a) Conclusion

10. Based on the clinical advice I have received I am satisfied that there is no evidence to suggest that the original extravasation injury was caused by an unreasonable level of care or competence and I do not uphold this aspect of the complaint. I am concerned that the family do not recall anyone actually apologising to them at the time for the fact the injury had occurred although I note that the Clinical Team Manager did later offer an apology as part of the Board's response.

(b) The Board failed to follow the appropriate policy and procedures with respect to such an injury

11. Mr C told me that he was unhappy that the Board's written response to him acknowledged that the relevant policy had not been accessed at the time and was concerned that his mother continued to suffer with extreme pain at the site of her injury for many months. Mrs A's family felt she had been simply discharged back into the community where, despite the best efforts of the community nurses and the GP, her condition did not improve.

12. In their written response the Board advised Mr C that the extravasation policy was available to all nursing and medical staff on the Board's intranet but that there was no evidence to suggest that the policy had been accessed by staff at the time of Mrs A's injury. The Clinical Team Manager for the ICU had undertaken to ensure that staff were more aware of the policy's availability and the requirement to

access it in the future should such an episode occur. The Board response went on to detail how the incident had been reported and managed, including input from the Plastic Surgery Team. The Board also advised Mr C that, for a variety of reasons, none of the staff immediately involved in Mrs A's injury were currently employed in the ICU at the time of their investigation. Following sight of the draft report the Board have advised me that the matter was later discussed directly with these staff after the investigation had been completed.

13. The Adviser reviewed the Board policy for management of such injuries and noted that it had been followed in part by staff although she did not consider that any of the omissions were likely to have materially altered the immediate outcome for Mrs A.

14. In response to my enquiry the Board told me that the omissions noted by the Adviser were a consequence of staff not accessing the policy at the time the injury was suspected. The Board told me that the extravasation injury policy had been introduced in May 2003 and placed on the intranet at that time. Any member of nursing staff who wished to undertake IV medicine administration was required to complete a Clinical Skills Course which included reference to the availability of extravasation injury kits and the extravasation injury policy. The Board told me that the Clinical Skills Course has been reviewed in 2006 and now directs staff to access the policy and note the actions which should be taken to reduce the risks of injury and when such an injury occurs. The Board told me that the policy is audited on an annual basis with the internal audit department undertaking random checks of all policies on the intranet to ensure they are being reviewed regularly. At the time of writing to me (28 August 2006) the Board advised that there was currently a recommendation that a further system be introduced to audit staff understanding of policies accessible through the intranet.

15. In their written response to Mr C the Board noted that Plastic Surgery staff visited Mrs A on 17 August 2004 and gave staff advice regarding the management of the injured site and that the medical and nursing documentation for the ICU indicates continued monitoring of the injury and its associated care plan. The Board also advised that the Consultant Plastic Surgeon, who had eventually undertaken Mrs A's skin grafting, considered that initially conservative treatment was appropriate.

16. The medical communications sheet associated with the care plan for the extravasation injury contains an entry on 21 August 2004 indicating a review by Plastic Surgery with a planned further review on 25 August 2004. This review did not occur.

17. Mrs A was transferred to Ward 10 on 22 August 2004 and the discharge summary from ICU includes reference to the injury and associated care plan and the statement that her wound is 'under review by the plastics team' but makes no specific reference as to how or when this review will occur. Once in Ward 10 the injury continued to be managed with appropriate dressings but there was no further input recorded from Plastic Surgery. The discharge letter sent to Mrs A's GP on 15 December 2004 refers to the extravasation injury and states 'this was taken care of very well by the Plastic Team'. No further reference is made to possible complications or follow-up if the injury did not improve.

18. The Adviser told me that follow-up from Plastic Surgery seemed to have ceased following discharge from ICU and the implication in the discharge letter to the GP is that all was resolved. The Adviser considers that there is evidence of improvement in the condition of the wound in the nursing notes for Ward 10 but that it is unlikely that the matter was yet resolved as the necrotic areas of the sore would need to be removed and this would possibly require to be followed by skin grafting (as was in fact the case). The Adviser agreed with the Consultant Plastic Surgeon that conservative management would have been initially appropriate but considered that in fact there had been a failure to properly follow-up rather than a deliberate plan for conservative management.

(b) Conclusion

19. I am satisfied, based on the advice I have received, that there were no immediate untoward consequences for Mrs A of failing to access the information in the extravasation injury policy. However, I am concerned that the failure to access the policy might have had more serious consequences and that it indicates a potentially poor level of understanding on the part of nursing and medical staff. I, therefore, conclude that there was a failure to access and follow the appropriate policy with respect to extravasation injury. I commend the Board for the action they have taken to try to address the possibility of such a failure to access the policy in

the future. I will ask that they notify me of whether and when the recommendation for a proactive audit of the intranet access is (or has been) implemented.

20. Based on the view of the Adviser and my review of the relevant medical records I conclude that Mrs A was not followed-up by the plastic surgery team while still an in-patient as had been intended. I also conclude that because of this no plan was in place for follow-up on discharge and in particular appropriate advice was not given to Mrs A's GP on reviewing her injury.

21. I have concluded that there was a failure to follow the appropriate policy on extravasation injury and that there was a failure to follow appropriate procedures with respect to ongoing management of such an injury and I, therefore, uphold this aspect of the complaint.

(b) Recommendation

22. In addition to asking the Board for the outcome of their own recommendation to proactively audit intranet policy access, the Ombudsman recommends that the Board revise the current procedure for referral of extravasation injury in-patients to the Plastic Surgery Team with particular regard to ensuring continuity of review while an in-patient and appropriate follow-up action on discharge (in particular the giving of follow-up advice to GPs).

23. The Ombudsman also recommends that the Board send a written apology to Mrs A for the failure to properly follow the appropriate procedures following her injury and for failing to adequately ensure appropriate follow-up by Plastic Surgery as well as the pain and distress caused to her by the injury.

24. The Board have accepted the recommendations and will act on them accordingly.

19 December 2006

Annex 1

Explanation of abbreviations used

Mr C	The complainant
Mrs A	The aggrieved – Mr C's mother
The Hospital	Ninewells Hospital, Dundee
The Board	NHS Tayside Health Board
The Adviser	Nursing adviser to the Ombudsman
ICU	Intensive care unit

Annex 2

Glossary of terms

Extravasation Injury	Extravasation injury usually refers to the damage caused by leakage of solutions from the vein to the surrounding tissue spaces during intravenous administration
IV	Intravenous – access made directly into a vein
Necrotic	Dead tissue (usually a result of injury)