Scottish Parliament Region: Lothian

Case 200700634: Lothian NHS Board

Summary of Investigation

Category
Health: Hospital

Overview
The complainant (Mrs C) raised a number of concerns about the care and treatment of her 64-year-old husband (Mr C) on Ward 58, a high dependency unit in the Western General Hospital (the Hospital), Edinburgh. He had been transferred there on 1 August 2006 after several weeks on other wards in the Hospital and had a cardiac arrest there on 5 August 2006. Sadly, he died later that day in an intensive care unit of the Hospital.

Specific complaints and conclusions
The complaints which have been investigated are that:

(a) Mr C's care and treatment from 1 to 5 August 2006 on Ward 58 were below a reasonable standard (*upheld*); and

(b) Lothian NHS Board (the Board)'s complaint handling time was not in accordance with the NHS Complaints Procedure (*upheld*).

Redress and recommendation
The Ombudsman recommends that the Board put in place rigorous measures to address each of the five shortcomings arising from the leaking central line.

The Board have accepted the recommendation and will act on it accordingly.

Main Investigation Report

Introduction

1. The complaints from the complainant (Mrs C) which I have investigated are that:

(a) her husband (Mr C)'s care and treatment from 1 to 5 August 2006 on Ward 58 were below a reasonable standard; and

(b) Lothian NHS Board (the Board)'s complaint handling time was not in accordance with the NHS Complaints Procedure.

2. As the investigation progressed, I identified issues concerning the standard of nursing records from 1 to 5 August 2006 on Ward 58. Therefore, the investigation of complaint (a) has additionally considered whether the nursing records, from 1 to 5 August 2006 on Ward 58, were below a reasonable standard. I should emphasise that the Ombudsman's clinical advisers (the Advisers – see paragraph 4) considered that Mr C's nursing records for the other wards, and all his medical records (that is, those written by the doctors), were of a good standard.

3. Mrs C had a number of complaints which I have not included in the investigation for various reasons. For example, in respect of some aspects, I am satisfied that the Board had, before the involvement of the Ombudsman's office, provided satisfactory explanations and, where appropriate, acknowledged shortcomings and drawn up remedial plans. It is not the usual practice of this office to pursue complaints in such circumstances. However, I acknowledge that Mrs C remained dissatisfied with much of what the Board had told her. It is also part of my role to identify, and focus on, what I consider to be the heart of a complaint. As, sadly, Mr C had died, it was clear to me that the most appropriate role of the investigation would be to focus on Mr C's death and the events leading up to it, particularly those of the day before he died, when his condition worsened significantly.

Investigation

4. I was assisted in the investigation by two Advisers: a consultant hospital doctor and a nurse consultant who specialises in intensive and high dependency care. Their role was to explain to me, and provide an unbiased comment on, various aspects of the complaint. We examined the papers provided by Mrs C, which included her complaint correspondence with the Board and her opinions about the events, and the papers provided by the

Board: those included Mr C's clinical records, internal complaint correspondence from their own investigation of Mrs C's complaint, and their replies to my enquiries. In line with the practice of the Ombudsman's office, the standard by which the events were judged was whether they were reasonable. By that, I mean whether the decisions and actions taken were within a range of what would have been considered to be acceptable practice at the time in question.

5. I have not included in this report every detail investigated. For example, I have omitted much of the detail given by the Board to Mrs C as part of their own investigation into her complaint, as this information is known to her. However, I am satisfied that no matter of significance has been overlooked in the investigation. Mrs C and the Board were given an opportunity to comment on a draft of this report.

(a) Mr C's care and treatment from 1 to 5 August 2006 on Ward 58 were below a reasonable standard

6. A reminder of the abbreviations is at Annex 1. I turn now to the events in question, starting with a short summary. Having been in another of the Board's hospitals, Mr C, a 64-year-old man, was transferred to the Western General Hospital (the Hospital) in July 2006 for a bowel operation, which was performed on 14 July 2006. Mr C's condition deteriorated, and he spent time on various intensive care and high dependency units before being moved to the ward in question, Ward 58 (see next paragraph), on 1 August 2006. He was there from 1 to 5 August 2006. On 5 August 2006, he had a cardiac arrest and was transferred to an intensive care unit in the Hospital, where, very sadly, he died later that day.

7. Ward 58 is a high dependency unit. High dependency units are for patients who need closer, more specialised, nursing attention than could be expected on a general ward but less than in an intensive care unit. They rely on good observation and good record-keeping. High dependency units differ within and between hospitals, depending on which patient-care levels are catered for and on whether the unit is surgical or non-surgical. Patient-care levels are based on national classifications. In general (although this varies between hospitals), there are four levels, with level 3 relating to intensive care, levels 2 and 1 relating to two different levels of high dependency care and level 0 relating to care which can be given on a general ward. The Board told me that Ward 58 provides care for level 1 patients and that the staffing ratio there was

one nurse for every three patients. The Advisers have confirmed that this ratio is in line with national recommendations and is a typical number for such a unit.

8. Mrs C had many concerns about her husband's care and treatment on Ward 58, which she felt amounted to neglect and caused her husband's death.

9. More detail about the nature of the complaints investigated will be clear from the Advisers' initial comments, which I summarise in this paragraph and at paragraphs 10 to 12:

> 'There are few Ward 58 nursing records for Mr C from 1 to 5 August 2006. This is an unacceptable standard of nursing practice. One of the consequences is that it is not possible to know enough about - and, therefore, comment on – much of the nursing care during that time, in particular during 4 to 5 August 2006, when Mr C's condition worsened.
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> Twenty-four hour monitoring charts were, however, completed for 3, 4 and 5 August 2006 on Ward 58. Generally, the observations which were carried out were recorded two-hourly. This was an appropriate frequency. We note that the frequency was increased to half-hourly/hourly during the administration of two blood transfusions on 4 and 5 August. That is in line with expected practice. However, we would have expected the frequency to have been increased to hourly from 14:00 on 4 August because of a drop in Mr C's oxygen saturation level. The fluid balance records on Ward 58 were mainly completed well – except for a shortcoming from 20:00 onwards on 4 August, when nursing staff did not record Mr C's fluid input and output. Mr C's condition worsened significantly on 4 August. However, there was inadequate recognition of this in the charts and inadequate indication that nursing staff acted on any observations of his deterioration. There are systems in existence, which are usually known as early warning scores systems or track and trigger systems. These enable the documenting of certain observations, to act as a trigger for action where appropriate. Subtle changes and/or a slow deterioration can make a worsening trend easy to miss. However, a track and trigger system means that a pattern of deterioration can be revealed. We would expect that a patient who begins to show signs of deterioration be placed on some sort of track and trigger system.'

10. In her complaint to the Board, Mrs C asked why her husband's 'wheeziness and unsteady breathing' were not recorded. The Advisers

confirmed that they would not expect the 24-hour monitoring charts to contain such information.

11. The Advisers expressed concern about the standard of nursing leadership on Ward 58 at the time in question, saying:

> 'It would be standard practice on a high dependency unit to have a shift supervisor on duty to provide supervision, training and advice to other nurses, to give support in decision making and to help staff to prioritise care. On the day shift of 4 August 2006, it is noted that four trained nursing staff were on duty for ten patients. The ward was extremely busy. A nurse caring for Mr C was caring for two other patients also; in internal comments to the Board following Mrs C's complaint to them, that nurse described a busy shift, in which he was unable to take his allotted break and had difficulties in prioritising and caring for a large number of patient needs. Difficulties in nursing care overall on Ward 58 can be shown by examples such as the failure to replace a damp gown, the placing out of reach of a sick bowl, the difficulty of finding a commode and the failure to follow the Board's procedures for dealing with patients' possessions. This suggests problems with staffing levels, nursing competencies and/or the support, leadership or direction of the nursing team.'

12. The Advisers had many concerns arising from a leaking central line. This was a long line inserted into a vein in Mr C's neck to give him nutrition and insulin. As a diabetic, it was important for Mr C to maintain a balance of these. For example, the sugar level in the blood of a diabetic falls below normal if they receive too much insulin. Symptoms of low blood sugar can include agitation, slurring of speech, confusion, unconsciousness and death. I summarise below the leaking line issues and the Advisers' initial views:

> 'The nutrition chart for Mr C's central line showed an entry at 16:00 on 4 August 2006: '[nutrition] stopped by day staff – c line leaking'.
>
> The insulin chart for the central line showed his insulin as continuing, despite the nutrition having stopped. For example, the insulin was checked at 16:45 and 18:45 but not stopped. (Staff checking the insulin would not necessarily have been able to see that the line was, or had been, leaking: this would have been more visible when trying to put the nutrients into the line.) Despite the leak, some insulin would have been going down. There is no evidence of appropriate monitoring of the blood sugar level after the stopping of the nutrition.

The 24-hour chart for 4 August shows Mr C's blood sugar level at 20:30 as 2.1 millimoles per litre. This is much lower than the normal sugar level of four to six millimoles per litre. The chart at 20:30 states, 'milk and biscuit – awaiting [access into the veins]'. In other words, at 20:30 someone had noticed the abnormally low blood sugar level, had presumably arranged for a doctor to come (who would be able to replace the central line or take some other action to get sugar in quickly through a vein) and had taken some short-term remedial action by giving carbohydrate. (Giving the milk and biscuit would normally have been an appropriate action, and one cannot criticise the nursing staff for this. However, because of Mr C's situation by now, this could not be adequate. For example, his gastric function was too poor (such as ability to keep food down or absorb anything from food) and his level of consciousness could have been slipping too much. The only real answer was to get sugar directly in through a vein.)

The insulin chart states, for 21:30 on 4 August, that the blood sugar level was 2.1 and that the insulin was stopped (presumably because of this very low sugar level).

In the absence of nursing notes, it is not possible to say whether a doctor had, as indicated by the 20:30 note, been called and, if so, why none came. Apart from the stopping of the insulin at 21:30, nothing appears to have happened after the low blood sugar was noticed at 20:30 until around 22:00 on 4 August: at that time the medical notes say that the central line was leaking, that the blood sugar level had now worsened to 1.1, that Mr C was agitated and confused (ie showing symptoms of low blood sugar) and that an anaesthetist was called, who accessed his veins and gave him sugar.

The next note in the medical records is for several hours later, recording Mr C's cardiac arrest.

The type of cardiac arrest is recorded as pulseless electrical activity. There are many causes for this type, including low oxygen levels. Low blood sugar reduces consciousness levels, which increases the probability of gastric aspiration, which causes low oxygen levels. The medical records show low oxygen levels in the time leading up to the cardiac

arrest. There is, therefore, a possibility that the low blood sugar level led to the cardiac arrest. It is not possible for anyone to know if this was the case. However, the low blood sugar was avoidable.

In summary, when nursing staff stopped nutrients going into the central line at 16:00 on 4 August, the team had a responsibility to monitor how that was affecting Mr C's blood sugar level. Adequate monitoring would have enabled the insulin to be stopped earlier, avoiding the low blood sugar levels. There is no evidence that anyone took any such responsibility. The low blood sugar level of 2.1 was not noticed until 20:30. And, for reasons unknown, although the situation was recognised at 20:30, no doctor came until one was called (again?) at around 22:00. This is all unacceptable.'

13. The Advisers said that Mr C's last 24 hours showed a patient whose reserves by that time were so low that even a slight deterioration would have been likely to have a significant adverse effect. They emphasised that it was not possible to say whether Mr C's death could have been avoided. Although aged only 64, he was at extremely high risk of having a heart attack at any time because he was a long-term smoker, with, for example, diabetes, high blood pressure and a family history of heart disease. However, they said that his care and treatment on Ward 58 could, and should, have been much better. In commenting on a draft of this report, Mrs C made the point that her husband's diabetes and high blood pressure had been well under control through diet, medication and regular clinic checks.

14. The Board's response to me about the complaint is summarised below:
'The staff to patient ratio on Ward 58 is one to three, and patient occupancy at the time in question was 79%. Before August 2006 it had already been noted that the clinical leadership of Ward 58's relevant senior nurse [referred to in this report as the Senior Nurse] was less than robust. Steps had been taken to address this through the support of the clinical nurse manager, who spent several shifts working with the Senior Nurse. It should also be noted that the Senior Nurse was unwell at this time. Following this period of support and supervision, there were demonstrable improvements. Regrettably, the Senior Nurse's continuing ill health meant that the improvements were not maintained. However, we can also say that the Senior Nurse is no longer in our employment. A new charge nurse was appointed in January 2008, and the chief nurse reports

that she has been taking significant steps to improve nursing standards on the ward.

We acknowledge that the nursing records were not of an acceptable standard. The nurse who delivered the care which was based on the care plan which had been developed for [Mr C]'s individual needs did sign the plan to confirm that the care had been given. However, we acknowledge that this did not offer a view of subtle changes in [Mr C]'s condition, although, used in conjunction with the 24-hour chart, it does afford a view of the physiological changes and the actions taken when aberrant. We acknowledge that this does not assist with a full investigation into the issues raised by [Mrs C]. This method of recording the care given relies on exception reporting and, in the case of straightforward elective care, provides a view of the patient's progress. The care planning approach was being utilised in [Mr C]'s case but we acknowledge it was insufficient to allow for recording of the deterioration that occurred on 4 August 2006. We also accept the Advisers' comment that the fluid balance chart should have continued to be completed. Because of concerns arising from this complaint and elsewhere, the Board have been taking a number of actions to improve the situation. The new charge nurse and the clinical nurse manager undertook a review of care planning and recording. A group has been set up and is reviewing the use of patient notes and charts, to bring together the varied documents in place within different specialties and on different sites. In addition, a team within each directorate is carrying out a monthly audit of case notes in order to highlight appropriate recording of care and to identify areas for improvement. That work feeds in to our existing Quality Improvement Team programmes for the improvement of care. Finally, we intend to hold a seminar and workshops to address written communication issues, including those that have emerged from complaints, and to highlight the standards which we require.

We accept the Advisers' comment that the frequency of observations should have increased to hourly when [Mr C]'s oxygen saturation level dropped.

The 24-hour charts are used successfully elsewhere within the Board, which suggests that shortcomings lay not with the chart's design but with staff's failure to act on the information in them. We have been reviewing our use of early warning scores systems and are implementing the

recommendations in a guideline which was produced for NHS England and which covers, amongst other things, track and trigger systems. A senior intensive care consultant within the Board is leading a group to implement this across the Division. In other words, its impact will reach beyond Ward 58.

In conclusion, from a medical perspective it would be difficult to say that [Mr C]'s death was avoidable because of his underlying medical conditions. However, from a nursing perspective, it would be difficult to repudiate the inference that the absence of robust observations and reporting of variances resulted in [Mr C]'s receiving less than appropriate management. We accept that, on Ward 58, [Mr C] did not receive an acceptable standard of care, the clinical leadership was less than acceptable and the documentation of care for complex cases was inadequate. Changes to the management structure were made in January 2008, and the chief nurse reports that there have been significant steps to improve nursing standards on the ward.'

15. For the most part, the Advisers welcomed the very many good measures taken by the Board, accepted the Board's comments and accepted that the design of the 24-hour charts was of a reasonable standard for a high dependency unit.

16. However, there was no evidence that the Board had at any time identified any concerns arising from the leaking central line and there was evidence that part of their investigation of the complaint had been less than rigorous. In her complaint to the Board, Mrs C said that one of her daughters visited Mr C from 19:00 to 20:00 on 4 August 2006 and noticed that Mr C's gown was wet because his central line was leaking. Mrs C said that, when her daughter told a nurse, the nurse simply switched the line's pump off, saying, 'It won't leak now'. In a letter to Mrs C, dated 5 April 2007, the Board said that the 'considered opinion' of the clinical staff was that the line could only have been leaking for about 30 minutes. In other words, their view was that the line started leaking at around 18:30. In their letter to Mrs C, they also said they could not say whether the nurse had made the quoted remark and added that there was no evidence in the records to suggest that switching off the central line was detrimental to Mr C. However, as stated (near the start of paragraph 12), I note that the nutrition chart for the central line clearly stated, for 16:00 on 4 August 2006, that the line was leaking. Therefore, either the nutrition chart was wrong, or Mrs C's

daughter's visit was much earlier than 19:00, or the Board accepted too readily the staff's comments that the line could only have been leaking for 30 minutes before the visit.

17. Moreover, the Advisers were surprised that the Board's comments to me about the complaint made no mention of the consequences of the leaking line. They were also surprised that, when replying to Mrs C, the Board did not appear to have realised that the line had been noted as leaking as early as 16:00 on 4 August 2006, did not seem to have seen any need to investigate the delay until about 22:00 of a doctor's arrival (given that the note of 20:30 stated 'awaiting IV access', which would have required a doctor) and, overall, did not appear to have recognised any adverse consequences from the stopping of the nutrition at 16:00 because of the leaking line.

18. The Advisers were clear that one could not say whether Mr C's death was avoidable. For example, one could not say that the issues with the leaking central line led to his death. However, they said the Board should not ignore the possibility of a link between the significant upset to Mr C's metabolism and, a few hours later, his cardiac arrest. The issues with the central line on 4 August 2006, and the Board's later consideration of the subject, were unacceptable. The Advisers identified five shortcomings:

- the failure to recognise any wider implications when nutrients were stopped at 16:00;
- the failure to monitor the effect on Mr C's blood sugar level of the insulin which continued to be given after 16:00;
- the continuation of the insulin for about an hour after the blood sugar level was noted (at 20:30) as being very low;
- the delay until about 22:00 in the arrival of a doctor who could gain access to the veins and give sugar; and
- the Board's consideration of the leaking line when considering the complaint about Ward 58.

The Advisers said they would expect the Board to take significant action to prevent a recurrence of these shortcomings.

(a) Conclusion

19. The Board could give me no evidence of certain aspects of the nursing care because of the shortage of nursing records. To their credit, they have fully acknowledged weaknesses in the care on Ward 58, including weaknesses in

the Senior Nurse's leadership and support. Together with the shortcomings identified regarding the completion of the 24-hour charts and the failure to act on information in the charts, these shortcomings are so serious that I have no option but to uphold these aspects of complaint (a). The Ombudsman welcomes all the actions described by the Board and has, therefore, decided to make no recommendations for further action – except in relation to the central line issues (see next paragraph).

20. The Advisers have said clearly that one could not know whether Mr C's death was caused by the various shortcomings arising from the leaking central line. However, the shortcomings were so serious and indisputably did lead to dangerously low blood sugar levels that the Advisers were clear that the Board should take significant action to prevent, as far as reasonably possible, any recurrence. They were also concerned that the Board appeared never to have acknowledged any shortcomings arising from the leaking line and, therefore, never to have learnt any lessons from this. I accept the Advisers' advice, and the Ombudsman has, accordingly, made a recommendation relating to the five shortcomings listed in paragraph 18. She is pleased that, in commenting on a draft of this report, the Board said that staff had now received training in central line care and management. The Board also asked for their sincere apologies to be passed to Mrs C in respect of the central line shortcomings and for not having covered the issue properly in their complaint correspondence to her. The Ombudsman welcomes this and is happy to pass on the apology through this report. In all the circumstances, I uphold complaint (a).

(a) Recommendation

21. The Ombudsman recommends that the Board put in place rigorous measures to address each of the five shortcomings arising from the leaking central line.

(b) The Board's complaint handling time was not in accordance with the NHS Complaints Procedure

22. Mrs C complained that the Board took five months to respond to her complaint. The Board have accepted this and told me of the imminent additional member of the complaints team to provide an additional resource. They also explained that the complaint to them had covered many issues, a detailed investigation of which had required time.

(b) Conclusion

23. I note the Board's failure to follow the following extract from the NHS Complaints Procedure:

> '57. … Where it appears the 20 day target will not be met, the person making the complaint … must be informed of the reason for the delay with an indication of when a response can be expected. The investigation should not, normally, be extended by more than a further 20 working days.
>
> 58. While it may be necessary to ask the person making the complaint to agree to the investigation being extended beyond 40 working days, for example because of difficulties caused by eg staff illness, they should be given a full explanation in writing of the progress of the investigation, the reason for the requested further extension, and an indication of when a final response can be expected. The letter should also indicate that the Ombudsman may be willing to review the case at this stage if they do not accept the reasons for the requested extension.'

24. The Board did send holding letters to Mrs C, except in the couple of months before the complaint response. As this is a fairly minor shortcoming, the Ombudsman is not making any recommendation. I welcome the Board's comment to me that holding letters will now be more explanatory. That should satisfy paragraph 57 and part of paragraph 58 of the NHS Complaints Procedure. Paragraph 58 allows for complaints to take some months. But, as it indicates, Mrs C should have been given the chance to have her complaint taken over by the Ombudsman at a certain point. She was not given that choice. In all the circumstances, I uphold complaint (b). In commenting on a draft of this report, the Board indicated that the complaints staff were now mindful of the requirements of the above paragraphs 57 and 58, that mechanisms were now in place to ensure that holding letters were sent and that the complaints team's processes were currently being reviewed. The Ombudsman welcomes this and has, therefore, decided to make no recommendation for further action in respect of complaint (b).

25. The Board have accepted the recommendation and will act on it accordingly. The Ombudsman asks that the Board notify her when the recommendation has been implemented.

Annex 1

Explanation of abbreviations used

Mrs C	The complainant
Mr C	The complainant's husband
The Board	Lothian NHS Board
The Advisers	Clinical advisers to the Ombudsman
The Hospital	Western General Hospital, Edinburgh
The Senior Nurse	The relevant senior nurse on Ward 58