**Scottish Parliament Region: North East Scotland**

**Case 201001566: Grampian NHS Board**

**Summary of Investigation**

***Category***

Health: Hospital; Oncology

***Overview***

The complainant (Mr C) raised a number of concerns about the treatment which his late wife (Mrs C) received when she attended Aberdeen Royal Infirmary (the Hospital) as a day patient on 18 March 2010. Mrs C fell and fractured her hip while receiving chemotherapy treatment but the fracture was not identified on x-ray and she was discharged home. Mrs C received a telephone call from a consultant oncologist at the Hospital (the Consultant) on 22 March 2010 and was told that she had to return to hospital as the fracture had been identified when he had reviewed the x-ray. Mrs C was admitted to the Hospital that day but her condition deteriorated and she died on 26 March 2010.

***Specific complaint and conclusions***

The complaint which has been investigated is that the care and treatment which Mrs C received at the Hospital on 18 March 2010 was inadequate (*upheld*).

***Redress and recommendations***

| The Ombudsman recommends that the Board: | *Completion date* |
|---|---|
| (i) bring this report to the attention of the On-call doctor's clinical supervisor and determine whether there is a training requirement for the interpreting of x-rays; and | 4 March 2011 |
| (ii) formally apologise to Mr C for the On-call doctor's failure to correctly interpret the x-ray on 18 March 2010. | 4 March 2011 |

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

## Main Investigation Report

### Introduction

1. On 21 July 2010 the complainant (Mr C) wrote to my office to submit a complaint against Grampian NHS Board (the Board). Mr C raised a number of concerns about the treatment which his late wife (Mrs C) received when she attended Aberdeen Royal Infirmary (the Hospital) as a day patient on 18 March 2010. Mrs C fell and fractured her hip while receiving chemotherapy treatment but the fracture was not identified on x-ray and she was discharged home. Mrs C received a telephone call from a consultant oncologist at the Hospital (the Consultant) on 22 March 2010 and was told that she had to return to hospital as the fracture had been identified when he had reviewed the x-ray. Mrs C was admitted to the Hospital that day but her condition deteriorated and she died on 26 March 2010. Mr C complained to Grampian NHS Board (the Board) but remained dissatisfied with their response.

2. The complaint from Mr C which I have investigated is that the care and treatment which Mrs C received at the Hospital on 18 March 2010 was inadequate.

### Investigation

3. In conducting the investigation in this case my complaints reviewer reviewed Mrs C's clinical records and the complaints correspondence with the Board. He also took into account the Board's Protocol for Medical Staff Outwith Radiology to interpret images (x-rays) and sought advice from two of my professional advisers, who are a consultant clinical oncologist (Adviser 1) and a senior nurse (Adviser 2).

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. An explanation of the abbreviations used in this report is contained in Annex 1 and a glossary of terms is at Annex 2.

### Complaint: The care and treatment which Mrs C received at the Hospital on 18 March 2010 was inadequate

5. In his complaint to the Board dated 13 April 2010, Mr C set out his concerns about Mrs C's care and treatment. This was that Mrs C was admitted to Ward 15 on 18 March 2010 for chemotherapy treatment. She had been

sitting in a chair for ten hours and as she attempted to go to the bathroom, she fell onto her right side. Mrs C was taken for x-ray at 18:45 and was told her hip was badly bruised. She returned to the ward and, despite being in serious pain and unable to stand or walk, Mrs C was allowed home. On 22 March 2010 Mrs C received a telephone call from the Consultant who said there had been a mistake and that Mrs C had in fact fractured her hip. An ambulance was called and Mrs C was admitted to the Hospital. Mrs C developed breathing problems and the following day was put on antibiotics for a lung infection. Initially Mrs C showed signs of improvement and it was decided she was well enough to undergo radiotherapy on 25 March 2010. However, due to complications, surgery to repair the hip fracture was postponed. Mrs C again looked better on 25 March 2010 but she passed away on 26 March 2010. Mr C was aware that Mrs C had been diagnosed with lung cancer some three weeks previously and the long-term prognosis might not have been good. However, he felt the fractured hip had led to Mrs C's premature death. Mrs C had not been in immediate danger on the day of the chemotherapy treatment; the Hospital failed in their duty of care; and did not correctly diagnose the fractured hip. Mr C felt that staff were negligent in sending Mrs C home in such a condition. This had put a strain on her body and she needed all her resources to fight the cancer.

6. The Board's chief executive (the Chief Executive) wrote to Mr C on 7 May 2010. He explained that Mrs C was fit and well and working prior to Christmas 2009. She then developed pain around the right posterior chest wall with associated cough, anorexia and weight loss. A chest x-ray and CT scan showed a 7-centimetre tumour extending into the fourth and fifth ribs. Mrs C also had a significant past medical history with previous cancer of the cervix and recent breast cancer. Mrs C also smoked and had significant chronic obstructive pulmonary disease (COPD) with emphysema being apparent on the chest CT scan. Core biopsy of the lung tumour was diagnosed as primary squamous cell carcinoma of the lung (third primary cancer).

7. The Chief Executive continued that the Consultant met Mrs C on 5 March 2010 and despite her pulmonary function, Mrs C was deemed fit to undergo chemotherapy and radiotherapy. With stage III lung cancer treatment durable control of the cancer was expected, with average survival of 18 months. Investigations revealed no evidence of metastatic disease outside the chest. Mrs C was admitted as a day case to Ward 15 on 18 March 2010 for the first course of chemotherapy. He advised that during chemotherapy it is normal practice to give two to three litres of fluid [by Intravenous drip (IV) drip] to induce

a large volume of urine. This is to protect the kidneys from the chemotherapy medication, Cisplatin. The Chief Executive advised that patients regularly take their IV stands to the toilet and it was thought that Mrs C fell as she left her chair to go to the toilet. Mrs C had had a full day of chemotherapy and would have been tired. As Mrs C stood up she put her foot on a place on the chair not intended for weight bearing and she fell to the floor injuring her right hip. Mrs C had fallen heavily, she complained of localised hip pain and was unable to weight bear. Mrs C was reviewed by the on-call doctor (the On-call Doctor) and, although uncomfortable, she was reluctant to go for a x-ray and her main concern was that she would be able to go home that evening. A clinical examination was not typical of a fractured hip: there was no shortening or rotation of the right leg; range of movement in the right leg was limited to flexion only but good in all other directions. However, in spite of this and because of the diagnosis of cancer and inability to weight bear, a x-ray was arranged and painkillers requested.

8. The Chief Executive explained that, following the x-ray, Mrs C was reviewed by the On-call Doctor and she reported that she was comfortable; that the painkillers were effective and that she could transfer from bed to chair. The On-call Doctor reviewed the x-ray but did not detect a fracture. The overall impression was that it was not a fracture and, therefore, the On-call Doctor did not request a second opinion at that time. Had the examination been more suggestive of fracture or had Mrs C's description of the pain been more severe, then the On-call Doctor would have arranged an orthopaedic assessment on the evening of the fall. The Chief Executive advised that all x-rays are reviewed by a radiologist whose conclusions are passed to the doctor who treated the patient and it was at that point that the fracture was noticed. The Consultant received the x-ray report of the fracture on 22 March 2010 and when he telephoned Mrs C, her GP was present in the house. It was agreed with the on-call orthopaedic team that Mrs C would be admitted to Ward 46 via the Accident and Emergency Department. On admission, Mrs C was treated with intravenous antibiotics, fluids and Pamidronate. The Chief Executive indicated that, at that time, surgery for the hip fracture was not appropriate and Mrs C was treated with bed rest and painkillers. Initially Mrs C showed signs of improvement and the Consultant arranged a short course of radiotherapy for the chest cancer, as chemotherapy was no longer deemed safe. The hope was that Mrs C would improve sufficiently to allow surgery for the fracture.

9. The Chief Executive continued that Mrs C deteriorated on 26 March 2010 and died. As Mrs C had COPD and lung cancer she was vulnerable to a further chest infection, which happened, and she was too ill for an operation to her hip. The Chief Executive explained that the death certificate mentioned the left lower lobe pneumonia was the primary cause of death and the other causes were significant conditions which contributed to but were not part of the main sequence of events causing death. With Mrs C's pre-existing lung cancer and COPD, the further insult of fracture was a significant injury which would have impacted on her overall health and reserve to fight infection. An apology was made that Mrs C was sent home from hospital before the fracture of the hip was identified.

10. The issues my complaints reviewer asked Adviser 1 to consider were whether he had any concerns about the medical review which was carried out on Mrs C following her fall; whether it was reasonable for the On-call Doctor not to have realised from the x-ray that Mrs C's hip was fractured; was it appropriate to have discharged Mrs C from the clinic; and whether it was reasonable to postpone surgery until Mrs C's health improved. My complaints reviewer was satisfied that the On-call Doctor met the Board's criteria to interpret x-rays.

11. Adviser 1 reviewed Mrs C's clinical records and observed that the clinical record-keeping was of a generally high standard and informative in giving an understanding of Mrs C's condition. The medical documentation of the medical assessment carried out on Mrs C following the fall appeared full and the On-call Doctor appeared to have made an appropriate clinical examination and assessment. However, the conclusion which was drawn from the assessment was incorrect. Adviser 1 had concerns about the medical review, in that the hip fracture, which was clearly demonstrated on the x-ray was missed. This was of particular concern when the x-ray was performed specifically to exclude fracture. However, if the x-ray had been normal (as the On-call Doctor thought it was) then the subsequent conclusion, assessment and plan (analgesia and discharge with pain thought to be secondary to soft tissue injury) was appropriate. Adviser 1 had concerns about the training of the On-call Doctor, particularly about his ability to interpret x-rays correctly. Adviser 1 continued that the fracture was obvious enough on the x-ray and that he would expect a doctor of any training grade to be able to detect it. Adviser 1 indicated that this was a matter of training for the individual doctor concerned rather than a systematic failing of the Board's procedures.

12. Adviser 1 went on to say that, given the erroneous clinical diagnosis (pain secondary to soft tissue injury), it was not unreasonable to send the patient home, although, had the correct diagnosis been made, then Mrs C would not have been sent home. Adviser 1 continued that it was entirely appropriate to wait until Mrs C's health improved before attempting hip surgery. Mrs C's health was such that at any point during her illness (specifically including the time of the fracture) she had multiple co-morbidities which would have made a hip replacement operation potentially dangerous. Even before her hip fracture, Mrs C would have presented a very severe anaesthetic risk, in that she had multiple co-morbidities and was hypoxic (oxygen deficient) on room air.

13. Adviser 1 believed from his review of the notes that progression of Mrs C's malignancy was what eventually led to her death. It was reasonable to assume that the biological insult of the hip fracture, as well as the very significant biological insult of strong chemotherapy, further added to her deterioration such that she collapsed on 26 March 2010. Adviser 1 added that the failure to diagnose Mrs C's hip fracture led, at the very least, to her having some days at home in pain, causing distress both for her and for her family, which would have been avoided if the hip fracture had been noted and had she remained in hospital.

14. Adviser 1 told my complaints reviewer that as a general observation, although Mrs C's disease led to her death, the care pathway which was in process worked extremely quickly and efficiently to diagnose her cancer and start treatment. He noted Mrs C was seen by the Oncology Department within eight days of the original referral being requested and she had a CT scan on the same day. Within a further nine days Mrs C had been assessed by Thoracic Medicine Department and only waited a few more days for a biopsy. To be able to assess, diagnose and institute treatment for a patient with lung cancer in such a relatively short space of time suggested to Adviser 1 that this was a Unit which was highly focussed to lung cancer care and expert in it. The only major deficiency appeared to be the radiographic training for the On-call Doctor.

15. My complaints reviewer asked Adviser 2 whether a falls risk assessment should have been carried out on Mrs C while she was undergoing her chemotherapy treatment. Her medical records did not highlight that she suffered from mobility problems prior to attending the day clinic. Adviser 2 explained that in essence she would not normally expect staff to conduct a falls risk assessment for a patient attending a day facility and it appeared from the

information available that Mrs C was independent prior to her attendance. She confirmed that it would be normal procedure for such patients to be attached to an IV drip on a stand which can be wheeled about to allow them to move from a chair or bed to the bathroom, etc.

*Conclusion*

16. Mr C's complaint to my office was that the care and treatment which Mrs C received at Aberdeen Royal Infirmary on 18 March 2010 was inadequate. It is clear from the records that Mrs C received recognised chemotherapy treatment, in that she had to attend the day ward and was attached to an IV drip stand which allowed her to move about if required. I am also satisfied that when staff were alerted to Mrs C's fall they took appropriate action and had her reviewed by the On-call Doctor who arranged for her to undergo a x-ray. The On-call Doctor then reviewed the x-ray and failed to notice that Mrs C had fractured her hip and deemed that she would be suitable for discharge. It was only when the x-ray was reviewed under the Board's procedures that the error was noticed and Mrs C was recalled to the Hospital. However, given Mrs C's underlying medical conditions, it would not have been appropriate for her to have undergone surgery at that time and the injury was suitable for conservative treatment.

17. I am extremely concerned that Adviser 1 has criticised the On-call Doctor's interpretation of the x-ray and that in his opinion the fracture was clearly visible and would have been noticed by a doctor of any grade. Had the On-call Doctor any doubts about interpreting the x-ray he could have sought a second opinion but the Board's response was that there were no obvious signs of a fracture. Although Mrs C had expressed a desire to return home, she should have been admitted to hospital where staff could have monitored her closely and provided an appropriate level of analgesia. Instead, she was discharged from the Hospital in some pain and this caused distress for her and her family.

18. Insofar as Mr C's belief that the failure to identify the hip fracture hastened Mrs C's death is concerned, I am unable to agree with such a view. The advice which I have received is that while it was reasonable to assume that the trauma of a hip fracture as well as the strong chemotherapy were contributory factors, it was a progression of Mrs C's malignancy which eventually led to her death. For the reasons which have been stated, I uphold the complaint.

*Recommendations*

| 19. I recommend that the Board: | *Completion date* |
|---|---|
| (i) bring this report to the attention of the On-call Doctor's clinical supervisor and determine whether there is a training requirement for the interpreting of x-rays; and | 4 March 2011 |
| (ii) formally apologise to Mr C for the On-call Doctor's failure to correctly interpret the x-ray on 18 March 2010. | 4 March 2011 |

20. The Board have accepted the recommendations and will act on them accordingly. The Ombudsman asks that the Board notify him when the recommendations have been implemented.

**Annex 1**

## Explanation of abbreviations used

| | |
|---|---|
| Mr C | The complainant |
| Mrs C | Mr C's wife |
| The Hospital | Aberdeen Royal Infirmary |
| The Consultant | The Consultant Oncologist responsible for Mrs C's cancer treatment |
| The Board | Grampian NHS Board |
| Adviser 1 | Ombudsman's professional medical adviser |
| Adviser 2 | Ombudsman's professional nursing adviser |
| The Chief Executive | The Board's chief executive |
| The On-call Doctor | The medical on-call doctor who examined Mrs C on 18 March 2010 |

**Annex 2**

## Glossary of terms

| | |
|---|---|
| Chronic Obstructive Pulmonary Disease (COPD) | Lung disease |
| Computed Tomography (CT) Scan | Computerised X-ray Procedure |
| Cisplatin | Chemotherapy medication |
| Co-morbidities | The presence of other disorders (or diseases) in addition to the primary disorder |
| Emphysema | Long term lung disease |
| Intravenous drip (IV) drip | Continuous introduction of a solution directly into a vein |
| Pamidronate | Medication to treat excess calcium in the blood and cancer of the bones |

**Annex 3**

## List of legislation and policies considered

Board Procedure for Entitlement of Medical Staff Outside of Radiology Departments to interpret images