

## Scottish Parliament Region: North East Scotland

### Case 201204379: Grampian NHS Board

#### Summary of Investigation

##### **Category**

Health: Cardiology; clinical treatment; diagnosis

##### **Overview**

The complainant (Mrs C) raised a complaint on behalf of Ms B about the care and treatment provided to her late mother (Mrs A) by Grampian NHS Board (the Board).

##### **Specific complaint and conclusion**

The complaint which has been investigated is that staff at Dr Gray's Hospital (Hospital 1) failed to provide Mrs A with appropriate care and treatment following her admission on 6 April 2012 with severe chest pain (*upheld*).

##### **Redress and recommendations**

	<i>Completion date</i>
The Ombudsman recommends that the Board:	
(i) apologise to Ms B for the failures identified;	26 February 2014
(ii) reflect on the failure to examine Mrs A's chest and ensure that measures are in place to prevent a similar occurrence in the future;	26 March 2014
(iii) undertake an audit of record-keeping within Ward 8 to ensure medical records are completed timeously and comprehensively and report back to the Ombudsman; and	26 March 2014
(iv) bring this report to the attention of relevant staff during their appraisals to ensure lessons have been learned from this case.	26 March 2014

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

## **Main Investigation Report**

### **Introduction**

1. The Complainant (Mrs C) said that Mrs A had a history of heart problems and in July 2010 a percutaneous coronary intervention (PCI) procedure was carried out when two stents were implanted to unblock two coronary arteries. A year later, however, Mrs A developed recurrence of her angina symptoms and a coronary angiogram test revealed that the previously stented coronary arteries had become significantly re-narrowed. In November 2011 Mrs A had attended Aberdeen Royal Infirmary (Hospital 2) when the PCI procedure was repeated. Mrs A remained symptom-free for only a short period before her angina recurred again and saw a consultant cardiologist (Doctor 1) at Dr Gray's Hospital (Hospital 1) on 28 February 2012, who booked her for a repeat coronary angiogram test with a view to then considering revascularisation, depending on the angiogram findings. On 9 March 2012 Doctor 1 referred Mrs A for Coronary Artery Bypass Grafting (CABG) surgery on a priority basis.

2. On 6 April 2012 (at approximately 21:40) Mrs A experienced severe chest pain and attended Hospital 1. Mrs C said that it was believed that, during the initial admission, she was examined by a duty doctor, received morphine and was connected to a heart monitor. Mrs A was admitted to Ward 8, where she was to be monitored overnight.

3. On 7 April 2012 (at approximately 07:00) Mrs A's son telephoned Hospital 1 to be told that Mrs A had had a comfortable night. Also on the same day (at approximately 09:00) one of Mrs A's daughters visited her and stated that Mrs A looked grey, pale and was experiencing breathlessness although she was receiving oxygen.

4. Mrs A's daughter (Ms B) also telephoned Ward 8 on the morning of 7 April 2012, spoke to Mrs A and stated that Mrs A had difficulty speaking and had repeatedly indicated that she was sore. Following this telephone call, Ms B telephoned the ward, but was informed that Mrs A was not in pain and was resting comfortably, which was in contradiction to what Mrs A had told her during their telephone conversation.

5. On 7 April 2012 (at approximately 11:00) Mrs A was seen by a ward doctor and was told that she had suffered a heart attack on 6 April 2012. The

family complained that this news was not passed directly to them by any medical staff.

6. Mrs C stated that Mrs A's family were not sure if Mrs A had received any urgent care or treatment regarding the confirmed diagnosis of a heart attack during that day (7 April 2012). The family complained that Mrs A was left by medical staff without urgent consideration regarding treatment options. They alleged that it was the delay period that caused the premature death of Mrs A.

7. In addition, on 7 April 2012 Mrs A's son had visited her. He complained that when he approached a staff nurse (the Staff Nurse) he was poorly greeted, the Staff Nurse appeared disinterested and had looked vague. He had asked the Staff Nurse if Doctor 1, who knew Mrs A's history, had been contacted. He stated that the Staff Nurse advised him that Doctor 1 was on leave and they were waiting for a decision from the doctor, but thought that Mrs A would be transferred to Hospital 2 on 9 April 2012. Mrs C stated that Mrs A's son could not understand this because the family were under the impression that Mrs A's condition was serious and some urgency was required.

8. Mrs C stated that a family friend who was medically trained visited Mrs A that evening (7 April 2012) and was concerned about her condition. A site nurse practitioner (the Site Nurse Practitioner) who was with Mrs A at the time, said that the transfer to Hospital 2 was urgent and should happen that day. Ms B went to Ward 8 at approximately 20:30 and could not gain access as Mrs A was being transferred immediately, as her condition was life threatening. Ms B stated that the Site Nurse Practitioner had been shaking her head expressing her disappointment and annoyance that the transfer to Hospital 2 had not happened earlier. Mrs A was admitted to Ward 21 (Hospital 2) later that day as she had fluid on her lungs and her kidneys were failing. The family remained overnight with Mrs A.

9. On 8 April 2012 (at approximately 06:00) Mrs A appeared a little better. Her family were advised that there had been a slight improvement overnight but that her condition remained critical. Mrs C stated that Mrs A's family were advised that if Mrs A continued to improve, it was planned that she would undergo a heart by-pass operation on 10 April 2012. However, Mrs A suffered a massive heart attack and died on the evening of 8 April 2012.

10. The complaint from Mrs C which I have investigated is that staff at Hospital 1 failed to provide Mrs A with appropriate care and treatment following her admission on 6 April 2012 with severe chest pain.

### **Investigation**

11. As part of the investigation all the information provided by Mrs C and Grampian NHS Board (the Board) (including Mrs A's relevant clinical records, complaints correspondence and their complaints policy) was given careful consideration. Independent specialist advice was also obtained from a consultant interventional cardiologist (the Adviser). The information he provided was taken into account as part of this investigation.

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

### **Complaint: Staff at Hospital 1 failed to provide Mrs A with appropriate care and treatment following her admission on 6 April 2012 with severe chest pain**

13. Mrs A had a history of heart problems and in July 2010 had two stents implanted to unblock two coronary arteries. In November 2011 the PCI procedure had to be repeated. However, Mrs A's angina recurred again and Mrs C indicated that Mrs A was seen by Doctor 1 on 28 February 2012 and was informed that she required an urgent heart by-pass operation. Mrs A was admitted to Hospital 1 on 6 April 2012 with severe chest pain.

14. Mrs C said that Mrs A's family believed that the care and treatment Mrs A received whilst a patient at Hospital 1, following her admission on 6 April 2012, was poor and below the Board's expected standards. They believed that the communication and information disclosed between doctors, nurses and relatives had been extremely poor. They complained that Mrs A died prematurely, due to a catalogue of events that occurred at Hospital 1 and, in particular, the delay in being transferred to Hospital 2. Mrs C said that Mrs A's family were struggling to understand why, following Mrs A's admission to Hospital 1, no members of the medical staff contacted Hospital 2's Cardiology Department for further information or advice.

*Board's response to Mrs C's complaint*

15. On 19 September 2012 the Board responded to Mrs C's complaint. They explained that on arrival at Hospital 1 Mrs A was seen by doctors in the Accident and Emergency Department shortly after 22:00 on 6 April 2012. As part of that assessment it was documented that an electrocardiograph (ECG) was performed. Mrs A was believed to be having a heart attack and the appropriate Acute Coronary Syndrome (ACS) drug treatment was administered by 22:30. They explained that, in line with policy and protocol, this was the standard care and management plan that a patient would receive and would continue to receive in subsequent days.

16. They explained that Mrs A was reviewed by the consultant physician on call with the admitting junior medical doctor at 23:00 and a management plan was recorded. Following this, Mrs A was transferred to Ward 8, the high dependency unit, where close monitoring commenced. They stated that this was evidenced in the medical records sheets. An intravenous infusion of GTN was commenced at 23:30.

17. The Board stated that, at the time of review on the morning of 7 April 2012, a treatment plan was put in place based on the findings by a consultant physician on call (Doctor 2); which consisted of commencing an insulin infusion, adjustment of GTN infusion rate with appropriate monitoring and continuing with medication plan. According to Mrs A's medical notes, she was not suffering any pain at that time. It was also recorded that Mrs A's clinical condition would be discussed with the cardiology unit at Hospital 2 regarding her plan of care. The Board said that the discussion with Hospital 2's Cardiology Department occurred at approximately 15:00 and the clinical decision was that there was no requirement for immediate or emergency transfer to Hospital 2 or for any significant changes to Mrs A's treatment (see paragraph 43). They explained that Mrs A's observation charts at this time showed that her condition was stable and that she remained pain free.

18. The Board explained that, whilst Mrs A's condition remained stable, she complained of feeling generally unwell at 15:30 and nursing staff immediately informed the doctor of this. A further ECG was taken and medication, including morphine, was administered to alleviate Mrs A's pain. Morphine was administered again approximately 70 minutes later.

19. The Board stated that on 7 April 2012 (at 19:00) there was a sudden change in Mrs A's recordings and observations suggesting that her condition had rapidly deteriorated. This was demonstrated by an increased heart rate, decrease of oxygen saturations and an increase in respiration rate. A further ECG was obtained, oxygen therapy rate increased and a doctor was notified. A senior registrar who was on-call with Doctor 2 assessed Mrs A's condition and documented her findings and management plan in Mrs A's medical notes, retrospectively at 19:40.

20. The senior registrar evidenced that Mrs A had developed heart failure with fluid collecting in her lungs and had discussed Mrs A's condition further with the on-call cardiology registrar at Hospital 2, who agreed to an immediate transfer by ambulance with a nurse escort.

21. In relation to Mrs A's family's reference to a medically trained friend who had visited the ward, the Board explained that a senior staff nurse (the Senior Staff Nurse) was at Mrs A's bedside delivering care and recalled that a lady had visited Mrs A, however, she had quickly walked out of the ward again, at no point requesting to speak to any member of nursing staff or the ward doctor. The Site Nurse Practitioner had also entered the ward at that time and assisted while the Senior Staff Nurse undertook administration of medication to Mrs A.

22. The Board indicated that, according to Mrs A's nursing notes, all required monitoring and nursing care was delivered throughout the night of 6 into 7 April 2012 on Ward 8. The nursing notes recorded that Mrs A was comfortable in the early morning of 7 April 2012. They said that, due to patient confidentiality and nursing staff professional accountability in relation to information discussed regarding a patient's condition, it would not be expected that staff would discuss in detail any aspect of the patient's condition by telephone. In this case the Board were satisfied that acceptable and accurate information was given to Mrs A's son on 7 April 2012 (at approximately 07:00).

23. Mrs A was seen by Doctor 2 that morning (7 April 2012). In relation to Ms B's concern that ward staff had given her a different impression about her mother's condition to that given to her by her mother during a telephone conversation, the Board explained that it was not documented on the notes which member of nursing staff Ms B had spoken to when she contacted the ward on the morning of 7 April 2012.

24. The Board indicated that Mrs A was informed of her diagnosis and care management plan. They explained that, in all patients who have capacity, it was normal process to discuss all medical and nursing care directly with the patient, unless otherwise advised. This was to protect the confidentiality and dignity of patients. Medical staff were happy to meet with relatives of patients on request and with the patient's consent as appropriate. The Board explained that, in this case, there had been no reason why care and treatment delivery should be discussed with the next-of-kin rather than Mrs A.

25. The Board indicated that the Staff Nurse who spoke to Mrs A's son on 7 April 2012 apologised if she appeared disinterested but that had not been the case; that she had been fully aware of Mrs A's clinical condition and communication took place regularly with the ward doctor. They explained that the Staff Nurse had reflected on this and would, in future, ensure that she did not give any impression of disinterest.

26. The Board accepted that it was unfortunate that Ms B had been refused access to Ward 8 on Saturday evening (7 April 2012). However, due to the intensive nature of care delivery and treatment required in a high dependency unit, visiting times were restricted to enable patients to have adequate rest. It was also clear that Mrs A was undergoing urgent care and treatment at that time, in preparation for transfer to Hospital 2. The Board apologised for the distress caused at that time and recognised that they should have handled this more sensitively.

27. In relation to Mrs A's family's reference to the Site Nurse Practitioner shaking her head and expressing disappointment that Mrs A had not been transferred to Hospital 2 earlier, the Board apologised that this had been witnessed by Ms B. They explained that this matter would be discussed in detail with the Site Nurse Practitioner.

*Advice received*

28. Advice was obtained on the care and treatment Mrs A received at Hospital 1 following her admission on 6 April 2012. The Adviser indicated that Mrs A was admitted to hospital on 6 April 2012 with symptoms of chest pain. He said that her background medical history was documented to include the following medical conditions:

- diabetes mellitus;
- severe obesity;

- high blood pressure;
- previous pancreatitis secondary to gallbladder stones; and
- ischaemic heart disease.

29. The Adviser explained that, while Mrs A was waiting to undertake CABG surgery, she experienced severe chest pain which would not respond to GTN spray. She was admitted to Hospital 1 on 6 April 2012. He said that it was documented that the pain started at 19:30 and that some residual pain was still present, despite the admission of 5mg of intravenous morphine for pain relief. He indicated that on admission, Mrs A seemed to have been clinically stable as her documented breathing rate, oxygen saturation, and heart rate were all normal. Her blood pressure at the time was shown to be only mildly elevated, at 150/80 mmHg (normal range: 100-140/60-85mmHg). Mrs A's ECG revealed normal heart rhythm but also evidence to indicate the heart muscle was suffering from blood supply deficiency (referred to medically as ST segment depression), suggesting either a developing or an established heart attack. Mrs A was, therefore, diagnosed as such and was documented to have been given appropriate initial treatment as per ACS protocol.

30. The Adviser said that the initial Troponin - T blood test result was minimally raised but the repeat sample taken 12 hours later revealed a hugely elevated level, indicating a significant heart attack. Mrs A was documented to have continued to suffer from on-going chest pain and was, therefore, commenced on intravenous GTN infusion, without much response.

31. The Adviser commented that Mrs A was documented to have been reviewed by Doctor 2 at 11:00 on 7 April 2012. Mrs A's documented heart rate and blood pressure at the time were normal. However, her respiratory rate was documented to have risen to 22 breaths per minute (normal 12-16 breaths per minute) and she was then requiring 4 litres/minute of inhaled oxygen to maintain a blood oxygen saturation of 97 percent (normal:  $\geq$  96 percent). This was in contrast to Mrs A's admission state, when she was then comfortably able to saturate at 99 percent on room air alone (without the need for supplementary oxygen) at just 10 breaths per minute. The Adviser said that, despite this relative decline in oxygen saturation that was associated with a significant increase in the respiratory rate, it was not documented that Doctor 2 had either examined Mrs A's chest or requested a chest x-ray to check for pulmonary oedema, a well-recognised complication of a heart attack. Instead, Doctor 2's documented plan was to:



- start insulin in view of the high blood sugar value of 19.2 mmol/L (normal: 3.5 – 6.0 mmol/L);
- continue ACS treatment in view of the raised second Troponin –T result;
- attempt to reduce GTN infusion rate as Mrs A had no chest pain at the time; and
- discuss with Hospital 2.

32. Mrs A was later reviewed by a Foundation Year 1 junior doctor (Doctor 3) at 15:00, who was called to see Mrs A as she had chest pain and was feeling sick. Mrs A's documented clinical observations at the time were similar to when she was reviewed earlier by Doctor 2, except for the fact that Doctor 3 had documented that Mrs A had oxygen saturation of 97 percent while not on oxygen. However, this was contrasted by the clinical observation chart, which clearly demonstrated that Mrs A had been on oxygen throughout that day. The Adviser said that there was no documentation to evidence that Doctor 3 examined Mrs A's chest or requested a chest x-ray. Doctor 3, however, had a discussion with the registrar and had documented the following plan:

- continue GTN infusion;
- give morphine to control the pain and Ondansetron (anti-sickness treatment) to relieve the nausea.

33. At 17:00 on 7 April 2012 Mrs A was documented to have still been experiencing some chest pain and she was then given 10mg of morphine.

34. At 19:40 on 7 April 2012 a Speciality Trainee year 5 registrar (Doctor 4) was asked to review Mrs A in view of her increased respiratory rate (now 25 breaths per minute). On examination, Doctor 4 found Mrs A to be severely unwell with pulmonary oedema, low blood pressure of 86/52 mmHg and fast heart rate at 118 beats per minute (normal: 60-100 beats per minute). Mrs A's oxygen saturation had significantly dropped to 95 percent. Her ECG showed worse ST depression changes than on admission. Doctor 4 instructed that Mrs A be given intravenous Frusemide and that – following discussion with the cardiology registrar – she was accepted for immediate transfer to the coronary care unit.

35. Mrs A was later seen by a Foundation Year 2 junior doctor (Doctor 5) on 7 April 2012. Mrs A was then much worse with a very high respiratory rate of 30 breaths per minute, a low oxygen saturation of 90 percent despite 15 litres of

inhaled oxygen and a very low blood pressure of 72/53 mmHg. Mrs A was still in severe pulmonary oedema. Doctor 5 advised to stop further Frusemide and GTN infusions (as they could lower the blood pressure even further) and informed the registrar, who advised on giving a small dose of GTN infusion. Doctor 5 also documented that the registrar would attend to Mrs A, with a view to inserting an intra-aortic balloon pump (IABP).

36. Mrs A was transferred to Hospital 2 and Mrs C said that she arrived on Ward 21 between 21:30 and 22:00 on 7 April 2012.

37. The Adviser said that, while the initial diagnosis of ACS was correct, Mrs A appeared to have subsequently started to develop acute pulmonary oedema (due to acute heart failure) in the morning of 7 April 2012 (before 11:00) but as none of the doctors who reviewed her was documented to have examined her chest between 11:00 and 19:40 on 7 April 2012, she received no diuretic treatment for several hours (until 19:40 on that day) until her condition had become significantly worse. The Adviser was of the view that not examining Mrs A's chest when she was clearly breathless after having suffered a heart attack was a serious failing on the part of the medical team, which was against the guidance set in the General Medical Council's Good Medical Practice 2013 publication which indicated:

'you must provide a good standard of practice and care. If you assess, diagnose or treat patients, ... you must adequately assess the patient's conditions, taking account of their history (including the symptoms and psychological, spiritual, social, and cultural factors), their views and values; where necessary, examine the patient.'

38. My complaints reviewer asked the Adviser whether there was evidence that there was a delay in the decision being taken to transfer Mrs A to Hospital 2 in view of her medical history. The Adviser said that, based on the clinical records, there was evidence of a delay in transferring Mrs A to Hospital 2. He went on to say that, as indicated above, there was an unjustified delay of several hours between the commencement of Mrs A's breathlessness symptoms (as evidenced by her raised breathing rate and her need for inhaled oxygen) and the identification of pulmonary oedema as the cause of that breathlessness. In his view, had the pulmonary oedema been identified earlier, the decision to move Mrs A to Hospital 2 would have been made sooner.

39. However, the Adviser said that, while it was reasonable to conclude that the delay had deprived Mrs A of her best chance of survival, it remained uncertain as to whether that delay had actually led to Mrs A's death. This was because of the realistic possibility that Mrs A – given the significant heart attack that she had been admitted with, and given her other significant co-morbid medical conditions - might not have responded to the diuretic treatment for pulmonary oedema even if she had been given it as early as it was needed.

40. The Adviser said that, given his comments detailed above, he disagreed with the Board's position that they had, at every point during the pathway of care delivery, delivered appropriate care and attention to Mrs A in a timely manner.

41. My complaints reviewer also asked the Adviser to comment on whether Mrs A had, on admission to Hospital 1, received a GTN infusion or an insulin infusion or both, as Mrs C had raised this matter as part of her complaint. The Adviser explained that the clinical notes showed that insulin infusion had been prescribed and administered on 6 April 2012. The notes also showed that GTN infusion had been prescribed on 6 April 2012 but there was no record of it having been administered. He went on to explain that the GTN infusion without accompanying diuretic treatment was of no benefit in acute pulmonary oedema. He said that GTN was only indicated in acute heart failure when the blood pressure was high, which was not the case with Mrs A. He indicated that the mainstay of treatment, which should have been given early but was not, was intravenous diuretic therapy (Frusemide) The Adviser stated that it was only documented to have been given after 19:40 on 7 April 2012.

42. My complaints reviewer also asked the Adviser whether he was satisfied that there was appropriate contact with Hospital 2 in connection with Mrs A's condition. In response, the Adviser said that there was no documentation in the clinical notes to suggest any contact with Hospital 2's cardiology team prior to 19:40 on 7 April 2012, when Mrs A's pulmonary oedema was identified. The Adviser went on to explain that pulmonary oedema was a sign of acute heart failure, which commonly occurred following a heart attack. Acute heart failure was a serious and life threatening condition which required prompt treatment with oxygen and intravenous diuretics (European Society of Cardiology and SIGN 93).

43. My complaints reviewer subsequently raised the matter of contact with Hospital 2 with the Board who accepted that, having reviewed the clinical notes, there was no evidence that there had been contact at approximately 15:00 on 7 April 2012 with a specialist registrar at Hospital 2 and that the discussion may have been held with a specialist registrar at Hospital 1. However, they explained that there was evidence that there had been an escalation to a specialist registrar.

44. Mrs C had also raised with my office her concern about the communication with Mrs A's family and my complaints reviewer raised this point with the Adviser. In response the Adviser indicated that, as far as the documentation in the clinical notes was concerned, there was nothing to indicate that the communication with Mrs A's family or between healthcare professionals was anything other than reasonable.

#### *Conclusion*

45. This investigation has taken into account what Mrs C said on behalf of Ms B and how the Board replied. My complaints reviewer has obtained independent advice and this advice has expressed concern about the care and treatment Mrs A received following her admission to Hospital 1 on 6 April 2012 with severe chest pain. While the Board maintained that, at every point during the pathway of care delivery, appropriate care and attention was delivered to Mrs A in a timely manner, the independent advice I have received is that, while the medical team at Hospital 1 correctly diagnosed and treated Mrs A's ACS, they failed to timeously diagnose her pulmonary oedema despite her high breathing rate and relatively low oxygen saturation, documented on her observation chart. I am concerned that there is no evidence that Mrs A's chest was examined between 11:00 and 19:40 on 7 April 2012 and I accept the advice I have received that the failure to examine her chest led to the gradual worsening of Mrs A's pulmonary oedema for several hours until it was eventually identified at 19:40.

46. In addition, the Adviser was of the view that, having failed to timeously treat Mrs A's pulmonary oedema for several hours after her heart attack, the Board had deprived Mrs A of her best chance of survival. In addition, had the pulmonary oedema been identified earlier, the decision to move Mrs A to Hospital 2 would have been made sooner. I recognise that Ms B maintained that Mrs A died prematurely due to a catalogue of events that occurred at Hospital 1 and, in particular, the delay in being transferred to Hospital 2.

However, I also accept the advice I have received that it is uncertain as to whether the delay in transferring Mrs A to Hospital 2 had actually led to Mrs A's death.

47. I am further concerned that the Board initially stated that they had consulted with the Cardiology Department at Hospital 2 at approximately 15:00 on 7 April 2012, when the decision was taken that there was no requirement for immediate or emergency transfer to Hospital 2. However, they subsequently accepted that, while the clinical records confirm that there was a discussion with a specialist registrar at this time the records do not confirm this was a specialist registrar at Hospital 2. Therefore, there is no evidence that contact was made with Hospital 2. I am critical of this failure. I am also concerned that while the clinical notes show that GTN infusion had been prescribed on 6 April 2012 there was no record of it having been administered.

48. Finally, Mrs C raised Ms B's concern about the adequacy of communication with the family in connection with Mrs A's condition. While the Board explained why they would not provide details about a patient's condition by telephone and that they aimed to protect the confidentiality and dignity of patients, I recognise that the level of communication in this case did not meet the family's needs during this extremely difficult and distressing period. I have decided that there were failures in the level of communication with Mrs A's family. I can only make a judgement on the evidence available to me. In this case I am mindful that the Board accepted that some of the communication with Mrs A's family was not of a high standard, have apologised and have taken action.

49. In view of the failures described above, I uphold the complaint.

#### *Recommendations*

	<i>Completion date</i>
50. I recommend that the Board	
(i) apologise to Ms B for the failures identified;	26 February 2014
(ii) reflect on the failure to examine Mrs A's chest and ensure that measures are in place to prevent a similar occurrence in the future;	26 March 2014
(iii) undertake an audit of record-keeping within Ward 8 to ensure medical records are completed timeously and comprehensively and report back to the	26 March 2014

- Ombudsman; and
- (iv) bring this report to the attention of relevant staff during their appraisals to ensure lessons have been learned from this case.

26 March 2014

51. 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.

**Explanation of abbreviations used**

Mrs C	the complainant
Mrs A	the aggrieved
Hospital 2	Aberdeen Royal Infirmary
Doctor 1	a consultant cardiologist
Hospital 1	Dr Gray's Hospital
CABG	Coronary Artery Bypass Graft
Ms B	the aggrieved's daughter
the Staff Nurse	a staff nurse
the Site Nurse Practitioner	a site nurse practitioner
the Board	Grampian NHS Board
ECG	Electrocardiograph
ACS	Acute Coronary Syndrome
Doctor 2	A consultant physician
the Senior Staff Nurse	a senior staff nurse
Doctor 3	Foundation Year 1 junior doctor
Doctor 4	Speciality Trainee year 5 Registrar
Doctor 5	Foundation Year 2 junior doctor

### Glossary of terms

Angina	chest pain mostly felt on exertion, due to narrowing of one or more of the coronary arteries
Coronary angiogram	a diagnostic heart catheter test performed under local anaesthesia via the groin or the wrist arteries to examine the heart coronary arteries (the blood vessels which supply the heart muscle), aiming to identify any blockages or obstructions within them
Coronary arteries	the blood vessels that supply the heart
European Society of Cardiology (ESC)	European Society of Cardiology (ESC) Guidelines for the diagnosis and treatment of acute and chronic heart failure
Frusemide	a diuretic medication which removes excess fluid in the body. It helps in conditions like pulmonary oedema.
glyceryl trinitrate (GTN) infusion	an infusion drip containing GTN given to patients with continuing cardiac chest pain; and can also help relieve pulmonary oedema (only if given along with an intravenous diuretic)
GTN spray	a liquid medication which relieves angina symptoms within a few minutes when sprayed under the tongue
Intra-aortic balloon pump (IABP)	a mechanical blood pressure boosting device which can help patients with severe heart failure and low blood pressure. IABP is inserted into the circulation through the groin artery under local anaesthesia. Patients needing IABP are generally very unwell and would normally require urgent PCI or cardiac surgery.



Ischaemic heart disease (IHD)	blockages affecting the coronary arteries which can lead to chest pains and heart attacks
Pancreatitis	inflammation of the pancreas
Percutaneous coronary intervention (PCI)	the unblocking of coronary arteries using the balloon and wire technique, usually performed under a local anaesthetic via a catheter inserted through groin or the wrist
Pulmonary oedema	fluid accumulating inside the lungs, usually as a result of heart failure or following a heart attack
Revascularisation	the restoration by interventional means of blood flow to an organ or a tissue, as in bypass surgery, or with stent or balloon procedure
SIGN 93	Scottish Intercollegiate Guidelines Network 93 Acute Coronary Syndromes
stent	a small supportive metal scaffolding structure which is implanted inside a coronary heart artery to unblock it. It is deployed via a special catheter which is inserted inside the body through either the wrist or groin artery
Troponin T	a blood marker which detects heart muscle damage; and tends to be raised after a heart attack