Dr A / Ms B /

Ms C / Ms D /

Mr E /

Private Hospital

A Report by the

Health and Disability Commissioner

(Case 00HDC04656)

Parties involved

Dr A	General Surgeon, Provider
Ms B	Nurse
Ms C	Nurse Manager
Ms D	Nurse
Mr E	Nurse Manager
Private Hospital	
Mrs F	Complainant, Consumer's daughter
Mrs G	Consumer
Ms H	Consumer's other daughter
Ms I	Director of Nursing, Private Hospital
Dr J	Resident Medical Officer
Dr K	Deputy Coroner

Investigation process

On 1 May 2000 the Commissioner received a complaint from Mrs F concerning the services provided to her mother, Mrs G (deceased), by Dr A, general surgeon, and a Private Hospital. An investigation was commenced on 12 June 2000. At Dr A's request, the investigation was deferred until the completion of the Coroner's inquest. The hearing took place on 23 and 24 November 2000, and the Coroner released his decision on 8 June 2001. Based on the comments made by the Coroner in his report, and the information provided by Dr A, the matters under investigation were modified and further responses sought. Dr A responded to this request on 4 March 2002. The Commissioner then sought further information from the Private Hospital. On 8 May 2002 the Commissioner sought expert advice from Dr Stephen Kyle, general surgeon. On receipt of Dr Kyle's report on 4 June 2002, the Commissioner sought additional advice from an independent nurse advisor, Ms Janet Hewson. Ms Hewson's report was received on 27 August 2002. On 25 November 2002 the investigation was extended to include nursing staff involved in Mrs G's care, and their responses were sought. A provisional opinion was issued on 18 March 2003 and additional responses sought. Once these were received, additional advice was sought from Ms Hewson, and a second provisional opinion was issued on 1 September 2003.

Complaint

The complaint is summarised as follows:

Following a laparoscopic cholecystectomy performed by Dr A at the Private Hospital on 26 February 1999, Mrs G experienced an inadequate standard of care from staff at the Private Hospital. In particular:

- *notes were not kept to an acceptable standard;*
- *after Dr A reviewed Mrs G on the morning of 27 February 1999, there was an unacceptable delay before further medical assessment occurred;*
- *postoperatively Dr A failed to respond to significant changes in Mrs G's condition;*
- *postoperatively staff at the Private Hospital failed to recognise significant changes in Mrs G's condition and advise Dr A accordingly.*

On 25 November 2002 the investigation was extended to specifically include four registered nurses who cared for Mrs G postoperatively – Ms C, Ms D, Mr E and Ms B – and a further allegation:

Following a laparoscopic cholecystectomy performed by Dr A at the Private Hospital on 26 February 1999, Mrs G experienced an inadequate standard of care from staff at the Private Hospital. In particular, staff at the Private Hospital did not respond appropriately to significant changes in Mrs G's condition.

Information reviewed

- Complaint letter from Mrs F, dated 12 April 2000
- Response from the Private Hospital, dated 23 June 2000
- Response from Dr A, dated 28 September 2000
- Coroner's findings, dated 8 June 2001
- Records relating to Mrs G's care at a Public Hospital
- Relevant policies and procedures from the Private Hospital
- Records relating to Mrs G's care at the Private Hospital
- Post-mortem report
- Letter from Dr A, dated 26 February 2002
- Letter from Ms I, dated 12 July 2002
- Independent expert advice from Dr Stephen Kyle, general surgeon
- Independent expert advice from Ms Janet Hewson, registered nurse
- Responses from Ms C and Mr E, dated 20 December 2002
- Response from Ms D, dated 6 January 2003
- Response from Ms B, dated 15 January 2003
- Letter from Mrs F, dated 4 April 2003
- Letter from Dr A, dated 6 April 2003
- Letter from Ms D, dated 7 April 2003

- Letter from Ms B, dated 8 April 2003
- Letter from the Private Hospital, dated 8 April 2003
- Letter from Ms C, dated 16 April 2003
- Details of X-rays performed on Mrs G, supplied from the Private Hospital Radiology in a letter dated 16 April 2003
- Letter from Ms D, dated 16 April 2003
- Telephone records for the Private Hospital on 28 February 1999
- Further independent advice from Ms Hewson
- Letter from Ms D, dated 17 September 2003
- Letter from Ms C, dated 17 September 2003
- Letter from the CEO, Private Hospital, dated 25 September 2003
- Letter from Mrs F, dated 26 September 2003
- Letter from Dr A, dated 29 September 2003
- Letter from Ms B, dated 30 September 2003

Information gathered during investigation

Background
Mrs G, aged 58, was referred to Dr A, general and endoscopic surgeon, by her general practitioner. Mrs G consulted Dr A on 15 February 1999. She gave a history of about six months of intermittent chest pain that radiated through to her back. As Mrs G was clinically obese and smoked, she was at higher than average risk for surgery. Dr A concluded that her pain was due to biliary colic. Her abdominal ultrasound demonstrated gallstones. Surgery was arranged for 26 February 1999. It was expected that she would be discharged the following day. However, two days after a laparoscopic cholecystectomy performed at the Private Hospital on 26 February 1999, Mrs G was transferred to a Public Hospital with postoperative complications. She died at the Public Hospital on 1 March 1999.

Laparoscopic cholecystectomy – Friday 26 February 1999
As noted above, on Friday 26 February 1999, Mrs G underwent a laparoscopic cholecystectomy at the Private Hospital under the care of Dr A. After the operation, Mrs G was transferred to the Recovery Ward at the Private Hospital where she was placed in the care of nursing staff. A senior house officer was on site and available to the nursing staff, and Dr A remained on call. That night nursing staff noted that Mrs G was febrile (feverish) and her temperature reached 38.4°C, although this resolved overnight.

Postoperative review by Dr A – Saturday 27 February 1999
At 6.30am the following day Mrs G's blood pressure and pulse were taken and noted to be in the normal range. Dr A assessed Mrs G sometime between 8am and 9am. Mrs G was noted to be very short of breath and she had a productive cough. Her oxygen saturation on room air was 88%.

Dr A thought Mrs G seemed tired and did not look ready to go home. He considered that she might have atelectasis (incomplete expansion of the lungs following surgery) and

recommended oxygen and assistance with mobilising, and chest physiotherapy and nebulisers for her cough. With the oxygen, Mrs G's oxygen saturation improved to 92%. Dr A issued instructions that Mrs G's condition be monitored.

Dr A advised that when he left, he believed that Mrs G was not unwell and had no specific complaints, but would benefit from an extra day in hospital before being discharged. He departed with the expectation that he would return the next day unless nursing staff noted a deterioration in her condition, in which case they would contact him immediately.

Nursing notes record that during the afternoon and evening of 27 February, Mrs G's cough remained productive and she was still short of breath. A physiotherapist visited Mrs G to provide chest physiotherapy and assist her in mobilising, and nursing staff encouraged her to do deep breathing exercises.

On the evening of 27 February, Mrs G was visited by her two daughters, Ms H and Mrs F. Mrs F stated that she reported to a nurse that Mrs G was complaining of feeling hot and cold, was clammy to touch, appeared tired and her feet looked blue. Mrs F recalls that she was told that "it was because of her cough". Ms D, who was the registered nurse on duty at the time, does not recall the comment being made. Ms D stated that she was on her own on the ward. However, she also stated that the senior nurse managing the hospital was on the ward helping, and was very aware of her patients.

Nursing care – night of 27/28 February 1999

On the night of 27/28 February Mrs G was under the care of registered nurse Ms B and Nurse Night Manager Ms C.

Ms B advised that when she came on duty at 11pm on 27 February she was told by the outgoing nurse (Ms D) that Mrs G was not progressing as she should. Ms B reviewed Mrs G at 1.30am on 28 February and noticed that she was perspiring. Ms B stated that she reviewed Mrs G's entire clinical record. The nursing notes she wrote at this time state: "perspiring, feeling hot but cold to touch". Ms B took Mrs G's observations and noted that her oxygen saturation level and blood pressure had dropped. Ms B recorded in the notes that at 2am Mrs G's pulse was 109, her temperature 35.4°C and her oxygen saturation on room air was 88%. Ms B reported that, because of her concern for Mrs G, she advised Ms C and kept a close eye on Mrs G, who did not show further signs of being unwell. No further observations were recorded during that shift until her "general observations" chart was updated at 6.30am. At this time the chart records Mrs G's temperature as 36.8°C, her pulse as 104, and her oxygen saturation on room temperature as 86%. Ms B advised me that at 6am Mrs G went to the bathroom unassisted. At 6.30am she was warm and comfortable and did not show any signs of perspiring or appearing unwell.

Ms C recalled that she was contacted by Ms B at around 2am and told that Mrs G was cool, clammy and breathless. Ms C said that she immediately went to see Mrs G and, while she was in transit, Ms B placed Mrs G on oxygen. Ms C said that by the time she arrived the episode appeared to have passed, as Mrs G's skin was warm and dry. Ms C advised me that when she saw Mrs G, she was sleeping comfortably and her observations were not significantly different from when Dr A had seen her the previous day. She said that she would have been concerned if they had been worse than the previous day.

Ms C said that had she been given the preoperative information obtained by Dr A, and had she known that Mrs G was morbidly obese, and a smoker with cardiac co-morbidity, she would have sought medical review. Ms C also said that neither she nor any of the other nursing staff had been informed by Dr A that he thought Mrs G had atelectasis.

Ms B stated that she did not contact a doctor during the night as she did not feel that this was a situation that warranted such action. She stated that had Mrs G demonstrated nausea, restlessness or pain then she would have suggested to Ms C that a doctor be called. Ms C said that if she had had any concerns about Mrs G then she would have contacted a doctor. Ms B submitted that the decision to call for a medical review was that of her supervisor. Under the Private Hospital's instructions she was not authorised to ring the on-call medical specialist without her supervisor's approval. Ms B added that she did not believe that Ms C's decision not to call a doctor was sufficiently inappropriate that it should have been challenged by her.

The Private Hospital advised that "[Ms B] did not see the need to contact a doctor during or following this event and this was supported by the Nurse Night Manager, [Ms C] who also assessed [Mrs G] at the time. Both nurses had been on the previous night so were familiar with her progress. Both are very familiar with caring for patients undergoing this procedure." Ms I, Director of Nursing at the Private Hospital, also advised that "[the nurses] know they have a responsibility to contact medical staff if they are concerned about any patient at [the hospital] and they do this regularly – day and night. In addition they make use of the expertise the on site afterhours doctor provides."

Ms B said she handed over care to Ms D at 7am and advised her what had happened during the shift, including details of Mrs G's observations at around 1.30am and her subsequent improvement.

Nursing care – Sunday 28 February 1999

On the morning of Sunday 28 February Ms D and After Hours Nursing Manager Mr E were on duty and responsible for Mrs G's care. At this time Ms D was responsible for a total of five patients. Ms D advised me that at the handover she had no indication that Mrs G should be prioritised over other patients, and that Ms B told her that Mrs G had had a comfortable night.

Ms D advised that she first saw Mrs G after the handover report at 7am, and that Mrs G was getting up to the toilet independently, her oxygen was off, she wanted to wash early, and she hoped Dr A would let her go home. Ms D stated that she went back to see Mrs G at about 8.30am and assessed her at this time. Mrs G was coughing and vomiting into a sink and stated that she felt sick. She was short of breath and had used her GTN spray for angina. Ms D said that she put Mrs G on a humidified oxygen supply and noted that Mrs G's abdomen was red on the right side and very bruised.

Ms D stated that she rang Mr E, who advised her that Dr A was expected shortly but that she should call him at 9am if he had not arrived. Ms D stated that she made a telephone call to Dr A at around 9am. She said that she told him that Mrs G was short of breath, complaining of abdominal pain, and generally "not well". Ms D said that Dr A advised her that he would be in to see her. Ms D stated that she asked whether a chest X-ray would be

appropriate, and said that Dr A agreed and also instructed her to order blood tests. Telephone records indicate that a call was placed to Dr A's home address from the Private Hospital at 9.33am.

Dr A has no recollection of this call. He advised me that by 9.30am he should have left the house to take his daughter to a pre-arranged meeting and that he was away from the house for some time. His "strong recollection of the morning was not having any expectation other than discharging Mrs G". He acknowledges that the passage of time means he does not have a clear recollection of events that occurred in February 1999.

Mr E said that when Ms D advised him "in the early hours" that Mrs G's condition was causing concern he went to Mrs G's room to assess her. Mr E said Ms D advised him that she had telephoned Dr A and requested a chest X-ray. Mr E and Ms D helped Mrs G to the bathroom. Mr E then contacted the Resident Medical Officer, Dr J, and asked him to come to assess Mrs G, which Dr J did promptly. He stated: "Knowing that Dr A had been informed and was on his way to the hospital I called our Resident Medical Officer [RMO] to attend Mrs G and assess her present condition … IV access was achieved after blood had been drawn for testing and a fluid regimen started. IV antibiotics were given 'stat' as advised …"

Mr E said that Mrs G's anaesthetist was also present, as he was conducting his rounds, and that the Private Hospital's on-call cardiologist was also called to assess Mrs G and arrived almost immediately as he was in the building. Mr E also called the radiologist, who also attended immediately.

At 10.27am a bedside chest X-ray was taken. Ms D advised that she did not have the authority to order an X-ray and could only have done so at Dr A's request. Dr A commented that the RMO could also have made this order. Ms D said that the RMO took bloods between about 10.30-11am. Telephone records indicate that a second call was placed to Dr A's home address from the Private Hospital at 11.24am.

Ms D said that Dr A arrived around 11.30am–12 noon and that all the doctors – Dr A, the RMO, the anaesthetist and the cardiologist – "stood at the end of Mrs G's bed and discussed her condition". Dr A advised that when he arrived at the Private Hospital he found Mrs G breathless, and he therefore examined her for cardiac and respiratory problems. Further examination showed the cause of her breathlessness to be sepsis. Ms D performed an ECG as requested by the cardiologist. The records show that the ECG was taken at 12.06pm. Dr A administered antibiotics at around 1.15pm, IV Lasix was given, blood tests were ordered at around 2pm and, at 2.30pm, Dr A arranged Mrs G's transfer to the Intensive Care Unit at the Private Hospital.

Dr A stated that he had not been notified of any deterioration in her condition and, when he attended Mrs G, he was expecting to be able to discharge her. Given the timing of events, Ms D's clear recollection of events, the nursing records and telephone records, I have formed the view that Ms D's account of her telephone call to Dr A is credible, and that Dr A's belief that he was not called is mistaken.

Nursing notes
The nursing notes held by the Private Hospital in relation to Mrs G's care on 28 February 1999 differ from the copy of the notes for the same period held at a Public Hospital. Amendments were made to the notes held at the Private Hospital after a copy had been taken for the Public Hospital after Mrs G's transfer. The nursing notes state (with amendments made after Mrs G's transfer printed in bold):

> "F/satis [fairly satisfactory] **start of duty deteriorated 0830hrs**
> very SOBOE [short of breath on exertion] lips blue O_2 87% R/A [very low oxygen saturation]
> O_2 3L via IU/P 91% sats [3 litres of oxygen administered, oxygen saturation improved slightly]
>
> Washed with assistance – wound satisfactory bruising R [right] side
>
> Small breakfast
>
> Pt [patient] using own GTN spray – c/o [complaining of] chest pain
> + abdo [abdominal] pain
> Productive cough – blood in sputum
>
> [Dr A] called **0900hrs –** chest x-ray completed
> RMO called Pt very SOB – O_2 4L via mask
> **[Dr A] called again, family said on his way**
> [Dr A] present 1200hrs onwards
> Dr[..] present
>
> [Another doctor] called
>
> ECG done. Blood Gases."

Ms D stated that after Mrs G had been transferred to the Public Hospital she was asked by the after-hours manager to clarify her notes and she therefore added to them. She noted that at the time it was normal practice for staff at the Private Hospital to write notes as they went along, and that extra notes were added in spaces and gaps as the shift progressed.

Transfer to the Public Hospital
Mrs G's condition continued to deteriorate and at 4.20pm she was transferred to the Public Hospital for an emergency laparotomy, which revealed a duodenal perforation. Mrs G died on 1 March 1999. The Coroner determined that she died from a duodenal perforation giving rise to an abdominal wall abscess and septicaemia following laparoscopic cholecystectomy.

Coroner's inquest
The deputy coroner, commented that Mrs G should have been reassessed by a doctor on the night of 27 February 1999. The deputy coroner stated:

> "… [T]here was a delay in assessment and treatment. It is evident from family and clinical records that by Saturday [27 February] evening [Mrs G] was far from well, and a

thorough medical examination should have been undertaken, and [Dr A], with his qualifications and experience, would have been alerted to possibilities other than chest problems. … Peritonitis and septicaemia would have to be candidates for her deterioration during Saturday, for by Saturday evening [Mrs G] was obviously unwell."

Independent advice to Commissioner

Surgical advice
The following independent expert advice was obtained from Dr Stephen Kyle, a general surgeon:

"**Relevant information reviewed**

- Relatives' letter of complaint
- Anaesthetic record and operation notes
- [The Private] Hospital Integrated Progress Plans and General Observation Chart
- [The District Health Board's] medical records
- Coroner's report
- [Dr A's] letter to [the Coroner]
- [Dr A's] letter to Commissioner
- [Ms I's] letter to [orthopaedic specialist]
- [Ms I's] letter to Commissioner
- [Dr A's lawyers] letter to Commissioner

Executive Summary:
[Mrs G] had a laparoscopic cholecystectomy commencing at 1100hrs on 26.02.1999. She subsequently died from overwhelming septicaemia on the 28.02.1999 [actually 1 March 1999]. She was found on emergency laparotomy on 27.02.1999 [actually 28 February 1999] to have a perforated duodenum, which must have occurred either at the time of her initial surgery or shortly thereafter. Clearly this was the initiating event resulting in overwhelming septicaemia and subsequent death.

This report does not examine mechanisms that may have led to duodenal perforation but focuses on post operative monitoring and management that may have allowed more prompt recognition of this complication facilitating more expeditious treatment and possibly a more favourable outcome.

[Mrs G] was obese, weighing 106kg at the time of her surgery and was of short stature. Obesity can add potential difficulties in performing this procedure, however, [Dr A] commented that despite some extra retraction that was required, the operation proceeded in a straightforward manner.

[Mrs G's] nursing observations up until 2200hrs in the evening were clearly stable and very reasonably, she was commenced on 4 hourly observations at that time.

[Dr A] visited [Mrs G] between 0800 and 0900 on 27.02.1999. She had been febrile up to a temperature of 38.4 in the night, though this had resolved. Her last blood pressure and pulse measurement were performed at 0630hrs that morning and were in the acceptable range. [Mrs G] was noted as being very short of breath. Her oxygen saturation on room air was 88% which is low though this improved to 92% with oxygen.

[Dr A] very reasonably concluded that [Mrs G's] respiratory state was due to pulmonary collapse (Atelectasis) and requested chest physiotherapy and mobilisation.

The majority of patients, following laparoscopic cholecystectomy are fit for discharge within 24 hours of surgery. In fact [Mrs G's] anticipated length of stay on her admission form was for 1 night. Hence, a deviation from an expected outcome has occurred with [Mrs G] not being fit for discharge the following day with what was thought to be a respiratory complication that should be easily treated. However the possibility of further deterioration existed. In view of this unexpected negative outcome, arrangement ideally should have been made for a further medical assessment later that day, or even simply a telephone call as to [Mrs G's] general state and observations.

[Mrs G's] observations during the day on 27.02.1999 clearly deteriorated with rising pulse and low blood pressure, both of which were normal prior to surgery. This should have prompted a nursing staff initiated increased frequency of observation and medical staff review. These observations become particularly dramatic at around 0200hrs on 28.02.1999. I determine this time by extrapolation (the exact time is not actually documented). Her pulse was 108, her blood pressure 88/56 and her temperature 35.4°C. Her oxygen saturation was only 86% on room air. These observations are extremely alarming and would be consistent with her condition entering the later stages of septicaemia. These nursing observations should have been recognised as entirely inappropriate and urgent medical attention should have been sought.

Obesity and a dark complexion can perhaps make some signs of septicaemia difficult to assess. Not all patients will manifest fever, some will have a low temperature. In the Coroner's report, [Mrs G's] relatives, [Ms H] and [Mrs F], both state classical signs of septicaemia seen on the evening of 27.02.1999. They describe [Mrs G] being in a cold sweat and clammy to touch. [Ms H] states that [Mrs G] complained of feeling hot and cold and her feet looked blue. Both state their mother appeared unduly tired. These features, they state, were pointed out to the nursing staff. Irrespective of the subjective nature of simple observation this should not override the objective data obtained from monitoring.

It is written in the nursing notes on 28.02.1999 that [Dr A] was called at 0900 hours when it was noted that [Mrs G's] condition had deteriorated by the nurse that commenced the morning duty. In the coroner's report, it is stated [Dr A] cannot recall being called (paragraph 16). In [Dr A's] letter to the Commissioner dated 26/02/02 it is stated that [Dr A] did not receive the call which went to his family home. No degree of urgency was stated. The nurse was informed that [Dr A] was in transit to [the Private Hospital]. From the nursing notes however this is the second call to [Dr A]. It is

unclear whether [Dr A] was directly spoken to or a degree of urgency portrayed with the first call. He subsequently arrived at 1200 hrs.

When contacted about a patient's condition that has deteriorated, it is standard practice to relay nursing observations and general concerns. If not volunteered, this should be directly asked for. It would be immediately apparent that [Mrs G] was in a parlous state and immediate attention required. If [Dr A] was contacted, then himself or a delegated person with sufficient skills to manage the situation should have attended [Mrs G] promptly. If [Dr A] could not be contacted, then it would be standard practice with such a sick patient to find another specialist to perform this task. The nurse looking after [Mrs G] at this time clearly recognised her as being ill and actively sought medical assistance.

When [Mrs G] was assessed by [Dr A] he found her to be extremely ill, and he acted appropriately in trying to salvage the situation from that time.

Specific Issues:
Overall the [Private] Hospital notes contain sufficient information about [Mrs G's] condition. They reflect the level of monitoring that was required up until the afternoon of the 27.02.1999. With her deterioration, medical review and increased frequency of observation should have been obtained.

The fact that [Dr A] did not arrange a further medical review or even a telephone assessment on the day of 27.02.1999 following his assessment that morning where [Mrs G] appeared to have respiratory complications, would represent a minor departure from normal practice. This departure would only be minor in the presence of experienced nursing staff that were readily able and willing to communicate any concern at any time.

If [Dr A] was contacted at 0900 on 28.02.1999 and her observations relayed, then a lack of specialist assessment for three hours represents a severe departure from standard practice. However it is unclear as to whether [Dr A] was contacted directly.

The significance of the deterioration of [Mrs G's] observations on afternoon and evening of 27.02.1999 and particularly in the early hours of 28.02.1999 should have been recognised. Nurses are more than simple recorders of observations. Observations should be interpreted and acted upon. The nursing staff taking these observations must accept responsibility as to documenting a significant deviation from normal and feeling freely able to communicate any concern to the relevant medical specialist or his delegate. The failure to do so in this case represents a severe departure from standard practice and would incur strong disapproval from peers."

Nursing advice
On receipt of Dr Kyle's advice and additional information sought from the Private Hospital, the following independent expert advice was obtained from Ms Janet Hewson, a registered nurse:

"**History**

[Mrs G] was admitted to [the Private] Hospital for an elective laparoscopic cholecystectomy. The surgery was performed on 26 February 1999. On 28 February her condition became unstable and she was transferred to [the] Public Hospital. She died on 1 March 1999.

Complaint

The family of [Mrs G] has expressed dissatisfaction with her post-operative care and events leading to her death. I have been asked to advise you if, in my opinion, there are any matters in [Mrs G's] nursing care during her admission to [the Private] Hospital that require investigation by the Commissioner's Office and if so, what are they and what are my concerns.

Supporting Information

- Complaint letter from [Mrs F]
- Details of phone call with [Mrs F]
- Response from [the Private] Hospital
- Response from [Dr A]
- Letters from [Ms I]
- Coroner's findings
- Records from [the] Public Hospital
- Records from [the Private] Hospital
- Post Mortem Report
- Letter from another surgeon at the Private Hospital
- Advice from SM Kyle
- Policy and procedures from [the Private] Hospital

Review of clinical notes

[Mrs G's] baseline observations before surgery were: blood pressure 138/92, pulse 62 and oxygen saturations 98% on air. She was obese at 106kg and her notes from [the Public] Hospital state that she smoked half a pack per day although her self reported smoking on the pre-operative checklist was ticked 'no'.

Her observations on the ward after surgery (26/2) were: blood pressure 130/70, pulse 70's and oxygen saturation 89% on air.

On 27/2 at 0200 hours her observations were: temperature 38.4, blood pressure 112/62, pulse 90's and oxygen saturation 90% on air. It was reported she had a productive cough. For the remainder of that day her systolic blood pressure was between 90-100 with a pulse in the 80-90 range. Her oxygen saturations were 91% on 2/3-litre oxygen. She was reported to be very short of breath. Later in the evening her systolic blood pressure was between 110-120 and her pulse between 98-110 with an oxygen saturation of 91% on 3 litres oxygen (88% on air).

On 28/2 at 0200 hours her blood pressure was recorded at 88/58, pulse 108, oxygen saturations 88% on air and it was reported she was short of breath after mobilizing, was perspiring and feeling hot although was cold to touch. Her temperature was 35.5. About an hour later it was reported she was warm and not short of breath. The next recorded observations at 0600 were: temperature 35.8, blood pressure 98/58, pulse 105 with an oxygen saturation of 86% on air. At 0830 hours that morning it was reported that [Mrs G] was very short of breath on exertion, her lips were blue and her oxygen saturations were 87% on air.

Throughout this period it is recorded that [Mrs G] was seen by physio, encouraged to deep breathe, was coughing and mobilised regularly.

Comment

[Mrs G] was at risk for developing postoperative atelectasis due to her obesity (and smoking?). Obesity makes optimum positioning for good ventilation difficult and hinders independent mobilization. However it was recognised as a potential problem and measures were put into place to manage this (chest physiotherapy and regular mobilization).

[Mrs G's] baseline observations were within normal limits. On five occasions during the first and second post-operative day her systolic blood pressure was recorded at less than 100. Her pulse was recorded at greater than 90 on three occasions and greater than 100 on three occasions during the same period. Her oxygen saturations never rose above 90% on air and with supplemental oxygen the saturations were generally around 92%.

She was reported to be short of breath on two occasions and cold to touch while perspiring and feeling hot in herself before she was reported to have deteriorated at 0830 hours on 28 Feb.

Although [Mrs G] was at risk for post-operative atelectasis, despite regular deep breathing, coughing and mobilizing she did not reach a state that reflected stability and progressive recovery from this surgery. Her blood pressure and pulse were often far from her normal baseline and she could not maintain a normal oxygen saturation 36 hours post-operatively. Adding to this her shortness of breath and cold skin 36 hours post operatively suggests an impending or actual complication that would not be expected for this type of surgery in a previously well woman.

Opinion

Nurses represent the primary surveillance in hospitals 24 hours a day. [Mrs G] was regularly monitored and appropriate interventions were carried out as ordered by the surgeon. However it does not appear that the nurses appreciated that her observations over the 36 hours post-operatively were not consistent with just atelectasis or a chest infection. I would not expect hypotension, tachycardia, hypothermia, shortness of breath and cold skin 36 hours after a laparoscopic cholecystectomy. The nurses should have been considering other impending or actual problems that required a medical review. Despite the recording that [Mrs G] settled at around 0300 hours on 28/2, her

recovery before and after that time was not progressing as would be expected. I believe a medical practitioner should have been asked to review her on 27/2 when she was 'very short of breath' with a blood pressure, pulse, and oxygen saturation that were not returning to her normal range.

The standard of documentation was poor in that it was difficult to follow a sequence of events in the clinical notes as no time was recorded for each entry and events were not recorded in the order [in] which they occurred. There is also no signature for each entry.

I am aware from the letters written by the director of nursing that measures have been taken to improve knowledge through in-service [training] and debriefing. The issue of improved documentation was also raised.

Situations like [Mrs G] do happen. Nurses are most often in the frontline of assessing patients and alerting other members of the healthcare team. Early recognition of the potential and actual deterioration (often subtle) in the patient's condition is crucial and nurses need to have an acute degree of suspicion. In this case it was important for the nurse to reflect on her entire post-operative period. This should have triggered some doubt about her condition and prompted a review, regardless of the time of day/night.

It does not seem to me that singling out any one nurse will be helpful. I believe that provision for advanced education and training with regular learning opportunities for the nursing service would be most beneficial. Nursing practice today demands that we are able to think critically, expect the worst possible scenario, be able to make a knowledgeable assessment, mobilize interventions, coordinate activities and appropriately refer on to other health professionals."

Responses to provisional opinion

Dr A
In response to my first provisional opinion Dr A stated:

"Clearly the cause of death was septicaemia, most likely due to necrotising fasciitis as a result of duodenal perforation. I have no explanation as to why this perforation occurred. I thought it might have been due to arcing from the diathermy but there was no sign of any diathermy damage when I carefully inspected the perforation at operation. In addition I took a biopsy of the perforation to see if there was any diathermy and this was not found. Instead this biopsy showed that she had ulceration present. I am not sure of the cause of this ulceration and it appears unlikely to be peptic. The pathologist commented that there might have been vascular insufficiency as a cause for this ulceration. To reiterate, the pathologist found microscopic evidence of ulceration which was present before and quite distinct from the actual perforation that occurred. This ulceration was in the tissue adjacent to the perforation. Thus there is microscopic

pathological evidence of ulceration disease in the duodenum and this somehow may relate to the cause of the perforation.

I must stress that at no time during the first operation was there any inadequate exposure. Because of this there was no possibility of direct diathermy damage to the duodenum or indeed damage with any other instrument. The only other sharp instrument that I used during the operation were laparoscopic scissors and these had no point on them. These are back biting scissors with blunt ends. The retraction that was employed through the 5th port was a retraction of the colon and omentum only and not the duodenum. In any case this was also a blunt instrument. I have not encountered this complication before during well over a thousand cholecystectomies and unfortunately, I still have no explanation as to why it occurred this time.

- Routine post-operative measurements were made and routine observations were performed on [Mrs G]. Apart from a high temperature on one occasion, which could be put down to atelectasis, there was no indication that there was anything wrong on the first post-operative day. [Mrs G] was able to drink and this would be very unlikely if she were to have a duodenal perforation. She did not complain of excessive pain, which is also unusual if there were a perforation.

- Even on the second post-operative day, when it was clear that something was wrong, it was not apparent that there was peritonitis. Patients are commonly tender in the abdomen on the right side after a laparoscopic cholecystectomy and it was not possible to be sure that the cause of [Mrs G's] only symptom of breathlessness was sepsis or peritonitis. Once it was clear that there was sepsis, I immediately administered antibiotics and arranged transfer to ICU forthwith and then laparoscopy.

- At the second operation, I identified a certain cause of peritonitis and treated it appropriately. Although I recognised that there was a cellulitis of the right side of the abdomen, I saw no need to postulate two separate causes of the sepsis, namely the duodenal perforation AND necrotising fasciitis. I assumed that antibiotics would be sufficient to treat the cellulitis, while I had dealt effectively with what I saw as the primary cause of the sepsis, the peritonitis. I did indeed think of the diagnosis of necrotising fasciitis, but the incision I made into the subcutaneous tissues did not reveal necrotic fat, in my opinion. My incision into the abdominal cavity for the laparotomy was through what I considered to be viable subcutaneous tissue. It was slightly discoloured and I put that down to leakage of peritoneal fluid through the trocar incision in that area. The pathologist tells us that indeed there was no necrotising fasciitis here. The separate lower incision I made revealed subcutaneous fat of similar appearance, resulting in my conclusion that it too was not dead tissue. It must be stated that [Mrs G's] obesity made the mere thought of radically debriding her abdominal wall, including skin, 15cm of subcutaneous fat and possibly muscle was unbearable. The area was not well delineated and it was possible that the debridement could have involved a very large surface area indeed, making this manoeuvre simply lethal. In other words, it was my assessment that if there was indeed necrotising fasciitis present it was for all intents and purposes untreatable in

this lady at the time of surgery for her peritonitis and I was giving her better odds by backing my assumption of cellulitis only.

- As it turns out, the forensic pathologist's report indicates an area of subcutaneous necrosis only and only 15cm in diameter. While I concede that it would have been contributory to her ultimate demise, I suggest that such a relatively small area of necrosis would not be the primary cause of her death. Furthermore, by extrapolation, at the time of second operation the area of necrosis would have been smaller and even harder to diagnose at that time.

- Necrotising fasciitis is a rare condition. It is most commonly described in the leg and less often in the perineum. It is usually a solitary diagnosis meaning that there is no other pathology present and therefore no other cause for sepsis. The organism involved is usually streptococcus although very often other organisms are synergistically involved. Streptococcus is the causative organism for cellulitis too, which of course is a very common condition. The difference between the two diagnoses is not easy to detect or even to explain. Cellulitis is usually caused by one organism and involves skin only and necrotising fasciitis is usually caused by more than one organism and involves skin subcutaneous fat, fascia and muscle. It is not clear why it occurs, that is, why the infection is so much more virulent. However when a patient who has a cellulitis of the leg and is systemically very unwell, particularly with renal failure, then the clinic diagnosis is changed to necrotising fasciitis. In the case of [Mrs G], there was an alternative proven diagnosis to adequately explain her deterioration. In her case, the necrotising fasciitis was not the only pathology and thus the diagnosis was much more difficult.

- Necrotising fasciitis is said to have a 50 per cent mortality rate overall. This includes all those cases of sole pathology. Regardless of treatment, [Mrs G's] disease, accompanied by peritonitis and aggravated in no small degree by her obesity, her age and general condition, would have a much higher associated mortality. Whereas necrotising fasciitis of the leg can be dealt with 'simply' by amputation, necrotising fasciitis of the abdominal wall, entailing excision of indefinite areas of abdominal wall resulting in probable bowel eventration, is a much more difficult undertaking. I suggest that in [Mrs G] it would have been a fatal operation and as I considered that she only had cellulitis, a potentially unnecessary fatal operation.

- While necrotising fasciitis has been well described in the leg and perineum, there is very little in the medical literature about necrotising fasciitis following laparoscopy. My literature search only found three articles in English. They refer to the very high mortality rate and the cases successfully treated were not complicated by peritonitis and progressed much more slowly than [Mrs G's] case. The onset was usually several days after the surgery and several days passed between several operations. In [Mrs G's] case, shock was not evident until after her second operation and there was only a matter of hours later that she died. There was only an impossibly tiny window of opportunity of successful treatment assuming the necrotising fasciitis was contributory.

- After [Mrs G's] death, cultures of the blood, peritoneal fluid and wound swabs showed E Coli and Candida. This confirms that there was an established peritonitis present at the second operation. Initially after a duodenal perforation, the peritonitis is a chemical one and if one can operate at this time, the chances of a successful outcome are high. By the time the fluid becomes infected, the morbidity is higher and this supports my contention that the peritonitis itself could have been the primary cause of death. That the wound swabs grew these organisms rather than the expected Streptococcus could mean that the septic process in the abdomen and the abdominal wall was even more virulent than usual. It was not of course known that [Mrs G] had Candidiasis and she was not treated for this. This unavoidable omission could also have contributed to her death. The pathologists report states that the fluid in the peritoneal drain was brown. This fluid was therefore still infected; the peritonitis process was still active and therefore contributory to [Mrs G's] death.

- The operative duodenal biopsy showed mucosal ulceration, indicating that there was a pre-existing ulcer or ulcers in the duodenum prior to the surgery or at least indicating that there was associated pathology present so that one does not have to propose dual pathological causes of perforation, namely iatrogenic trauma <u>and</u> idiopathic or stress-related duodenal ulceration.

- It might be suggested that the wrong operation was performed on [Mrs G] in the first instance. She presented to me with a history of severe chest pain that has necessitated admission to hospital and investigations for ischaemic heart disease. She was anxious to prevent further attacks of pain. Cholecystectomy was therefore clearly indicated. Although her morbid obesity was risk factor for adverse outcome, an 'open' operation would have been much more likely to have complications than a laparoscopic one. The laparoscopic procedure has been shown to have a lower morbidity for obese patients.

In summary, I believe that [Mrs G] suffered a duodenal perforation from an acute ulcer. I treated that perforation at the earliest clinically detectable time and yet peritoneal sepsis by untreated organisms caused her rapid demise. The necrotising fasciitis was not reasonably diagnosable at the second operation and radical debridement could have resulted in added unnecessary trauma.

After I operated on [Mrs G], I wrote my operation report in the notes as usual. There were no special difficulties at operation other than the insertion of one extra port, which is of itself of little significance. When I examined [Mrs G] the next day she was not unwell in my view and had no specific complaints. It seemed appropriate that she stay in hospital one more day to allow for a fuller recovery prior to discharge. There was nothing special to write in the casefile over and above what the nurses wrote in their nursing section. There was enough information for the nurses and in-house doctor to work with if necessary. After I examined and treated [Mrs G] the following day, when it was now clear that she was very unwell, I wrote extensively in the casenotes, wrote a referral letter to the Intensive Care Unit in [the Public] Hospital and attended the Department to personally discuss the case with the doctors working in the Unit that day.

I wrote by hand the operation note for the operation I performed that night and again wrote in the [the Public] Hospital casenotes as appropriate post-operatively.

It was clear during the Coroner's inquest that it was difficult to assess [Mrs G] post-operatively. When I examined her on the first post-operative day she was not unwell and although I recommended another day's hospitalisation, I was not concerned about her condition. Indeed when I came to see her the following day I was expecting to be able to discharge her and was surprised to see her so unwell. I had not been notified by the [Private Hospital] staff that there had been any deterioration in her condition at any stage. Although the nurses recorded in the notes that they tried to contact me mid-morning and were told by my family that I was on my way, if there had been any urgency expressed, my family knew where I was and could have contacted me urgently if required.

Unless the patient's condition demands it, visiting a patient daily is regarded as sufficient contact. Because I was not concerned about her condition on the first post-operative morning and because I was not notified of any change, I believe it still reasonable to plan on daily visits as usual. I was not contacted at any time by the nursing staff or the resident medical officer on Saturday night to advise that there had been a deterioration in her condition. During the Coroner's inquest, it was stated by [Mrs G's] relatives that on the second post-operative night they were aware of a drastic change in [Mrs G's] condition that the nurses and therefore I did not respond to. One of [Mrs G's] daughters has stated that she pointed out to the nurses that she felt her mother was unwell on the Saturday night but however when I first spoke to one of [Mrs G's] children on the second post-operative day, it was after she had arrived at [the Public] Hospital to take her mother home. It would appear that at that time on the Sunday morning, she was unaware of [Mrs G's] desperate state. When I first examined [Mrs G], the main symptom was of breathlessness and my attention was first directed at searching for respiratory and cardiac causes for that. I then deduced that overwhelming infection was the cause and once [Mrs G] had been stabilised at [the Public] Hospital, I made arrangements to re-operate to ascertain the cause of that infection. It was always difficult to examine [Mrs G] because of her size and peritonitis was therefore difficult to diagnose.

In a case such as this it is easy in retrospect to criticise delays and misdiagnoses. [Mrs G's] obesity made examination difficult, her cause of death, namely duodenal perforation, is extremely rare after cholecystectomy (and the cause of that is still unknown) and the ultimate cause of death, namely necrotising fasciitis is also extremely rare. Her obesity made that diagnosis difficult and the treatment also difficult. The extreme rapidity of advancement of the necrotising fasciitis was far faster than that described in the literature and it was therefore almost certainly untreatable with a fatal outcome likely whatever the treatment.

I believe that I was not negligently responsible for any significant delay in diagnosis or treatment. As soon as I was aware that [Mrs G] was unwell, I instituted tests to diagnose her problem, arranged transfer as appropriate, and began treatment in a timely manner.

I would like to take the opportunity to again express my sincere condolences to the family for the sad loss of [Mrs G]."

Ms B, Ms C, Ms D and the Private Hospital
I also received comprehensive responses from Ms B, Ms C, Ms D and the Private Hospital. I have carefully considered their submissions and referred to them in my opinion, where appropriate.

Further independent nursing advice

After receiving the responses to my provisional opinion, further independent expert advice was obtained from Ms Hewson:

"You have asked me to review the information relating to the involvement of [Mr E], [Ms B], [Ms C] and [Ms D]. You have asked me to give my opinion if these nurses provided [Mrs G] with reasonable care and skill. If not, which areas was her care deficient.

You have also asked me if it was usual and acceptable practice to amend nursing notes sometime after the time of the events recorded.

Additional Supporting Information

Response from [Mr E]

Response from [Ms D] (December 2002)

Response from [Ms B]

Response from [Ms C]

Commissioner's provisional opinion

Response to PO from [Dr A]

Response to PO from [the Private] Hospital

Response to PO from [Ms B]

Response to PO from [Ms C]

Response to PO from [Ms D] (March 2003)

Summary of facts by [Mrs F]

I have read these documents several times including those offered to me in August 2002 when I wrote my initial report. My initial report was concluded from the [the Private] Hospital medical record, particularly the nursing notes and observation charts, knowledge of the expected post operative course for a patient recovering from a laparoscopic cholecystectomy, [Mrs G's] pre operative state and reports from the coroner and medical advisor. I had no opportunity to read any statements from the

nurses involved in [Mrs G's] care. I will update my opinion in light of these nurses' reports.

[Mr E]

[Mr E] is a mature, experienced nurse who had been employed full time for over three years as an after hours manager at [the Private] Hospital. He was involved in the care of [Mrs G] on 26 Feb afternoon shift, 27 Feb day shift and 28 Feb day shift. [Mr E] reports that he had occasion to speak to the family and was aware of their request that [Mrs G] was pushed along in her recovery, as she may be reluctant to move about. He had no reason to be concerned about her progress on the afternoon of 26 Feb. Although not specifically stated, I would have assumed [Mrs G] was included in the handover [Mr E] gave to [Ms C] on 26 Feb and received from [Ms C] on 27 & 28 Feb. As [Mr E] implied he had no concerns about [Mrs G] until [Ms D] called him on 28 Feb, I am concluding he did not receive an unfavourable handover from [Ms C] at the 0700 handover on 27 & 28 Feb. Once he received a call from [Ms D], around 0830 hours on 28 Feb, his assessments and coordination of activities was appropriate and to the expected standard.

I conclude that [Mr E] provided reasonable care and skill to [Mrs G].

[Ms B]

[Ms B] is a mature nurse with significant experience in theatre, oncology and hospice. It is unclear in the records how much postoperative surgical experience [Ms B] had or how long she had been employed at [the Private] Hospital. [Ms B] nursed [Mrs G] on the night shift of 27 & 28 Feb. She received the afternoon shift handover from [Ms D] on both occasions and gave handover to [Ms D] on the morning of 28 Feb. The night of 27 Feb [Ms B] was told in handover by [Ms D] that [Mrs G] was not progressing well. [Ms B] assessed she had a productive cough and a temperature spike. Panadol was given with the effect that her temperature returned to normal and she handed this information over at 0700.

On 28 Feb she received handover from [Ms D] who reported that [Mrs G] was not progressing as she should have been. At around 0130-0200 [Mrs G] was perspiring, cold to touch and short of breath with the following observations: blood pressure 88/58, pulse 108, oxygen saturation 88% on air and a temperature of 35.4. [Ms B] did pass this information on to the duty manager, [Ms C], who came to see [Mrs G] shortly thereafter. After discussion with [Ms C], the decision was made to watch her closely as she had warmed to touch and her shortness of breath at rest was less. The next recorded observations were at 0600 hours. She stated she handed over to [Ms D] in the morning but there was nothing that made her think a doctor should be called.

It would be the expected standard of postoperative nursing care that [Ms B] reviewed [Mrs G's] entire clinical record. The record clearly showed that [Mrs G's] observations during the day shift and afternoon shift were far from her admitting baseline and far from her immediate post operative period on 26 Feb. As well the last recorded observations

at 2100 and 2200 were significantly better than those obtained at 0200. Taking into account the daytime and afternoon observations, a handover report that she was not progressing as she should and the 0200 signs and symptoms assessed by [Ms B] (now 36 hours after [Mrs G] returned to the ward), it would make sense to get a medical opinion as well as another nursing opinion. Although the 0200 episode was brief and the patient 'warmed' and seemed settled in the next hour, this significant event suggests to me that her body was able to compensate somewhat, however still remained hypotensive and tachycardic (0600 recordings). Despite her re-warming and appearing to be settled and comfortable, there were several poor clinical indicators that day and evening that warranted a medical review in light of the episode at 0200. People in a decompensation state, as she was, will not always overtly express themselves as being sick or uncomfortable as the body begins to shut down and conserve energy.

I am also concerned [Ms B] did not convey a clear picture of [Mrs G's] condition to [Ms D] in the morning report on 28 Feb. Not having a critical approach to [Mrs G's] progress, thus not allowing a reflective discussion between [Ms B] and [Ms D] at handover, may have disadvantaged [Ms D's] vigilance to fully assess [Mrs G] sooner and contact [Dr A] with an update of her progress. It seems that [Ms B] did keep a close eye on [Mrs G] but I am concerned she did not consider the whole peri operative period of this woman only focusing on what was happening at that time. I know nurses will let time pass and see if the patient settles, however in this case too much time had passed in this woman's unsatisfactory recovery to warrant that decision.

I conclude that [Ms B] would meet with mild disapproval by nursing peers. Although she did notify her supervisor, [Ms C], I would expect a postoperative surgical nurse to have questioned, 'what was going on here' more critically and ask for a medical review.

[Ms C]

[Ms C] is a mature and experienced nurse who has been after hours manager at [the Private] Hospital for nearly 25 years. She was night shift manager on 27 and 28 Feb.

[Ms C] knew [Mrs G] from the night of 27 Feb when her temperature rose. She received handover from the after hours manager [..] on the afternoon shift of 27 Feb. From this report she knew [Mrs G] had been short of breath and treated with nebulizers. And she knew from family reports that [Mrs G] needed encouragement to mobilize as she was inclined to do little.

[Ms C] responded to the call from [Ms B] at around 0200 and by the time she arrived the patient was warm and dry. [Ms C] reported that [Ms B] said the patient was cool, clammy and breathless. She said she had no concerns about this transient episode otherwise she would have notified the RMO. [Ms B] states there was a discussion about [Mrs G] and the decision was to watch her closely.

I do not know what information was discussed between [Ms B] and [Ms C] but had the medical record been reviewed and some critical thinking occurred about the details of her recovery (which was not progressing as expected) I believe a decision to get a medical opinion should have taken place. There was sufficient information at hand from

the records, her lack of progression given in handover reports and the 0200 episode to trigger doubt. Choosing 'to closely watch' the patient was not the best decision as the course of this sequelae was well underway.

I conclude that [Ms C] would meet with mild disapproval from her nursing peers. I would have expected a nurse with her years of experience to take a critical view of the big picture in a woman who was not progressing and had a transient yet very significant event at 0200 accompanied by persistent hypotension and tachycardia.

…

[Ms D]

[Ms D] had almost two years experience before being employed at [the Private] hospital. She had been working at [the Private Hospital] for three months at the time of this case. She looked after [Mrs G] on three occasions: 26 Feb afternoon shift, 27 Feb afternoon shift and 28 Feb morning shift (short change). She should have known what [Mrs G] was like better than any of the other nurses who cared for her.

[Ms D] looked after [Mrs G] on the first post op afternoon. Her initial recovery was uneventful. On 27 Feb [Mrs G's] blood pressure was below 100 systolic with a gradually rising pulse. Her oxygen saturations were borderline on supplemental oxygen. She was slow to mobilize and required frequent interventions to help her cough and mobilize. She was often short of breath and required nebulizers with partial relief. [Ms D] contacted the duty manager, .., around 1800 hours to convey her concern about [Mrs G]. Nebulized oxygen was organized and by 2100 [Mrs G's] observations began to improve.

The daughter of [Mrs G] reports that she informed a nurse that her mother was feeling hot and cold, had a cold sweat, was clammy and had blue feet. [Ms D] denies being told this information and states that had she received this information she would have notified her duty manager or [Dr A]. [Ms D] never reported signs and symptoms as described by the daughter. I am concerned that [the after hours manager], who was on the ward helping [Ms D], may have been the nurse the daughter reported these signs and symptoms to.

[Ms D] did report to [Ms B] that [Mrs G] was not progressing as she should during handover on 27 Feb.

Although [Dr A] and [another doctor] had seen [Mrs G] at around 0900 hours (27 Feb) and were aware she was not ready to go home, there appeared a lack of appreciation that she did not improve as the day and evening wore on. She was no better 12 hours later. It would have been expected that [Mrs G] would be improving, however her blood pressure and pulse were well below her expected normal. I believe the transient rise of blood pressure with a slight decrease in pulse at 2200 hours gave [Ms D] a false sense of things being OK. Again this transient compensating effect can obscure the many hours of hypotension that occurred before and after the 2200 recordings. From [Ms D's] report it appears as if she would have contacted a doctor had she known about the

signs and symptoms described by the daughter. I do not know what input the nurse manager had and if she would have been able to give clinical advice and support to [Ms D] who had less surgical experience than any of the other nurses involved.

On Sunday morning, 28 Feb, [Ms D] reported that she saw [Mrs G] around 0700 and did not notice anything of concern. She did not appear to make a full assessment of her before breakfast and again saw her around 0830 when [Mrs G] was in the bathroom being sick and looking cyanosed. Her action was to settle her patient, notify the duty manager, [Mr E], and call [Dr A] around 0930 (confirmed with Telecom). The information she gave [Dr A] was that [Mrs G] had a cough, was short of breath and 'didn't look or seem right' (from [Ms I's] report). [Ms D] states she definitely told [Dr A] [Mrs G] had deteriorated.

The events that took place after this appeared to be timely and the necessary support from medical staff and the duty manager were apparent. There was another phone call to [Dr A] (confirmed with Telecom) later in the morning to find out if he was on his way.

[Ms D] did not appreciate the progressive and sustained hypotension and rising pulse. However, without any other signs that pointed to a cardiovascular deterioration (e.g. cold, clammy skin) and with the transient rise in [Mrs G's] blood pressure at 2100 & 2200 hours, her relative inexperience and unknown support from the duty manager, I am reluctant to overly criticize her care of [Mrs G] on the afternoon of 27 Feb.

On the morning of 28 Feb if she was given a detailed handover by [Ms B], she should have prioritized her work to fully assess [Mrs G] at that time. Her observations would have alerted her to impending problems in as much as [Mrs G] was still, after all this time, hypotensive and tachycardic.

Her verbal report to [Dr A] should have been more detailed to alert him to the specific problems at hand (e.g. vomiting + blood, cyanotic, pulse and oxygen sats) as well as finding out exactly when he would be on the ward.

I would conclude that [Ms D] would meet with mild disapproval with her nursing peers. She may not have had the experience or information required to make a more knowledgeable judgment about [Mrs G's] care on 27 Feb. Her actions on 28 Feb could have been of a higher standard had she prioritized her work to perform an early assessment, considered the progress of [Mrs G] to that point as being far from normal and reported her findings to [Dr A] in a concise and assertive manner.

Amending Nursing Notes

The explanation that [Ms D] gave regarding the later addition to her nursing notes on the morning shift of 28 Feb is reasonable. The formats of the notes at [the Private Hospital] at the time were such that empty lines/spaces were left for nurses to add comments from other shifts or at a later time in the shift. It was appropriate that [Mr E], duty manager, reminded her to note more specific times and any details about [Mrs G's] deterioration before that shift was complete. Because the notes needed to be

photocopied earlier in the shift to send to [the Public] Hospital, the additions were obvious. It is preferred practice in most hospitals not to leave spaces and lines and if additions or amendments need to be made they are done with the time, date and complete signature of the writer. I conclude that this was reasonable custom and practice at [the Private] Hospital at the time."

Code of Health and Disability Services Consumers' Rights

The following Rights in the Code of Health and Disability Services Consumers' Rights are applicable to this complaint:

RIGHT 4
Right to Services of an Appropriate Standard

1) *Every consumer has the right to have services provided with reasonable care and skill.*

2) *Every consumer has the right to have services provided that comply with legal, professional, ethical, and other relevant standards.*

Other Relevant Standards

'Cole's Medical Practice in New Zealand' (Medical Council of New Zealand, 1999)

"Inadequacy of patient records as a form of misconduct:

A doctor is expected as part of a quality service to maintain adequate records."

'Code of Conduct for Nurses and Midwives' (Nursing Council of New Zealand, 1998)

"Principle 2.9

The nurse or midwife accurately maintains required records relating to nursing or midwifery practice."

[The Private] Hospital 'Clinical Documentation' policy

"...

Entries must be legible, dated and signed, designation and time noted where appropriate. ..."

Opinion: Breach – Dr A

Failure to adequately manage Mrs G's deterioration
A complaint was made that Dr A failed to adequately manage Mrs G postoperatively. I accept that Mrs G's condition began to deteriorate significantly during the afternoon of 27 February 1999. As noted earlier, I have received conflicting information surrounding the circumstances in which Dr A became aware of the significant changes in Mrs G's condition.

Ms D stated that she spoke to Dr A at around 9am on 28 February and advised him that Mrs G was coughing, short of breath and didn't "look or seem right". The nurse said she asked Dr A whether to arrange a chest X-ray and said that Dr A advised her to do this and ordered some blood tests before stating that he would be arriving at the hospital shortly. Dr A advised that he has no recollection of this conversation; he probably would not have been at home at the time the call was made and felt that there was no urgent need for him to attend Mrs G. He said that when he went to see her at midday he was expecting to discharge her and was surprised she was so unwell. A second call was made to Dr A's family home at around 11.30am. The nurse calling was advised that Dr A had already left for the hospital. Telephone records confirm a call was placed at 9.33am and then again at 11.33am.

Having considered all the evidence, I am satisfied that Dr A was contacted by Ms D at 9.33am, informed about Mrs G's symptoms and given sufficient information to determine that a chest X-ray and blood tests should be arranged.

I asked my general surgeon advisor to comment on Dr A's failure to see Mrs G for the 24-hour period following his review on the morning of 27 February 1999. Dr Kyle informed me that Dr A's failure to arrange a further medical review, or even conduct a telephone assessment during this period, represented a departure from normal practice in view of Dr A's assessment on 27 February that Mrs G would not be fit for discharge that day as had been expected. Dr Kyle advised me that given the presence of registered nursing staff available to contact him with any concerns, he considered such a departure was minor.

Dr Kyle also advised me that if Dr A had been advised of Mrs G's symptoms and parlous state, he should have either attended immediately himself, or arranged for another doctor with suitable skills to attend in his place. Dr Kyle noted that "[i]f Dr A was contacted at 0900 on 28.02.1999 and her observations relayed, then a lack of specialist assessment for three hours represents a severe departure from standard practice. However it is unclear as to whether Dr A was contacted directly."

I accept Dr Kyle's advice. Dr A was responsible for Mrs G's care and was on notice on the morning of 27 February that she was not recovering as he expected. In my opinion, he had a responsibility to follow up Mrs G's progress later that day – or arrange for an appropriate delegate to do so – and to promptly attend to Mrs G as soon as significant changes in her condition were reported to him. Accordingly, Dr A failed to provide services to Mrs G with reasonable care and skill and breached Right 4(1) of the Code.

Dr A has advised that as a result of this incident he has reviewed his practice and now, whenever he is the sole specialist responsible, makes a point of visiting every patient twice

daily or telephoning the nursing staff and asking for full details of the patient if he is only able to visit once a day. He has also provided a letter of apology for Mrs G's family.

Opinion: Breach – Ms B, Ms C and Ms D

Failure by the Private Hospital nursing staff to recognise changes and advise Dr A
In my opinion Ms B, Ms C and Ms D failed to care for Mrs G postoperatively with reasonable care and skill and breached Right 4(1) of the Code.

In his findings, the deputy coroner concluded that by the evening of 27 February, Mrs G was far from well, and a thorough medical examination should have been undertaken. The deputy coroner added that had he seen Mrs G again, Dr A, with his qualifications and experience, would probably have realised that Mrs G's decline was not simply the result of chest problems.

Dr Kyle advised me that the significance of the deterioration of Mrs G's observations on the afternoon and evening of 27 February and 28 February should have prompted an increased frequency of observation and medical staff review. As he rightly pointed out, nurses are more than simple recorders of observations. Observations should be interpreted and acted upon. My nursing advisor, Ms Hewson, noted that postoperatively Mrs G's blood pressure and pulse were often far from her normal baseline. She could not maintain a normal oxygen saturation and was short of breath and cold. Ms Hewson advised that the nurses involved in Mrs G's postoperative care should have reflected on Mrs G's observations and recognised that her postoperative recovery was not progressing as expected and sought a medical review – particularly when she became short of breath on 27 February and her observations were not returning to her preoperative baseline.

I concur with this advice. In my opinion, Ms B, Ms C and Ms D failed to think critically about Mrs G's ongoing abnormal symptoms and seek timely medical review. Instead, they simply recorded a continued and significant deviation from the expected course of recovery until Mrs G was in a parlous state on 28 February.

The failure to recognise that the changes in Mrs G's condition required a medical review was not isolated to one individual. Three nursing staff reviewed Mrs G during the evening of 27 February and the early stages of 28 February 1999. Ms B, Ms C, the night nurse manager, and Ms D all failed to request a timely medical review. Ms Hewson advised me that it would not be helpful to single out any one of the nurses involved in Mrs G's postoperative care for criticism. To some degree I accept that the failure of nursing staff to contact Dr A was indicative of a systemic problem at [the Private] Hospital. However, I do not accept that the poor standard of nursing care provided to Mrs G is the result of systems issues at [the Private] Hospital.

As my nursing advisor noted:

> "Situations like [Mrs G] do happen. Nurses are most often in the frontline of assessing patients and alerting other members of the healthcare team. Early recognition of the potential and actual deterioration (often subtle) in the patient's condition is crucial and nurses need to have an acute degree of suspicion. In this case it was important for the nurse to reflect on her entire post-operative period. This should have triggered some doubt about her condition and prompted a review, regardless of the time of day/night."

My overall impression of the service provided to Mrs G following surgery is that the nursing staff did not have the required degree of suspicion and vigilance. Despite clear signs that Mrs G was not recovering from surgery as expected and that close monitoring was required, none of the nursing staff involved increased the frequency of observation or requested a medical review until the morning of 28 February.

I will deal with each nurse's specific responsibilities in turn:

Ms B

Ms B nursed Mrs G on the night shift of 28 February and was concerned about her condition at approximately 1.30am. Ms B notified her supervisor, Ms C, and they decided that Ms B would observe Mrs G closely and monitor any changes. They did not think a doctor should be called.

Ms B considered that there were no further signs of Mrs G being particularly unwell during her shift. It appears that soon after 2am Mrs G settled and slept well. Ms B took further recordings from Mrs G at about 6am. Her blood pressure and pulse were again far from her normal baseline and she could not maintain a normal oxygen saturation. Ms B did not inform her supervisor of these recordings nor convey any particular concern to Ms D at handover, even though these observations were still far from normal. Nor was medical review sought.

My nursing advisor stated that she would have expected Ms B to have questioned Mrs G's condition more critically and asked for a medical review, as well as to have notified Ms C. Ms Hewson stated that "in this case too much time had passed in this woman's unsatisfactory recovery to warrant that decision [not to obtain medical review]".

Ms B submitted that she did everything that could reasonably have been expected of her during her shift; she reviewed Mrs G's entire clinical record, responded appropriately to her concerns about Mrs G's condition by informing her supervisor, Ms C and, as planned in consultation with her supervisor, she monitored Mrs G to ensure there were no further signs of her being particularly unwell. She said it was not her role to obtain a medical review and she had no authority to do so without her supervisor's approval. Ms B submitted that she did not believe that her supervisor's plan was sufficiently inappropriate that she should challenge it.

I do not accept Ms B's submission that she did all that could be reasonably expected of her and that it was not her role to call for a medical review. I note that the Director of Nursing (Ms I) at the Private Hospital considered that nurses "have a responsibility to contact medical staff if they are concerned about any patient at [the Private Hospital]".

I accept Ms Hewson's advice that Ms B's conduct would meet with mild disapproval by nursing peers. In my opinion, Ms B had a responsibility to monitor Mrs G's condition critically and ask for a medical review. It was necessary but not sufficient for her to notify Ms C of her concerns at around 2am. By failing to seek a medical review Ms B failed to provide services to Mrs G with reasonable care and skill and therefore breached Right 4(1) of the Code.

Ms C

Ms C was the night shift manager on 28 February. Ms B reported her concerns about Mrs G to Ms C at about 2am. Shortly thereafter, Ms C reviewed Mrs G and it was agreed that Ms B should closely monitor her. Ms C said that she did not know that Mrs G "deteriorated and that at 0600 hours she remained hypotensive and tachycardic".

Ms C submitted that Mrs G's condition was not such that it required a medical review when she saw her in the night – Mrs G's observations "were certainly not ideal but they had not been at all in all her postoperative period at any time". She did not regard Mrs G's observations as being significantly different from the observations recorded by Dr A on 27 February. If they had been, she would have been more concerned. She commented that insufficient preoperative and postoperative information was provided by Dr A, and that she was not aware of the family's concerns.

My surgical advisor commented that "these nursing observations should have been recognised as entirely inappropriate and urgent medical attention should have been sought". He also noted that "the [Private] Hospital notes contain sufficient information about Mrs G's condition. They reflect the level of monitoring that was required up until the afternoon of the 27.02.1999. With her deterioration, medical review and increased frequency of observation should have been obtained."

My nursing advisor believes that, had the medical record been reviewed and some critical thinking occurred about Mrs G's recovery (which was not progressing as expected), a medical opinion would have been sought. While Mrs G's condition at 2am was little different from the immediate postoperative period, the observations reflected a considerable decline from her presentation the previous afternoon. My nursing advisor considered there was sufficient information available to trigger doubt and prompt a medical review, regardless of the time of day or night. She believed that despite Mrs G "re-warming and appearing settled and comfortable, there were several poor clinical indicators that day and evening that warranted a medical review in light of the episode at 0200".

I accept Ms Hewson's advice that Ms C's actions would meet with mild disapproval from her nursing peers. In my opinion, Ms C should have appreciated the need for and sought medical review. By failing to do so, Ms C failed to provide services to Mrs G with reasonable care and skill and therefore breached Right 4(1) of the Code.

Ms D

Ms D nursed Mrs G on three occasions. Mrs G's daughters state that they reported Mrs G's poor condition to a nurse on the evening of 27 February. Ms D submitted that she was not aware that Mrs G's daughters saw classical signs of septicaemia. The after hours manager was the senior nurse on duty. On balance I am not satisfied that Ms D was the

nurse the family raised their concerns with, and I accept therefore that the concerns were not brought to her attention.

On Sunday morning, 28 February, Ms D came on duty just before 7am and was responsible for five patients. She went to see Mrs G after the handover report at around 7am. Ms D recalls that Mrs G was up to the toilet and looked well. She recorded in her notes that Mrs G was "fairly satisfactory", but deteriorated at about 8.30am. Ms D accordingly notified the nurse manager and Dr A (at 9.33am).

My nursing advisor stated that Ms D should have prioritised her work that shift to perform a full assessment of Mrs G following the handover report at 7am, and promptly reported her findings to Dr A. Ms D accepts that it would have been ideal to assess Mrs G earlier than she did, but she was not her only patient that morning and, in her clinical judgement at the time based on the handover she received, as well as Mrs G's appearance and demeanour at the time she saw her after the handover report, and having considered her other patients' needs, she prioritised her further down than some other patients. She called Dr A promptly after she became aware of Mrs G's deterioration.

I acknowledge that Ms D was busy that morning – she did not know how unwell Mrs G was – and accordingly did not prioritise her. I agree with my nursing advisor that Ms D took prompt and appropriate steps once she recognised that Mrs G's condition had deteriorated. However, in failing to assess Mrs G's condition fully at the commencement of her shift, Ms D failed to provide services to Mrs G with reasonable care and skill and breached Right 4(1) of the Code.

Opinion: Breach – The Private Hospital

Standard of notes

During the course of my investigation general concerns about the standard of notekeeping at the Private Hospital were raised. While my independent expert advisor, Dr Kyle, considered that the notes contained sufficient information about Mrs G's condition, he noted that the times of the observations were not well documented. Ms Hewson advised me that the standard of nursing documentation was poor. She commented that it was difficult to follow a sequence of events in the clinical notes, as no time was recorded for each entry and events were not recorded in the order in which they occurred. Some nursing observations were recorded in Mrs G's integrated progress plan, while others were recorded on her general observation chart. I am also concerned that the entries in the integrated progress plan do not include a signature for each entry, and that the entry advising that Dr A had been contacted was amended after it was completed to say that this action occurred at 9am. This is particularly unhelpful given that Dr A does not recall being contacted at this time. Ms Hewson noted that it is preferred practice not to leave spaces and lines. If additions or amendments need to be made, they should be done with the time, date and signature of the writer. However, she does accept that the notes reflected the reasonable custom and practice at the Private Hospital.

Cole's Medical Practice in New Zealand (Medical Council of New Zealand, 1999) states that in providing care doctors are expected to maintain adequate records. Principle 2.9 of the 'Code of Conduct for Nurses and Midwives' (Nursing Council of New Zealand, 1998) requires that "the nurse or midwife accurately maintains required records relating to nursing or midwifery practice". In addition, the Private Hospital's 'Clinical Documentation' policy requires that all clinical records must be "legible, dated and signed, designation noted and time noted where appropriate". I also note that if amendments are made to nursing notes after the fact, they should be signed and the time of the addition or correction annotated.

Although the Private Hospital's policy is reasonable, the consistent failure of staff to accurately record significant events, the time of such events, and the personnel involved, indicates that the policy was not satisfactorily complied with. There was a substantial gap between the policies and procedures and their actual implementation. In my opinion, by failing to ensure that staff implemented the Private Hospital's policy and other relevant standards, the Private Hospital breached Right 4(2) of the Code.

The Private Hospital has informed me that it has since changed the format of its nursing report sheets to improve readability, and staff have been reminded of the importance of clear, concise and complete records. A nursing assessment sheet has also been introduced. The Private Hospital's record audit system ensures that records are now checked on an ongoing basis and feedback is provided where applicable.

Ms D has stated that she subsequently audited the nursing care forms and changed them for her ward. There is now a box that clearly shows each shift, and each person signs at the bottom of the box. Ms D also stated that she now always adds the time at which she writes each separate note; if she calls the doctor she writes both the time of her note about it, as well as the time at which she called the doctor.

I am encouraged that the Private Hospital has since taken steps to improve its standard of notes, and has provided a letter of apology for Mrs G's family.

Vicarious liability for failings of the nursing staff

Employers are vicariously liable under section 72(2) of the Health and Disability Commissioner Act 1994 for ensuring that employees comply with the Code of Health and Disability Services Consumers' Rights. Under section 72(5) it is a defence for an employing authority to prove that it took such steps as were reasonably practicable to prevent the employee from doing or omitting to do the thing that breached the Code.

The Private Hospital submitted that its "nurses are trained and instructed to inform medical staff where they have concerns about a patient's condition. However regardless of the extent of training and instruction on obtaining medical assistance, on any particular occasion (as in the current case) it will be a judgement call on the part of the nursing staff as to whether it is necessary to contact medical staff."

I accept the Private Hospital's submission. In my view, the failure of the nursing staff to identify and promptly advise the relevant medical specialist (or his delegate) of Mrs G's deterioration cannot fairly be attributed to any lack of training by the Private Hospital.

Accordingly, the Private Hospital is not vicariously liable for its nursing staff's breach of Right 4(1) of the Code.

Opinion: No breach – Dr A

Dr Kyle advised that when Dr A finally assessed Mrs G on 28 February, he acted appropriately. I am satisfied that when Dr A was finally made aware of Mrs G's serious condition, he responded appropriately. Accordingly Dr A did not breach the Code in this respect.

Opinion: No breach – Mr E

Ms D stated that she contacted Mr E at around 8.30am on 28 February. Mr E himself recalls that she contacted him "in the early hours" of 28 February. Whatever time Ms D contacted Mr E, I am satisfied that he acted promptly. He assessed Mrs G, called the RMO, Dr J, to attend and assess her (notwithstanding that Ms D had advised him that Dr A was on his way to the hospital), and ensured that he remained on the ward until there were doctors as well as Ms D in attendance. I am satisfied that Mr E's actions were appropriate. Accordingly he did not breach the Code in respect of his involvement in Mrs G's care.

Actions

I recommend that Ms D, Ms C, and Ms B take the following actions:

- Apologise in writing to Mrs G's family for breaching the Code. The apologies are to be sent to the Commissioner and will be forwarded to Mrs F.
- Review their practice in light of this report.

I recommend that the Private Hospital ensure that in future all nursing records are signed and have the designation of the nurse and the time of action noted.

Further actions

- A copy of my opinion will be sent to the Medical Council of New Zealand, the Nursing Council of New Zealand, and Quality Health New Zealand.

- Copies of my opinion, with all identifying details removed, will be sent to the Nursing Council of New Zealand and the Royal Australasian College of Surgeons and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.