Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Report of the Health and Disability Commissioner

Wanganui Hospital — Emergency Department — Inadequate communication between doctors in relation to patient referred to hospital by general practitioner

In early 2004 a 52-year-old woman with possible cardiac symptoms was referred by her general practitioner to Wanganui Hospital three times over the course of eleven days. The level of concern the general practitioner held about the patient's condition was not fully understood by the hospital doctors. On all three occasions, the patient was investigated in the Emergency Department and discharged with a diagnosis of viral illness. On each occasion the general practitioner was unaware that the patient had been discharged until informed by the patient's husband. Tragically, the patient died at home the day after her final discharge. The post-mortem found the cause of death to be heart failure resulting from cardiac tamponade secondary to massive pericardial effusion.

The Commissioner considered that, overall, the assessment and management of the patient by the individual hospital doctors was appropriate. However, reaching the correct diagnosis was compromised by poor communication between the hospital doctors, and with the general practitioner, and inadequate discharge information. It was held that the hospital breached Right 4(5) of the Code, and the Commissioner recommended that the Whanganui District Health Board undertake a review of the management of referral and discharge information, and a review of the timeliness of its radiology services.

Background
On 27 January 2006, the Health and Disability Commissioner decided to investigate the following matter concerning the Whanganui District Health Board:

- *The adequacy and appropriateness of the care provided to Mrs R by Whanganui District Health Board over eleven days.*

During the investigation the Commissioner obtained information from Mr R, the Board, Drs B, D, E, F, and G, and the New Zealand Police.[1]

[1] Names (other than Whanganui District Health Board, Wanganui Hospital, and the Commissioner's expert advisors) have been removed to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Overview
In early 2004, Mrs R (aged 52 years) was referred to Wanganui Hospital by her general practitioner, Dr B, on Day 1, Day 5 and Day 11 with possible cardiac symptoms, including chest and left arm pain, breathlessness and lethargy. She presented at the Emergency Department (ED) and was investigated and discharged with working diagnoses of ischaemic heart disease and viral hepatitis. Tragically, Mrs R died at home the next day. The post-mortem found the cause of death to be heart failure resulting from cardiac tamponade (constriction of the heart) secondary to massive pericardial effusion (accumulation of fluid in the pericardial sac around the heart).

First GP referral to ED — Day 1
On Day 1, Mrs R presented to Dr B with symptoms of chest pain. Dr B informed me that Mrs R was generally a "strong healthy woman", despite an episode of colon cancer 12 years previously. Mrs R's chest was clear and there was no apparent lung infection. However, Dr B considered the only diagnosis that "fitted" (albeit unlikely) was possible mild myocardial infarction. Consequently, Dr B referred Mrs R to Wanganui Hospital for investigation of her chest symptoms. Dr B explained that he telephoned the hospital and gave details about Mrs R to the receiving house officer.

Dr B's medical records state "refd [referred] c [with] chest pains". The referral letter stated:

> "2 nights ago this lady had a period of chest pain extending over the shoulder down the arm of left side. I find her heart 72 with occas[ional] irrgs [irregularities] and very soft I suspect a mild MI I should be grateful for yr [your] opinion."

Dr B sent Mrs R by private car rather than ambulance to expedite the journey. Mr R commented that Dr B said Mrs R had symptoms of a heart attack, and was "adamant" that she would be admitted.

Mrs R presented at Wanganui Hospital Emergency Department at approximately 10.30am. On arrival her pain had primarily resolved (recorded as 1/10). At 11.30am (when she received medical review) her pain was "nil". Mrs R's clinical examinations and investigations (including ECG and cardiac enzyme testing) were normal. The working diagnosis was angina due to acute coronary syndrome. Mrs R was discharged later that day, with aspirin, and an exercise tolerance test was booked for the next one–two weeks. Mr R stated that he was told there were no signs of a heart attack.

Second GP referral to ED — Day 5
On Day 5, Mrs R again presented (with Mr R) to Dr B. Dr B informed me that he had received no information from the hospital about Mrs R, and had presumed that she had been admitted on Day 1. Mr R stated that Dr B was "shocked" to see Mrs R, and said she should be in hospital.

Dr B considered that Mrs R's condition had deteriorated. She was distressed and still complaining of chest pain. He stated:

> "When I saw her she was agitated, unhappy and in considerable discomfort. I felt at sea but it was perfectly obvious that she was ill and needed to be in hospital."

Dr B contacted the hospital duty medical officer and "expressed [his] anxiety". He referred Mrs R back to hospital (by private car). His letter of referral stated:

> "… Seen A&E 1503 in evening as a myoc [myocardial] inf [infarction] sent home because troponin not abnormal. Bu[t] she is definitely abnormal and I still think she has had an infarct[ion]. Please have another look at her."

Mrs R was reviewed by house officer Dr D at approximately 11.30am. He obtained a history of non-specific chest pain and noted her previously normal ECG. He requested ECG, chest X-ray and blood tests (including cardiac enzymes). The ECG results indicated possible abnormal signs (ST elevations in three inferior leads) but Dr D was unsure of the significance of this result. The blood test results were suggestive of infection but showed no cardiac enzyme changes.

The chest X-ray showed mild enlargement of the heart at 16/28.5 (ratio of heart size to chest), which Dr D recorded as "cardiomegaly". (Later, on the day Mrs R died, a radiologist incorrectly reported this X-ray as indicating a 16/20 ratio. The Board explained that the delay in reporting was due to having only one radiologist on site at that time, due to recruitment difficulties. As an interim measure, X-ray reporting has now been outsourced.)

Dr D was unsure of the correct diagnosis and discussed Mrs R's clinical presentation with physician Dr E, who agreed to review her. In the interim, Dr E requested additional blood tests. Dr D completed his shift, and had no further involvement in Mrs R's care.

Dr E examined Mrs R at approximately 4pm and noted right upper abdominal tenderness and elevated liver functions. He considered that the chest X-ray showed only mild cardiac enlargement, and was not clinically significant. Similarly, the ECG changes were non-specific and not indicative of myocardical injury. Dr E diagnosed suspected viral hepatitis, and discharged Mrs R with outpatient follow-up scheduled. Dr E commented that Mrs R was also booked for an exercise ECG test, which would have further ruled out possible cardiac pathology.

Mr R commented that his wife was "much brighter and cheerful" at the time of her discharge.

Mr R further stated:

> "During the rest of the week I got concerned because [Mrs R] was not getting better. [She] still seemed to be lacking in energy and spending a lot of time in bed. [She] still looked pale. I seemed to be up and down with her colour changing. She would go from good to feeling tired."

Dr B stated that he received no follow-up from the hospital, and assumed that Mrs R had been admitted.

Mr R explained that his wife deteriorated on Day 11:

> "I found [her] sitting in the lounge wrapped in a blanket trying to keep warm. She explained when she was having a shower in the morning she almost passed out and had become very weak."

Third GP referral to ED — Day 11
Mr R contacted Dr B, who urgently referred Mrs R to hospital (by private car). Dr B stated:

> "She had apparently been discharged again although this was the first I had heard of it. I found a desperately ill lady. [Mrs R] was semi-comatosed and sweating. I decided that [Mrs R] was dying and I again contacted the hospital to let them know my thoughts.
> …
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> She was in urgent need I felt of the ICU. I made it clear to the hospital that I thought the woman was dying.
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> …
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> The letter [of referral] was handwritten and I kept no copy. The urgency of getting her to hospital care was supreme."

Dr B's letter of referral stated:

> "Extremely ill. Looks as though she has had some haemorrhagic incident in abdomen."

Dr C, Head of the Emergency Department, confirmed that Dr B spoke to him about Mrs R, although he cannot remember precisely what was said. Dr C commented that his involvement was coincidental, as referring GPs normally contact the admitting medical officer directly as a matter of protocol. Dr C did not document his conversation with Dr B. He stated:

> "The referral as described by [Dr B] was brief and lacked clinical content, making it difficult to accurately portray acuity."

Dr B advised me:

> "Beyond contacting the hospital and talking to the MO [medical officer] on duty I had no communication with the hospital. At no time was I aware of whose responsibility it was to decide my patient's future. I just wish I had a medical superintendent to telephone as it use[d] to be."

Dr C explained that GP-referred patients are assessed by the particular admitting team, and ED clinicians are not directly involved in the decision-making process. However, according to Dr C, ED clinicians are always available to assist with GP-referred patients, should the situation demand. These patients are considered ED patients primarily being cared for by the admitting team. Dr C commented:

> "[Mrs R's] care was from the start the responsibility of the Department of Medicine in that it was on the basis of a GP referral. At no stage was she an undifferentiated presentation to the medical staff in the Emergency Department. The ED just happens to be the venue where GP referrals are initially assessed."

Mrs R was reviewed by junior medical officer Dr F. It appears that Dr F did not see Dr B's referral letter, but was informed by Dr C of her admission. Dr F stated:

> "[Dr C] told me that [Dr B] was referring in a lady for the third time, and gave me the impression that it did not sound very serious."

Dr C disagreed that he gave the impression that Mrs R's condition was not serious. However, he acknowledged that it was "difficult to impart an appropriate sense of concern to Dr F" — given the level of information he obtained from Dr B.

Dr F noted the provisional diagnosis of hepatitis, and the negative cardiac investigations to date. (Dr F had been practising as a doctor for four months at the time of these events.) Mrs R's chest pains and breathlessness had improved, but she was still feeling very unwell. Mrs R's ECG was normal and her blood tests were showing some improvement. Dr F concluded that she was suffering from a viral illness.

Dr F considered that the appropriate course of action was to discharge Mrs R with follow-up by Dr E, as previously arranged. She discussed this management plan with Dr G, the senior physician on duty.

Dr G advised me that Dr F informed him that Mrs R's primary symptoms were malaise and nausea. Mrs R was unchanged from her previous admission, and Dr F believed she had a viral illness. Dr G recommended discharge with follow-up as previously planned. He stated:

> "On the basis of reviewing the notes and [Dr F's] assessment, I did not consider that [Mrs R] had a cardiac disorder and agreed with [Dr F] that [Mrs R] had a viral illness with hepatitis and that she did not require admission."

Mr R said that the doctor who examined Mrs R insisted that she had a viral infection, and there was no particular treatment. He stated:

> "I asked her [Dr F] if she had read the note that the doctor had given us. She said no. I said that she should phone [Dr B] and explain to him what she had diagnosed. She wouldn't, saying she wouldn't phone doctors after hours. I said to the doctor that there was no way we were going home."

Mr R then contacted Dr B, who stated that Mrs R should not be discharged. Dr B informed me:

> "I told [Mr R] to stand his ground and declare loudly that his wife was ill and was not being treated appropriately."

The ED Nurse documented:

> "He [Mr R] rang wife's GP ([Dr B]) and informed him regarding the plan. GP told husband that [Mrs R] must be admitted for observation."

Dr F confirmed that she was told (by the ED nurse) that Mr R had called Dr B, who said that Mrs R must be admitted. She again consulted Dr G. (There is no documentation of Dr F's conversation with Dr G. Dr F has reviewed her practice and says that she is now careful to document when a patient's management has been disputed.)

Dr G said that Dr F advised him that Mr and Mrs R were unhappy with the proposal to discharge her, and suggested that he reassure them. Dr B had wanted her to be admitted, but Dr F did not consider that to be necessary. Dr G was busy at the time with other patients, but offered to review Mrs R if necessary. However, Dr F advised him that she did not have any clinical concerns about Mrs R's condition.

Dr G advised me that he was unaware of the extent of concern about Mrs R's condition, and stated that he did not see Dr B's referral note. Dr G incorrectly assumed that the telephone conversation Dr F was referring to (in which Dr B requested that Mrs R be admitted) had occurred prior to her presentation to ED. He stated:

> "[Dr B] queried the possibility of a myocardical infarction on his referrals on [Day 1] and [Day 5]. On both occasions this was excluded on laboratory investigations. I was not aware of his concerns when he referred [Mrs R] on [Day 11].
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> …
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> Had I assessed [Mrs R], I would have appreciated the level of her husband's concern and that her clinical condition and course was not what I understood it to be. Whether I would have determined what was underlying [Mrs R's] deterioration and have been able to alter the outcome is uncertain. However, based on the information I had at that time I did not suspect that [Mrs R] had a serious condition that was shortly to claim her life.
>
> Since this event I have endeavoured to ensure that I fully understand the nature of patient/family concerns when there is a conflict between the clinical information that I have been given and the patient's/family's expectations."

Dr G also noted (on reviewing the notes) that Dr F omitted to inform him that Mrs R was short of breath on exertion.

Discharge on Day 11
Following Dr F's discussion with Dr G, the decision to discharge Mrs R was not changed. Dr F informed me:

> "I returned to [Mr R] and explained that I had discussed his wife's case with the consultant-on-call several times, and that the decision to discharge was ultimately [Dr G's]. [Mrs R] agreed to go home."

The ED Nurse recorded:

> "Still for discharge. RMO [Dr F] had a talk with the couple … [Mr and Mrs R] not happy with the discharge plan."

Mrs R was then discharged from ED.

Death at home — Day 12
Dr B reviewed Mrs R the next day, around midday. Mr R said that Dr B was "very concerned" but "did not know what was wrong". He planned to refer her to a specialist the following week. Dr B's medical notes state:

> "[T]hey sent her back insisting it is only a virus. Today she looks cyanosed — chest clear — heart ok. No difficulty in breathing."

Mrs R died at home later that evening without receiving further medical assistance.

Discharge policy
The Board advised that ED patient notes are documented on a carbonised triplicate form. One copy is retained by the hospital, one is sent to the patient's GP, and the third copy is given to the patient. There is currently no capacity to provide this electronically. The Clinical Quality and Risk Advisor advised me that administration staff send the general practitioner copies within 48 hours. The Board was not able to confirm whether Dr B received his carbon copy, although his copy was missing from the patient records.

Dr B informed me that he received no follow-up from the hospital concerning Mrs R. He was surprised to hear from Mr R (on all three occasions) that Mrs R had been discharged. Mr R advised me that he was not given any discharge notes for Mrs R, at any time.

There is no separate discharge summary generated from ED. (The hospital has a detailed policy in relation to the requirements of discharge summaries for inpatients, but this policy does not apply to ED.) The Board explained that, since these events, all patients discharged from ED after-hours are reviewed by the senior medical officer on duty.

Commissioner's Opinion
Medical assessment — individual doctors
My general practitioner advisor, Dr Tony Birch, was of the view that Dr B provided Mrs R with an appropriate standard of care, and I concur. Dr B recognised that Mrs R was seriously ill, and attempted to communicate his concerns to the hospital doctors.

My expert physician advisor, Dr Kingsley Logan, considered that Dr D appropriately assessed Mrs R on Day 5, and appropriately referred her to Dr E — whose treatment plan and management were also appropriate. Dr Logan stated:

> "Given the presumptive diagnosis of a hepatitis and the recent ultrasound it was reasonable to accept the limit of the investigations at the time."

Dr Logan commented that Dr F's assessment of Mrs R was detailed and "very complete". Dr F appropriately discussed Mrs R's presentation with Dr G, and advised him of the concerns of Dr B (and Mr R) about the proposed discharge. Dr F discharged her responsibilities in a manner commensurate with her training and experience (four months of clinical practice). Dr Logan considered that Dr G's assessment of Mrs R, based on the information available to him at the time, was appropriate.

A mitigating factor in this case is the rarity of Mrs R's condition. All standard cardiac investigations had returned essentially normal, and a reasonable working diagnosis of viral illness (in the context of no recurrence of chest pain) had been formulated. As noted by Dr Logan, there were no measurable clinical features of a life-threatening illness — despite Dr B's primary assessment.

After careful consideration of the available information, I do not consider that Drs D, E, F or G breached the Code in their care and treatment of Mrs R, although I do have some concerns about Dr F's and Dr G's involvement in the miscommunication discussed below.

Drs Logan and Seddon both expressed significant concern about the quality of communication concerning Mrs R (most significantly, the lack of communication with Mrs R's GP). In my view, these concerns were primarily the product of systematic deficiencies at Wanganui Hospital ED (although the individual doctors involved also contributed). This aspect of Mrs R's care is discussed below.

Communication issues

Dr Mary Seddon, a physician with expertise in quality improvement and hospital systems, commented that this case has "tragically highlighted" deficiencies in the way Wanganui Hospital managed the interface between primary and secondary care. Dr Seddon stated:

> "Communication between the various hospital doctors and Dr B seems to have been extremely poor. It would appear that Dr B did not receive any communication from the hospital doctors on the three occasions that Mrs R was discharged from Wanganui Hospital and therefore back under his care.
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> …
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> There appeared to be a culture of not ringing and discussing discharges with general practitioners, even when it was clear that the GP expected the patient to be admitted. In a small DHB one would expect that this would not be too difficult."

Mr R himself commented:

> "[I]t is a concern that a junior doctor with only four months' experience should be put in the position she [Dr F] was. I would have thought we would have been asked to wait or given the option to wait until the senior doctor ([Dr G]) was able to attend to [my wife] and undertake his own diagnosis. Also if [Dr F] had talked to [Dr B] when I rang him she would have understood his concerns."

Dr Logan stated:

> "[Dr F] was reviewing a patient … in a situation of dysfunctional communication that seems to have become an accepted situation and I believe is the major criticism to be faced by all the doctors involved.
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> The statement from [Mr R] demonstrates a lack of understanding by [Dr F] and whilst she may have felt these [concerns] were communicated to [Dr G], there was a responsibility I believe to contact and communicate with [Dr B] who seemed to be so readily contactable by the family. The responsibility rested with all the clinicians involved, including [Dr F], and is an issue of training and hospital protocol.
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> …
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> Rather than debate or due consideration given to the reasons for admission/discharge occurring between the doctors involved, it was left to a very junior doctor to discharge [Mrs R]."

It is highly regrettable that Dr F and Dr G did not realise the extent of Dr B's concerns, and did not contact Dr B to clarify why Mrs R had been referred for the third time. It appears that this was partly due to a degree of miscommunication between Dr F and Dr G. There was certainly no awareness on the part of Dr F, or Dr G, that Dr B thought Mrs R was dying.

Dr Seddon considered that communication between the hospital doctors about Mrs R was less than ideal in relation to Mrs R's third admission. Dr Seddon stated:

> "[Mrs R] was seen by a number of doctors on her three presentations, and the quality of the written record is good. However, any patient presenting on three occasions in a very short time (especially being referred by her GP each time) should have rung alarm bells and admission, or at least a verbal discussion with those who had seen her earlier, including her GP."

Discharge information

Dr B, understandably, was at a loss to understand why Mrs R had been repeatedly discharged from hospital, in light of his view of the seriousness of her condition.

Dr Logan stated:

> "If her [Mrs R's] care was to be handed back on each occasion to [Dr B] it is my opinion that this should have been discussed directly or at least there should be evidence in the notes of a clear assessment and follow-up plan. The same should have been communicated to the patient so she was encouraged to represent if she remained unwell. Information handed to the patient as well as the referring doctors is crucial and is a systems issue that clearly needs to be addressed at Wanganui Hospital.
>
> …

> The responsibility however of reviewing the notes of repeat presentations, ensuring effective communication between the department and the general practitioner as well as obtaining adequate support from laboratory and radiology rests with the emergency department."

Dr Seddon also expressed concern about the quality of communication with Mr R, and noted that it is unclear whether Mr R understood why his wife was not admitted, or whether he received his copy of the discharge notes. (Mr R subsequently confirmed that he did not receive his copy of the discharge notes.)

I agree with Drs Logan and Seddon that the poor discharge information, and the lack of direct discussion with Dr B, highlights a systems failure at Wanganui Hospital. In my view, the hospital doctors were not primarily responsible — although I would expect Dr F and Dr G to handle a similar case differently in future. Mr R is correct that Mrs R should have been given the option of being reviewed by a more senior doctor.

An emergency department must have appropriate systems in relation to the management of referral and discharge information, particularly for patients who have been medically referred. ED doctors must document information received from referring doctors, and ensure all relevant referral information is transferred to medical staff. Although the Board has a comprehensive policy in relation to inpatient discharge summaries, there is no comparable policy for patients discharged from ED. I am not convinced that posting a carbonised copy of a patient's ED notes, within 48 hours, without any record that it has been sent, is sufficient to ensure appropriate continuity of care. It certainly was not effective in the case of Mrs R.

Dr Seddon has recommended that the Board involve local GPs and hospital doctors in the improvement of discharge and referral processes. Specifically, Dr Seddon recommended:

> "I also suggest a working group of GPs and hospital doctors look at the acute referral process. This group would be asked to review the current process, ascertain what the hospital doctors need from the referral, whether the content can be standardised, and how the physical referrals are managed when the patient arrives."

The Board's GP liaison officer would be well placed to lead such a project. I endorse Dr Seddon's sensible suggestions. In my view, such steps are essential to improve the interface between primary and secondary care, and ensure that the Wanganui Hospital Emergency Department operates as an effective safety net for the people of Whanganui district.

If hospital doctors have concerns about the quality of GP referral information, they need to be ironed out. It is disappointing for the Head of ED to state, nearly two years after the event, that a GP's referral was "characteristically" brief and lacking clinical content, with no evidence of what steps have been proactively taken by the hospital to draw the evident concerns to the GP's attention.

Right 4(5) of the Code of Health and Disability Services Consumers' Rights states that patients have the right to co-operation amongst providers to ensure quality and continuity of services. I consider that the inadequate communication by the hospital with Mrs R's general practitioner, Dr B, meant that she did not receive appropriate continuity of care. The poor standard of internal communication also contributed.

In these circumstances, the Board breached Right 4(5) of the Code in relation to Mrs R's care.

Recommendations
I recommend that the Board:

- review current practice and procedure in relation to the management of acute referrals to Wanganui Hospital, and of discharge information for ED patients. I encourage the Board to consult with regional GPs and hospital doctors as part of this review process

- review the timeliness of its radiology services.

A copy of this letter (including my recommendations) will be sent to the Minister of Health and the Director-General of Health. As Wanganui Hospital is accredited by Quality Health New Zealand, a copy of this letter will also be sent to that organisation.

I consider that there is a public interest in the local community being aware of the problems in the Emergency Department illustrated by this case, and the positive steps being taken by the Board to improve the situation. A copy of this letter will also be sent to the Royal New Zealand College of General Practitioners, the Royal Australasian College of Physicians, and the Australasian College of Emergency Medicine.

Addendum
On 29 March 2007, the Whanganui District Health Board confirmed that it has reviewed the management of acute referrals to Wanganui Hospital, and of discharge information for Emergency Department patients. The Board indicated that it will implement electronic discharge summaries for ED patients and, as an interim measure, discharge summaries and referrals will be faxed between general practitioners and the ED.

The Board also indicated that ED doctors are to have responsibility for all patients within the department until there has been a formal handover to a specialty team, and that repeat presentations to ED will be flagged. The Board further advised that it is taking steps to improve the timeliness of radiology services.

Expert advice
The following independent expert advice was obtained from physician Dr Kingsley Logan:

"I am a general physician and medical director at Taupo Hospital and have been asked to provide medical opinion following the death of [Mrs R]. I have addressed the complaint from [Mrs R's sisters] and have reviewed the following documents

1. Letter to the Commissioner from [Mrs R's sisters] dated 12 September 2005, marked "A" (pages 1–2);
2. Investigation letter to [Drs D, E, F and G] and Whanganui District Health Board dated 27 January 2006, marked "B" (pages 3–17);
3. Letter to the Commissioner from [Dr D] dated 27 February 2006, marked "C" (pages 18–19);
4. Letter to the Commissioner from [Dr E] dated 14 March 2006, marked "D" (pages 20–25);
5. Letters to the Commissioner from [Dr F] dated 8 March and 4 May 2006, marked "E" (pages 26–30);
6. Letter to the Commissioner from [Dr G], dated 15 February 2006, marked "F" (pages 31–33);
7. Letters and information from Whanganui District Health Board dated 25 October 2005 March 2006 marked "G" (pages 34–112);
8. Letters to the Commissioner (with attachments) from [Dr B] dated 10 February 2006, 10 April 2006 and 4 May 2006, marked "H" (pages 113–129);
9. Letter and information from the New Zealand Police dated 7 February 2006, marked "I" (pages 130–150).
10. X-rays dated [Day 5].

Before considering individual aspects of the care provided to [Mrs R] consideration of the following is required.

1. **The nature of the diagnosis**
2. **Communication between the doctors involved/The standard of the admission and discharge letters.**
3. **The responsibility of the Emergency department at Wanganui Hospital**

1. The nature of the disease and diagnosis

[Mrs R's] death is tragic given that this was potentially reversible but having said this many of the initial symptoms were non-specific given that it is a viral illness and although in retrospect there were symptoms and signs that we can now attribute to the pericardial syndrome, there was no evidence at any stage that she was tamponading. The final haemodynamic changes can occur rapidly over a matter of minutes such that unless the diagnosis has been made and facilities are immediately available death rapidly ensues. Key elements are the rate of fluid accumulation relative to pericardial stretch and the effectiveness of compensatory mechanisms. Intrapericardial hemorrhage occurs in the context of a relatively stiff, unyielding pericardium and quickly overwhelms the pericardial capacity to stretch before most compensatory mechanisms can be activated, whereas in the case of a

slow increase in pericardial volume as a result of inflammation, 2 litres or more may accumulate before critical, life-threatening tamponade occurs.

Acute bleeding eg, due to trauma but in this case as a result of acute hepatic congestion, where bleeding follows as a result of the coagulopathy associated with acute congestion, this bleeding into a relatively stiff pericardium can rapidly lead to tamponade.

[Mrs R] clearly was a patient who was used to enjoying good health. She was initially assessed in the setting of ischaemic heart disease and was noted 4 days later to have features of hepatitis. She had had an ultrasound [the month before]. Tragically, the correct diagnosis was not made given that many of the symptoms were attributed to hepatitis.

The clinical features of ischaemic hepatitis does simulate acute virus or toxic hepatitis and having researched the matter in detail it is important to note that in an article in 1992 that it was felt this presentation had not been previously described and does therefore illustrate the rarity of this situation.

Post-cardiac surgery tamponade mimicking acute hepatitis. Report of two cases.

Rex DK, Rogers DW, Mohammed Y, Williams ES. Department of Medicine, Indiana University Medical Center, Indianapolis 46202.

Two patients developed cardiac tamponade from delayed hemorrhage into the pericardial sac following open heart surgery. The initial clinical manifestations of tamponade included nausea and dramatic elevations of serum aminotransferases, simulating acute hepatitis. To our knowledge, this presentation of cardiac tamponade has not been previously reported.

In addition [Mrs R] had only recently undergone an ultrasound so that the doctors were not prompted to repeat the procedure. The ultrasound would have shown changes of congestion and may have led to the correct diagnosis.

2. Communication between the doctors involved/The standard of the admission and discharge letters.

[Dr B] referred [Mrs R] on three occasions, the referral letters and clinical details are very limited and although he has indicated in his first letter that he felt the heart sounds were soft, this was not framed in the context of pericardial disease and on both occasions his referrals seemed to indicate the concern that [Mrs R] may have had a coronary event. [Mrs R's] problems were discussed with three physicians and was reviewed in some detail by [Dr E] who ultimately assumed responsibility for her follow up care at Wanganui Hospital.

If her care was to be handed back on each occasion to [Dr B] it is my opinion that this should have been discussed directly or at the least there should be evidence in the notes of a clear assessment and follow up plan. The same should have been communicated to the patient so she was encouraged to represent if she remained

unwell. Information handed to the patient as well as the referring doctors is crucial and is a systems issue that clearly needs to be addressed at Wanganui Hospital.

The guidelines from Wanganui emergency department (ED) relate to the responsibility of patients seen in ED and not referred onto the medical department. The discharge summaries relate to patients admitted and not to those seen in ED and discharged home. There clearly is an issue of responsibility of care and my understanding of this is that it is the senior clinician who shares this with their junior colleague and on each occasion responsibility of the discharge process was in the hands of both the junior and senior doctors involved.

The final communications between [Dr B] is not recorded and follows telephone calls with the Emergency department and then with the family from the Emergency department.

The responsibility and handing over critical information to the most appropriate doctor has clearly been compromised and clearly the Emergency department is more than simply a facility for the medical department and all telephone calls should have been carefully recorded. [Dr B's] opinion and serious concerns was not obviously appreciated and the deterioration in [Mrs R] condition so readily apparent to [Dr B] is not evident in any of the communication in the notes.

In similar fashion it is not clear whether [Dr B] was contacted following any of the Emergency Department assessments, whether there was any debate or consideration as to the reasons for admission/discharge and it is not clear what correspondence [was] sent to [Dr B] from the Emergency Department.

Whilst we all accept that it may be difficult to reconcile various opinions and that the threshold for admission may vary according to the findings and investigations that follow presentation to the hospital, the communication between the doctors at the hospital and [Dr B] was not of an acceptable standard.

The final call made from the family in ED to [Dr B] epitomises the very poor communication that seems to have been accepted. Rather than debate or due consideration given to the reasons for admission/discharge occurring between the doctors involved, it was left to a very junior doctor to discharge [Mrs R].

There is policy in some hospitals where patients referred for admission and not accepted, require direct contact and debate with the referring doctor. When this is not possible the quality of the ED notes and discharge letter together with the process of delivering these to the referring doctor becomes crucial. I understand that copies of the ED notes are sent onto the referring doctors. It is not clear whether this included only the front page as well as the continuation notes or those of the progress notes. There is no indication in the notes that these were faxed copied or sent.

The notes do however reflect the full decision process by the doctors involved. Follow up on the first occasion with the booking of an exercise test was made. It is not possible to decipher on the photostat copy whether responsibility was handed back to [Dr B]. The second ED attendance 4 days later commences with a

continuation sheet. The detailed notes reflect the consideration to diagnosis and management and concludes with GP follow up in one week and MOPD in 2 weeks. There is no so called front page or indication in the notes that these were faxed, copied or sent. The third ED attendance 6 days later notes that [Mrs R] was discharged and that again MOPD follow up had been arranged and that a further appointment with [Dr B] should be arranged a week following. It is again not clear whether this included only the front page as well as the continuation sheet, there is no indication in the notes that these were faxed copied or sent.

It follows therefore that the standard of the referral letters and discharge letters between the doctors at the hospital and [Dr B] was not of an acceptable standard.

3. The responsibility of the Emergency department at Wanganui Hospital

It is the responsibility of an Emergency department to assess triage and resuscitate patients. Many departments have now extended their brief to including all undifferentiated presentations but as in this case where there has been direct communication between the referring practitioner and a particular department the onus then rests with that particular department.

The responsibility however of reviewing the notes of repeat presentations ensuring effective communication between the department and the general practitioner as well as obtaining adequate support from Laboratory and Radiology rests with the Emergency department.

The experience and support of those doctors seeing patients initially in the Emergency department is a reflection of workforce availability in particular emergency department staffing but also a reflection of the efficacy of the department. Whilst I do not have the credentials of [the doctor] who initially assessed [Mrs R], [Dr D] and [Dr F] were both junior doctors. [Dr F] in particular was a very junior doctor. The second letter from [Dr B] was in fact addressed to medical OPD rather than the Emergency Department.

4. Were the services provided to [Mrs R] appropriate?

[Mrs R] was reviewed by the junior doctors; she was also assessed by [Dr E]. Her case was initially discussed telephonically with [another physician] and the findings reviewed with [Dr G]. Whilst the medical team reviewed the presentations it is unusual for a patient to represent in this way. Hepatitis however does produce demanding symptoms and the initial services were appropriate for this presentation.

Communication from [Dr B] was too brief to be of any value to the doctors asked to assess her and whilst I do not have copies of the ED discharge letters I must assume a copy of the front sheet of the casualty notes was sent as a discharge note to [Dr B]. There is no indication in the notes of whether this was the case and should be requested from Wanganui Hospital.

Communication between the hospital and [Dr B] cannot be deemed to be effective and clearly needs to be addressed. The fact the family could contact [Dr B] from

ED at the final hospital presentation but [Dr B] could not speak directly to [Dr F] or [Dr G] is unacceptable. [Dr B] had serious concerns that should have been discussed and debated.

5. What standards apply in this case?

[Mrs R] was assessed in some details albeit as an emergency presentation rather than an elective assessment by a senior doctor, her case was discussed and reviewed by 2 other senior doctors as well as the junior doctors in the ED.

The relevant test were done, the chest X-ray and ECG findings were felt to be non specific and could not be deemed to be life threatening.

Communication was not effective between the hospital and [Dr B].

The Emergency department is more than a facility for the medical department and all communication received from [Dr B] should have been properly recorded. Management and prioritisation is inextricably linked to all of the clinical findings. [Mrs R] was discharged on 3 occasions from the Emergency department and this should have been deemed as being unusual.

Discharge information from the hospital both medical and as well as to the patient indicating the right to review appears to be lacking and should be sought from the hospital.

6. Were those standards complied with?

I have considerable reservations as I have indicated as to the quality of communication between the doctors and departments involved. The delay in X-ray reporting is not of an acceptable standard but it was recognised by the attending doctors that there was evidence of mild cardiomegaly. This is not a specific finding but requires explanation. The causes are many and vary from poor inspiratory effort, habitus pericardial fat pad or as a result of heart or lung disease.

7. Were there any clinical signs of pericardial effusion that were missed by the doctors caring for [Mrs R]?

Cardiac tamponade is the decompensated phase of cardiac compression caused by an effusion accumulation. In ‘surgical’ or trauma related tamponade intrapericardial pressure is rising rapidly, in the matter of minutes to hours (i.e. haemorrhage), whereas a low-intensity inflammatory process is developing days to weeks before cardiac compression occurs (‘medical’ tamponade).

Given that the medical causes of tamponade usually develop slowly signs become more apparent but in this case there was bleeding agonally into the pericardium converting matters within minutes to tamponade. The bleeding occurs in situation of acute hepatic congestion and was well recognized in the older literature relating to tuberculous pericarditis where these cases presented with a psuedo-hepatitis with a coagulopathy secondary to centrilobular hepatic necrosis.

This is recognized in its most severe form where ischaemic hepatitis is recognized as a consequence of a liver hypoperfusion due to acute heart failure.

The major symptoms of pericarditis described are retrosternal or left precordial chest pain (the pain can be pleuritic or simulate ischemia, and varies with posture) and shortness of breath. Most physical findings are equally nonspecific. Tachycardia and a pericardial rub is a frequent finding in patients with inflammatory effusions. Heart sounds may be attenuated owing to the insulating effects of the pericardial fluid and to reduced cardiac function. The dominant sign in the early phases is a pericardial friction rub but this can be transient, this was not evident at any stage.

Clinically significant tamponade usually produces absolute or relative hypotension and in rapid tamponade, patients are often in shock, with cool arms and legs, nose, and ears and sometimes peripheral cyanosis. Jugular venous distention is the rule, with peripheral venous distention in the forehead, scalp, and ocular fundi unless the patient has hypovolemia. Again none of these features were evident although the initial note from [Dr B] states that the heart sounds were soft. No attempt was made to collate or interpret this.

The characteristic signs as an effusion develops are pulsus paradoxus and distant heart sounds. These are both difficult clinical signs and depend on habitus and presence of co-existing lung disease. Inevitably the venous pressure is elevated and is sought as it was during the examination by [Dr E]. He considered this however to be normal and whilst this may be difficult again to evaluate in patients whose venous pressure is obscured by reason of their habitus or poor visibility of neck veins, in the pericardial syndrome venous pressure is often so high that it is literally not evident on examining the neck but only becomes obvious during inspiration, the so-called reversed Kaussmal's sign. Normally venous pressure will rise on inspiration and in this case as it is only apparent on inspiration is thought to rise with inspiration, but as with all of these signs they are soft and often not obvious.

Pulsus paradoxus is a defining feature of a pericardial effusion and is measured as a drop in systolic blood pressure 10 mmHg during quiet inspiration whereas diastolic blood pressure remains unchanged. During inspiration, the pulse may disappear or its volume diminishes significantly. Clinically significant pulsus paradoxus is apparent when the patient is breathing normally. The magnitude of pulsus paradoxus is evaluated by sphygmomanometry. It is a sign that is not looked for routinely and requires some experience to interpret. It is often sought in patients who have a high venous pressure. Other conditions causing pulsus paradoxus include massive pulmonary embolism, profound hemorrhagic shock, other forms of severe hypotension, and obstructive lung disease.

The ECG 00072 is not dated but labeled as number 1 and would be regarded as being normal. I assume this is the ECG regarded as being normal on the first presentation to ED.

There are however ECG changes (00102) regarded as being non specific but seen in pericarditis. The ECG again is not dated but includes anterior and inferior concave ST segment elevation. PR segment deviation is opposite to P polarity.

There are further changes described but not evident on the tracings; these include:

Early stage II: ST junctions return to the baseline, PR deviated.
Late stage II: T waves progressively flatten and invert
Stage III: generalised T wave inversions
Stage IV: ECG returns to prepericarditis state

Whilst the electrocardiogram may show signs of pericarditis, the only quasi-specific sign of tamponade is electrical alternation, which may affect any or all electrocardiographic waves or only the QRS. If the QRS complex is affected, every other QRS complex is of smaller voltage, often with reversed polarity. Combined P and QRS alternation is virtually specific for tamponade. There were no changes to suggest this on any of the ECGs.

The CXR showed mild cardiomegaly but could not be viewed as showing changes of a pericardial effusion. These features need to be put in context, having obtained the diagnosis at post mortem there were features compatible with the pericardial syndrome but there were also signs compatible with many other illnesses, all of which did not appear to be life threatening to the hospital doctors who examined and reviewed [Mrs R].

In relation to [Dr D]

- **Was [Dr D's] assessment of [Mrs R] appropriate?**

[Mrs R] presented with a problem of ongoing chest pain, the assessment was complete and [Mrs R] was appropriately referred to [Dr E].

- **Did [Dr D] provide [Dr E] with appropriate information about [Mrs R's] condition?**

Yes.

- **What further action, if any, should [Dr D] have undertaken when he saw [Mrs R]?**

The quality and extent of information handed to the patient and returned to [Dr B] is not obvious. Whilst we all accept that it may be difficult to reconcile various opinions and that the threshold for admission may vary according to the findings and investigations that follow presentation to the hospital, the communication between the doctors at the hospital and [Dr B] was not of an acceptable standard.

- **Did [Dr D] appropriately document his care?**

Yes.

In relation to [Dr E]

- **Was [Dr E's] assessment of [Mrs R] appropriate?**

Yes. [Mrs R] was fully assessed and a systematic attempt at diagnosis and management was undertaken. Given that she assessed the venous pressure to be normal the finding of pulsus paradoxus was not sought. Reviewing the notes and with the hindsight this affords there were features compatible with the pericardial syndrome but as I have indicated there were no signs to suggest she was tamponading.

- **Was [Dr E's] interpretation of [Mrs R's] chest X-ray appropriate?**

Yes, he noted the mild cardiomegaly but as I have indicated there are many causes to account for this and based on the clinical symptoms and findings the CXR finding mild cardiomegaly was noted but could not be interpreted at that stage.

- **Was [Dr E's] treatment plan and management of [Mrs R] appropriate?**

Yes in the management of a patient considered to have hepatitis her treatment plan was appropriate but should have been actioned with [Dr B]. This was the second presentation and given that the patient was again discharged the relevant details of findings should have been discussed or very carefully detailed in direct correspondence to [Dr B].

Further blood tests were arranged as was a follow up OPD appointment. An exercise test was prompted by the first visit to the emergency department, given that this was seen as a low risk situation an appointment was made some weeks later. There were now ECG changes, but there seems to be no attempt to address or integrate those findings with the dominant findings of the hepatitis.

- **What further action, if any, should [Dr E] have undertaken when he saw [Mrs R]?**

Given the presumptive diagnosis of a hepatitis and the recent ultrasound it was reasonable to accept the limit of the investigations at that time. There were however other findings in relationship to the ECG and CXR that now weigh heavily in the setting of a hepatitis. Cardiac failure is a well known cause of hepatic congestion but it clearly was not considered to be the case at the time of [Dr E's] evaluation. There was certainly not enough on the baseline tests to indicate the patient was in heart failure. The pericardial syndrome is a relatively rare form of heart failure where the dominant feature is right heart involvement and is characterised by very high venous pressure and no CXR evidence of left heart failure. Whilst we all accept that it may be difficult to reconcile various opinions and that the threshold for admission may vary according to the findings and investigations that follow presentation to the hospital, the communication between the doctors at the hospital and [Dr B] was not of an acceptable standard.

- **Did [Dr E] appropriately document his care?**

Yes.

In relation to [Dr F]

- **Was [Dr F's] assessment of [Mrs R] appropriate?**

Yes, detailed and very complete. Chest discomfort and pleuritic pain, tachypnea and dyspnea on exertion that progresses to air hunger at rest are the key symptoms in the more advanced stages, these were not evident as signs of impending tamponade.

- **Did [Dr F] provide [Dr G] with appropriate information about [Mrs R]?**

Yes, and whilst there seems some debate as to whether all of this was heard, I would have expected her to discuss all of the issues. Inevitably the emphasis goes to the dominant clinical or laboratory and unless we only have the single patient to face some of the important information including family and social concerns may have been relegated in priority during the discussion.

- **Did [Dr F] give sufficient consideration to the concerns expressed by Mr R and [Dr B] to the proposed discharge?**

Yes, and in every way this junior doctor did what we would expect in this situation. [Dr F] was reviewing a patient however in a situation of dysfunctional communication that seems to have become an accepted situation and I believe is the major criticism that has to be faced by all of the doctors involved. The statement from [Mr R] demonstrates a lack of understanding by [Dr F] and whilst she may have felt that these were communicated to [Dr G], there was a responsibility I believe to contact and communicate with [Dr B] who seemed to be so readily contactable by the family. This responsibility rested with all the clinicians involved including [Dr F] and is an issue of training and hospital protocol.

- **What further action, if any, should [Dr F] have undertaken concerning [Mrs R]?**

I don't believe there is any further action she could have taken at that time. She had been given reassurance by [Dr G]. [Mrs R] had very recently been assessed by a physician and one of the blood tests the CRP was improving suggesting that the inflammation may be settling. There were no features to suggest they were dealing with a life threatening illness, the clinical observations were reassuring and she did not have access to the very grave concerns that are now apparent from [Dr B].

- **Did [Dr F] appropriately document her care?**

Yes and again I want to emphasise this doctor did her best under the circumstances.

In relation to [Dr G]

- **Was [Dr G's] assessment of [Mrs R] appropriate?**

Yes.

- **Did [Dr G] provide [Dr F] with appropriate advice about [Mrs R's] condition?**

Yes. [Mrs R] was assessed by several doctors, the documentation we have demonstrates a thoughtful and thorough process. There were no signs at any stage to suggest impending tamponade. During her final presentation the doctors concerned including [Dr G] was on duty and in the Emergency department.

It is accepted procedure where an RMO has seen a case and where the case is then discussed, results reviewed and responsibility is shared by the senior doctor. Clearly decisions follow and are determined by the quality of the information to hand both from the referring practitioner and obtained by the RMO.

In similar fashion decisions that follow are determined by the quality of the examination findings to hand both from the referring practitioner and revealed by the RMO. It is not always possible to repeat all of the history or examine every system in patient reviewed by the RMOs even when they are admitted to the ward. The assessment and discussion of the findings by [Dr F] would be regarded as accepted practice.

The issue here of course are the concerns allegedly raised by [Dr B] and clearly documented by the family during the final presentation which could not be satisfactorily addressed and was left to a very junior RMO to discharge the patient.

[Dr G] was not only available but onsite, clearly there were other major issues he faced as he was left to assess other patients in the department and whilst one may argue the other cases may have been seen as a distraction this is a common clinical scenario when a doctor is on duty. In addition he was aware that [Mrs R] had been fully examined a few days previously by [Dr E].

I have indicated that the hepatic presentation of pericardial syndrome is now very rare as would be the complication of medical tamponade. There were clinical signs that could not be easily attributable to pericardial disease and indeed at no stage was there evidence of impending tamponade. In retrospect there were ECG changes and CXR findings that indicated pathology but were seen to be non-specific.

It is not always possible to get it right and as medical practitioners we have to accept opinion and findings made by other doctors in the team, it is simply not possible to review every patient by a senior clinician in the same way as they are seen by other team members. The tragedy in this case was not only an unusually rapid deterioration in all illness that is rarely seen viz haemorrhage and acute tamponade but that it masqueraded as another more commonly seen viz hepatitis. The correct diagnosis was further compromised by the poor communication

between the doctors at the hospital and [Dr B]. There clearly is an issue of patient information at the time of discharge from ED with a clear management plan that allows for further presentation if symptoms are worsening.

- **Did [Dr G] give sufficient consideration to the concerns about [Mrs R's] proposed discharge?**

[Dr G] has stated that he did give sufficient consideration to the discharge process, clearly there were distractions and as with [Dr F], [Dr G] … was doing his best under the circumstances.

- **Was [Dr G]'s treatment plan and management of [Mrs R] appropriate?**

It had become an accepted fact that [Mrs R] had hepatitis, the management of this is supportive and symptomatic.

- **What further action, if any, should [Dr G] have undertaken in relation to [Mrs R] on [the day she died]?**

It is not clear from the accepted findings available to [Dr G] that anything further should have been done. There were no changes in the vital signs to suggest an impending life threatening event / or tamponade.

- **Did [Dr G] appropriately document his care?**

Documentation was left to [Dr F] as is often the case this is done by the RMO. It is not always possible to repeat all of the history or examine every system in patient reviewed by the RMOs let alone to document these. The assessment and discussion of the findings by [Dr F] would be regarded as accepted practice. The issue again however becomes communication between the hospital and the general practitioner.

Whilst we all accept that it may be difficult to reconcile various opinions and that the threshold for admission may vary according to the findings and investigations that follow presentation to the hospital, the communication between the doctors at the hospital and [Dr B] was not of an acceptable standard.

In relation to Whanganui District Health Board

- **Was [Mrs R] triaged appropriately?** Yes.
- **Was [Mrs R] seen in ED in accordance with triage timeframes?** Not on the first occasion but in the setting of a normal ECG and active assessment by the ED staff, this was acceptable. Triage 3 times vary widely in ED departments depending on the level of patient load and acuity.
- **Did [Mrs R] receive appropriate nursing observations and care**? Yes.
- **Was [Mrs R] provided with appropriate information on discharge?** No.
- **Should [Mrs R's] general practitioner have been contacted on discharge?** Yes.

- **Was [Mrs R] provided with appropriate follow-up care?** No.
- **Was [Mrs R] cared for by staff in accordance with the Hospital chest pain protocol?** Yes.
- **Was the chest pain protocol appropriate?**
  During the initial evaluation this was appropriate but sadly emphasises how the adherence to a set protocol prevents the ability of doctors to consider the differential diagnoses. Once patients are set down the path of the chest pain protocol there is very little consideration given to the differential, the nature of the pain and the ancillary findings. Inextricably the patients get labelled on the ECG and in modern terms the Troponin value.
- **Were hospital radiological services adequate?** No.

There is a now a major move toward ambulatory care. In New Zealand as in many countries the number of inpatient beds have been reduced and it is envisaged there will be further reductions both relative and absolute as this model becomes the standard. Commensurate with this the ambulatory model there is a requirement to have very ready access to definitive investigations. Whilst the interpretation of a standard CXR is well within the brief of a physician the radiologist's input was not obtained for 5 days, there were however no further changes noted on the report that would have engaged medical debate.

It is not acceptable to have XR unreported for 5 days when a patient has been discharged directly from the emergency department.

The current guidelines we have for patients with heart failure includes ready access to echo-cardiography. I am not aware whether any of these would include mild cardiomegaly but clearly echocardiography would have been a life saving investigation in this patient. The threshold for requesting this is often dependant upon availability. Tragically there were no definitive findings that triggered this investigation during any of the presentations to Wanganui Emergency department.

Final Comments
The assessment and management of [Mrs R] was detailed and thoughtful with clear consideration given initially to the most life-threatening condition of ischaemic heart disease and then to the most likely cause and appropriate management during her subsequent visits. The on call physician considered the issues on each occasion and although [Mrs R] was not seen on each occasion by a physician, the discussion and consideration that follows is standard acceptable medical practice.

The assessment and management of [Mrs R] could not have been faulted if the correct diagnosis had been made and whilst the failures in communication and process in the ED department have been highlighted, there were no findings that should have triggered echocardiography during any of the presentations to the Wanganui Emergency department. CXR and ECG changes were not obvious or indicative of the pericardial syndrome, certainly there were no changes to suggest tamponade.

The correct diagnosis however of a critically ill patient was further compromised by the poor communication between the doctors at the hospital and [Dr B].

There clearly is an issue of patient information at the time of discharge from ED as well as the need to document a clear management plan that does allow for further presentation if symptoms are worsening."

Expert Opinion Provided By Dr Mary Seddon

I have been asked to provide an opinion to the Commissioner on case number 05/14141 regarding [Mrs R].
I have read and agree to follow the Commissioner's Guidelines for Independent Advisors.

Qualifications: MBChB, FRACP, MPH, FAFPHM.
Training: Graduated Otago Medical School 1987, MPH (Auckland) 1999.
Experience: Medical Registrar appointments in Auckland and Tauranga 1990–1995.
General Physician Middlemore Hospital 2000–2002.
Head of Quality Improvement Medicine and Acute Care, Middlemore Hospital
Clinical Director for Patient Safety Campaign, CMDHB.
Senior Lecturer in Quality Improvement, Epidemiology and Biostatistics, School of Population Health, University of Auckland.

Referral instructions: Expert Advice Required
Advice on the quality of care provided to [Mrs R] at Wanganui Hospital and any recommendations for improvements concerning hospital systems.

The following documentation was received and reviewed.

1. HDC referral from [Mrs R's sisters].
2. [Mr R's] statement to police [three days after Mrs R died].
3. Transcript of meeting between [Mr R] with [Dr B] and the Wanganui Hospital doctors …
4. Responses from:
   - [Dr D]
   - [Dr E]
   - [Dr F]
   - [Dr G]
   - [Dr B]
   - [Dr C]
   - [The] (Clinical Director)
   - Wanganui District Health Board CEO
   - [The] (Quality & Risk Advisor).
5. Clinical notes provided by [Dr B] and Wanganui Hospital (including laboratory tests and ECG recordings).
6. Report of coroner's post mortem [two days after she died].
7. Wanganui DHB Health Records Policy.
8. Expert advice provided by Dr Kingsley Logan.
9. Expert advice provided by Dr Tony Birch.
10. Provisional report dated 13th December.

The particulars of [Mrs R's] illness and care have been well outlined in the HDC provisional report. Furthermore the clinical issues and clinical care provided has been well critiqued by the two expert advisors; nothing that I have read contradicts their opinions.

Systems Issues:

1. Communication — processes for handling GP referrals and hospital discharges.
2. Delays in radiology reporting (see provisional report — not discussed further here).
3. Supervision of junior medical staff.

The central system issue (also noted by Drs Logan and Birch) is one of communication — especially between Wanganui Hospital staff and [Mrs R's] GP ([Dr B]). There are also issues with the quality of communication between the hospital doctors and [Mr and Mrs R], and between the hospital doctors themselves.

Communication between the hospital and GP:

Handing care between primary and secondary care is a crucial step in ensuring safe/quality care. It is also a vulnerable step which if not carefully managed is an area that can cause misunderstandings and sub-standard care. Communication between the various hospital doctors and [Dr B] seems to have been extremely poor. It would appear that [Dr B] did not receive any communication from the hospital doctors on the three occasions that [Mrs R] was discharged from Wanganui Hospital and therefore back under his care.

The DHB has quite a detailed policy (Health Records Policy 24 June 2005) on the need to write discharge summaries and what such summaries should include. It also states that the discharge summary should be faxed promptly to the GP. It is not clear whether this policy (or a version of it) was in place when [Mrs R] was discharged. Furthermore, according to [the Quality and Risk Advisor's] letter (21 June 2006), the policy only pertains to inpatients and day cases and not to the Emergency Department.

[Mrs R] was referred to the Department of Medicine, but was seen in the Emergency department, where it is apparently the norm to use a hand-written carbonised triplicate form, one copy for file, one for the patient, and one for the GP. However this system does not seem to be very robust as [Dr B] claims not to have received documentation on any of the three occasions.

There appeared to be a culture of not ringing and discussing discharges with general practitioners, even when it was clear that the GP expected the patient to be admitted. In a small DHB one would expect that this would not be too difficult.

Communication between the hospital doctors and [Mr & Mrs R]:

[Mrs R] was seen by a number of different doctors on her three admissions. On the whole they seem to have been thorough in their history taking and examination. It is however clear that [Mr R] was not always clear as to why his wife was not admitted and was not clear about what to do if her condition deteriorated. It is unclear whether he received 'his' copy of the discharge sheet or whether he was able to interpret what was written on them.

At the time of her last review [Mr R] conveyed to [Dr F] and nursing staff, that [Dr B] thought that [Mrs R] should be admitted. He even rang [Dr B] and was told

to "stand his ground and declare loudly that his wife was ill and was not being treated appropriately." [Dr F] did not speak to [Dr B] and stated that it was not usual to ring GPs after-hours.

Communication between the hospital doctors:

[Mrs R] was seen by a number of doctors on her three presentations, and the quality of the written record is good. However, any patient presenting on three occasions in a very short time (especially being referred by her GP each time) should have rung alarm bells and admission, or at least a verbal discussion with those who had seen her earlier, including her GP.

On the third admission [Dr C] took the referral call from [Dr B], but only because he happened to 'be there at the time.' Nothing was documented from this call and he verbally handed it over to [Dr F]. Although [Dr C] states that the "elapsed time since [Mrs R's] demise make recollection of events rather difficult," he goes on to claim that [Dr B's] referral was "characteristically brief and not engaging" and later that the referral "was brief and lacked clinical content, making it difficult to accurately portray acuity." Although [Dr C] was not responsible for [Mrs R's] care as she was a referral to the Department of Medicine team, his comments hint at a culture of mistrust of GP care that is worrying in the context of this case. It also suggests that there is no standardised form for GPs to use when referring patients to the hospital.

[Dr F], who saw [Mrs R] on her third and final admission, did not see the referral from [Dr B], and it is unclear what processes Wanganui ED has for physically handling written referrals.

[Dr F] did tell [Dr G] of [Mr R's] concern and mentioned the fact that [Dr B] wanted [Mrs R] admitted. According to [Dr G] he was not aware of the phone call in the evening and thought that it referred to the one prior to [Mrs R's] last admission. [Dr G] relied on [Dr F's] (a first year house surgeon) assessment that [Mrs R] did not need admission, rather than see [Mrs R] himself or discuss her with [Dr B] who was an experienced GP and knew [Mrs R] well.

Supervision of junior medical staff:

[Dr F] was only 4 months out of medical school and therefore her clinical experience was limited. In larger hospitals she would work with and be supervised by medical registrars with more experience. Wanganui does not have registrars so that supervision must fall on the senior medical officers (SMOs). I see from the CEO response (1st March 2006) that all patients discharged from the Emergency department are now to be seen by the senior medical officer on duty. Presumably this refers to both ED patients (self-presentations) and those referred by their GPs to the various 'inpatient' departments.

Recommendations:
This case has tragically highlighted systemic weaknesses in how Wanganui Hospital manages that critical interface between primary and secondary care. There are a number of ways that this could be improved, but the first step would be to organise a meeting with all the GPs in the region to discuss what GPs want from discharge information, and how it might be improved. If possible Wanganui should appoint a GP liaison officer and a lay member to have input into the process. These steps should be taken before Wanganui DHB looks at high cost improvements such as Electronic Discharge Summaries (EDS). Such EDS are now used in many DHBs, however, without input from GPs and patients, they do not always meet GP and patient's needs and though superior to carbon copies they are not a panacea as many have inherent safety concerns themselves.

I also suggest a working group of GPs and hospital doctors look at the acute referral process. This group would be asked to review the current process, ascertain what the hospital doctors need from the referral, whether the content can be standardised, and how the physical referrals are managed when the patient arrives.

I see that Wanganui Hospital has been accredited by Quality Health New Zealand. I would suggest that this body pay particular attention to the communication between primary and secondary care — not just whether there is a policy on discharge information transfer, but whether it is meeting the needs of the key stakeholders; GPs, patients and their families.

The following expert advice was obtained from general practitioner Dr Tony Birch.

"Thank you for your letter of 16 May 2006 requesting I provide an opinion to the Commissioner about the services provided by [Dr B] to [Mrs R], as detailed in the documents you supplied. I can confirm that I have no personal or professional conflict in this case. I have read and agree to follow the Commissioner's Guidelines for Independent Advisors. I understand also that my report is subject to the Official Information Act and that my advice may be requested and disclosed under that Act and that the Commissioner's policy is to name his advisors where any advice is replied upon in making a decision.

I qualified MB, ChB in 1968 from Victoria University of Manchester, UK. I also hold a Diploma in Obstetrics from the Royal College of Obstetricians (1970) and a Diploma in Health Administration from Massey University (1985). I have been a Member — now Distinguished Fellow of the Royal New Zealand College of General Practitioners since 1980. Prior to working in New Zealand I worked in an isolated area of Fiji for three years. For the past 32 years I have worked as a rural general practitioner in Rawene, Hokianga. This practice involves on call work and care of patients in a small rural hospital. I have recently (February 2006) retired from this post and I am now providing locum services.

I have read the supporting information supplied by the Commissioner, viz:

Supporting Information

1. Letters to the Commissioner from [Mrs R's sisters] dated 12 September 2005, marked 'A' (pages 1–2);
2. Investigation letter to [Dr B] dated 20 March 2006, marked 'B' (pages 3–6);
3. Letters to the Commissioner (with attachments) from [Dr B] dated 10 February 2006, 10 April 2006 and 4 May 2006, marked 'C' (pages 7–25)
4. Letter and information from the New Zealand Police, marked 'D' (pages 26–46);
5. Letters and information from Whanganui District Health Board dated 25 October 2005 and March 2006 marked 'E' (pages 47–125);
6. Letter to the Commissioner from [Dr D] dated 27 February 2006, marked 'F' (pages 126–127);
7. Letter to the Commissioner from [Dr E] dated 14 March 2006, marked 'G' (pages 128–133);
8. Letters to the Commissioner from [Dr F] dated 8 March and 4 May 2006, marked 'H' (pages 134–138);
9. Letter to the Commissioner from [Dr G], dated 15 February 2006, marked 'I' (pages 139–141).

Report

1. **In your professional opinion were the services provided to [Mrs R] by general practitioner [Dr B] appropriate?**

   In general I find little to fault in [Dr B's] care of [Mrs R]. He recognised that she was unwell and that it was outside his sphere of expertise and, he thought referring her to a centre where more expert help could be brought to bear on this problem.

2. **What standards apply in this case?**

   I am unaware of any particular 'standards' which might be applied in this situation. It would seem to me that [Dr B]'s clinical acumen was the standard involved.

3. **Were those standards complied with?**

   They appear to have been.

4. **Were [Dr B's] assessment and referrals of [Mrs R] to hospital appropriate?**

   [Dr B] was aware that his patient was unwell. He had known her over many years and thus was in a position to assess her response to symptoms. He judged that there was something serious going on. His specific diagnosis was ultimately discovered to be wrong, but he was not so far out — pericarditis might be quite far down the differential diagnosis list, but at least he was concerned about the right organ.

5. **Did [Dr B] provide hospital staff with appropriate information about [Mrs R's] condition?**

   [Dr B's] letters are rather sketchy, and I might have been more specific had I been writing them. They do, however, convey his concern and he, like I, may be aware of how little store junior staff may place in such communications. It appears that [Mrs R] was a 'good historian' and quite able to convey her history of chest pain made worse by breathing, shortness of breath and general malaise. The third letter conveys his concern about the change in condition.

   All that might be said is that [Dr B] could have been more forthright in his **written** communication regarding his concerns about [Mrs R's] deteriorating condition and his feeling that she needed inpatient management.

6. **Was it appropriate for [Mrs R] to be transported to ED by private car?**

   Private car is much more comfortable and convenient than travel by ambulance. In my opinion it was perfectly appropriate for this form of transport to have been used.

7. Did [Dr B] provide [Mrs R] with appropriate follow-up care?

[Dr B] was assiduous in his follow-up of [Mrs R]. He saw her at home when requested.

8. Was [Dr B] sufficiently pro-active in relation to [Mrs R's] care after being informed of her proposed discharge from ED on [Day 11]?

It is difficult to be completely clear on what transpired on [Day 11]. He was not, however, able to talk to the specialist [Dr G]. I would have hoped that, had an experienced doctor such as [Dr B] expressed his concerns directly, [Dr G] might have seen [Mrs R] again. It is possible that he would have noticed a change from his previous examination and taken appropriate steps.

9. What further action, if any, should [Dr B] have undertaken when he saw [Mrs R] (prior to her death)?

It is hard to know what [Dr B] could have done. He believed that he had done all he could to get her problem sorted out. With the hospital specialist saying it was just a viral infection he may have been questioning his own judgement.

10. Did [Dr B] appropriately document his care?

Documentation is not very adequate in this case. It is obvious from [Dr B's] response to your enquiry that he had taken a good history and examined [Mrs A]. He has also written some of his findings in his letters to the hospital. I would say that, as an 'aid memoire', [Dr B's] records are not outside the norm. They would not, however, meet the standards required by the RNZCGP Audit process. However, I do not think that his peers would view this with more than mild disapproval.

Further comments

It is interesting to look at this case in hindsight. With the benefit of this view, one can see that the symptoms and signs of pericarditis were there at the time. It is a rare condition and one which I have only, to my knowledge, seen once in my career. This is the reason why we have specialists! When an experienced GP refers a patient for admission, not once but three times, I would have expected that a specialist physician would have reviewed the patient thoroughly and considered the rare diagnoses.

It is often frustrating for a general practitioner that a patient is referred to a specialist centre for their expert opinion, only to be seen by a doctor who has been out of medical school for four months. This, I believe, is unacceptable. I believe that [Dr F] may have her whole medical career affected by this incident. In my opinion she did not have the seniority or experience to deal with this situation and should not have been left to do so.

I trust that this report is of assistance to the Commissioner in reaching his judgement. Please do not hesitate to contact me if any further clarification is required."