General Practitioner, Dr B

An Accident and Medical Centre

An Ambulance Service

A Report by the

Health and Disability Commissioner

(Case 02HDC01833)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Parties involved

Mr A	Consumer (deceased)
Mrs A	Complainant, Consumer's wife
Dr B	Provider / General Practitioner
An Accident and Medical Centre	Provider
Ms C	Nurse at the Accident and Medical Centre
An Ambulance Service	Provider

Complaint

On 7 February 2002 the Commissioner received a complaint from Mrs A about services Dr B and ambulance service officers provided to her late husband, Mr A. The complaint was summarised as follows:

On 2 December 2001 Dr B did not provide services of an appropriate standard to Mr A. In particular:

- *Dr B did not recognise the seriousness of Mr A's presenting symptoms*
- *Dr B did not correctly interpret an ECG performed by the triage nurse*
- *Dr B did not refer Mr A to hospital for urgent assessment and management of his chest pain.*

On 2 December 2001 ambulance officers who attended Mr A at his home did not provide services of an appropriate standard. In particular:

- *ambulance officers did not correctly intubate Mr A following his collapse. An endotracheal tube was inserted into Mr A's oesophagus instead of his trachea.*

An investigation was commenced on 28 June 2002.

Information reviewed

- Letter of complaint from Mrs A
- Mr A's medical records from the accident and medical centre and the public hospital
- Response and records from the ambulance service
- Information from the Accident Compensation Corporation
- Response from Dr B
- Information from the New Zealand Police, including interviews with Dr B and Ms C.

Independent expert advice was obtained from Dr Niall Holland, general practitioner.

Introduction

This is a report about a general practitioner who, while impaired by concussion, misread an ECG that showed obvious signs of heart ischaemia. (Ischaemia refers to inadequate flow of blood to a part of the body, caused by constriction or blockage of the blood vessels supplying it.) Due to the misreading of the ECG, the patient was sent home, where he suffered a heart attack and died less than two hours later. The issue for decision is whether the concussed general practitioner provided services with reasonable care and skill and in accordance with professional standards and, if he did not, whether his error can be excused by his personal circumstances.

Information gathered during investigation

Presentation at medical centre
At approximately 3pm on Sunday 2 December 2001, 36-year-old Mr A presented at an accident and medical centre (the medical centre) with tightness in his chest and shortness of breath. Mr A's wife accompanied him to the medical centre. Mrs A stated that her husband was in obvious discomfort.

At the time of Mr A's presentation at the medical centre, clinical resources were adequate, and there were no time pressures on staff. Dr B stated that the medical centre was appropriately staffed with two doctors, two nurses, and a receptionist.

Mr A was the first patient seen by Dr B during his rostered shift on 2 December 2001.

Nursing assessment
The medical centre's policy requires nursing and/or medical staff to be notified if a patient presents with chest pain or difficulty breathing. In accordance with this policy, the receptionist informed Ms C, nurse, of Mr A's presentation when he arrived at the medical centre.

Mr A was triaged and assessed immediately by Ms C. Ms C recalled that Mr A was not distressed and was not displaying any outward signs of shortness of breath. She recorded in Mr A's notes that he had developed difficulty breathing an hour before presenting at the clinic, some tightness in his chest, and was nauseous. She also recorded that he was speaking in full sentences, had no tingling in his limbs, and no cardiac history, although his father had had an angioplasty. His peripheral oxygen reading was normal. His pulse rate was 94 beats per minute. It was recorded that Mr A had a kidney transplant in 1984, for which he was taking felodipine, an immuno-suppressant.

Ms C stated that, on the basis of her assessment, she thought it prudent to attach Mr A to a three-lead cardiac monitor from the resuscitation room defibrillator, in anticipation that an ECG might be required. Ms C then called Dr B to attend.

Assessment by Dr B
Mr A was assessed by Dr B after a verbal handover from Ms C. Dr B also read Ms C's triage assessment notes. Dr B recalled that Mr A was calm, speaking easily, and did not appear short of breath. He recorded the following in Mr A's notes:

> "Not distressed, symts come and go WITH 4/7 URTI [upper respiratory tract infection] AND cough and feeling fluey
>
> hs N rs rhales and creps L base [heart sounds normal, respirations: crepitations (abnormal sounds) in the left base of the chest]."

Dr B recalled that Mr A presented with a history of feeling "fluey" for four days secondary to a cold, with cough, intermittent shortness of breath, and non-radiating tightness in the chest. Dr B examined Mr A, and listened to Mr A's heart and chest. Dr B stated that, on examination, he considered that Mr A was suffering from a chest infection. Dr B also ordered an ECG, although he cannot recall why.

Ms C performed the ECG. She stated that the ECG machine ran out of paper prior to the running of a rhythm strip, which is routinely recorded to complete the ECG report. Ms C was about to change the paper when Dr B entered the room and advised her it was not necessary. Ms C did not get a chance to see the ECG, as Dr B took the printout from her as it came off the machine. She did briefly notice that the ECG printout showed some changes.

Ms C stated that it is not a nurse's function to read or interpret ECGs in any way. As a level one nurse, her experience with ECG recordings did not enable her to make any comment on possible diagnoses.

Ms C left the room. When she returned, Dr B was preparing Mr A for discharge.

The ECG was of satisfactory technical quality. The ECG printout included both a tracing and a computer-generated interpretation of the tracing. The computer-generated interpretation recorded: "Sinus rhythm, Possible left atrial enlargement, Possible lateral infarct, ST & T wave abnormality, Possible anterior ischaemia, Abnormal ECG." Dr B recalled looking at the ECG printout and noting that it read "possible left atrial enlargement" and that there was a very slight ST elevation in lead 3, indicating a very mild non-specific abnormality that he did not think was significant. Dr B did not recall reading the rest of the ECG printout. Specifically, he did not recall reading the statement "possible anterior ischaemia".

On the basis of Mr A's presenting condition and the ECG, Dr B diagnosed him with a chest infection and sent him home with a prescription for Synermox (an antibiotic), and advice to see his own general practitioner within 24 hours if necessary. Dr B gave Mr A the ECG printout. Mrs A asked Dr B if the ECG was normal. Dr B reassured Mr and Mrs A that while the ECG was not completely normal, it was in keeping with his diagnosis of a chest infection.

Mrs A drove her husband home, where he vomited. Mrs A returned to the medical centre approximately 30 minutes later to pick up the prescription, and informed Dr B that Mr A was vomiting. Dr B (who acknowledges that he has no clear recollection of the matters discussed with Mrs A when she returned) recalled that although the new symptom of vomiting caused some degree of doubt over his diagnosis, in that vomiting is not consistent with a chest infection, he left it to Mrs A to determine whether she considered it necessary to bring her husband back, telling her to use her "common sense" and bring him back if she was concerned.

Cardiac arrest and attendance by ambulance officers
At approximately 4.40pm Mr A collapsed at his home. An ambulance was called and dispatched to Mr A's home at 4.42pm. The ambulance arrived at 4.47pm with two officers. A second ambulance crew, including an advanced paramedic, arrived shortly after. An ambulance officer phoned Dr B for background information. Dr B added the following in Mr A's medical notes:

> "5.15pm additional notes written after cardiac arrested at home from memory.
>
> Presumptive diagnosis was a chest infection due to feeling increasingly unwell over 4/7 2° to urti with resp symptoms and chest signs
>
> ecg had slight st elevation in 3, not thought to be significant
>
> Chest pain was non radiating, never before
>
> His wife came back to the clinic a little while later to say that he was vomiting. I advised to bring him back if she was concerned and that I could not explain his vomiting.
>
> ? 1 hour later an ambulance officer phoned and I discussed the background. She told me that they were managing him as a cardiac arrest and that he had not responded to resus and they were going through to [the public hospital]."

Mr A was found by the ambulance officers to be in cardiac arrest, with no respirations and no pulse. CPR was commenced immediately. An intravenous line was established and used to administer adrenaline and atropine during the resuscitation efforts. Mr A was also defibrillated during this time. He was put on a stretcher and taken to the ambulance to be transported to a public hospital.

Once in the ambulance, an endotracheal tube was placed in Mr A. An endotracheal tube is inserted into the trachea to provide an open airway to administer oxygen to the lungs. The ambulance service advised that the placement of the tube was clinically checked by the advanced paramedic and the paramedic, and breath sounds were heard over the chest area.

Mr A was then transported to hospital, requiring resuscitation on the journey, including CPR and defibrillation. On arrival in the resuscitation room at the hospital the endotracheal tube was found to be in Mr A's oesophagus and filled with vomit, rather than in his trachea. Mr A was re-intubated.

Resuscitation attempts failed, and Mr A was pronounced dead at 5.52pm. The post mortem revealed that the cause of death was ischaemic heart disease secondary to coronary artery disease.

Placement of endotracheal tube
The ambulance service conducted an internal investigation into the allegation of oesophageal intubation, and all staff involved were interviewed. The case was independently reviewed from an ambulance clinical management perspective.

It is unclear whether the endotracheal tube was initially wrongly inserted, or whether it was correctly inserted and became dislodged during the transfer to hospital. The Chief Medical Advisor of the ambulance service stated that in his opinion the endotracheal tube was initially placed in Mr A's trachea, but that it became displaced during transfer from the ambulance stretcher to the hospital bed. He stated that in his experience that is the most common time for endotracheal tube displacement to occur.

The ambulance service advised that, following this incident, steps have been taken to ensure that operational advanced ambulance paramedics have additional tools to verify the placement of an endotracheal intubation tube in the form of an Endotracheal Intubation Detector, and capnography technology.

Review of the ECG
Later that evening a consultant at the hospital's Emergency Department, phoned Dr B to advise him that Mr A had been pronounced dead. He discussed the ECG and informed Dr B that in his opinion it showed some changes indicative of myocardial infarction.

Dr B visited Mrs A after his shift at the medical centre, offering his condolences, and apologised if he had misdiagnosed the ECG and thus contributed to her husband's death.

On 5 December 2001 Dr B viewed a copy of the ECG, which was faxed to him. Dr B stated that as the ECG came off the fax machine he could see the obvious abnormalities on the ECG, and could not understand why he had not seen them at the time. Dr B stated that in hindsight the words "possible anterior ischaemia" on the computer-generated interpretation of the ECG tracing should have suggested to him that Mr A was suffering from a heart attack. Dr B stated that if he had read the ECG correctly he would have called for an ambulance and treated Mr A as if he were suffering from a heart attack. He acknowledges that Mr A's ECG is clearly abnormal, showing abnormalities indicative of acute myocardial infarction.

Dr B's impairment
Dr B accepts that he misread the ECG and did not recognise the seriousness of Mr A's presenting condition. Dr B states that the events concerning Mr A are not reflective of his normal practice. He submits that he was impaired at the time owing to concussion from a head injury sustained during an altercation with his neighbour on 30 November 2001 and that, due to the concussion, he lacked insight into his impairment. The assault was reported to the Police, and statements taken. Dr B states that since the assault, both he and his wife have noticed that his concentration is poorer, and he suffers from daily headaches.

Dr B advised that although he did not feel well (he had a headache and was tired) on 2 December 2001 and did not want to work his shift at the medical centre, he did not consider cancelling: "I would have been letting my colleagues down and it goes with the territory in general practice to carry on working despite sleep deprivation or suffering with minor ailments." Dr B believed that the symptoms he was experiencing were a result of a possible broken nose and questioned a colleague whether his nose might be broken. Dr B explained that the shift at the medical centre was a rostered shift, organised months in advance, which meant it was difficult to change shifts, especially on the day of the shift.

Dr B obtained a neurological opinion from a neurologist on 13 December 2001 and 15 January 2002. The neurologist concluded that during the altercation with his neighbour on 30 November 2001 Dr B sustained a minor head injury, resulting in a mild concussion. He stated that head injuries of the sort sustained by Dr B will often produce a temporary impairment of emotional state, judgement, and other cognitive functions.

At some stage between 13 and 21 December 2001 Dr B had a CT scan of his brain, which showed no structural change attributable to a head injury. On 21 December 2001 Dr B was assessed by a neuropsychologist, who tested for domains of significantly compromised functioning. The neuropsychologist's report stated that formal neuropsychometric testing generally found Dr B to have no compromised functions, except with non-verbal memory. There was also a suggestion of compromised executive functioning. He noted that Dr B was suffering from a range of symptoms associated with concussion, including daily headaches, undue fatigue, emotional lability, uncharacteristic irritability, photo-sensitivity, and reduced concentration/memory ability.

The neurologist's and the neuropsychologist's reports suggest that Dr B was mentally impaired at the time of his consultation with Mr A, owing to concussion.

Ms C stated that when working at the medical centre with Dr B on 2 December 2001 she did not notice Dr B having any obvious signs of physical injury or impairment. However Dr B submitted that Ms C was in no position to assess how he would normally act when not impaired, as she had never worked with him previously.

Review of events leading to the death of Mr A
Dr B stated that he does not believe that he lacks training about ECGs; however, for his own peace of mind he:

- has bought an additional textbook on ECGs
- now initials all ECGs at the end of the last trace
- discusses all ECGs that have any abnormality with his medical partners on a regular basis, as an information and education sharing exercise.

The medical director of the medical centre completed a Critical Incident Report in relation to this case, and advised that he is in the process of working with the team leaders to

produce guidelines and protocols to ensure that this situation does not arise again. He stated:

> "This information will be available to any disciplinary process in the future should they require to be reassured that [the medical centre] as an organisation has been accountable for events which occurred on their premises."

Responses to Provisional Opinion

Dr B

Dr B responded to my provisional opinion in a submission on his behalf by his legal counsel. In addition to various factual submissions (which have been taken into account in formulating the 'Information gathered' section above), Dr B's counsel made the following key points:

> "[Dr B's] case is in a very different category from deliberate or reckless incompetence or negligence, or where a practitioner has failed to keep abreast of knowledge and developments in his branch of medicine. That is culpable conduct which should invite sanction. [Dr B's] mistake in relation to the ECG was founded **only** on the fact that he was impaired at the relevant time, and that this impairment had not yet been ascertained or recognized because it was too close in time to the assault for it to have fully manifested itself. Further, by its very definition, this type of injury and incapacity means that there is subjective awareness of the impairment.
>
> There was no element of bad faith, reckless indifference or any degree of negligence. …
>
> It is submitted that the standard of what is reasonable for a fully functioning medical practitioner should not be applied to [Dr B] because of his unique circumstances. … There is also no danger of a 'floodgates' argument in this submission. It will be a minority of cases where there are substantial mitigating factors where a practitioner has been found to be incapacitated to such an extent that the mistake is convincingly explained by that circumstance."

Dr B's counsel noted that, subsequent to ACC's finding of medical error, the Medical Council took account of Dr B's significant changes to his reading of ECGs as a result of this incident, and his personal circumstances, and did not require him to undertake a competence review.

She further submitted:

> "It is respectfully submitted that the spirit of justice in this particular case would dictate that the extraordinary circumstances of the assault, concussion and neurological impairment of [Dr B] should be taken into account."

She noted the impact that this case has had on Dr B:

> "[W]ithout in any way wishing to minimize the enormous tragedy that [Mrs A] has suffered, [Dr B] has been personally devastated and traumatized by his role in the death of [Mr A]. He was off work for more than three months, and has received extensive counseling, which continues to this time. He has never attempted to defend the fact that he misread the ECG, but has acted ethically and morally in requesting that the ACC find medical error so as not to impede or delay payments being made to [Mrs A]. While money can never replace a human life, he did not in any way wish to contribute to any exacerbation of her grief and difficulties. [Dr B] also went to see [Mrs A] immediately on hearing of [Mr A's] death, at which time he apologized for any error he might have made and which may have contributed to the death. The apologies have been repeated by him and by [the medical centre] on his behalf."

In conclusion, Dr B's counsel submitted:

> "The standard that should be applied to [Dr B] is to question whether a reasonably competent practitioner practising under an unknown disability would have made a similar error. As indicated by all the medical experts who were aware of [Dr B's] circumstances, the answer to that questions is 'yes'. [Dr B] therefore did not fall below a standard reasonably to be expected in the particular circumstances of his impaired performance and ability. There is certainly no issue of professional misconduct. At most there was an error in failing to apprehend that he was suffering from impairment such that his professional abilities may have been compromised. This, however, is inherent in the disability he had."

The medical centre

In response to my provisional opinion, the medical centre outlined the steps that have been taken to improve its response to the sort of situation that occurred in this case. Specifically, it has developed:

1. a policy concerning General Staff Impairment/Illness; and

2. a policy concerning the management of Acute Coronary Syndrome.

The policy on General Staff Impairment/Illness requires any staff member who is unwell to report to the Medical Director or Team Leader as soon as possible to ensure that patient safety is maintained and adequate cover is put in place for the Clinic. There is an automatic stand down of two to three days for a head injury, and medical clearance from a doctor is required before the staff member can recommence work.

The management of Acute Coronary Syndrome policy was developed with the assistance of Mrs A, cardiologists at the hospital, and the head of the hospital's Emergency Department. The policy states that "all chest pain or shortness of breath is cardiac until proven otherwise", and that "hospital involvement with cardiac suspicion is mandatory". In addition, the policy states that nurses need to be given time to produce an ECG that they are technically happy with, and that "the process should not be rushed in the immediacy of the

moment". Under the policy, the doctor is required to sign the ECG and write a note into the area under the automated report commenting on whether the ECG is normal or abnormal, and what action is to be taken.

Both the General Staff Impairment/Illness and the Acute Coronary Syndrome policies are to be reviewed annually.

The centre also advised that:

- Soon after Mr A's death it began a process of accreditation with ACC, under standards formulated by ACC and the Accident and Medical Practitioners Association.
- It has a policy that all nursing and medical staff hold a current CPR certificate.
- Two modern ECG machines are available for use at the clinic, which give an automatic interpretation of the waveforms of the tracing.
- The orientation of new staff includes policies and procedures around the management of any acute medical event that is likely to require hospital admission.
- It has chosen to be internally responsible for the development of internal standards, which new staff will be oriented to and all staff will be certified to on an annual basis.

Independent advice to Commissioner

The following expert advice was obtained from Dr Niall Holland, general practitioner:

> "**Did [Dr B] read and interpret [Mr A's] ECG with appropriate care and skill?**
>
> [Dr B] was working at [the medical centre] in his capacity as a general practitioner, making his contribution to the roster of doctors needed to cover the after-hours care of patients in the area. As a general practitioner he would be expected to be able to interpret common ECG abnormalities and especially to be able to recognise the ECG signs of myocardial ischaemia.
>
> The ECG machine that was used provides both a tracing and a computer generated interpretation of that tracing. This is now the standard quality of machine to be used in this setting. The interpretative function provides an extra measure of safety. It provides a very conservative interpretation, flagging even minor changes as abnormalities to alert the reader to potential diagnoses. If anything these machines over-interpret and at times, while the report suggests an abnormality, the reader will have to make a judgement as to its significance.

In the case of this tracing the interpretation reads:

Sinus rhythm
Possible left atrial enlargement (-0.1mV P wave in V1/V2)
Possible lateral infarct (3.5ms Q wave in I/AVL/V5/V6), age undetermined
ST & T wave abnormality, possible anterior ischaemia (-0.1 + mV T wave in V3/V4)
Abnormal ECG
Unconfirmed report

The tracing is labelled as belonging to [Mr A] and dated 2/12/01 15.42 hours.

Perusal of the tracing reveals borderline Q waves in Leads I, aVL, V2, V5, V6 that can indicate a previous myocardial infarction or be part of a new and evolving infarct.

The key changes are those of the ST segment and the T waves. In lead I the ST segment is very slightly depressed and it is elevated in Leads II and III. It is also suspicious in Leads aVL, aVF, V2, V3, V4 and V5. The T waves are high and peaked in Leads II and III and inverted in the anterior chest leads.

In this case perusal of the ECG confirms the computer generated interpretation of the tracing.

There should be no doubt in any doctor's mind that this is an abnormal ECG indicating significant myocardial ischaemia. That is to say that the blood supply to the muscle of the heart was being compromised as this tracing was being taken. To interpret it otherwise is to fall well short of the standard of care to be expected.

Should [Dr B], on the basis of the ECG and [Mr A's] presenting condition have referred [Mr A] to hospital?

[Mr A's] presenting condition was not entirely typical of a myocardial infarct. The classic presentation would be with complaints of crushing pain in the chest perhaps radiating to the arm or jaw and associated with pallor and clamminess.

[Mr A] appears to have been more concerned with a feeling of shortness of breath and gave little indication of chest pain. He also had no previous history of heart problems that he was aware of. However his appearance was such that both the nurse and the doctor considered that an ECG was a necessary investigation.

The decision to admit him to hospital would not necessarily have been determined by his symptom presentation in this case. However the ECG findings were so clearly those of ischaemia that the ECG alone was sufficient reason to refer him urgently to hospital.

On the basis of the ECG and [Mr A's] presenting condition, did [Dr B] act with appropriate care and skill when he sent [Mr A] home with a prescription for antibiotics and instructions to see his doctor in 24 hours if necessary?

No. In this case [Dr B] has not acted with appropriate skill in sending [Mr A] home. There is little doubt that he urgently should have admitted the patient to hospital after instituting an initial MI treatment regime for which I have no doubt [the medical centre] will have a written protocol. This was a major departure from the required standard of care.

Are there any other issues raised in the information you have reviewed that warrant comment?

This error of judgement is so obvious and so major that it does seem plausible that there were some unusual contributing circumstances that impaired this doctor's decision making process at the time.

Perhaps the family also should know that, even had he made it to hospital, [Mr A] had such extensive obstruction and clotting in his coronary arteries that his chances of survival were very, very slim. While there has clearly been an error on the part of the doctor concerned, it has probably not changed the outcome for the patient.

I am not sure why the nurse did not challenge the doctor's decision that this was not a cardiac problem. She was clearly under the impression that the symptoms could have had a cardiac cause. The ECG interpretation was available to her and she has indicated that she noted the changes. There would be an additional safety check in [the medical centre] encouraging nurses to question the doctor under these circumstances.

I note that the family is concerned that the airway inserted by the ambulance was put into the oesophagus by mistake. The hospital notes indicate that it was dislodged by the CPR process, popping out of the airway and into the oesophagus at a later stage."

Code of Health and Disability Services Consumers' Rights

The following Right in the Code of Health and Disability Services Consumers' Rights is 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.

Opinion: Breach – Dr B

Introduction
In a recent decision from the High Court of New Zealand, *McKenzie v The Medical Practitioners Disciplinary Tribunal* (High Court of New Zealand, 28 May 2003, CIV2002-404-152-02), Venning J held that the test for whether a disciplinary finding is merited is a two-stage test involving:

1. an objective assessment of whether the practitioner departed from acceptable professional standards; and
2. an assessment of whether the departure was significant enough to attract sanction for the purposes of protecting the public.

In discussing the second stage of the test, Venning J stated:

> "Even at the second stage it is not for the Disciplinary Tribunal or the Court to become engaged in a consideration of or to take into account subjective consideration of the personal circumstances or knowledge of the particular practitioner. The purpose of the disciplinary procedure is the protection of the public by the maintenance of professional standards. That object could not be met if in every case the Tribunal and the Court was required to take into account subjective considerations relating to the practitioner."

The judgment in *McKenzie v The Medical Practitioners Disciplinary Tribunal* is the most recent statement on the legal test for whether a medical disciplinary finding is merited in New Zealand.

As Health and Disability Commissioner, it is my role to determine whether, objectively, Dr B departed from acceptable professional standards in his assessment and treatment of Mr A and breached the Code of Health and Disability Services Consumers' Rights (the Code).

Duty of care
Under Right 4(1) of the Code, Mr A had the right to have services provided to him with reasonable care and skill.

In accordance with professional standards, the duty Dr B owed Mr A in this case was to exercise reasonable care and skill in assessing his presenting condition and in reviewing and interpreting the ECG result to ensure that he was provided with appropriate treatment. As recognised by Venning J in the *McKenzie* decision, the duty of care is an objective one. I do not accept Dr B's counsel's submission that the relevant standard is "that of a reasonably competent practitioner practising under an unknown disability". In my view, the standard must be assessed by reference to a responsible medical practitioner, not a responsible medical practitioner suffering from a concussion.

Mr A presented at the medical centre with shortness of breath, tightness in the chest and nausea. His pulse rate was 94 beats per minute, his oxygen reading was normal, and he had no tingling in his limbs and no cardiac history. He was taking felodipine, an immuno-suppressant. My advisor informed me that Mr A's presenting condition was not entirely

typical of a myocardial infarct, which is usually associated with complaints of crushing and radiating pain in the chest, pallor and clamminess.

Despite the fact that Mr A's symptoms were not entirely typical of a myocardial infarct, Dr B decided that it was appropriate for an ECG assessment to be undertaken.

The ECG was performed by Ms C, but read and interpreted by Dr B. My advisor informed me that, as a general practitioner, Dr B would be expected to be able to interpret common ECG abnormalities and to recognise the ECG signs of myocardial ischaemia.

The ECG printout stated: "Sinus rhythm, Possible left atrial enlargement, Possible lateral infarct, ST & T wave abnormality, Possible anterior ischaemia, Abnormal ECG." My advisor informed me that the ECG was abnormal, indicating significant myocardial ischaemia; "to interpret it otherwise is to fall well short of the standard of care to be expected". I accept this advice. At the time of the consultation with Mr A, Dr B did not interpret the ECG as indicating significant myocardial ischaemia, but rather thought it was consistent with his diagnosis of chest infection. Dr B's reading of Mr A's ECG on 2 December 2001 fell well short of the standard of care expected of a responsible general practitioner.

In accordance with his diagnosis, Dr B sent Mr A home with antibiotics and advice to see his general practitioner in 24 hours if necessary. My advisor informed me that, on the basis of the ECG, Dr B did not act with appropriate skill in sending Mr A home. Dr B should have arranged Mr A's urgent admission to hospital. My advisor informed me that Dr B's failure to urgently admit Mr A to hospital was a major departure from the required standard of care. I accept this advice. By misinterpreting Mr A's ECG, Dr B did not ensure that Mr A was provided with appropriate treatment based on the ECG result.

In my opinion, Dr B's failure to demonstrate reasonable knowledge, care and skill in assessing and treating Mr A amounted to a major departure from professional standards, and a breach of the legal duty under Right 4(1) of the Code to provide services with reasonable care and skill.

Dr B's personal circumstances

I accept Dr B's submission that his misinterpretation of Mr A's ECG is not reflective of his normal practice; that he was impaired following the assault two days earlier; that he did not realise that he was impaired; and that his impairment affected his ability to correctly interpret the ECG.

Dr B's personal circumstances cannot properly be taken into account to dilute his professional duty of care. The right of patients to receive appropriate care cannot, as a matter of law, turn on whether the doctor was impaired at the time. I note that ACC has taken a similar approach in finding medical error (the failure of a registered health professional to exercise reasonable care and skill) on the part of Dr B. The determination of a doctor's duty of care, and whether it was breached in particular circumstances, requires an objective analysis. However, I have taken into account Dr B's personal circumstances in determining whether any further action is required in this case.

Subsequent events
Dr B visited Mrs A promptly after her husband's death, offered his condolences, and apologised for any shortcomings on his part. I commend Dr B on his candour and compassion. Without wishing to diminish Mrs A's tragic loss, I note that this case has exacted a heavy toll on Dr B.

Opinion: No breach – The Medical Centre

In addition to any direct liability for a breach of the Code, employers are potentially vicariously liable under section 72(2) of the Health and Disability Commissioner Act 1994 for ensuring that employees comply with the Code. 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 was breached.

Dr B was an employee of the medical centre. In failing to demonstrate reasonable knowledge, care and skill in assessing and treating Mr A, specifically in his interpretation of Mr A's ECG, Dr B did not provide services to Mr A with reasonable care and skill.

The medical centre did not have any policies or procedures in place at the time of Mr A's consultation with Dr B to ensure that its clinical staff did not work while impaired or unwell.

However, the medical centre has taken steps to address the issues raised by this complaint. Detailed policies have been developed in relation to General Staff Impairment/Illness, and the management of Acute Coronary Syndrome. The orientation of new staff now includes policies and procedures around the management of any acute medical events that are likely to require hospital admission.

On balance, I do not consider that the medical centre could reasonably have been expected (in December 2001) to have prevented an impaired, but apparently functioning, doctor from continuing to work and committing the sort of error that Dr B made.

It follows that the medical centre is not vicariously liable for Dr B's breach of the Code. I commend the medical centre on the positive steps taken to prevent a similar situation in future.

Opinion: No breach – The Ambulance Service

Mrs A complained that the ambulance officers attending to Mr A following his collapse did not act with reasonable care and skill, in that Mr A was not correctly intubated because the endotracheal tube was inserted into Mr A's oesophagus instead of his trachea.

I was advised by the ambulance service that after the endotracheal tube was placed in Mr A the placement of the tube was clinically checked by the advanced paramedic and the paramedic. Breath sounds over the chest area were heard by both paramedics, indicating that the tube had been correctly placed in Mr A's trachea. However, on arrival in the resuscitation room at the hospital the endotracheal tube was found to be in Mr A's oesophagus and filled with vomit.

It is unclear whether the endotracheal tube was initially wrongly inserted, or was correctly inserted and became dislodged during transfer to hospital. The Chief Medical Advisor of the ambulance service advised me that endotracheal tube displacement can occur during transfer from the ambulance stretcher to the hospital bed.

I accept that once the tube was inserted, the advanced paramedic and the paramedic listened to breath sounds over the chest area to check that the endotracheal tube had been correctly placed. I am satisfied that, on the balance of probabilities, the endotracheal tube was correctly placed in Mr A's trachea by the attending paramedics, but became dislodged at some point in Mr A's transfer to hospital. Accordingly, in my opinion the ambulance officers and the ambulance service did not breach the Code by inserting Mr A's endotracheal tube into his oesophagus instead of his trachea.

Follow-up actions

- A copy of this report will be sent to the Medical Council of New Zealand.

- A copy of this report, with details identifying the parties removed, will be sent to the Royal New Zealand College of General Practitioners, the Accident and Medical Practitioners Association of New Zealand, and The Order of St John, and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.