General Surgeon, Dr C

Lakes District Health Board

A Report by the

Health and Disability Commissioner

(Case 08HDC03361)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Overview

Mr B (aged 52) had a laparoscopic cholecystectomy[1] at Rotorua Hospital in late 2007. This procedure was performed by surgeon Dr C, who was employed as a short-term locum consultant surgeon by Lakes District Health Board.

Mr B developed complications in the hours after surgery, and his condition deteriorated. Unfortunately, despite further surgery in the early hours of the following day, and care in the intensive care unit, Mr B died a few days later.

This report considers Dr C's clinical skills and the co-ordination of Mr B's care when his condition deteriorated soon after surgery.

Parties involved

Mrs A	Complainant/Consumer's sister
Mr B (dec)	Consumer
Dr C	Provider/General surgeon
Dr D	Surgeon
Dr E	Surgeon
Dr F[2]	Surgical registrar
Dr G	Surgical house officer
Dr H	Surgical house officer
Mr I	Registered nurse
Ms J	Registered nurse
Ms K	Registered nurse
Lakes District Health Board	Provider

[1] Laparoscopic cholecystectomy is the surgical removal of the gall bladder usually for cholecystitis (inflammation of the gall bladder) or gallstones.

[2] Dr F is no longer an employee of Lakes District Health Board.

Complaint

On 4 March 2008 the Health and Disability Commissioner (HDC) received a complaint from Mrs A about the services provided by Lakes DHB to her brother, Mr B. The following issues were investigated:

- *The appropriateness of the care provided by Dr C to Mr B in late 2007 including:*
    - *the appropriateness of the cholecystectomy performed;*
    - *the management of Mr B's postoperative care following the cholecystectomy.*
- *The appropriateness of the care provided by Lakes District Health Board to Mr B in late 2007.*

An investigation was commenced on 26 March 2008.

Information was received from Mrs A, Dr C, Dr F, the Coroner, Lakes DHB, the Accident Compensation Corporation, and the Medical Council of New Zealand.

Independent expert advice was provided by general surgeon Dr Tom Elliott, and is attached as **Appendix 2**.

Information gathered during investigation

Dr C
Dr C trained as a general surgeon and qualified as a Fellow of the Royal College of Surgeons in England in 1983. In 1990, he was appointed as a consultant surgeon in England. He commenced performing laparoscopic surgical procedures in the same year, and over the next 10 years performed over 1,400 laparoscopic cholecystectomies. In 2000, Dr C decided to work outside the United Kingdom, and began working short-term contracts overseas.

Following credentialling, Dr C was appointed to work at Rotorua Hospital from September to November 2007 as a locum consultant general surgeon. He was supervised by Dr E, a consultant general surgeon.[3] Dr C was paid to work seven sessions per week (a session equating to a half day). Lakes DHB confirmed that Dr C's employment included associated work prior to an operating session (such as preadmission clinics), ward rounds, and being contactable after surgery.

[3] The Medical Council of New Zealand requires all registrants (regardless of seniority) to work under supervision for their first 12 months in New Zealand to familiarise themselves with the local work environment.

Mr B

Mr B, aged 52, attended a preadmission clinic with surgeon Dr D in preparation for a laparoscopic cholecystectomy. (Mr B had been under Dr D's care in August 2007 when admitted to Rotorua Hospital with abdominal pain. During that admission, Mr B was diagnosed with acute cholecystitis,[4] and Dr D placed him on the surgical waiting list for a laparoscopic cholecystectomy.) It is recorded in the clinical notes that Mr B had pancreatitis three years earlier; he had had an operation for a perforated duodenal ulcer in 2003, and had an "alcohol dependency" (something Mr B's family disputes). It was concluded that Mr B was fit for surgery, and the procedure was arranged for late 2007.

Admission to Rotorua Hospital — Friday

Mr B was admitted to Rotorua Hospital early on Friday morning. The procedure was due to be performed by Dr C, who had not previously met Mr B. Dr C stated:

> "I first met [Mr B] about 8am on [Friday] when I visited him on the surgical admission ward at Rotorua Hospital prior to his operation. It was clear from the medical history that surgery was likely to be difficult due to adhesions from previous abdominal surgery … and his history of alcohol-related pancreatic and liver disease."

Dr C warned Mr B that there was a "higher-than-usual" chance that the procedure might not be able to be performed using a laparoscopic approach, and might require "conventional open surgery". Mr B accepted this, and signed the consent form to indicate his agreement to open surgery if it became necessary.

The operation is recorded as having commenced at 9.58am and ended at 10.44am. In a subsequent statement to Lakes DHB, Dr C described the procedure as follows:

> "As expected, multiple adhesions were present within the abdominal cavity … A window was present through the adhesions to allow access to the gallbladder area … In view of this I proceeded with laparoscopic surgery …
>
> The gallbladder was very thin-walled and contained no gallstones. The duodenum was adherent to the gallbladder body as a result of his previous surgery, but it was not difficult dissecting the duodenum off the gallbladder to allow [the procedure] to proceed. The gallbladder was so thin-walled and friable that attempts to dissect downwards to the cystic duct resulted in tearing of the gallbladder wall where it was being held in clamps. I opted to tie off the gallbladder just above the cystic duct using an endoloop suture to circle and close the neck of the gallbladder.
>
> The gallbladder was next dissected piecemeal due to its friability leaving a small segment of gallbladder wall attached to the liver. I was not aware of any problem

[4] Acute or chronic inflammation of the gall bladder.

during this dissection and the pieces of tissue I removed were retrieved and sent to the histopathology department for formal examination.

At the end of the operation I felt confident that surgery had been a success. I was not aware of any damage to adjacent bowel loops."

Dr C inserted a drain. He was confident that the procedure had gone well, and Mr B would be discharged in two to three days.

Dr C was assisted during the operation by registrar Dr F, who stated:

"There was bleeding that at times obscured the operative field. It was heavier than would be tolerated by many other surgeons I have worked for. [Dr C] often worked without worrying too much about haemostasis but [Mr B's] operation was bloody even in comparison with the other operations I assisted [Dr C] with."

Immediate postoperative care

After surgery, Mr B was transferred to the post anaesthetic care unit (PACU), where he was cared for by registered nurse (RN) Mr I.

In a statement to HDC, RN Mr I advised that Mr B was in considerable pain, and a patient-controlled analgesia pump (PCA) was commenced. RN Mr I said that there had been 280ml drainage from the Redivac drain inserted in theatre, which he thought was "more than one would expect from a [laparoscopic cholecystectomy]". Mr B stayed for three hours in PACU. According to RN Mr I, this is longer than the approximately one hour that a patient having had the same procedure would normally stay in PACU.

RN Mr I noted that Dr C was called to assess the drainage from the Redivac drain and did so as part of his ward round following theatre. However, he gave no further instructions prior to leaving hospital that Friday afternoon.[5]

Dr C was paid to work one session[6] on Friday. On completion of the session, he left Rotorua Hospital for a long weekend in the Bay of Islands but remained contactable by telephone. Before leaving the hospital, Dr C completed a ward round of all his patients. It appears that there were no concerns with Mr B at that stage.

Mr B was collected from PACU by RN Ms J to be taken to the ward. Mr B was in a lot of pain, and RN Ms J remarked on the amount of drainage from the wound. She was told by RN Mr I that the medical staff were aware of the drainage, "but that they said it was all right". RN Ms J also noted that the blood stain on the dressing had increased, and she told this to the nurse who was to look after Mr B that afternoon,

[5] The exact time Dr C left Rotorua Hospital is unclear.

[6] A session comprises four hours of outpatient clinics or theatre with associated pre-theatre work and associated ward rounds.

RN Ms K. RN Ms J advised RN Ms K that she should contact the medical staff if she had any concerns. RN Ms J added:

> "The last thing [Mr B] said to me was that he wished he never had agreed to the operation. I should have documented my observations after I picked the patient up from PACU; a verbal handover was not enough."

RN Ms K recalls that RN Ms J mentioned the bleeding from the procedure sites and that from the time of handover the bleeding had increased. She stated:

> "We were all told that the patient was anxious but he had a history of alcoholism and a very low pain tolerance."[7]

At 2.50pm, Mr B's pain was recorded as 7 out of 10 (10 being the worst), his blood pressure 130/85mmHg, pulse 120 beats per minute (bpm), and temperature 36°C.[8] Because of the pain, RN Ms K encouraged Mr B to use the PCA.

At 4pm, RN Ms K noted that Mr B's pulse was fast (133bpm), his breathing rate fast (36 breaths per minute),[9] and he was still in pain (9 out of 10) despite use of his PCA.

Dr G (house officer) first became involved in Mr B's care at 3.50pm, when she was told that he had returned from theatre, was "looking unwell", and "the nurse was concerned about his condition". (Dr G did not write any notes describing her care of Mr B.) Dr G was not given any specific information by the nurse, and told the nurse that she would attend Mr B after she had finished dealing with another patient.

Dr G assessed Mr B at 4.05pm. She found him "hot and flushed", with a fast pulse and breathing rate, and in a lot of abdominal pain (10 out of 10). Dr G spent 15 minutes reviewing Mr B's history, speaking to RN Ms K, and assessing Mr B. Dr G contacted the registrar, Dr F, at 4.20pm, and asked him to review Mr B as she was "concerned that the amount of blood draining may require operative management". After her call to Dr F, Dr G returned to assess Mr B. Dr G encouraged use of the PCA. This was done and there was some improvement in Mr B's pain.

Twenty minutes later, a further 50ml of blood had drained, and Dr G called Dr F again to express her concern that Mr B's drain was filling faster than she thought appropriate. She asked Dr F to come as soon as possible.

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[7] As mentioned, Mr B's family disputes that he had alcohol dependence and a low threshold for pain. Mrs A commented that having known Mr B "all his life", such comments were "absolute nonsense", "with no foundation".

[8] An optimal blood pressure is 120/80mmHg, while a normal pulse range for a healthy adult ranges from 60–100bpm. (Tachycardia — an increase in the heart rate above normal, is said to occur when the pulse rate is above 100bpm.) The normal body temperature is between 36°C and 37°C.

[9] The normal respiratory rate in adults is between 12–29 breaths per minute.

RN Ms K spoke to Dr G some time between 4.30pm and 5pm because of concern about Mr B's condition.

At 5pm, Mr B's observations were recorded by RN Ms K. She noted that his temperature was raised (39.5°C), his blood pressure was raised (172/98), his pulse was fast (140bpm), and 400ml of blood had drained from the wound. She asked Dr G to review Mr B again.

Dr F attended the ward at approximately 5pm, after the afternoon operation list had been completed. (Dr F did not record a time on his subsequent clinical note.)

Dr F noted that Mr B's pain had settled to 5 out of 10, and he appeared drowsy. His temperature was raised (39.3°C), and Dr F assessed that Mr B "was well perfused with warm peripheries, his pulse was 140 and his blood pressure was 120/80". Mr B was noted to have a tender abdomen, "with guarding on the whole of the right side of his abdomen". There was 450ml of dark brown fluid in the wound drain bottle, which RN Ms K subsequently changed because it was full. By the time of Dr F's review, a blood test had been performed, which showed a haemoglobin of 122g/L, haematocrit of 0.36, white cell count of 2.2x10E9/L, and neutrophils of 1.2x10E9/L.[10]

Because of Mr B's condition, Dr F telephoned Dr C, who by this stage was well out of Rotorua, on his way to the Bay of Islands. (As noted above, Dr C was not on call and was not required to remain in Rotorua.) Dr C advised Dr F to continue with intravenous (IV) antibiotics, to review Mr B later in the evening, and to call him if there was any deterioration.

Dr F also discussed Mr B's condition with a medical registrar because of his concerns about the neutropenia.[11] Following this discussion, Dr F recorded the plan to give pain relief as required. He also considered that Mr B might be suffering from alcohol withdrawal, but he thought it "less likely as a diagnosis", as Mr B had had other periods without alcohol and had not had withdrawal symptoms.

Dr F stated that the blood loss should be monitored, and a repeat blood test was to be performed at 9pm.

RN Ms K moved Mr B to a side-room nearer the nurses' station so he could be monitored more closely.

At 5.30pm, Dr G handed over care to house officer Dr H, who was on duty that evening and overnight.

[10] Normal ranges: haemoglobin 130–175g/L, haematocrit 0.4–0.45, white cell count 4–11x10E9/L, neutrophils 2–7.5x10E9/L.

[11] Neutropenia is a decrease in circulating neutrophils (the most common type of white blood cell) in the peripheral blood.

Dr H was told by Dr G that Mr B was unwell following his procedure earlier that day, and that his "background included a heavy alcohol intake and the team [was] unsure to what extent this was contributing to [his] postoperative state".

As Dr C was off duty, Dr F contacted Dr E (the on-call surgeon) at around 5.50pm and told him that Mr B had been assessed, that he was tachycardic and in pain, and that there was significant output in the drain. Dr E was told that the patient had made some improvement, and was not asked to attend at that stage.

At 6pm, Mr B's temperature was still raised (39.5°C), his pulse fast (140bpm) and his blood pressure had increased further (to 170/100mmHg). He was still in pain (6–7 out of 10), and he had not passed any urine since he had returned from theatre. RN Ms K asked senior nursing colleagues to watch Mr B while she took a break.

At 6.30pm, on RN Ms K's return from her break, Mr B's family approached her because they were concerned about his condition. RN Ms K telephoned Dr H to advise him that the family wanted to talk to a doctor about Mr B's condition. Dr H asked for the clinical observations, and concluded that although Mr B was still unwell, "he did not sound significantly different from his previous review". Dr H advised that he would see Mr B as soon as he was able. Dr H added:

> "It was a very busy shift, and given that it sounded as if his situation had not changed much, I decided to continue what I was doing rather than review him immediately. At the time of that phone call I was on the orthopaedic ward reviewing another patient and there were several other jobs on that ward to be done. There were also several patients in ED to be admitted. There was such a backlog building up that the ED house officers were seeing some of the surgical patients that were waiting for me, to try and help clear things."

At 7pm, RN Ms K noted that Mr B was still in pain, and the family was pressing the PCA button as Mr B was "too sore" to do it himself.

At 8pm, RN Ms K showed Mr B's observation chart to Dr H (who was in the ward office with another doctor) as she was concerned about his condition. RN Ms K noted that Mr B's temperature was raised, there had been a slight fall in his blood pressure, and 440mls had drained from the wound since the bottle had been changed.

At 9pm, while RN Ms K was recording Mr B's blood pressure, Dr H assessed Mr B. Dr H stated:

> "I did not get to [Mr B] until [9pm] which was when I was also due to take the [blood test] requested by the day team. Some members of his family were present when I arrived. On entering the room, his nurse told me she had just taken his BP [blood pressure] and it was 68/42. There was a decreasing BP trend evident on his observation chart over the previous 2 hours, but I had not been made aware of this. He was obviously in a lot of pain.

> My first thought was that he was bleeding, so I prescribed some colloid fluid immediately, and requested 2 units of blood from the blood bank. I phoned [Dr F] and informed him of the situation and asked for him to review [Mr B] (he arrived approximately 10 minutes later)."

Dr F assessed Mr B and immediately called Dr C (in accordance with his instructions during the first telephone call), who told him to contact the on-call surgeon. Dr F then contacted Dr E again. Dr E felt that Mr B's clinical picture suggested infection rather than blood loss. He was transferred to the intensive care unit before returning to the operating theatre, and an open laparotomy was performed by Dr E soon after midnight. During the operation, Dr E found that the "transverse colon … had been cut into" during the laparoscopic procedure that had taken place earlier that day, and repaired the perforation.

Mr B returned to the intensive care unit from theatre. However, his condition deteriorated, despite a third operation three days later. Mr B died two days later.

Post-mortem examination

That afternoon, a post-mortem examination was performed. The post-mortem report recorded that Mr B weighed 103.6kg and was of "178cms crown-heel length".[12] On 10 December 2007, the pathologist reported Mr B's cause of death to the Coroner as "circulatory collapse caused by acute peritonitis following perforation of the large bowel during the operation of cholecystectomy. The liver changes are considered due to circulatory collapse. The pulmonary emphysema[13] is considered an indirect secondary factor in death."

ACC

On 16 December 2007, an "Advice of Accidental Death" claim was submitted to ACC enclosing statements from Dr C and Dr E. On 14 February 2008, ACC accepted the claim as a treatment injury. ACC noted in its decision that "there is clear evidence from the full surgical reports available [that the] cause of death relat[ed] to [a] chain of events complicating surgical treatment" and that the "perforation of colon (although a recognised complication) and the septic shock leading to death were not ordinary consequences of the surgical treatment".

[12] In contrast, the anaesthetic chart recorded Mr B's preoperative weight as 75kg and height as 168cm.

[13] Increase in lung size beyond normal owing to dilatation of the alveoli (air sacs in the lungs) or from destruction of the lung walls.

Coroner
Mr B's death was reported to the Coroner. As at the date of this report, the Coroner has not made a decision whether to hold an inquest.

Referral to Medical Council
Following the events in question, Dr E consulted with his senior colleagues in Lakes DHB and an external surgical advisor, who suggested that the incident should be reported to the Medical Council of New Zealand. On 17 December 2007, the Lakes DHB Medical Director wrote to the Medical Council of New Zealand. He stated:

> "Following discussion with surgical colleagues it is apparent that this complication [which occurred during [Mr B's] procedure] sits significantly 'outside' the expected or anticipatable and therefore I am referring to you.
>
> I have spoken to [Dr C] who himself is devastated and understands the need for referral to the MCNZ, audit, overview."

In his statement to the Medical Council, Dr C said:

> "I was devastated when [Mr B] subsequently deteriorated and died as a result of septic shock from a colonic injury. Subsequent histology confirmed that one of the two pieces removed was colonic wall rather than gallbladder wall. Even retrospectively I cannot understand how this injury happened. I suspect that the thin, pale gallbladder wall looked very similar to the adjacent colonic wall and that inadvertently extended my dissection onto the colon. I may have become confused by the floppy nature of the opened gallbladder.[14]
>
> **Subsequent Actions**
>
> I have done a lot of soul-searching since this terrible event. I tried to see the family to apologise but they were understandably distraught and informed the senior surgeon at Rotorua that they did not wish to see me.[15] I will always be haunted by what happened and will be extra vigilant to try and ensure nothing similar happens again.
>
> Clearly, with the benefit of hindsight, I wish I had converted this patient to open cholecystectomy which may have prevented the tragedy. I think that my threshold for conversion from laparoscopic to open cholecystectomy has been appropriate (5% which is within the generally accepted rate of 2–10% …). Following this

[14] Mrs A commented that this statement was "a bit hard to swallow" given that Dr C had performed over 1,000 operations of this nature.

[15] Mrs A considers this "totally untrue as [her] family asked to see [Dr C] several times but were told that he was unavailable/out of town". According to Mrs A, her family was informed of Dr C's unavailability throughout Mr B's admission. In fact Dr C worked at Rotorua Hospital on the day Mr B died. He was not rostered to work on the Monday following the operation, and worked at another hospital on Tuesday.

> disaster I will convert some more of the difficult procedures rather than pressing on laparoscopically.
>
> …
>
> After [Mr B's] death I discussed the tragedy fully with my supervisor at Rotorua Hospital ([Dr E]). I was grateful that no restrictions were placed on my surgical practice during my remaining weeks at Rotorua. As soon as I returned to [Hospital 2] to start my second locum here on 3 December 2007 I discussed what had happened with my [surgical supervisor] here and the [administrative head of surgical services]. They also allowed me to continue with my full surgical practice including laparoscopic cholecystectomies.
>
> I have taken the opportunity to perform a retrospective audit of all the cholecystectomies I have performed in [Hospital 2] since I arrived in June 2007. … The results were presented at the monthly audit meeting of the department of surgery on 25 January. The consensus from my colleagues was that the outcome of my patients was within expected limits."

Following a review of the information provided, the Medical Council advised Dr C on 13 February 2008 that he was not required to undergo a performance assessment. The reasons cited by the Council for its decision were:

- Dr C was an experienced surgeon with complication rates well within accepted parameters and conversion rate from closed to open cholecystectomy also comfortably within accepted levels.
- Dr C had openly accepted [his] error and taken responsibility.
- Dr C had indicated an understanding of alternative decisions that may have avoided the error and made changes to [his] practice to ensure that it does not happen again.
- The Council was satisfied that this was a one-off incident with little likelihood of reoccurrence, due to [Dr C's] insight into the matter.

Dr C was asked to provide the Medical Council with confirmation of his continuing professional development (CPD).[16] On 10 March 2008, the Council advised that it was satisfied with Dr C's CPD activities, and confirmed that it was taking no further action.

Actions taken by Lakes DHB and medical staff

The DHB has taken various remedial measures to prevent a similar case. Following the events in question, Lakes DHB advised that in February 2008, an Early Warning

[16] Continuing Professional Development (CPD) is a doctor's involvement in peer review, clinical audit, and continuing medical education aimed at ensuring that the doctor is competent to practise medicine.

To have an annual practising certificate (APC) issued each year, a doctor must participate in appropriate CPD.

System (EWS) observation chart was introduced throughout the Board's inpatient areas, to improve the detection of and response to deteriorating patients.[17] Clinical staff have been trained in managing deteriorating patients and the use of the EWS. Staff practice has been monitored and compliance with the EWS reviewed. To date, Lakes DHB has completed its first audit of the EWS, and a second routine audit is scheduled for March 2009.

The various junior doctors who attended to Mr B have apologised for the shortcomings in their care and reviewed their practice in light of this case.

House officer Dr G stated:

> "I wish to offer my sincere apologies to [Mr B's] family for any contribution the failure to document my involvement in the clinical notes had. While it can in no way ease their loss, I have reflected in great depth on my practice and the importance of written notes as well as verbal advice in providing co-ordinated clinical care when many practitioners are involved. I therefore ensure that my assessments, observations and other relevant clinical information [are] documented in the patients' records.
>
> Since this event I have taken the opportunity to discuss my involvement in the case with several of my senior colleagues, including [Dr E]. This has reiterated the importance of medical documentation and my responsibility in keeping these records.
>
> I have also taken on board the advice of the HDC's independent expert Dr Elliott, that I should have documented the fact that I requested more senior assistance, and the care that I provided. I have subsequently adopted a policy of writing in the medical notes all conversations I have with colleagues/staff regarding patients, and of documenting any interactions I have with patients themselves or their care.
>
> I feel the feedback I have received around this case has been beneficial to my future practice and documentation, and the changes I have since adopted."

House officer Dr H commented:

> "This case had a huge impact on me and after the event caused me to reflect on my practice and seek advice from senior doctors on their practices. I again reviewed my practice and sought senior advice after reading the above mentioned report and have thought a great deal about the care I provided to [Mr B] in [2007]. I have reviewed my practice as detailed below and taken measures to ensure that I would provide a better quality of care if a similar situation were to arise.

[17] See **Appendix 1.**

> It is common when working after hours as a junior doctor to have multiple tasks to do at any one time. It is also necessary to prioritise time so that patients with the greatest need are seen first.
>
> As a result, I have resolved that if my other duties prevent me from being able to perform a full review of any unwell patient when initially notified, that I should — when possible in light of other patient needs — conduct a brief initial assessment (and intervention if appropriate) and return later for a full review.
>
> This means that I would have an opportunity to 'lay eyes' on the patient, review their notes rather than just rely on what I am told, and determine whether they are unwell but stable, or critical and deteriorating, requiring immediate involvement of senior colleagues.
>
> If a situation arises where I am unable to review a patient within the required time frame, my strategy is to notify the registrar, and if they are unable to assist, to notify the consultant.
>
> Over the year since the time I was involved in [Mr B's] care, I have increased my clinical knowledge through work experience as well as attending several courses. This experience and education further helps me to prioritise my work and respond appropriately to situations as they develop. One more year's clinical experience has inevitably resulted in my having more skills and knowledge to offer patients.
>
> …
>
> I deeply regret that I did not give [Mr B] priority over the other patients who I was looking after and review [Mr B] earlier on the night that he was unwell. I believe the changes and learning described above have made a positive impact on my practice and will prevent any similar tragedies in the future."

Surgical registrar Dr F stated:

> "This case has had a significant impact on me and my practice. I have discussed this case with appropriate senior staff, colleagues and mentors.
>
> I have reviewed my practice when it comes to caring for critically unwell patients. Firstly I have undertaken to review these patients regularly and in person, even when I am extremely busy. If I am unable to, due to workload, I will speak to somebody else who can review the patient for me in order to institute early intervention. From this experience I am now far less reassured by consultant discussion by telephone. I am more assertive in these situations [and] insist on consultants and other services personally reviewing patients swiftly. I now feel more strongly that re-operation in situations similar to this should be sought urgently.

> I intend to sit the Care of the Critically Ill Surgical Patient course again. This is a course all surgical trainees sit and I did in 2006. I believe I can appreciate this teaching in a new light in 2009.
>
> Please convey my sincerest regrets to the family of [Mr B]. I wish that my actions that day had allowed [Mr B] to survive."

Responses to provisional opinion

Mrs A

Mrs A described the impact of her brother's death of her family:

> "The loss of [Mr B] has been indescribably devastating to his immediate family. The circumstances surrounding his death are shocking and unjustifiable from a medical consumer perspective. For the family (including his 17 year old son who stayed at the hospital by his side for the duration) to have to sit and agonisingly watch [Mr B] transform before their eyes from a relatively healthy individual into a comatose mass of bruised and broken down flesh due to medical incompetence cannot be contemplated by words. The added impact of his death on our 71-year-old mother has been heart wrenching — not only losing one of her sons and constant companion ([Mr B] lived with her) but losing her health dramatically as a result of the associated anguish and grief."

Dr C

Dr C clarified several matters in his response to the provisional opinion. In relation to the events following Mr B's operation, Dr C stated:

> "The report appears to suggest that I failed to provide continuity of care for my patients in view of the limited number of sessions I was being paid for. Throughout my career I have never been a 'clock-watcher' and I have always come in [to] see patients who deteriorate even after hours and when I am not on call. The exception to this is when I am physically a long way from the hospital. Soon after [Mr B's] surgery I left for a long weekend in the Bay of Islands having done a ward-round of all my patients. I did not anticipate any problems. My registrar was on call and was asked to phone me if any problems did arise. By the time I received the first phone call[18] I was already north of Whangarei. By the time the second call was made[19] and the severity of the problem was made clear to me, I was in the Bay of Islands so I asked that the on-call consultant be called in to assess the situation."

[18] Dr F's first telephone call was some time after 5pm following his initial review of Mr B.

[19] Dr F's second telephone call occurred some time after 9pm.

Dr C also stated:

> "… I remain devastated by [Mr B's] death and I am fully aware of the serious surgical error I made leading to the death.
>
> I [am] very willing to supply a letter of apology[20] to be sent through you to the family. As you know, I tried to see the family face to face to apologise in Rotorua Hospital but they were, understandably, too distraught to see me at that time. …
>
> I confirm that I have reviewed my practice in the light of [Mr B's] death and that review was presented in the submission I made to [HDC] which was identical to the submission I had made to the New Zealand Medical Council earlier in the year."

In his apology to the family, Dr C described the impact Mr B's case has had on him:

> "… The mistake I made whilst operating on that fateful day last [year] was by far the worst of my career. I have been haunted by it ever since and will continue to be haunted by it. I have performed that operation more than 1,400 times and [Mr B] was only the second of my patients to die after surgery — the other death being from a heart attack. The fact that [Mr B's] death was a direct result of my error in judgement is hard to bear.
>
> … [T]he error I made on that day has seriously impacted on my career. I have not been able to find more work in New Zealand as a direct result of this mistake and I have therefore had to leave New Zealand where I had planned to settle.
>
> I know that my anguish is small in comparison to the anguish that you have had as a family. My thoughts have often been with you. I hope you find peace in your hearts and some forgiveness for me."

Lakes DHB

Lakes DHB accepts that it breached the Code of Health and Disability Services Consumers' Rights in failing to provide an appropriate standard of postoperative care, and has apologised in writing to Mr B's family.

In relation to the EWS observation chart introduced in February 2008, Lakes DHB stated:

> "We wish to advise that the organisation has the Early Warning System on our routine clinical audit schedule to monitor compliance. The first of these has been completed and showed that compliance with the completion of the tool

[20] A written apology was sent to the family (through HDC) following Dr C's response to the provisional report.

> needs improvement. As we have had an extensive education programme surrounding the introduction of this tool we have now set a pilot site for having 'nurse ambassadors' to check, coach and mentor the nursing staff to the importance and usefulness of the tool. The Resuscitation Coordinator and Head of the Anaesthetic Department will be working with doctors on the moderation process. This audit will remain on our schedule for the foreseeable future."

Lakes DHB also outlined various initiatives to improve compliance by staff with the EWS:

- issuing a memo to all clinical staff outlining the expectations of the Medical Advisor and Director of Nursing and Midwifery;[21]
- increasing the education of newly appointed doctors during their orientation;
- asking Clinical Nurse Directors and Clinical Nurse Managers to monitor and observe the practice of clinical staff, and to manage individual staff performance;
- scheduling another routine audit for March 2009;
- reviewing the options for education programmes regarding the deteriorating patient. Lakes DHB intends to run this programme in 2009.

[21] A copy of the memo was provided to HDC.

Code of Health and Disability Services Consumers' Rights

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

RIGHT 4
Right to Services of an Appropriate Standard

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

…

(5) Every consumer has the right to co-operation among providers to ensure quality and continuity of services.

Opinion: Breach — Dr C

Appropriateness of laparoscopic procedure
Locum general surgeon Dr C first met Mr B on the morning of his operation. He had initially been assessed by another experienced surgeon, Dr D, as a suitable candidate for a laparoscopic cholecystectomy. Having personally assessed Mr B, Dr C explained that there was a possibility that he would have to progress to an open procedure because of potential complications, and Mr B consented to this in writing.

My independent surgical expert, Dr Tom Elliott, advised that "it was reasonable and appropriate to commence the operation as a laparoscopic cholecystectomy". In this respect, Dr C did not breach the Code.

Standard of surgery
Dr C accepts that he made a serious technical error during the surgery, removing a section of the colon wall rather than the gall bladder. Dr Elliott described this as "an exceptionally rare complication" that "can only be attributed to major flaws in perception, judgement and/or technique". Dr C's perioperative error in confusing the colon with the gall bladder caused Mr B to develop postoperative complications that proved fatal.

Dr C speculated that he "may have been confused by the floppy nature of the opened gallbladder". This is notwithstanding that Dr C had performed over 1,400 laparoscopic cholecystectomies. According to him, Mr B's case involved a "more complex procedure".

Dr Elliott considered Dr C's error to be a "severe departure from the normally accepted standard of intra-operative care for a patient having laparoscopic cholecystectomy". This matches the view of Lakes DHB which, following a review of

the incident, took the unusual (and on the facts entirely proper) step of referring Dr C to the Medical Council, since "this complication [which occurred during Mr B's procedure] sits significantly 'outside' the expected or anticipatable".

Postoperative absence

Dr C knew that Mr B's operation had not been straightforward, with more bleeding than usual. Dr C had noted "multiple adhesions" from previous surgery (with the duodenum adhered to the gall bladder), and that the gall bladder was "thin-walled". These features of the surgery should have alerted Dr C to the possibility of postoperative complications. Instead, he was confident that the operation had gone well, and soon after his operating session and a ward round, Dr C left Rotorua Hospital for a long weekend in the Bay of Islands. Dr C's confidence was misplaced.

Soon after 5pm on the evening after surgery, surgical registrar Dr F telephoned Dr C to notify him of concerns about Mr B's condition. Mr B was exhibiting signs of severe and worsening sepsis, although it is not clear that this was recognised by Dr F or communicated to Dr C. By this stage, Dr C was well out of Rotorua, and was not in a position to return to hospital to review Mr B personally. Dr C advised Dr F to continue with the antibiotics, review Mr B later, and to contact him again if there was any deterioration.

By 9pm, Mr B was severely hypotensive, and Dr F again telephoned Dr C (by now in the Bay of Islands). Dr C was very concerned and asked Dr F to request the on-call surgeon to assess the patient. This occurred promptly and Mr B was transferred to ICU.

There was no impropriety in Dr C being absent on the Friday afternoon following Mr B's operation and over the weekend. He was off duty and there was no expectation by clinical staff that he should be available to attend Mr B. Dr C remained contactable, and appropriately directed Dr F to contact the on-call surgeon, Dr E, for assistance, as occurred on two occasions. I conclude that Dr C did not breach the Code by his postoperative absence.

Summary

Dr C is an experienced laparoscopic surgeon with an impressive CV. He has expressed great remorse and apologised for his error in this case. He has undertaken a full retrospective audit of his cholecystectomies at a second hospital from June to September 2007. These actions were sufficient for Dr C to maintain the confidence of his surgical supervisors, at both hospitals, and to convince the Medical Council that Mr B's case was "a one-off incident with little likelihood of recurrence due to [Dr C's] insight into the matter". This should not disguise the fact that Dr C's error was an egregious one that cost Mr B his life.

I endorse Dr Elliot's view that Dr C's error was a "serious technical error" that amounted to a "severe departure from the normally accepted standard of intra-operative care" for a laparoscopic cholecystectomy patient.

I conclude that Dr C breached Right 4(1) of the Code.

Opinion: Breach — Lakes District Health Board

I have concerns about the standard of postoperative care provided by clinical staff at Rotorua Hospital on the afternoon and evening after Mr B's operation. I concur with my expert, who advised that "there were missed opportunities to recognise the seriousness of Mr B's complications and to intervene appropriately".

While some of the clues to a deteriorating postoperative condition may individually have appeared to be unimportant, when viewed cumulatively they indicated that Mr B's condition was worsening, and should have been recognised and acted on. The need to detect and respond appropriately to the deteriorating patient has been highlighted in previous HDC decisions,[22] and is recognised as a key area for improving safety for hospital patients.[23]

Mr B spent three hours in PACU, longer than the usual one-hour recovery, and was in considerable pain, with his wound draining more than normally expected. After transfer to the ward, Mr B continued to experience significant pain, his wound drained excessively, and his clinical observations were abnormal. The nursing staff were concerned enough to ask for a medical review. House officer Dr G reviewed Mr B, and then contacted registrar Dr F, who also reviewed him.

At the time of Dr F's review, around 5pm, Mr B had a raised temperature, he was breathing fast, there were abnormal blood test results, and 450ml of dark brown fluid had drained from his wound. Mr B was showing signs of severe and worsening sepsis. As noted above, Dr F contacted Dr C and was advised to continue with the antibiotics, review Mr B later, and to contact him again if there was any further deterioration. Dr F also sought input from the medical registrar and the on-call surgeon.

The nurse caring for Mr B, RN Ms K, remained concerned about Mr B, and he was moved closer to the nurses' station so that he could be observed more closely. RN Ms K contacted the medical staff again at about 6pm, concerned at Mr B's condition, but owing to various competing demands in the Emergency Department and orthopaedic ward, house officer Dr H decided to review Mr B once he had finished his other duties.

RN Ms K said that at 8pm she showed the observation charts to Dr H (who was in the ward office), but he did not attend Mr B until 9pm. By this time, Mr B's condition had worsened dramatically as evidenced by his decreasing blood pressure over the

[22] See Wellington Hospital case 05HDC11908, 22 March 2007 (available from www.hdc.org.nz).

[23] Safety of Patients in NZ Hospitals: A Progress Report, Dr Mary Seddon, 6 October 2007 (available from www.hdc.org.nz).

previous two hours. According to Dr H, nursing staff did not inform him of this although he was told of the most recent blood pressure reading of 68/42mmHg. Dr H contacted Dr F who, in turn, contacted Dr C. As Dr C was not in a position to review Mr B personally, he recommended that the on-call consultant be contacted. Dr E arranged for Mr B to be transferred to the intensive care unit before being taken to theatre, where Dr E performed an open laparotomy and repaired the perforation.

Summary

Mr B's deteriorating condition in the postoperative period should have been recognised and acted on. It is possible that staff were distracted from the true picture by the suggestion that Mr B's symptoms could have been caused by alcohol withdrawal, or by Dr C's initial response (continue IV antibiotics and review later) when first contacted at 5pm, six hours after the operation. Drs F and H also claimed that they were not informed of Mr B's full clinical picture by the nursing staff, and this (along with being very busy) affected their decisions regarding Mr B's care.

There is some evidence that the nursing staff responded to Mr B's worsening condition (eg, by informing the medical staff of their concerns, performing regular clinical observations, and moving Mr B nearer the nurses' station). Nonetheless, Mr B's deterioration continued throughout the afternoon and evening until 9pm — seemingly observed by nursing staff but unchecked by any significant intervention from medical staff.

My expert described the DHB's failure as "a severe departure from the normally accepted standard". Dr Elliott singled out Drs H and F for their failure to respond to Mr B's deteriorating condition. It is clear that the clinical team failed to respond appropriately to Mr B's worsening postoperative condition. Lakes DHB is responsible for this failure. In these circumstances, Lakes DHB breached Rights 4(1) and 4(5) of the Code.

Referral to Director of Proceedings

As discussed above, Dr C made a "serious technical error" during surgery which cost Mr B his life. Although it was an isolated event, it was nevertheless a severe departure from the normally accepted standard of intra-operative care for a patient having laparoscopic cholecystectomy. In my view, disciplinary proceedings in such cases are a necessary form of accountability to maintain professional standards.[24]

I consider that the public interest requires that Dr C be referred to the Director of Proceedings in accordance with section 45(2) of the Health and Disability Commissioner Act 1994 for the purpose of deciding whether any proceedings should be taken.

I have also considered whether the public interest requires that Lakes DHB be referred to the Director of Proceedings. As noted in my Wellington Hospital report, "Public identification in a Commissioner's Opinion that criticises a district health board's systems and finds it in breach of the Code will in most cases suffice as a means of accountability."[25] Taking account of the remedial steps undertaken by Lakes DHB in light of Mr B's case, I have concluded that no further action is required in relation to the DHB.

Other comment

Dr C's UK registration
Dr C is no longer working as a medical practitioner in New Zealand. He remains registered as a medical practitioner in the United Kingdom. I intend to send a copy of this report to the General Medical Council of the United Kingdom, since I consider it important that the registration body in his home country be made aware of this significant adverse finding.

[24] I note that the Health Practitioners Disciplinary Tribunal has previously found a general surgeon guilty of professional misconduct for failing to undertake a laparoscopic appendectomy with reasonable care and skill, resulting in damage to the patient's inferior vena cava and psoas muscle (see HPDT decision no Med04/01D, available at www.hpdt.org.nz).

[25] See page 108 of Wellington Hospital case 05HDC11908, 22 March 2007.

Recommendations

I recommend that Lakes DHB:

- update HDC following its next routine audit of the Early Warning System. The results of the March 2009 audit are to be forwarded to HDC by **30 April 2009**
- update HDC on its initiatives to educate clinical staff on the Early Warning System and managing deteriorating patients by **30 April 2009**
- audit the standard of nursing and junior medical staff documentation, and report the results to HDC by **30 April 2009**
- review its employment arrangements for locum surgeons in light of Dr Elliott's advice, and confirm to HDC that it has done so, by **30 April 2009**.

Follow-up actions

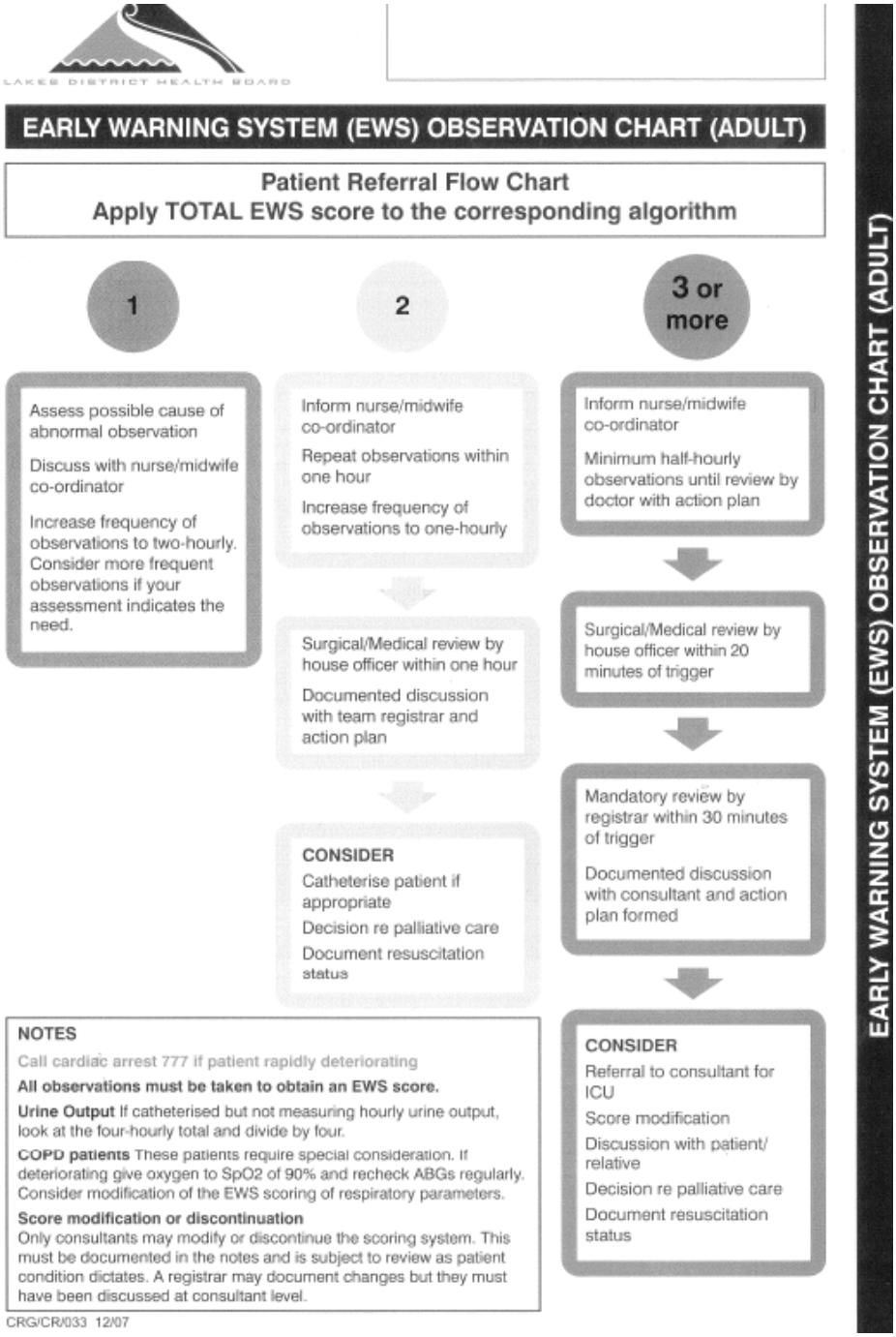
- A copy of this report will be sent to the Medical Council of New Zealand, the General Medical Council of the United Kingdom, and the Rotorua Coroner.
- Dr C will be referred to the Director of Proceedings in accordance with section 45(2)(f) of the Health and Disability Commissioner Act 1994 for the purpose of deciding whether any proceedings should be taken.
- A copy of this report with details identifying the parties removed, except the names of the expert who advised on this case, Rotorua Hospital, and Lakes DHB, will be sent to the Royal Australasian College of Surgeons and the Quality Improvement Committee, and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Addendum

Dr C was referred to the Director of Proceedings. The Director considered the matter and decided not to issue proceedings before the Health Practitioners Disciplinary Tribunal.

Appendix 1

Early Warning System observation chart flow chart



Names have been removed (except Lakes DHB/Rotorua Hospital) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Appendix 2 — Independent expert advice by consultant surgeon Tom Elliott

"I have been asked to provide an opinion to the Commissioner on Case No. 08/03361. I have read and agree to follow the Commissioner's Guidelines for Independent Advisors.

I am a Consultant General Surgeon with an interest in upper gastro-intestinal tract surgery. I graduated M.B. Ch.B (Otago) 1984, and F.R.A.C.S. 1991.

My referral instructions are as follows:

'To advise the Commissioner, whether, in your professional opinion, the care provided to [Mr B] in [2007] by [Dr C] and Lakes DHB was of an appropriate standard.'

The supporting information is as follows:

- Complaint dated 28 February 2008, marked A (Pages 1–5).
- Notes of telephone discussion between [Mrs A] and the investigator on 19 March 2008 marked 'B' (Page 6).
- HDC notification letters of 26 March 2008 to [Dr C] marked 'C' (Pages 7–9).
- Information from [Dr C] marked 'D' (Pages 10–23).
- HDC notification letters of 26 March 2008 to Lakes DHB, marked 'E' (Pages 24–26).
- Information from Lakes DHB including statements from clinical staff involved in [Mr B's] care, and [Mr B's] post-mortem report marked 'F' (Pages 27–72).
- [Mr B's] clinical records from Lakes DHB for [the day of the operation] marked 'G' (Pages 73–118).

with additional reports from [Dr F], Surgical Registrar, Lakes District Health Board, (pages 119 and 120) and from [Dr G], House Surgeon, Lakes District Health Board (page 121).

The factual summary provided by the Health and Disability Commissioner is accurate.

My opinions on the specific questions posed by the Commissioner follow.

1. Comment generally on the standard of care that was provided to [Mr B] by:

(a) [Dr C]

(b) Lakes District Health Board

(a) [Dr C]

As far as I can determine from review of the material provided, [Dr C] was employed by the Lakes District Health Board as a Locum Surgeon on a casual contract.

It is clear that he was not employed on the basis that he would be available for continuous care of patients in the pre-, intra- and post-operative period. [Dr C] states in his letter of 29 November (page 0035) that [Mr B] *'was allocated to my general surgical list on [that] morning'*. His first contact with [Mr B] was on the morning of surgery at about 8 o'clock in the morning.

The morning operation list was performed and then [Dr C] states that *'I saw [Mr B] before I left the hospital at mid-day [after the operation]'* and that he was *'not on duty over the weekend period'*.

[Dr C] left the Rotorua district over the weekend.

[The] Quality and Risk Manager, states in her letter of 2 May (page 0028) that

'initially it was intended that [Dr C] would be back at work on Monday following but he was, in fact, rostered off until Tuesday, and then on that day was rostered to work at [another] Hospital. He was available on Wednesday and wished to meet the family; however, [Dr C] was available to speak with the family only after [Mr B] had unfortunately deteriorated to the point that it was deemed that [Mr B's] prognosis was extremely poor and that removal of life support was to be considered. A meeting with [Dr C] was discussed with the whanau but it was generally felt that it was not a good time for them, so it was not pursued.'

From the above it is clear that [Dr C's] involvement with the patient was limited essentially to the operative procedure and the immediate post-operative period.

Thus, comments relating to [Dr C's] standard of care must be limited to the perioperative period.

The critical event in [Mr B's] catastrophic deterioration in the early post-operative period and later death after attempted salvage surgery, relates to the serious technical error which occurred during the laparoscopic cholecystectomy performed by [Dr C]. The nature of this technical complication will be expanded below.

Elective laparoscopic cholecystectomy is generally a straight-forward operation with a predictable outcome. However, serious complications of this surgery have been observed in case series around the world. Most serious complications relate to some form of injury or occlusion to the biliary system. Visceral injury, either through initial placement of the laparoscopic port or

during laparoscopic dissection or grasping, is also a reported complication. However, it is clear in this case that the surgeon became significantly confused as to which organ he was operating on and he not only incised the transverse colon but went on to remove a part of it in the mistaken belief that this was the gallbladder. This is an exceptionally rare complication and can only be attributed to major flaws in perception, judgement and/or technique. [Dr C] states (page 00015):

'Even retrospectively, I cannot understand how this injury happened. I suspect that the thin, pale gallbladder wall looked very similar to the adjacent colonic wall and that I inadvertently extended my dissection onto the colon. I may have become confused by the floppy nature of the open gallbladder'.

It is reasonable to assume that a careful and unhurried approach to the gallbladder and the surrounding viscera through an open laparotomy incision may have prevented this complication.

Additionally, [Dr E] noted at the emergency laparotomy late in the evening [following the operation], that there was also bile present in the peritoneal cavity and that the cystic duct stump was not closed (page 00037). [Dr C's] operation note from earlier in the day states that Hartmann's pouch had been closed with an Endoloop (page 00079). Clearly this was not a secure closure of the cystic duct.

It had been anticipated that there may be adhesions as a result of previous surgery (perforated peptic ulcer) and longstanding chronic pancreatitis. The possibility of conversion to open surgery was discussed with the patient. However, [Dr C] states that although dense adhesions were encountered in the upper abdomen, he was able to find *'a window through these adhesions to the gallbladder area'*. He believed that he *'had safe laparoscopic access to proceed to cholecystectomy'*.

[Dr F], Surgical Registrar who was assisting [Dr C], states that the operation *'was difficult surgery with adhesions and bleeding'*. From [Dr C's] description, the gallbladder was torn early in the procedure which gave rise to inevitable spill of bile into the operative field. [Dr F] also states that:

'there was bleeding that at times obscured the operative field. It was heavier than would be tolerated by many other surgeons I have worked for. [Dr C] often worked without worrying too much about haemostasis but this operation was bloody, even in comparison with the other operations I assisted him with'.

Review of the operative record reveals that the operation took less than one hour. This is relatively speedy surgery for a difficult cholecystectomy. In my view, [Dr C] made a perceptive error in that he confused the colon with the gallbladder. This error was brought about by operating in a laparoscopic field obscured by bile and bleeding. Adhesions restricted the operative view further. Thus, I believe there was an also an error of judgement in that [Dr C]

determined that despite the poor view, bile contamination and bleeding, he was still able to perform a safe laparoscopic cholecystectomy.

(b) Lakes District Health Board

In my opinion, it is not good practice for a surgeon to meet the patient on whom he is operating on the morning of surgery, perform the surgery, and then leave the hospital (and the district) the same afternoon. It would seem that this fragmentation of surgical care resulted from [Dr C's] terms of employment and contract with the Lakes District Health Board. A surgeon who is being asked to operate on patients initially assessed by another surgeon ([Dr D] in this case) should have the opportunity to meet with the patient and his/her family, and also to assess the indication for surgery himself and thus make a decision as to whether the surgery is appropriate in his mind. It would seem [Dr C] first met the patient on the morning of surgery when there was an assumed expectation that the surgery would proceed. It would be difficult in these rushed circumstances to make an assessment of the patient and decide whether in one's own view the surgery should, or should not, take place. Similarly, a locum surgeon who is employed to perform an operation list should also be employed for at least 24 hours after the operation in order to be available for post-operative assessment and care of the patient. Thus, the Lakes District Health Board may need to review the employment contracts it provides for locum surgeons operating at Lakes District Health Board such that these contracts allow and pay for time to assess the patient ideally a week or so pre-operatively and also to be available for the patient's post-operative care.[26]

Other comments on the standard of care provided by the Lakes District Health Board follow below.

2. Comment on the appropriateness of the decision to perform [Mr B's] cholecystectomy laparoscopically.

It was appropriate to commence [Mr B's] cholecystectomy using the laparoscopic approach. [Mr B] had a past history of perforated ulcer requiring operation and also a history of chronic pancreatitis, presumably from alcohol.

[Dr C] was aware that these previous conditions could be associated with significant intraperitoneal adhesions and thus there was a greater than usual chance that the operation might be converted from laparoscopic to open surgery. This possibility was discussed with the patient on the morning of [the operation] when [Dr C] first met [Mr B] (page 0035). Thus, it was reasonable and appropriate to commence the operation as a laparoscopic cholecystectomy.

[26] Commissioner's note: Lakes DHB subsequently clarified Dr C's contractual arrangement, which is set out in the report.

3. Comment on the appropriateness of [Dr C's] decision during the operation to continue to use a laparoscopic approach given the complications he experienced.

This question has been addressed in 1(a) above.

Clearly, [Dr C] felt that despite the difficulties he encountered during the operation *'that the gallbladder removal had been messy but that I had achieved a safe operation'* (page 0015). [Dr C] then states that *'clearly, with the benefit of hindsight, I wish I had converted this patient to open cholecystectomy which may have prevented the tragedy'*.

It is hard to escape the conclusion that this complication occurred as a result of persisting with a laparoscopic approach where the field of view was limited by adhesions, bile and blood.

4. Comment on the management of [Mr B's] post-operative care on [Friday] including:

(a) Whether [Mr B] was adequately monitored by nursing and medical staff.

The degree of monitoring was adequate.

(b) Whether clinical staff responded in a timely manner to the deterioration in [Mr B's] condition.

In my review of the material provided I am forced to conclude that there were missed opportunities to recognise the severity of [Mr B's] complications and to intervene appropriately.

Staff Nurse [Ms K] cared for [Mr B] on the afternoon shift following his surgery in the morning. She was made aware at the nursing handover at 1430 that [Mr B] was experiencing more pain than usually expected after laparoscopic cholecystectomy, and that he had shallow respirations. During the afternoon routine observations showed that he was developing a progressive tachycardia (133 at 1600); tachypnoea (40 breaths per minute at 1700); and a fever (39.3° at 1700). His drain bottle had drained 450mls since theatre. Staff Nurse [Ms K] appropriately alerted the afternoon House Surgeon, [Dr G], who assessed the patient at approximately 1605 and later phoned the Surgical Registrar at 1620 with her concerns regarding the patient. Her concerns principally at this time were with his ongoing pain and the blood loss in the drain bottle. [Dr G's] comments (page 00121) were that she was concerned regarding blood loss.

The Registrar, [Dr F], who had assisted [Dr C] during the surgery, states that he attended [Mr B] in response to [Dr G's] request at approximately 5 o'clock, after he left the Operating Theatre. [Dr F's] assessment is in the ward medical notes (page 0085, 0086 and in his response to the Commissioner page 00033

and 00034). [Dr F's] assessment, therefore, took place approximately six hours after the operation had concluded.

It was evident at this time that [Mr B's] post-operative course was well outside the parameters usually associated with an elective laparoscopic cholecystectomy. In particular, he was febrile (39.3°) and he had a raised respiratory rate (40 beats per minute). A full blood count taken earlier in the afternoon by [Dr G] was at hand and this showed that the haemoglobin was satisfactory at 122 but there was a significant leucopenia (white blood cell count 2.2) and neutropenia. [Dr F] reports that there was 450mls of dark brown fluid in the drain. He does not make it clear whether he thought this fluid was altered blood, bile or bowel content.

At this time [Mr B] was clearly showing signs of systemic inflammatory response syndrome (SIRS). I believe that more serious consideration could have been given to the fact that [Mr B] was exhibiting signs of severe sepsis at this stage. The clinical signs and the laboratory features were more in keeping with sepsis than hypovolaemic shock. [Dr F] noted the neutropenia and requested an opinion from the Medical Registrar. I believe that the notion expressed by the Medical Registrar that this neutropenia and fever may be secondary to alcohol withdrawal was not germane. The notes record that [Dr F] rang [Dr C] regarding [Mr B]. The record of this discussion is that [Dr C] felt that since 200mls of blood had been in the Redivac in the Recovery Room, a further 250mls blood loss in the subsequent hours was not excessive. It is not clear from the notes whether the full picture was outlined to [Dr C] and if so, what his plan was with regard to severe and worsening sepsis. The notes referred to the decision to 'continue intravenous antibiotics'. Review of the drug chart shows that the prescription for intravenous antibiotics was commenced that afternoon. Indeed it would not be normal practice to prescribe intravenous antibiotics in the post-operative period after a cholecystectomy. Instead, a single dose of prophylactic intravenous antibiotic is normally administered during the operation. [Dr C] did not instruct his staff to administer intravenous antibiotics in the post-operative period according to both the handwritten and typed operation notes. [Dr F] stated that he *'wanted to continue monitoring the blood loss via the drain to repeat haemoglobin at 9 p.m., to continue intravenous antibiotics and to watch for signs of alcohol withdrawal'*.

Review of the notes and observation records showed that [Mr B] deteriorated steadily throughout the afternoon. His tachycardia increased up to 155 at 2100 hours. His blood pressure progressively declined to a low of 68/45 at 2100. The respiratory rate remained high and his fever continued. He continued to complain of pain and to use his PCA. Staff Nurse [Ms K] notes that *'family pressing PCA as patient too sore and needed prompting to press it'*.

The Staff Nurse, a first-year post-graduate nurse, shifted the patient to a side room near to the nursing office so that observations could be carried out more frequently. She discussed his care with the Senior Nurse on duty.

Nurse [Ms K] was concerned that [Mr B] was not improving. She requested a clinical review of [Mr B] by the evening House Surgeon on duty, [Dr H], at some time variously described as 1800 to 1700. [Dr H], having listened to Nurse [Ms K's] description of [Mr B] decided that there had been no significant change and thus he would defer reviewing the patient until he had completed the numerous other tasks which had accumulated.

[Dr H's] description (page 00032) of his workload that evening confirms that he had a number of pressing tasks to attend to simultaneously elsewhere in the hospital. Nurse [Ms K] remained very concerned about her patient's status and at 2000 hours presented the patient's observation chart to [Dr H] and another doctor in the nursing station. His recordings had deteriorated in that his blood pressure had dropped to 115/65; he was still febrile, tachypnoeic and tachycardic.

[Dr H] was able to attend [Mr B] at 2100 which was when he had been asked to take a repeat blood test by the Day House Surgeon and Registrar, [Dr F]. At this stage, [Mr B] was severely hypotensive (blood pressure 68/42). The drainage had increased a further 380 ml since the bottle had been changed, giving a total of 830 ml loss since the operation. However, a repeat blood test showed that the haemoglobin had dropped only to 113, but the profoundly depressed white blood cell count and neutrophil count had worsened.

[Dr F] responded to the request for assistance and, realising the severity of the problem, called [Dr C] to report the situation. [Dr C] was also very concerned but as he was no longer in the Rotorua District, asked that [Dr F] request the on-call surgeon to assess the patient.

[Dr E] attended very quickly and arranged for transfer of the patient to the Intensive Care Unit for a period of optimisation before returning to the operation room.

In my opinion, the Surgical Registrar should have been sufficiently concerned about the patient when he first assessed him post-operatively at 1700 that he personally re-assessed the patient throughout the evening. It is my opinion that at 1700 the assessment should have concluded that there was serious variation from the normal recovery after laparoscopic cholecystectomy and that unless there was significant improvement re-laparotomy would be required. Merely requesting another blood test in 4 hours was not an adequate management plan.

I also believe that [Dr H] should have made more of an effort to review the patient before he did at 2100. Clearly, the nursing staff had alerted him to their concerns, as had the Day Shift House Surgeon and, indeed, [Dr F]. In [Dr H's]

defence it does sound as though he was exceptionally busy that evening and if this was the case then he should have rung more senior staff such as the registrar, [Dr F], or the on-call Consultant, [Dr E], or the Intensive Care staff, and requested assistance.

In summary, it is my opinion that the junior staff caring for [Mr B] in the post-operative period failed to recognise the severity of his postoperative complications early in the afternoon. The Registrar, [Dr F], should have been more proactive and concerned about [Mr B] and personally reviewed him earlier in the evening and [Dr H], who found he was unable to personally assess the patient because of other pressing tasks, should have requested assistance at an earlier stage from more senior colleagues.

5. Please comment on the timing of [Mr B's] second operation [the following day]. Should [Mr B] have returned to theatre earlier?

Once [Dr E] had been alerted to [Mr B's] severe deterioration at 2100 events moved quickly and appropriately. Rapid assessment and resuscitation by the ICU service was appropriate before proceeding back to the operating room. [Mr B] returned to the operating room at 1220 a.m. [the following day].

However, it is my opinion that [Mr B] was sufficiently unwell during the evening [following the operation] that serious thought should have been given to his return to the operating room at an earlier stage. As outlined in the previous section, there was a failure to recognise how unwell [Mr B] was and thus a loss of opportunity to take corrective measures at an earlier stage.

6. Please comment on the standard of documentation by:

(a) [Dr C]

The standard of documentation by [Dr C] was satisfactory. He provided both a written and typed operation note. As he was not involved in subsequent care of [Mr B] the absence of an entry from him in the medical record is not unexpected.

(b) Lakes District Health Board

The standard of documentation from the nursing and junior staff is somewhat deficient.

This assessment is based on review of the ward clinical and nursing notes. Documentation from the Theatre, Recovery Unit and Intensive Care Unit is satisfactory.

The admission notes from the House Surgeon who pre-admitted [Mr B] are confusing. These notes state the background is *'?gallstone pancreatitis three years ago, also alcohol dependence. Now has recurrent pancreatitis'*. This is

given as the primary justification for performing the cholecystectomy. However, other statements in the material provided indicate that the principal justification for surgery was a recent admission with acalculous cholecystitis.

The next entry is the operation note followed by [Dr F's] note regarding his initial assessment which, as far as he can recall, is approximately 1700. As he points out, he did not give a time on this assessment.

The Afternoon House Surgeon, [Dr G], did not write any notes in the clinical record and her account (page 000121) is from her recollections of events. She does state that at 1605 she went to review [Mr B] and was concerned about him at that point. She then reports that she phoned the Surgical Registrar at 1620 and requested that he come and assess the patient. In my opinion her assessment and statement that she had asked for more senior assistance should have been recorded in the notes.

After [Dr F's] entry at approximately 1700, the next entry is from the evening House Surgeon, [Dr H], at 2200 hours. There is no entry from the Registrar at this point.

Staff Nurse [Ms K] has added her afternoon shift notes at 2200. Although these notes are comprehensive, it is my opinion that they should have been written contemporaneously as the events occurred i.e. prospectively rather than retrospectively as is the case here.

Typed operation notes from the two laparotomies performed by [Dr E] would have been usual practice.

Summary

In summarising my responses to Questions 4, 5 and 6, I believe that [Dr C] and the Lakes District Health Board did not provide an appropriate standard of care for this patient.

In [Dr C's] case I regard this as severe departure from the normally accepted standard of intra-operative care for a patient having laparoscopic cholecystectomy.

Similarly, it is my opinion that, the Lakes District Health Board and, in particular, its junior medical staff, [Dr F] and [Dr H], failed to provide an appropriate standard of post-operative care for [Mr B] and that this was a severe departure from the normally accepted standard.

The fragmented nature of [Dr C's] contact with the patient is not satisfactory. The Lakes DHB should evaluate its terms of employment for locum surgeons to ensure that they have adequate paid time allocated to be involved at the pre-admission of surgical cases and similarly, that there is a clear expectation that a locum surgeon will be available to undertake remunerated post-operative care.

7. Are there any aspects of the care provided by [Dr C] and/or Lakes District Hospital that you consider warrant additional comment?

From the material provided it is evident that this case has been reviewed by the Coroner and the Medical Council.

[Dr C's] responses to inquiry from these organisations indicate genuine remorse and critical reflection on his operative practice (pages 00013, 00015).

He has provided a comprehensive summary of his operative experience and from this it would appear that the devastating medical complication in [Mr B's] case is an isolated and, in some ways, inexplicable event.

It is not possible for myself or anyone else to make any statements regarding [Dr C's] technical competence and fitness to practice without painstakingly auditing his work from various sites around the world and interviewing his contemporary colleagues.

There can be little doubt that the fatal course of events which ensued in [Mr B's] case started with a major technical error in the operating room and the magnitude of this error should not be minimised.

However, I do believe that the situation could have been retrieved had there been a more diligent and prompt process of clinical assessment and intervention in the first eight hours or so of his post-operative recovery.

It is commendable that the Lakes DHB has introduced an 'Early Warning System' (EWS) to identify at risk patients (page 00072). This initiative is being progressively adopted by DHBs throughout the country. By using this assessment tool, [Mr B] would have been identified as having a high EWS score. Consequently, a rigorous assessment and monitoring process would have been initiated.

Whilst this type of institution-wide, algorithm based approach is very useful, it is still incumbent upon individual doctors to use their training and acumen to identify a 'sick patient' and to take appropriate action."