Consultant General Surgeon, Dr I

Consultant Colorectal and General Surgeon, Dr K

A Regional Public Hospital

A Report by the

Health and Disability Commissioner

(Case 01HDC07116)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Parties involved

Ms A	Complainant / Consumer's niece
Mrs B	Consumer (deceased)
Dr C	General Surgeon and Liver Specialist
Dr D	Hepatobiliary-Pancreatic / Upper Gastrointestinal Surgeon
Dr E	General Practitioner
Dr F	General Practitioner
Dr G	House Surgeon
Dr H	House Surgeon
Dr I	Provider / Consultant General Surgeon
Mrs J	Consumer's sister
Dr K	Provider / Consultant Colorectal and General Surgeon
Dr L	House Surgeon
Dr M	Provider / Registrar
Dr N	House Surgeon

Complaint

On 26 June 2001 the Commissioner received a complaint from Ms A about the standard of care provided to her late aunt, Mrs B. The complaint was summarised as follows:

- *In January 2000 medical staff at a regional hospital initially misdiagnosed Mrs B as having hydatids*
- *On or about 14 January 2000 Mrs B was inappropriately discharged from hospital when she was still ill.*

An investigation was commenced on 4 September 2001.

Information reviewed

- Relevant medical records
- Information from the parties
- Information from the Accident Compensation Corporation (ACC)
- Report of Dr C, general surgeon (prepared for the Coroner)
- Report of Dr D, hepatobiliary-pancreatic / upper gastrointestinal surgeon (medical advisor to Ms A at Coroner's hearing)
- Transcript of evidence at Coroner's hearing on 24/25 March and 11 August 2003

Names have been removed to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Independent expert advice was obtained from a consultant general surgeon, Dr Ian Stewart, and a consultant colorectal surgeon, Professor Bryan Parry.

Information gathered during investigation

At the time of these events, Mrs B was 76 years of age and lived independently in her hometown.

In mid-December 1999, Mrs B suffered a fall, which resulted in her being unable to move for several hours. A few days following her fall, Mrs B developed a painful lump in her right side near the kidney region. The lump reportedly increased in size and became more painful over the course of the ensuing two weeks.

On 27 December Mrs B attended an after-hours clinic, where she was seen by her general practitioner, Dr E, who was the on-call doctor that evening. Dr E noted that Mrs B had ongoing problems with alternating constipation and diarrhoea and had developed a "lump" or "swelling" on her right "flank area". He arranged for her to have an ultrasound and asked her to follow this up with Dr F, as Dr E was planning to travel overseas for the holidays.

On 31 December an ultrasound was performed. The results were as follows:

> "The superficial lump is caused by a rounded mass that is 6.4 cm. in diameter. The mass is located between the liver and the right lateral abdominal wall and it deeply indents the liver – the impression is that the mass does not derive from the liver, but this remains possible. The mass has a smooth, thin, well-defined outer wall …
>
> The mass is unusual both in its appearance and position. The general appearance fits into the spectrum for hydatid cyst – though this is unlikely, caution is suggested with regard to biopsy."

The same day Mrs B consulted Dr F (as Dr E was by this time away on holiday). Dr F considered the results of the ultrasound and referred Mrs B to Surgical Outpatients at the hospital for surgical assessment of the swelling. Unfortunately the referral did not make reference to Mrs B's fall or to the history of fluctuating diarrhoea and constipation.

First admission to hospital

On 11 January 2000 Mrs B attended the Emergency Department (ED) of the hospital. Dr E advised that, although a referral for investigation was sent to the hospital on 31 December 1999, Mrs B had not at that time been contacted by Surgical Outpatients. The hospital advised me that the hospital received the referral on 5 January 2000. The letter was then forwarded to the surgical department and categorised as non-urgent, which would normally mean that the appointment would take several weeks. In order to obtain more urgent assistance, Mrs B presented directly to the ED.

In the ED Mrs B was initially seen by a triage nurse, who recorded a history of "large lump (R) loin. Now has ↑ pain (R) side, ↓ appetite, tolerating oral fluids, weight loss. Feels cold all the time. Lump slightly discoloured + hot."

Mrs B was then seen by Dr G, house surgeon, who noted the following:

> "… rapidly enlarging lump (R) loin area. First noticed on Boxing Day. Since then ↑ size ↓ appetite ↑ lethargy … large weight loss °[no] fever → feels cold continuously. Not coping [with] lethargy + pain …"

Dr G considered the following differential diagnoses:

> "(1) Ca ? Osteosarcoma
> ? myosarcoma
> (2) ? cystic lesion
> (3) ? haematoma"

Dr G recommended Mrs B be admitted for analgesia/diagnosis as she was "not coping at home".

Mrs B was seen later that day by surgical house surgeon Dr H. Dr H made similar observations:

> "Noticed ↑ growing lump in (R) loin approx 2 weeks ago. Rather painful, feels 'raw' when touched. For past 3 months has noticed ↑ anorexia, weight loss & ↑ lethargy. Has also noticed impaired cold tolerance. Never had a similar lump."

In terms of diagnosis, Dr H recorded the following three possibilities:

> "(1) ? Ca – myosarcoma
> (2) ? Cystic
> (3) ? Abscess"

Dr H then formally admitted Mrs B and referred her for surgical review under the care of Dr I, a consultant general surgeon. Routine blood tests were ordered. The admitting nurse noted the following:

> "Temp: 36 Pulse: 88 Resps: 18 BP: 76/48 SA02: 93%
> … Looks tired … Temp – afebrile [without fever] …"

Once on the ward, she was reviewed again by the house surgeon, Dr G, and a registrar. Blood tests, urine tests and a chest X-ray were ordered and IV antibiotics commenced.

On 12 January Dr I reviewed Mrs B. At the time he was the Head of the Department of Surgery at the hospital. Dr I stated in sworn evidence at the Coroner's hearing that when he examined Mrs B on 12 January:

> "[s]he had discomfort in the right upper quadrant of her abdomen extending out into the flank. It was not particularly tender on examination, the mass was soft, there was no underlying skin redness. There was no fluctuation, the mass moved when she breathed, which would be consistent with it being attached or derived from the liver. My feeling was that this was a malignancy and that it was probably a type of malignancy called a sarcoma."[1]

A very brief note of Dr I's attendance on Mrs B was made by the accompanying house surgeon, Dr H. It records an abdominal CT referral for that day. The referral was signed by Dr H and requested a 'diagnosis'. Three potential diagnoses were suggested:

"1. ? hydatids cyst
2. ? myosarcoma
3. 2° [secondary]"

I note that the request for scan states the reason for CT as "locate lump, suggest diagnosis".[2]

The results of the abdominal CT scan, taken at 1.30pm on 12 January, were reported on 14 January as follows:

> "Pre intravenous contrast CT images show signs of a well defined multiloculated cystic lesion involving the right posterior lower abdominal wall and pressing on the outer margin of the right lobe of the liver with defined capsule. There is a small localised hypodensity within the upper margin of the cyst, possibly loculated gas within the cystic lesion raising the possibility of leak or impending rupture …
>
> Post intravenous contrast axial CT scans show signs of wall enhancement septal enhancement of the cystic lesion with the demonstration of a small cystic component within the margin of the right lobe of the liver in its inferior aspect … raising the possibility of hepatic involvement or origin of the cystic lesion.
>
> The appearance is in keeping with your [Dr I's] clinical suggestion of hydatid cyst which is reaching an immediate subcutaneous level on the right side of the abdomen."

A radiologist confirmed that his role was to report on what he saw, not to suggest diagnoses, which are the domain of the clinician. He confirmed, however, that from the three diagnoses proposed, in his view hydatid cyst was the most likely, though still improbable,[3] that he would "never" have stated categorically that this was a hydatid cyst, and he cannot remember discussing the CT result with any member of Dr I's medical team.

The CT report was not available on the ward until after Mrs B's initial discharge [on 14 January]. Dr I advised that the CT result was conveyed to him by a member of his team,

[1] See Appendix 1 – copy of request for CT scan.
[2] Refer to transcript of Coroner's hearing – p 39, lines 8-18.
[3] Refer to transcript of Coroner's hearing, pp 172, 174, 176 and 177.

though he cannot recall who this was. Unfortunately, the exact nature of that conversation is unclear, as are the parties. However, Dr I clearly formed the view, on the basis of the information conveyed to him, that the CT had confirmed Mrs B's mass as a hydatid cyst.

Dr I advised that he then discussed Mrs B's condition and the CT finding with Dr C, a general surgeon and liver specialist from a public hospital.

Dr I recalled:

> "[Dr C] advised commencing the medication Albendazole and arrangements were made for [Mrs B] to be seen as an outpatient in [the public hospital] for further assessment and management. At this stage the working diagnosis was hydatid disease and there was no clinical evidence of a pyogenic infection. There was no indication for [Mrs B] to remain in an acute surgical ward."

Dr C later confirmed in a report dated 17 September 2001 (prepared for the purposes of the Coroner's hearing) that he "knew nothing of [the] case until requested to review the file recently". In his report Dr C notes:

> "An attempt was made to have the patient reviewed by myself; I was away on summer holidays. My registrar suggested an appointment after my return, and to start the hydatid drug Albendazole."

The issue of consultation with Dr C was clarified at the Coroner's hearing. It is accepted that this consultation took place between Dr I's registrar, and Dr C's registrar at the public hospital. It was on Dr C's registrar's advice that Mrs B was commenced on albendazole, a worm-killing agent for the treatment of hydatids. In his response to my provisional opinion, Dr I commented that "at no stage was [he] aware that the advice [to commence albendazole treatment] had not come from [Dr C], the liver specialist to whom he wished to refer the patient".

On 13 January, Dr H reviewed Mrs B and noted that she was "markedly pale" and "very lethargic today". Further tests were ordered and an H_2-blocker was added to her medication regime.

On 14 January Dr I and Dr H again reviewed Mrs B. Blood was taken for a hydatid complement fixation test. A non-urgent referral was made for Mrs B to see Dr C in the city hospital.[4] (An appointment with Dr C was later scheduled for 17 February; however, Mrs B died before it could take place.)

Dr I advised that it was on the Friday morning (14 January) that the CT result was reported to him by either the registrar or house surgeon who had been to see the radiologist after the scan was performed. It was reported to him that the mass was hydatid. Dr I stated: "There

[4] Refer to transcript of Coroner's hearing, p 41, lines 13-29.

was no differential given, there was no possibility of any other diagnosis given in that verbal report."[5]

The notes for the ward round that day record: "Hydatids cysts suggested by CT. (P) [Plan] Refer to [Dr C], liver surgeon."

Planning for discharge was commenced with referrals being made by the hospital to community services for "personal cares, meals on wheels and home help". It was also arranged for a community specialist nurse to visit Mrs B at home.

Dr I accepts that it was his decision to discharge Mrs B that day. He stated:

> "I did not believe from a clinical point of view she was sick enough to warrant staying in a hospital bed for the time that it took to get her to [the public hospital]. She had not deteriorated from her initial admission to when she went home. We had what we thought was a diagnosis … if the nurses or the junior staff have concerns that someone is not well enough to go home or can't cope they will say so but no such concerns were made to me or, I gather, to the other medical staff."[6]

Mrs B's sister, Mrs J, was present at the hospital on the day of discharge. While there, she expressed concern about her sister's condition and the proposed discharge. She felt that her sister was too ill to return home. In her letter of complaint, Ms A (Mrs B's niece, who was not present during her aunt's illness) described her aunt as "still very unwell, eating and drinking very little and generally very weak". Mrs J expressed her concerns about Mrs B's impending discharge to the Customer Relations Office of the regional hospital, which advised me:

> "The Customer Relations Officer contacted the manager responsible for complaints and an immediate response occurred, the manager meeting with [Mrs J]. The diagnosis of hydatids disease was discussed with [Mrs J] along with suitable analgesic medication and home support systems available on discharge … [Mrs J] appeared satisfied with this discussion and [Mrs B] was discharged home on the afternoon of 14 January 2000."

Deterioration following discharge

After Mrs B's discharge home from hospital she was cared for by her sister, Mrs J. While at home, Mrs B's condition deteriorated.

On 15 January, Mrs B was visited by a community nurse (a registered nurse), who conducted a nursing assessment and assisted Mrs B to wash.

On 16 January the community nurse saw Mrs B again and assisted with her hygiene needs and noted a referral for social work assessment. She noted that the 'lump' had increased in size, and that Mrs B was "not eating" and had diarrhoea.

[5] Refer to transcript of Coroner's hearing, p 40, lines 14-21.
[6] Refer to transcript of Coroner's hearing, p 42, lines 25-33 and p 43, lines 1-8.

On 17 and 18 January a registered nurse visited Mrs B and on 20 January another registered nurse visited. Social work and occupational therapy assessments were also undertaken on 18 January.[7]

On 19 January Mrs B was seen by her general practitioner, Dr E, at her home. Dr E recalled:

> "[Mrs B] was too ill to come to the surgery, mainly because she was suffering from a lot of pain from this mass on her (R) flank. I prescribed analgesics for her and explained that we expected improvement in the next week or so once her anti-helminthic medication had had time to work. I was contacted by telephone 3 days later, on 20/01/00, by [Mrs B's] niece [Ms …] in [the city] who had been in touch with [Mrs B's] sister, [Mrs J] who was staying with [Mrs B] here in [her hometown].
>
> [Mrs B's] niece sounded very concerned that [Mrs B] was not eating at all and was deteriorating in condition and had been passing black bowel motions. I contacted [Dr I], General Surgeon at the hospital, for advice and we decided to admit [Mrs B] the following morning for further investigation of the presumed malaena and management of her pain (which was still a real problem)."

Ms A understood that during the telephone discussion on 20 January, Dr I expressed doubt to Dr E about his original diagnosis of hydatid disease. I have been unable to confirm this with Dr E, as he is no longer resident in New Zealand. However, Dr I subsequently confirmed this discussion and advised that he passed on these observations to Dr I's registrar at the time, in order that a gastroscopy could be arranged, if Mrs B was readmitted.[8]

Second admission to hospital

On Friday 21 January Mrs B was readmitted to the hospital. As Dr I was absent on leave, Mrs B was placed under the care of consultant colorectal and general surgeon Dr K.

The medical records note that an initial assessment of Mrs B was made in the ED by house surgeon Dr L. Dr L noted that CT and ultrasound tests had previously been undertaken, and that there was a suspicion of hydatid cyst. The negative result of the hydatid complement fixation test had been reported by 21 January but it is unclear whether Dr L was aware of it.

In relation to Mrs B's presenting symptoms on this admission, Dr L's recorded impressions were:

> "– Dehydrated, diarrhoea ? cause.
> ? Hydatid cyst – Awaiting liver specialist [in the city]."

Dr L admitted Mrs B to the ward.

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[7] Refer to transcript of Coroner's hearing, p 5, lines 10-28.
[8] Refer to transcript of Coroner's hearing, pp 43-44.

Later that day, Mrs B was seen on the ward by the registrar, Dr M, who noted the following:

> "Mass enormous Rt flank
> + areas of ecchymosis [bruising] over it.
> Impending Rupture."

Dr M's recorded impressions were "?? GE [gastroenteritis]" and/or "Systemic Hydatid disease". He then documented the following plan:

> "(1) Fecal samples
> (2) Abd [abdominal] x-ray
> (3) To contact liver surgeon in [the city]."

At 6.45pm that night, Mrs B was seen by house surgeon Dr G, who recorded in the inpatient notes the results of Mrs B's blood tests, including Hb (haemoglobin) of 111, WCC (white blood cell count) of 14.0, creatinine of 0.13, K+ (potassium) of 2.8 and albumin levels of 23. Dr G's plan was for "K+ [potassium] supplementation → recheck K+ morn [morning]."

Dr K advised me that on admission Mrs B "was stable. There was a concern that there was possibly something else going on but the decision was made at this time to treat her conservatively given the presenting diagnosis." He further commented:

> "Her temperature and pulse were normal. White cell count was raised, but this had been raised at the time of her previous admission and discharge. Through the weekend, I was concerned with the level of pain and discussed with the patient the possibility of bringing her appointment in [the city hospital] forward.
>
> The patient's condition was discussed with review of her CT scan with a colleague on the Sunday morning and there was an agreement to continue with conservative treatment, as her condition was stable."

Unfortunately, there is no record in the clinical notes of these visits, discussions or consultations. However, Dr K has subsequently clarified his involvement, advising that his first contact would have been over the phone with the registrar. This call indicated that the patient was understood to have hydatid disease and was being admitted because of pain and diarrhoea. His first attendance on Mrs B took place the next morning (22 January 2000). At that time the ultrasound and CT reports were available to him. Dr K conceded at the Coroner's hearing that, while hydatids was the working diagnosis, the reports of themselves did not amount to a diagnosis of hydatids. However, he commented that his understanding of Dr C's involvement and the commencement of albendazole were influential in his accepting the hydatids diagnosis at that time. He stated:[9]

[9] Refer to transcript of Coroner's hearing, p 186.

"I was particularly influenced by the fact that the case had been discussed with [Dr C] in [the city hospital], at least I understood it was with him, and she had been commenced on Albendazole, which wouldn't have been done lightly, without some consideration. Reviewing the CT myself, and that is the films, all these factors made me feel that it was reasonable to consider hydatid in this particular case, in spite of my own doubts."

Dr K advised me:

"On review of the notes it was evident that the previous team seriously considered hydatids to be the primary diagnosis. This was supported by three factors:

1. Her case had supposedly been discussed with [Dr C] in [the city hospital], our regional expert on hydatids disease, and arrangements made for her to see him in outpatients.

2. She was already on treatment for hydatids disease, having been on Albendazole since her recent discharge.

3. The diagnosis of hydatids seemed consistent with the CT films in my view.

Given this information in a patient, who was clinically stable, I could not disagree with this diagnosis, at that time.

The diagnosis of an abscess was contemplated and aspiration considered. However for the above reasons plus my understanding that hydatid cysts are not to be aspirated and [Mrs B's] stable clinical condition, without evidence of acute infection, on my assessment it was decided to provide symptomatic relief and to continue to closely monitor. I did enquire at the time as to the availability of both [Dr C] and [Dr I], with the hope that I could discuss her case, but was informed that both were on holiday. Thus, even at this early stage the diagnosis was questioned.

The following day, the 23rd January, I reviewed Mrs B and because of my concerns for her I took the opportunity of discussing her case with [Dr …], one of my surgical colleagues who was present that day. He supported my conclusion that we should not aspirate the potential hydatids cyst, but continue to monitor and relieve her symptoms.

[Mrs B] was again reviewed on the 24th January. Her symptoms did not seem to be settling although her condition remained relatively stable. It was precisely because of our careful assessment on a daily basis that the diagnosis was questioned and arrangement made to discuss her case with my colleagues at our Tuesday morning X-ray meeting.

At this meeting on the 25th January it was decided that aspiration of the lump would be a reasonable procedure to undertake even though there was as yet no clear evidence of an acute infective process occurring. [Dr I] was not present at that meeting and unfortunately I did not know that he was absent for that day."

The nursing progress notes briefly refer to Dr K attending Mrs B on the mornings of Saturday 22 January, Sunday 23 January, and Monday 24 January. The entries of 23 and 24 January note Dr K's instructions that a colostomy bag be placed over the cyst "in case it bursts".

On Sunday 23 January, there is an entry in the medical notes by Dr M. It reads:

> "Well + pale
> Condition stationery
> Diarrhoea improved
> Rigid Sig [sigmoidoscopy] up to 18 cm → NAD
> (P) [Plan] Continue."

The regional hospital has since confirmed that this entry was made retrospectively by Dr M, following a claim being made to ACC by Ms A.

In addition, the regional hospital advised the Coroner that Dr M "acknowledged that he had made the addition to the file, but he is unsure when he did it". The Board noted that it is "not uncommon practice for clinical staff to make notes retrospectively. However, standard practice and [the regional hospital's] policy is to acknowledge the time and date of each entry. Retrospective entries should be clearly identifiable as such. This has been brought to the attention of the doctor concerned."

Dr M advised me:

> "Because of the significant delay between the event and the notification of the complaint, I have no recall of the specific events. It appears that an entry dated 23 January 2003 [2000] is in my writing and has my signature. From the record, it appears that [Mrs B] was seen and examined by myself on the 23 January. If an entry is added in retrospect, I usually add the date of entry as well as a reason for the retrospective entry. It was unintended that I did not document this, and I regret that the reason was not made clear. Although I cannot recall the exact reasons a retrospective entry would have been for completeness, and not to cover up any actions. I never intended to cause distress to the family, and I regret that the retrospective entry contributed to the family's feeling of a lack of trust in the service provided."

On Monday 24 January, Mrs B was seen on the ward round by Dr K and Dr M. The clinical notes record that Mrs B was "unwell" and "pale" with "continued diarrhoea and vomiting". They also note that Mrs B's white blood cell count had increased. In relation to the mass, the records note that there was "pressure necrosis [localised death of tissue] on skin". The plan was to repeat blood tests and to discuss Mrs B's condition with the surgical team. Dr M's record also states:

> "Possible exploration
> D/W [discuss with] [Mr …] + [Dr K]
> Most likely Hydatid disease."

In relation to his review of Mrs B on the ward round, Dr K commented:

> "Her temperature and pulse remained normal and her condition was stable, therefore the decision was made to continue to monitor and watch. There was no indication of significant deterioration."

The inpatient notes for that date, by house surgeon Dr H, record that Mrs B's condition was to be observed and monitored, and that there was to have been a "needle aspiration of [the] cyst later on today". At the Coroner's hearing Dr K explained the change in management as follows:[10] "At that X-ray meeting we had the benefit of my reviewing the patient over a period of three days and really sitting down with my colleagues and saying – well look you know there is real doubt and question about the whole diagnosis … and the fact that this lump was appearing to be more and more superficial rather than deep … and sort of seeing that there was some change over the area."

However, the cyst was not aspirated until 26 January. At the Coroner's hearing the reasons for this delay were explored. It appeared to flow from misunderstanding and miscommunication. Dr K was unaware that Dr I was not to return from holiday until 26 January and believed he "handed over" care to Dr I's team at the early morning meeting of 25 January. Accordingly, at that point, he considered that further investigations and management became the responsibility of Dr I and his team. He stated:[11]

> "I expected at the discussion, [Dr I's] team was present, and as noted in the documents 'patient handed over' and the aspiration suggested, and I expected that team to arrange that, certainly discuss it with [Dr I], as I thought he was around, but get on and do it."

Dr K later confirmed that he was not aware that Dr I was not back, conceding that "if he wasn't around, then it [Mrs B's care] remained my responsibility".[12]

Dr K clarified the process of "hand over/back" of care explaining that generally it is done through registrars communicating either directly to the registrar of the hand-back team or the consultant. He stated that "there are always particular cases where consultant may consult with consultant". He commented that "we probably all ought to know who is 'on deck' at a particular time". He conceded that, as this was a long weekend he made "an assumption" that everybody would be back on deck on the Tuesday.[13]

During the course of the night of 25 January, Mrs B's condition deteriorated significantly. The clinical notes record increased heart rate to 140 beats per minute, shortness of breath, increase in temperature to 38ºC, complaints of chest pain, increased abdominal pain and general discomfort. The blood test results also record an increase in Mrs B's white blood cell count from 16.3 on 25 January, to 33.8 at 1.04am on 26 January. There was a further increase to 51.5 by 8.05am on 26 January. The normal range is 4.0-11.0.

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[10] Refer to transcript of Coroner's hearing, pp 201-202.
[11] Refer to transcript of Coroner's hearing, p 193.
[12] Refer to transcript of Coroner's hearing, p 194.
[13] Refer to transcript of Coroner's hearing, p 207.

At 12.10am on Wednesday 26 January, Mrs B was seen by house surgeon Dr N, who made extensive notes. He recorded that Mrs B's temperature was 38.2°C, her BP 105/60, respiratory rate 22/minute and pulse 140/minute. Dr N also noted that Mrs B's white blood cell count had increased to 33.8. His further impressions were:

"Tachycardia ? Cause
- failure
- becoming septic
- underlying IHD [ischaemic heart disease]
- PE [pulmonary embolus]
- Causing SOB [shortness of breath]."

Dr N then ordered an ECG [electrocardiogram], CBC [blood count], ABG [blood gases], MSU [mid-stream urine], chest X-ray, and the administration of 20mg frusemide IV, and noted that reassessment was necessary. He queried whether antibiotics should be commenced.

At 2.30am, Dr N checked on Mrs B. He recorded that he had discussed the matter with the surgical registrar. Dr N noted that IV fluids and antibiotics (cefuroxime 750mg IV eight hourly) should be given overnight and "review mane" [in the morning].

At 4.30am, Dr N again saw Mrs B, noting that her BP had dropped to "60 systolic", and that there had been minimal response to the diuretic. He also recorded Mrs B's advice of a new onset of pain in the right quadrant, which he noted may have been a bleed into the cyst (which would explain the right lower quadrant pain, and the decrease in blood pressure). His recorded abdominal examination noted:

"BS present [bowel sounds present].
Ø [no] evidence of peritonitis
Ø [no] guarding
Ø [no] rebound."

He noted a request for surgical registrar review.

The next entry in the clinical notes records the review by the surgical registrar, who recommended the following plan:

"– Continue with IV Fluid resus [resuscitation]
– Observe closely
– May need further u/s [ultrasound] today
– ? +/- exploration or aspiration today."

Dr I stated that by 26 January, the "clinical picture had changed". He noted that Mrs B:

> "… had become systemically toxic the previous evening and at this time had an obvious abscess in her right upper quadrant/right loin. A needle was placed into this and pus obtained, the pus sent for microbiology and it contained no scolices and this made it very unlikely that this was an infected hydatid cyst. [The lump was in fact a pyogenic

(pus-producing) abscess.] The patient was therefore anaesthetised and the abscess drained under general anaesthetic. Subsequently she was admitted to the Intensive Care Unit and whilst there, developed considerable problems with the left side of her chest, for which she would normally have required ventilation. However, she declined ventilation, knowing that her chest condition may prove terminal."

Mrs B's condition continued to deteriorate in ICU and she died on 29 January 2000. The medical certificate by Dr I's registrar records the causes of death as follows:

"Lung collapse & respiratory failure
Septicaemia
Hepatic abscess [Note – the Coroner's hearing has established that this is incorrect][14]
Emphysema."

Meeting
Following Mrs B's death, her family raised several concerns with the hospital about her care. On 7 February 2000 Dr I, Dr K, and the Surgical Manager of the regional hospital met with Ms A and Mrs J to discuss their concerns. No resolution was reached. The key concerns are outlined below.

Misdiagnosis – Dr I
The main concern expressed by Ms A is the initial misdiagnosis of Mrs B's condition. In commenting on the misdiagnosis, Dr I advised:

"On examination, there was no clinical evidence whatever that this was likely to be pyogenic in origin, being slightly tender, but a large soft mass with no sign of acute inflammation. Personally I thought this was more likely to be a malignancy … At the time of discharge, there was certainly no clinical evidence of an acute pyogenic illness."

Ms A disputes this. In support of her complaint, she obtained expert advice from a hepatobiliary-pancreatic/upper gastrointestinal surgeon, Dr D.

Dr D notes that there was evidence of infection prior to Mrs B's discharge on 14 January. He states:

"[Drs K and I] do not consider that there were significant pointers to infection. This is not the case. Although Mrs B was afebrile, she had an enlarging tender mass in the loin, that the House Officer considered might have been an abscess, even though there was not evidence of superficial erythema, at that point. It was associated with some concerning signs of toxicity, including feeling hot and cold, pulse of 91/min, blood pressure of 87/50 mmHg, respiratory rate of 26/minute, and initial saturations of 88-93% on air. Her initial blood results showed an elevated white blood count of 13.9 with some bands, a thrombocytosis of 521 and a very elevated ESR at 109. In addition she

[14] Refer to transcript of Coroner's hearing, p 13, lines 20-23.

had some signs of pre-renal failure (creatinine 0.14). Therefore, there were clinical signs of infection. [Dr C] agrees with this in his report."

This assessment was challenged at the Coroner's hearing. In response, Dr D explained his belief that "in a context where a pyogenic abscess is certainly part of the diagnostic list, if not the most likely diagnosis, notwithstanding this question of hydatids, all of which put together, suggests to me that this toxicity related to infection".[15] However, Dr D did concede that sarcoma was a "very reasonable assessment at that point".[16] Dr C accepted that there were a number of possible reasons for the evidence of infection noted by Dr D. In particular, he noted that these indicators could have been compatible with Mrs B's heart and lung problems and her initial fever and "wouldn't exclude hydatid disease".[17]

In further explaining the rationale behind the misdiagnosis of hydatid cyst, Dr I noted that the diagnosis was "made on the basis of a CT scan". Dr I commented that the radiologist was "very experienced in hydatid diseases as he [came] from [overseas]" and that he had given "only one diagnosis, this being consistent with hydatid disease".

In relation to this issue, Dr D makes the following comment:

"I do not believe that the problems that resulted from this misapplied diagnosis can be blamed on the Radiologist. The reference to hydatid disease in the first ultrasound report might be forgiven from a Radiologist who had worked in a country in which that disease is endemic. However he stated that this diagnosis was 'unlikely'. Contrary to the opinion of the two surgeons, at the time of the interview with the family, the CT report did not make a definite diagnosis of hydatid disease. It was stated that the findings on the CT were 'in keeping with the clinical suspicion of hydatid'. The point is that there was no clinical suspicion of hydatid disease. My reading of this situation is that hydatid disease was raised as a possibility on the CT request form because of the U/S report. There was no clinical suspicion of hydatid disease, other than what had been raised in that U/S report. Two differential diagnosis lists are given in the medical notes: the A & E doctor raised the possibility of malignancy, cystic lesion and haematoma to which the admitting House Officer added the possibility of abscess. There appears to have been a fixation on the diagnosis of hydatid disease."

Dr D further comments:

"The real question is whether there was any clinical suspicion that this was hydatid disease. There is no evidence in the notes that [Mrs B] was asked the relevant questions about where she grew up, her contact with dogs, family history etc. Dr … [expert advisor: radiologist] has commented that the films were 'not characteristic of hydatid cyst', although it could be in keeping with it."

[15] Refer to transcript of Coroner's hearing, p 122, line 4, p 123, line 5.
[16] Refer to transcript of Coroner's hearing, p120, lines 1-4.
[17] Refer to transcript of Coroner's hearing, p 67, lines 4-14, p 68, lines 28- 69, p 72, lines 21-27.

One of the main concerns expressed by Ms A is that following the ultrasound and CT examinations, no other differential diagnosis was considered, other than hydatid cyst.

At the Coroner's hearing Dr D accepted that, while he considered hydatids was most unlikely in this case, Dr I "was working on a diagnosis, or a provisional diagnosis of a sarcoma, which fits the clinical picture, again a very rare condition and that was his working diagnosis initially. But his hands were tied by the fact that hydatid disease had been raised."[18]

It was accepted that a general surgeon operating in a base hospital should consider very carefully any decision to operate where hydatid disease cannot be excluded. Management of a patient in these circumstances must proceed cautiously, and in general terms appropriate management would be to refer.[19]

Appropriateness of discharge
Ms A believes that Mrs B's discharge from hospital on 14 January 2000 was inappropriate:

> "The family does not think that [Mrs B] should have been discharged after her first admission, as she was still very unwell, eating and drinking very little and generally very weak … It is worth noting that [Mrs B] was sent home on the basis that [Dr C], Liver Specialist in [the city hospital], would see her. After she got home, [Mrs B] received the appointment, which was for 27 February 2002 (one month after her death), yet her condition was deteriorating all the time. Was [Dr C] the only Liver Specialist that she could have seen?"

Dr D stated that in his view Mrs B's discharge was inappropriate for the following reasons:

> "There were sufficient clinical concerns that make it difficult [to] justify discharge from hospital. Furthermore, the diagnosis had not been confirmed. As stated elsewhere, there were grounds for transfer[ring] her to a specialist unit. Little is documented in the notes about the thinking on the part of the medical staff at this time."

At the Coroner's hearing Dr I clarified his thinking on this point.[20] Dr D conceded that, on the basis of Dr I's evidence, "the acuity of the situation wasn't there to justify ongoing admission".[21] He did, however, go on to express concern that the family's wishes were not relayed to Dr I, who in earlier evidence indicated that this may have altered his decision to discharge.[22]

[18] Refer to transcript of Coroner's hearing, p 141, lines 17-21.
[19] Refer to transcript of Coroner's hearing, p 72, line 27, p 73, line 2, p 198, line 16 and p 109, line 7.
[20] Supra at footnote 6 above.
[21] Refer to transcript of Coroner's hearing, p 123, lines 17-21.
[22] Refer to transcript of Coroner's hearing, p 59, lines 6-31.

The regional hospital explained the rationale for discharge as follows:

> "[Mrs B's] healthcare record refers to the fact that she required some assistance with hygiene cares and was taking food and fluids.
>
> Given that [Mrs B] was not requiring acute surgical treatment the decision was made to discharge her to her home on 14 January 2000."

Alleged delay in forming the correct diagnosis during the second admission
One of the concerns expressed by Ms A is that Dr I did not advise Dr K of his doubts about the original diagnosis of hydatid disease prior to going on leave. She stated:

> "[Dr I] told [Dr E] that he would be passing on his concerns about the diagnosis to [Dr K]. This was never done, and I think that it is fair to say that [Dr K] may well have handled [Mrs B's] care in a different way if he had been made aware of the doubts about diagnosis. However on [Mrs B's] return to Hospital she was still being treated as though she had hydatids, and the care given was focused on treating her symptoms. Little seems to have been done in the period that [Dr I] wasn't there."

During the Coroner's hearing this point was clarified. Dr I advised that he did pass on his concerns, via his registrar.[23]

In relation to the failure to make a correct diagnosis in the first five days following readmission, Dr D comments:

> "The diagnosis of hydatid disease appeared to have been considered secure at the time of the second admission. The extent of the clinical deterioration of [Mrs B] did not appear to have been appreciated by the second admitting medical team. Repeat imaging with a CT scan would have been reasonable, if not expected for a patient with a history of significant enlargement in the loin mass over one week, the overall clinical deterioration and the worsening problem of diarrhoea. Instead of re-imaging, the approach was to stop the albendazole and 'watch the patient'."

Dr K does not accept his management was inappropriate, nor that there was overall clinical deterioration. Having never seen the patient prior to this admission he commented that it was difficult to establish whether there had been any significant changes in appearance in the mass between the first and second admissions.[24]

Dr D disputes Dr K's statement that there was "no significant deterioration". Dr D comments:

> "The admission to hospital on 21/1/2000 reveals a significant change in the mass itself. It was significantly larger and was described [by] the registrar as 'enormous'. He was concerned about 'impending rupture' and this implies some skin changes, not present at

[23] Supra at footnote 8 above.
[24] Refer to transcript of Coroner's hearing, pp188-189.

> the first admission. The comment was one of 'areas of ecchymosis'. A colostomy bag was placed on the abscess in case it 'burst'. Despite this progression of local findings, there was not any significant progression in the clinical signs of sepsis. She remained afebrile [without fever], pulse was normal, blood pressure a little down at 104/52, saturations at 95% and respiratory rate of 16. Her blood results showed little change. There was a WBC of 14 and albumin of 23, which are in keeping with infection."

The negative result of the hydatid fixation test had been reported by 21 January, the day of Mrs B's readmission, yet there is no evidence of a further test being sought.

Ms A noted:

> "Whilst I can appreciate the danger in aspirating a hydatid cyst, this had not been conclusively proven to be the case, and in fact wasn't supported by the hydatid complement fixation test which was negative. From my research into hydatid disease, it is my understanding that hydatid cyst is a slow growing cyst, indicative of a tumour, often with no outward indication of its presence, and often completely asymptomatic. This was certainly not the case here."

Dr K responded:

> "[Mrs B] had been readmitted with a diagnosis, a plan for treatment and remained stable. Her condition was assessed daily and treatment reviewed. The most appropriate plan was to watch and review, given her initial diagnosis."

In relation to the issue of delay, Dr D comments, when asked whether there was a delay in making the diagnosis of pyogenic abscess:

> "It is my opinion that this is the case. The delay is not justified by the fact that the radiologist raised the possibility of hydatid disease. The radiologist did fail to suggest alternative diagnoses even when hydatid disease was considered unlikely. There was no clinical reason to suspect hydatid disease, other than what was raised by the radiologist. There was, in retrospect, an unjustified willingness to accept the diagnosis of hydatid disease. This was seen in the treatment for hydatids prior to the diagnosis being made and by not considering and investigating for other possibilities. The presentation was not typical for hydatid disease and the patient was not in an at risk category for it."

ACC

On 10 March 2000 Ms A filed a claim with the Accident Compensation Corporation (ACC) for medical misadventure on the basis that the pyogenic abscess was misdiagnosed and there were delays in treatment. The claim was denied by ACC on 28 August 2001.

At the time the claim was denied, ACC had received expert advice from a specialist general and endoscopic surgeon. He considered that there was no evidence of infection on Mrs B's initial admission or during the first few days of her subsequent readmission. The ACC report states:

"Whilst it is clear that the medical team failed to correctly diagnose your aunt's abdominal abscess and instead, made the diagnosis of hydatid cyst based on clinical findings including a CT scan, ultrasound scans and blood tests, this cannot be said to be negligent as appropriate tests and investigation were undertaken. Once it became clear that your aunt did not have a hydatid cyst but an infection, all attempts were made to treat this appropriately.

Given that these investigations were undertaken at the time of [Mrs B's] admissions, it cannot be said that the failure to diagnose your aunt's condition was negligent."

It appears from the file that the independent advice from Dr D subsequently obtained by Ms A was not available to ACC at the time the claim was declined. The ACC decision is currently under review, and I am advised that ACC is awaiting the outcome of the Coroner's findings (currently awaited) and my report.

Independent advice to Commissioner

Consultant general surgeon
The following expert advice was obtained from Dr Ian Stewart, a consultant general surgeon:

"**Re: [Dr I] File No 01/071161/…**

- **What specific professional and other relevant standards apply in this case and did [Dr I] meet those standards?**

An elderly lady presented with a two-month history of being generally unwell, weight loss, anorexia and a tender mass in her right upper abdomen. The professional requirement was to accurately diagnose, as best as possible, the cause of her illness particularly focussing on the right-sided mass. It would seem probable that this right-sided mass was most likely the cause of her ill health. The investigations done on [Mrs B] at admission, namely blood tests including a hydatid complement fixation test and a CT scan, were appropriate. Blood test results showed a persisting high white cell count and neutrophilia with a high ESR. Hydatid complement fixation test was negative. The CT scan report summarises by saying the appearance is in keeping with your clinical suggestion of hydatid cyst. Although these results could remotely still be in keeping with a hydatid cyst of the liver it seems a very unlikely possibility. Other potential causes for her unwellness and abdominal mass should have been entertained.

I believe relevant professional standards were not maintained, not because of the wrongful diagnosis but due to the fact that other diagnoses, particularly abdominal sepsis were not entertained. Secondly the notes and information provided, suggest, at the time of discharge on the 14th January 2000 this lady was still very unwell. She was described in the notes as being lethargic and markedly pale. Whatever the circumstances

it would seem unwise to discharge her. There is no record in the notes of what conversation or contact took place with [Dr C] in [the city hospital]. It is only conjecture, but if he was informed that this elderly lady was particularly unwell, with a large tender mass on the verge of perforating associated with a high white cell count, then it seems likely he would have insisted on seeing her much earlier than a planned outpatient appointment.

In summary then for these various reasons I do not think that the care for this lady meets the required professional standards.

- **Was the initial diagnosis of hydatid cyst reasonable in the circumstances?**

I should preface my remarks about hydatid cyst by saying that this is an uncommon condition particularly for general surgeons such as myself. I can not remember seeing a case of hydatid cyst in my institution over the past 12 year period.

It would be highly unusual for uncomplicated hydatid disease to present in the way [Mrs B] presented, namely unwell, with weight loss, anorexia and features of acute inflammation, a tender mass and high white cell count. The ultrasound findings of hydatid disease can be quite variable depending on the age of the cyst. Hydatid cysts ultrasonically can range from being very cystic in appearance to quite solid. This change is due to gradual infolding of membranes and internal echoes due to scolices. In view of this variability, radiologists can never completely rule out the possibility of hydatid disease being present and the diagnosis then comes back to the clinical impression associated with the results of a complement fixation test. The ultrasound report on the 31st December 1999 finished up by saying the appearance could fit the spectrum for hydatid disease (which bears out what I mentioned earlier) though this is unlikely. In one of [Dr I's] submissions, he implies he was confident in the diagnosis of hydatids, because the ultrasound and CT were reported by a radiologist from Iraq who was very experienced in making this diagnosis. My interpretation of both the ultrasound and CT report is that the radiologist was not confident in a diagnosis of hydatids and was only swayed toward that possibility because of what was suggested on the request form. Neither the ultrasound or CT reports give great confidence for a diagnosis of hydatid disease.

In summary then I believe that there was a very low likelihood that she had hydatid disease. I do not think there would have been any merit in repeating the hydatid complement fixation test. I submit that it is very easy in hindsight but from the evidence presented the possibility of a pyogenic abscess and perhaps not in the liver should have been entertained. Her obvious frailty, the unusual diagnostic possibility and her general unwellness indicate it was unwise for her to have been discharged on the 14th January 2000. As mentioned I am suspicious whether adequate post-operative care was arranged. Had [Dr C] been aware of all the circumstances I am sure he would have offered a more immediate service. Clearly if the clinical impression was that she had hydatid disease then Albendazole was perhaps an appropriate medication for her to be prescribed. However, I think the question as to whether it was appropriate is irrelevant in view of the misdiagnosis.

Clearly there is no evidence in the issued documents that [Dr I] ever suspected any other diagnosis other than hydatids. There is mention of perhaps a malignancy but as far as I can ascertain pyogenic abscess was never mentioned. As I have alluded to I think the failure to entertain that diagnosis was the mistake and this is a departure from what would be regarded as a reasonable clinical standard. Also clearly there were communication difficulties. The family felt [Mrs B's] discharge on 14th January 2000 was inappropriate. Further discussion between [Dr I] and the family should have occurred at that time.

In summary then I am critical of the process of her diagnosis, her subsequent clinical management and discharge and finally it seems throughout her period in hospital there was a lack of communication both between the doctors themselves and also with [Mrs B] and her family."

Additional expert advice – consultant general surgeon
Further expert advice was sought from Dr Stewart, after he had the opportunity to consider responses to the provisional opinion and the transcript of the Coroner's hearing. He commented as follows:

"During her first admission (11-14 January 2000) [Mrs B] was clearly unwell. Evidence to support that:–

- Several entries in the notes by both junior medical staff and nursing staff, describing her as 'frail, 'pale', 'unwell', lethargic'.
- A description from the doctor (can't read the name) in the Emergency Department on 11 January 2000 of [Mrs B] having a 'tender reddened mass R) loin'.
- A further description from the Emergency Department saying she is 'not coping at home'.
- A nursing note from the 14 January 2000 states, 'seen by [Dr I], may go home. Sister anxious and angry'.
- Serum albumin (11/01/2000 – 29), 14/01/2000 – 26) – normal range 35-48. This is very low and falling, and in the context of her clinical state (described above) cannot be ignored and required further investigation or at least justified her staying in hospital.
- White blood cell count during the period 12-14 January 2000 was consistently elevated (14.2-16.5), with a neutrophilia. Again, this finding taken in the context of the clinical findings, indicated a need for at least further close surveillance as an inpatient.
- I would strongly dispute the assertion by [the] (CEO) where he refutes my contention that [Mrs B] should not have been discharged – the evidence described above is very strong to support her need at that stage (14 January 2000) to remain as an inpatient.

1. What responsibility did [Dr I] have to ensure that consultation with [Dr C] did, in fact, take place?

As has been well documented, even if this lady did have hydatid disease, this is a very uncommon diagnosis that most medical staff (including surgeons) have had little, if any, exposure. For two reasons then:–

a) the rare (uncommon) provisional diagnosis, and

b) [Mrs B's] poor (?deteriorating) clinical state as outlined above,

made it mandatory that [Dr I] either personally spoke with [Dr C] or ensured that a direct communication with [Dr C] had occurred. Had that communication occurred, there is little doubt that had [Dr C] been aware of the clinical situation, he would have put the diagnosis of hydatids in serious doubt and encouraged further active management to have occurred.

2. What responsibility did [Dr I] have to ensure that the information he received from his junior medical staff was accurate?

   From the documents submitted, clearly various people recognized that during that first admission (11-14 January 2000) that this lady was not well. Various junior doctors documented in the notes her 'unwellness'. Nursing staff repeatedly wrote comments to support [Mrs B] being very unwell. The abnormal blood tests have been signed off (signature illegible), so presumably again the junior staff at least were aware. The family of [Mrs B], particularly her sister, knew she was very unwell.

   Despite all of this [Dr I] did not recognize how sick she was, although even he concedes in the Coroner's report that the request to [Dr C] should have been made semi urgent and not non urgent. If [Dr I] genuinely thought [Mrs B] needed to be seen quite quickly (i.e. semi urgent) it perhaps implies he was aware she was quite unwell and therefore he had an obligation to know all factors (nursing, junior doctor, family impressions and blood results), prior to permitting her discharge. If he didn't know all these facts, then he had an obligation to find out from the junior medical staff.

   If in the full knowledge of her poor clinical state, he was still happy to discharge her, then there was an obligation to ensure that within a short period of time (days, not weeks), her clinical situation be reviewed (by [Dr C] or anyone, probably himself).

3. Was it reasonable for [Dr I] to rely on the verbal advice of the radiologist (following CT scan) communicated by junior staff in the face of such an unusual diagnosis? If so, why? If not, why not?

   Again I use the two factors referred to above:–

   a) very uncommon provisional diagnosis; and

   b) a very unwell patient

made it mandatory that any investigations done (CT in this case) are thoroughly reviewed at consultant level, where the radiologist will become fully conversant with the clinical situation and the clinician likewise will gain an appreciation of the level of diagnostic certainty the radiologist has.

A verbal report of the CT delivered through an intermediary (the house surgeon), in a situation such as this is not satisfactory.

4. Any other comments raised by the further information

One view through this whole episode was that [Dr I] did not realise how sick this lady was. It may be argued that he ([Dr I]) was unaware of the nursing perspective or the family's view of her state of health. [Dr I] saw [Mrs B] for three days (11-14 January 2000) and I find it hard to accept that whilst everyone else appreciated she was so unwell, he didn't. Then if he did appreciate she was clearly very unwell, he had a definite obligation to personally be more assertive in his communication, both with his own junior medical staff and importantly, with peripheral contacts such as the radiologist and [Dr C]."

Consultant colorectal surgeon

The following independent expert advice was obtained from Professor Bryan Parry, Professor of Surgery and consultant colorectal surgeon:

"Thank you for your invitation to provide expert advice about the conduct of this case. Thank you for the enclosed documentation, which I have studied in some detail to arrive at my conclusions, which follow later.

Overview of Case

I will not relate this in detail as it is well documented in the material that was enclosed to me. In brief, [Mrs B] was a 77-yr-old woman with co-morbidities of emphysema, previous myocardial infarction and angina. She was on a large number of medications, which pertain to these co-morbidities.

In mid-December [Mrs B] apparently sustained a fall following which, a few days later, she noted the development of a painful lump in her right side in her lower chest and lumbar region. This lump increased in size and discomfort until she presented to her GP on the 27th December 1999. An ultrasound was performed on the 31st December 1999 and was reported as showing hydatids. The radiologist cautioned against biopsy because of this.

The GP referred [Mrs B] to the outpatients services at [the regional hospital] but before that appointment was kept she presented acutely on 11th January 2000 because of increasing ill health. At that time a 3-month history of weight loss and anorexia was determined and a CT scan likewise to the ultrasound previously suggested hydatid cyst. Appropriate blood tests were sent to [another city hospital] for hydatid serology by complement fixation testing and discussion was had with [Dr C], the liver surgeon in

[the city hospital] regarding advice. He recommended commencement of Albendazole and an appointment was given to consult the specialist in [the city hospital] on the 27th February 2000.

In addition to her clinical signs there were abnormal blood tests noted on that admission including, and significantly, an albumin of 26.

She was discharged home 3 days later on 14th January 2000 although the patient was not eating well and had a poor appetite.

On the 21st January 2000 she was re-admitted this time under [Dr K] (in the absence of [Dr I] her consultant on the first admission) because of increasing pain and failure to thrive at home. It was noted that her white count was elevated and her albumin was 23 on admission.

The diagnosis of hydatids was still the working diagnosis but there was a review of the CT scan on Sunday 23rd of January by [Dr K] and a radiological colleague. On Monday the 24th January the working diagnosis was again reviewed particularly as the patient was becoming increasingly uncomfortable although her vital signs were stable.

On Tuesday 25th January at an X-ray meeting the appearance on CT scanning was again reviewed and the decision was made in the light of the patient's deterioration that needle aspiration of this abscess should be undertaken.

The next day she was noted to have deteriorated with an increased temperature increased white count and her albumin was now 12. As [Dr I] had returned from leave he continued her management until her demise on 29th January. During this period she underwent aspiration of the abscess and then formal intra-operative drainage with release of the pus and the establishment of ongoing drainage. She had a stormy time in the intensive care unit with the development of a collapsed left lung and poor effusion and apparently the patient declined ventilation.

At post-mortem she was found to have severe arterio sclerosis of her heart vessels and evidence of an old myocardial infarction. She was in congestive cardiac failure with the above mentioned left lung collapse with association effusion. There was the presence of a retroperitoneal and subcutaneous abscess in the right loin and a large peri-rectal and peri-sigmoid diverticular abscess, which was not suspected prior to her death. Other associated findings were a 2cm poorly differentiated carcinoma of her lung and a small GIST of her small bowel.

In summary, this lady died of uncontrolled sepsis from a large abscess in the retroperitoneal and associated subcutaneous space in her right loin. This had presumed to have arisen in a haematoma at the site of her fall seeded by her diverticular disease with its associated contained abscess. There was delay in draining this abscess due to a mistaken diagnosis of a hydatid cyst. Her final unfortunate course was the well known path of systemic inflammatory response syndrome (SIRS) deteriorating to multi-organ dysfunction syndrome (MODS) in the intensive care setting. Her co-morbidities and her

protracted illness, which included nutritional depletion, would have contributed to her demise.

Questions Arising

What specific professional and other relevant standards apply in this case and did [Dr K] meet those standards?

Leaving aside the issue of the wrong diagnosis, which will be addressed below, the duty of care by [Dr K] was carried out conscientiously. During her second admission beginning the 21st January 2000, he reviewed the working diagnosis on two occasions culminating in the decision made on Tuesday 25th January to aspirate the abscess. The delayed decision to aspirate this abscess and it being carried out (24 hours later) was not advisable in my opinion, but is unclear to me as to whether there were system problems behind this delay.

Given [Mrs B's] present symptoms upon readmission, should [Dr K] have been alerted to the possibility of a pyogenic abscess earlier than he was?

In retrospect the evidence for her deterioration was there. Her pain had increased despite being on the purported correct therapy of Albendazole and her albumin had decreased to 23 which is very suggestive of a significant septic process going on in the body. In mitigation however it can be noted that her albumin had been 29 on admission on 11th January and was down to 26 on her discharge 3 days later on 14th January. It is clear that all the doctors involved in the management of this lady's case overlooked the significance of this low and decreasing albumin level and failed to connect this to the probability that the abscess was thereby pyogenic and not hydatid in origin.

Are there any other diagnostic tests that should have been performed upon readmission in order to determine [Mrs B's] condition?

No. All the relevant tests were done and were available for analysis. That they were not interpreted correctly was, in hindsight, incorrect and her medical attenders in my view, too uncritically accepted the diagnosis of hydatid cyst from the beginning.

Should the hydatids complement fixation test have been repeated? If so, when?

The hydatid complement fixation test was, as events have borne out, a distracter in the management of this lady's condition. It has been well pointed out in the accompanying notes that this test has a false negative rate of about 10% in active disease and in other patients without the disease it can be elevated due to previous exposure (false positive rate). Sero conversion from a negative to a positive test can, of course, occur but the timeframe of this patient was too short to have revealed it even if it were the case that she had hydatids.

I would offer the following conclusions:

1. Continuity of Care

The continuity of care of patients when the lead consultant attendant is on leave can be problematic due to workload and systems issues. In practice, it is the junior staff who often has a better and more detailed knowledge of patients on a day to day basis and consultants rely heavily on their monitoring and documentation of such patients. Where hospital services are organised into consultant teams as is the general pattern in New Zealand, it is more likely that continuity at consultant level can occur more rigorously. I do not think that the difficulties arising in this case were attributable to this problem.

2. Diagnostic Error

It is my view that [Dr K] unwittingly propagated the diagnostic error in this lady's case due to 'buying in' to the very explicit and uncompromising diagnosis that was made at the outset. It is recorded that he reviewed the diagnosis on several occasions while the patient was under his responsibility but not to the point where the original assessment was overturned. This diagnostic error resulted in a downstream cascade of events where too little was done too late resulting in the patient's unfortunate demise. I do not think [Dr K] contributed more than the other doctors involved in this patient's negative outcome. The needle aspiration of this abscess should have taken place earlier once the decision had been made but I do not think the 24 hour delay materially altered the inevitable consequences of this patient's severe septic illness."

Additional expert advice – consultant colorectal surgeon

Further expert advice was sought from Professor Parry, after he had the opportunity to consider the responses to the provisional opinion and the transcript of the Coroner's hearing. He commented as follows:

"Thank you for the documents that you provided on the 13th October supplemented on the 27th October with some further documents of the Coroner's inquest.

I greeted this imposing pile of paper with some trepidation, I must admit. Nevertheless I have been impressed with the thoroughness with which the issues surrounding [Mrs B's] demise have been aired and all people participating in her care are fairly heard.

I have to say that some of the interchanges in the Coroner's transcript highlighted the gap in understanding between lay person and doctor as to clinical conditions and management realities. There are occasions, as recorded in the transcript, where the lay person does not appreciate how inexact clinical methods and tests are in their elucidation of disease, and also how the clinician's mind is constantly interrogating the data before his or her eyes and making adjustments in diagnosis, treatment, and views regarding prognosis of patients – all in the context of busy practice involving many patients in parallel!

Nevertheless I thought the excellent summary by … at the end of the Coroner's inquest was fair, gave due weight to the impact of hindsight on clinical decision making, and was gracious towards the deceased's relatives and respectful of both the legal and medical professions. All this with making some clear and important statements in improving the delivery of care for doctors and [the regional hospital] alike.

As expressed in my letter of the 1st October 2002, I do not think that [Dr K] was guilty of medical misconduct even though the Commissioner [provisionally] finds him in breach of duty of care in his 'failing to take active steps to review [Mrs B's] diagnosis in the face of significant evidence of infection and deterioration.'

I think there is sufficient evidence in the material given to me that [Dr K] did in fact review this patient regularly although, with the benefit of hindsight, he did not disabuse himself of the hydatid diagnosis quickly enough to change the outcome. I am sure that [Dr K], like most surgeons in this situation, would entertain regrets and disappointment with his decision making in this lady's case. Being asked to apologise to the deceased's family, is therefore entirely appropriate.

However I have some problems with the notion of him being in breach of his clinical duty. Whereas that is a decision the Commissioner is privileged to make I think it could be regarded as severe because:–

1. Diagnostic error occurs in every surgeon's practice; and

2. There is evidence [Dr K] reviewed her case regularly without the 'penny dropping'; and

3. The issues of delayed 'handover' to his colleague and the time taken in implementing the decision to drain the abscess are partly systemic problems although [Dr K] needs to take some of this responsibility at least. In hindsight he would better have contacted his colleague directly but he clearly thought this was done through the registrar and therefore deserves the benefit of the doubt."

Code of Health and Disability Services Consumers' Rights

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

RIGHT 4
Right to Services of an Appropriate Standard

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

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

…

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

Opinion: Breach – Dr I

Lack of care and skill in diagnosis
On her initial admission to the hospital, Dr I misdiagnosed Mrs B as having a hydatid cyst. The question is whether the misdiagnosis was attributable to a lack of reasonable care and skill by Dr I.

Dr I stated: "I fully accept that this lady's [Mrs B's] condition was inaccurately diagnosed, this diagnosis being made on the basis of a CT scan." Dr I explained that the radiologist was "very experienced in hydatid disease as he comes from [overseas]" and that he "gave only one diagnosis, this being consistent with hydatid disease". Yet the radiologist who reported the results of the CT scan noted that the "appearance is in keeping with your [Dr I's] clinical suggestion of hydatid cyst". The radiologist who reported the results of the earlier ultrasound noted that while the "appearance" fitted within the "spectrum for hydatid cyst", this was "unlikely".

Dr I stated that following the CT scan he was advised unequivocally by a member of his team that the radiologist had said this was a hydatid cyst (the scan report did not become available until 14 January). However, the radiologist has no recollection of such a conversation and, further, gave evidence at the Coroner's hearing that a radiologist would never make such a statement; the radiologist's role is to report what he or she sees, not to diagnose.

In any event, Dr I proceeded on the basis that Mrs B had a hydatid cyst. This was, in my opinion, unwise and ultimately led to a failure to make the correct diagnosis of pyogenic

abscess. By his own admission, Dr I was not familiar with hydatid cysts. Yet, when receiving information that his patient might have a hydatid cyst – an extremely unusual diagnosis – he took no steps to discuss this further with the radiologist. Dr I uncritically accepted the advice given him by his team member, seemingly without further analysis. As my expert advisor, Dr Stewart, commented:

> "In the face of:
>
> a) a very uncommon provisional diagnosis; and
>
> b) a very unwell patient,
>
> it was mandatory that any investigations done were thoroughly reviewed at consultant level, where the radiologist will become fully conversant with the clinical situation, and the clinician likewise will gain an appreciation of the level of diagnostic certainty the radiologist has. A verbal report of the CT delivered through an intermediary (the house surgeon), in a situation such as this is not satisfactory."

In addition, there is no evidence that Mrs B was ever asked whether she had been in contact with any likely sources of infection, or had travelled overseas to infected areas. No notes about possible contact with hydatid disease were recorded by Dr I or the other attending staff. If hydatid disease was seriously being considered as a probable diagnosis, Mrs B should have been questioned about possible contacts.

In relation to his failure to make a differential diagnosis of abdominal sepsis, Dr I stated: "At no time during her first admission, or I understand during the first part of her second admission, did she have any clinical evidence that the mass on her right side was a pyogenic abscess." However, my expert advisor, Dr Stewart, commented that there was evidence of infection, including from the blood test results, which showed a high white cell count and neutrophilia with a high ESR. Dr D (who provided expert advice to Ms A) noted several factors that showed "signs of toxicity", including not only Mrs B's white blood cell count and elevated ESR levels, but her pulse rate, blood pressure, respiratory rate, and the fact that she was "hot and cold". There was some evidence of pre-renal failure during the first admission. He accepted that these could also be attributable to other factors, primarily her co-morbidities of heart and lung disease and her initial fever.

I am satisfied that there was insufficient clinical evidence for Dr I to rely on the diagnosis of hydatids without entertaining other diagnoses. I accept the advice of Dr Stewart: "I believe relevant standards were not maintained, not because of the wrongful diagnoses, but due to the fact that other diagnoses, particularly abdominal sepsis were not entertained." Further, "it would be highly unusual for uncomplicated hydatid disease to present in the way [Mrs B] presented, namely unwell, with weight loss, anorexia and features of acute inflammation, a tender mass and high white cell count".

I concur with my expert advisor that Dr I failed to sufficiently consider and investigate other diagnoses during Mrs B's first admission. In saying this, I accept that in making different management decisions (such as an urgent referral/further investigations/ surgical exploration

of the mass) Dr I would have needed to proceed cautiously given that the sceptre of hydatids had been raised. As Dr Stewart commented: "The failure to entertain that diagnosis [pyogenic abscess] was the mistake and this is a departure from what would be regarded as a reasonable clinical standard."

Dr I was also hampered by his incorrect assumption that his registrar had spoken to Dr C personally, whereas in fact only Dr C's registrar had been spoken to and recommended that the hydatid drug albendazole be commenced. In my view Dr I must accept responsibility for his failure to ensure that Dr C was spoken to. As Dr Stewart commented:

> "As has been well documented, even if this lady did have hydatid disease, this is a very uncommon diagnosis that most medical staff (including surgeons) have had little, if any, exposure. For two reasons then:–
>
> a) the rare (uncommon) provisional diagnosis; and
>
> b) [Mrs B's] poor (?deteriorating) clinical state as outlined above,
>
> made it mandatory that [Dr I] either personally spoke with [Dr C] or ensured that a direct communication with [Dr C] had occurred. Had that communication occurred, there is little doubt that had [Dr C] been aware of the clinical situation, he would have put the diagnosis of hydatids in serious doubt and encouraged further active management to have occurred".

In these circumstances Dr I failed to exercise reasonable care and skill in diagnosing Mrs B's condition and therefore breached Right 4(1) of the Code.

Discharge from hospital

Ms A believes that Mrs B was inappropriately discharged from hospital on 14 January 2000, when "she was still very unwell, eating and drinking very little and generally very weak". Mrs J was present and raised concerns about the proposed discharge with hospital staff, who attempted to reassure Mrs B and her family that the discharge was appropriate and that community support was in place.

Dr I defended the decision to discharge Mrs B:

> "At this stage the working diagnosis was hydatid disease and there was no clinical evidence of a pyogenic infection. There was no indication for [Mrs B] to remain in an acute surgical ward. The appropriate referrals were made to community support groups for Home Support on [Mrs B's] discharge."

Yet, at the time of discharge, Mrs B did not have a definitive diagnosis, she was frail, unwell with an increasing 'lump' in her groin and her family had expressed real concern about the discharge.

My advisor, Dr Stewart, noted that Mrs B's obvious frailty, "general unwellness", and the "unusual diagnostic possibility" all indicated that it was unwise to discharge her on 14 January and that further discussion should have occurred between Dr I and the family. He

pointed to a falling albumin level (29 on 11/1/00 and 26 on 14/1/00); normal range 35-48) and commented that this is very low and falling and, in the context of her clinical state, cannot be ignored and required further investigation or at least justified her staying in hospital. Further, he noted that the white blood cell count during the period 12-14 January 2000 was consistently elevated (14.6-16.5) with a neutrophilia. Again, he stated that this finding taken in the context of the clinical findings, indicated a need for at least further close surveillance as an inpatient.

Dr Stewart commented:

> "One view through this whole episode was that [Dr I] did not realise how sick this lady was. It may be argued that he ([Dr I]) was unaware of the nursing perspective or the family's view of her state of health. [Dr I] saw [Mrs B] for three days (11-14 January 2000) and I find it hard to accept that whilst everyone else appreciated she was so unwell, he didn't. Then if he did appreciate she was clearly very unwell, he had a definite obligation to personally be more assertive in his communication, both with his own junior medical staff and importantly, with peripheral contacts such as the radiologist and [Dr C]."

Having reviewed the evidence and my expert advice, I am satisfied that Dr I failed to exercise reasonable care and skill in discharging Mrs B on 14 January 2000, and therefore breached Right 4(1) of the Code.

Opinion: No breach – Dr K

Maintaining misdiagnosis
Mrs B was readmitted to the hospital on 21 January. She was admitted into Dr K's care as Dr I was on leave. On readmission, the same markers that made Dr I's initial diagnosis of Mrs B's condition questionable were still present.

There had been changes in the size and physical appearance of the 'lump', and Mrs B's general condition was reported as having deteriorated. On readmission the lump was noted as being "enormous", with "areas of ecchymosis". Mrs B's white blood cell count was still elevated at 14.0 and her albumin level was 23. The elevated blood count indicated the possibility of infection.

Dr K advised me:

> "On admission she was stable, there was a concern that there was possibly something else going on but the decision was made at this time to treat her conservatively given the presenting diagnosis. Her temperature and pulse were normal, white cell count was raised but this had been raised at the time of her previous admission and discharge."

Ms A believes that Dr K "did nothing" and that his "wait and watch" approach was inappropriate and contributed to the delay in diagnosis and Mrs B's subsequent deterioration and death. There are conflicting opinions over whether Dr K saw or examined Mrs B over this period. Ms A, supported by the evidence of her mother Mrs J, stated that Dr K did not see or examine Mrs B until 24 January. Dr K stated he saw her on all but the day of admission. The contemporaneous nursing notes support this. I am satisfied that Dr K did visit and examine Mrs B on all three days (22-24 January) and actively reviewed her case.

Dr K was clearly concerned about Mrs B's management and advised me that he actively initiated discussion about her care with his surgical colleague, and put her case before the X-ray meeting on 25 January. Unfortunately, much of this review is undocumented and there was poor communication at handover (see 'Other Comments' below). As my expert advisor, Professor Parry commented:

> "Diagnostic error occurs in every surgeon's practice; and … there is evidence [Dr K] reviewed her case regularly without the 'penny dropping'…"

The situation is well summed up by Professor Parry:

> "It is my view that [Dr K] unwittingly propagated the diagnostic error in this lady's case due to 'buying in' to the very explicit and uncompromising diagnosis that was made at the outset. … This diagnostic error resulted in a downstream cascade of events where too little was done too late resulting in the patient's unfortunate demise."[25]

On balance, I am satisfied that Dr K's "wait and monitor" approach was not unreasonable. As he explained in his response to this complaint, the primary diagnosis was thought to be hydatids at the time of Mrs B's initial readmission. This was supported by a purported discussion with the liver specialist from the city hospital, Dr C, initiation of albendazole treatment, and Dr K's own review of the CT scan results. Dr K had not seen Mrs B prior to 21 January and had had no opportunity to assess her previously. He did not have the benefit of full and comprehensive notes, or continuity of medical or nursing staff. The lack of continuity of care made it more difficult to assess, in context, the changes reported in Mrs B's condition and in the mass. It may also have contributed to the perceived absence of medical monitoring over the long weekend 22-24 January. Dr K did actively review Mrs B's diagnosis over the period 21-25 January but the sceptre of hydatids continued to loom large. With the benefit of hindsight, there were sufficient signs for Dr K to revise the diagnosis, but I do not consider that Dr K failed to exercise reasonable care and skill. Accordingly, Dr K did not breach Right 4(1) of the Code.

Consultant responsibility

Dr K has acknowledged that, although he understood Dr I had returned from leave on 25 January, this was an "assumption" that proved incorrect. Dr K accepts that until Dr I returned, Mrs B's care remained his responsibility.

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[25] Refer to transcript of Coroner's hearing, pp 208-209.

Assumptions about management responsibility of a patient have no place in clinical medicine. Responsibility for patient care needs to be clear and unambiguous, and all staff and the patient (and family) should be aware of who is co-ordinating and managing care at all times. As Professor Parry noted:

> "The issues of delayed 'handover' to his colleague and the time taken in implementing the decision to drain the abscess are partly systemic problems, although [Dr K] needs to take some of this responsibility at least. In hindsight, he would better have contacted his colleague directly but he clearly thought this was done through the registrar …"

Opinion: No breach – The Regional Hospital

Vicarious liability
Employers are vicariously liable under section 72(2) of the Health and Disability Commissioner Act 1994 for ensuring that employees comply with the Code of Health and Disability Services Consumers' Rights.

The regional hospital employed Dr I as a consultant at the hospital in January 2000. In order to negate the presumption of vicarious liability under the Act, the employing authority must prove, pursuant to section 72(5), that it took such steps as were "reasonably practicable" to prevent its employees from breaching the Code.

The regional hospital provided me with the following information regarding the steps taken to ensure the clinical competence of Dr I:

> "In 2000 [the hospital] had established systems that had the capacity to highlight issues of clinical competence, namely incident reporting, customer complaints, surgical audit and peer review. The collective agreement between [the hospital] and the Senior Medical Officers in its employ makes provision for one half-day per month for peer review. Both [Drs K and I] attended peer review meetings when they were resident in [Mrs B's hometown]. We can find no record of any customer complaint or incident report relating to the clinical competence of [Dr K] or [Dr I] prior to the notification of [Mrs J and Ms A's] complaint.
>
> [The hospital] ensures that all new employees participate in the organisational orientation programme that includes a presentation on the Code of Health and Disability Services Consumer Rights. Existing employees are required to attend a training session annually."

The hospital also noted that "there were no nationally accepted guidelines for credentialling until the Ministry of Health released these in 2001", but that Senior Medical Officers are now credentialled.

On balance, I am satisfied that the regional hospital took such steps as were reasonably practicable to prevent Dr I's clinical failings that amounted to breaches of the Code.

Other comments

Co-ordination of care
Under Right 4(5) of the Code health professionals are required to co-operate in order to ensure quality and continuity of care for patients.

Ms A advised me that Dr I expressed doubt as to his original diagnosis to Dr E, Mrs B's general practitioner, just prior to her second admission. Dr I confirmed that this conversation took place. However, he did not document it, passing the information on to his registrar informally.

If Dr I had doubts about his original diagnosis, he should, prior to taking leave, have communicated those doubts to Dr K, who was to act as consultant in his absence, or ensured that Mrs B's clinical notes were updated to include this information. In order to avoid a repeat of the communication failure evident in this case, transfer of such critical information should be carefully documented and/or passed directly to the consultant who is to act during the intervening period.

I am particularly concerned to note the failure of co-ordination of services that led to Mrs B being without effective consultant cover for a period of approximately 24 hours, on 25-26 January 2000, during which time her condition deteriorated significantly. Dr K has acknowledged that he was "unaware" that Dr I had not returned from leave and that he was not alerted to this by junior staff. Accordingly, he "assumed" Dr I was back 'on deck' and had taken over Mrs B's care. Dr I did not in fact return until the morning of 26 January.

Such assumptions, which led in this case to the breakdown of basic systems of patient management, are unacceptable. It is essential that consultants and hospital management ensure that their systems make it abundantly clear who is the consultant on duty with responsibility for a particular patient, at all times. It is also critical that when a patient's care is transferred from one consultant to another, one team to another, or from one ward to another, all relevant medical and nursing staff are aware of the transfer and their respective responsibilities.

Record keeping
I note the lack of adequate records by Dr I and Dr K. I accept that it is common practice for a consultant not to personally make entries in the clinical notes. However, relevant information must be recorded. Right 4(2) of the Code affirms the right of every patient to services that comply with professional standards. Professional standards clearly require clear and comprehensive record keeping.

The regional hospital's "Health Records Policy" (dated 13 December 1999) states at clause E 4.4:

> "All assessments and clinical examinations shall be fully documented in the health record by the person undertaking that assessment, and at the time of that assessment."

It is essential that clinicians ensure that clear and comprehensive records are kept to provide quality and continuity of care. This is particularly so in the hospital setting where a number of health professionals may be involved in a patient's care. This case highlights the difficulties when this is not done. The consultants' thoughts and actions in relation to Mrs B's care were not documented, and were therefore not obvious to others caring for Mrs B. More comprehensive notes may have focused the clinicians' attention on her slow and inexorable deterioration and have promoted earlier doubts about the working diagnosis.

Entry by Dr M
I note with concern the retrospective entry made by Dr M in the inpatient notes for 23 January 2000. The regional hospital has acknowledged that this entry was made well subsequent to the events and have advised me that this was contrary to stated policy, and that it has brought this matter to the doctor's attention. Dr M's action in retrospectively altering Mrs B's clinical notes, without acknowledging the retrospective change, shows a lack of judgement. His action has contributed to the family's lack of trust in the integrity of the documentation of Mrs B's medical care.

I acknowledge Dr M's advice that his action was contrary to his usual practice and his expression of concern that it contributed to the family's feeling of a lack of trust in the service provided. I trust that he will never repeat such an action.

Actions taken

In response to my provisional opinion, Dr K provided an apology, which has been forwarded to Ms A and Mrs J.

Recommendations

I recommend that the following actions be taken:

Dr I
- Apologise in writing to Ms and Mrs J for his breach of the Code. The apology is to be sent to the Commissioner's Office and will be forwarded to Ms and Mrs J.

- Review his practice in light of this report.

Dr K

- Apologise in writing to Ms A and Mrs J for the shortcomings in his care of Mrs B. The apology is to be sent to the Commissioner's Office and will be forwarded to Ms A and Mrs J.

- Review his practice in light of this report.

The regional hospital

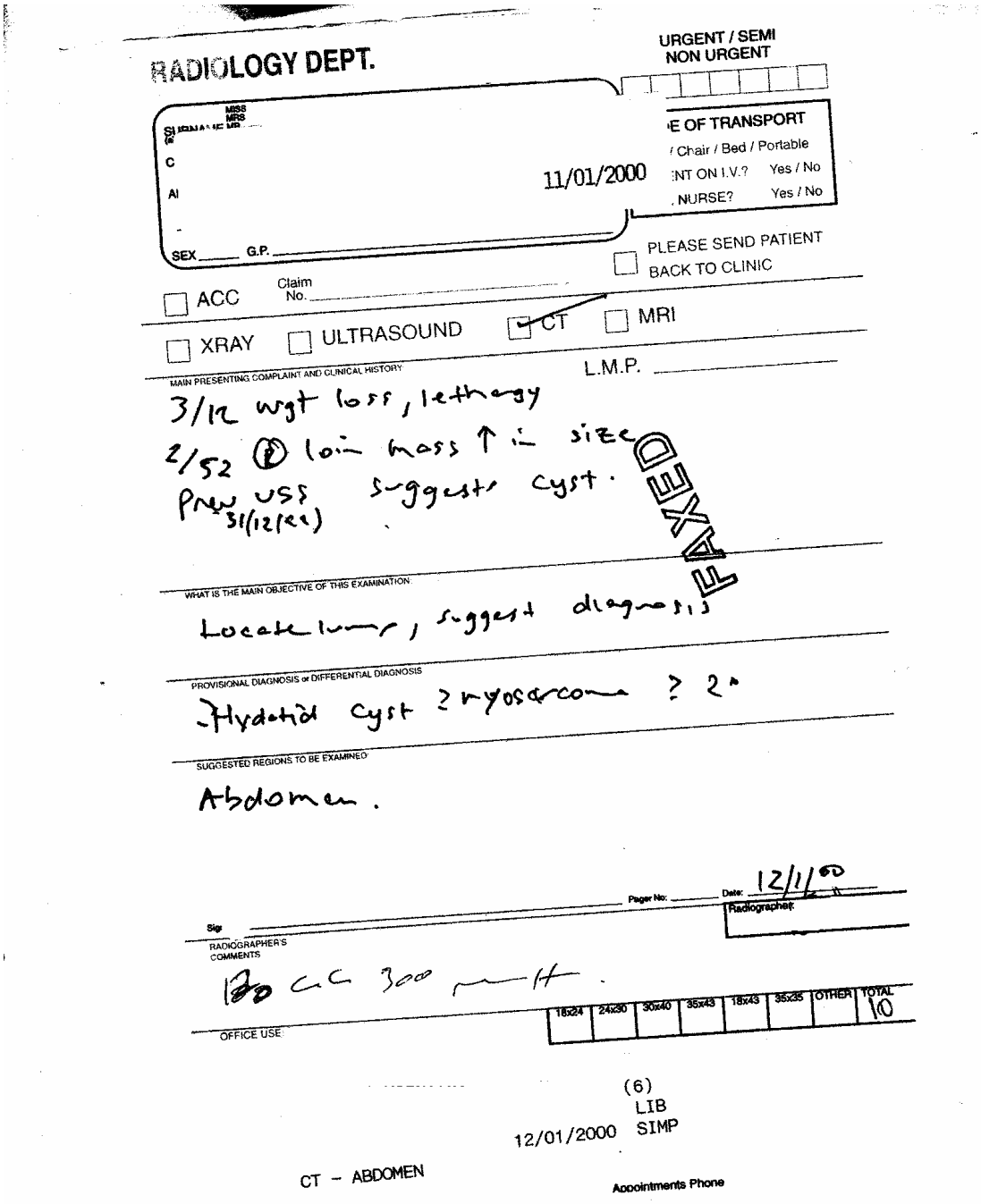
- Review its systems for effective communication of the responsible consultant during holidays or periods of sickness and in relation to internal transfer of patients.

Further actions

- A copy of this report will be sent to the Medical Council of New Zealand with a recommendation that the Council consider whether a competence review is warranted in relation to Dr I.

- A copy of this report, with personal identifying details removed, will be sent to the Chief Medical Advisors of all District Health Boards, and to the Royal Australasian College of Surgeons, and placed on the Health and Disability Commissioner's website, www.hdc.org.nz, for educational purposes.

Appendix 1



RADIOLOGY DEPT.

URGENT / SEMI
NON URGENT

MISS
MRS
MR

C

AI

11/01/2000

E OF TRANSPORT
/ Chair / Bed / Portable
NT ON I.V.? Yes / No
NURSE? Yes / No

SEX ____ G.P. ____

PLEASE SEND PATIENT BACK TO CLINIC

ACC Claim No. ____

XRAY ULTRASOUND CT MRI

MAIN PRESENTING COMPLAINT AND CLINICAL HISTORY

L.M.P. ____

3/12 wgt loss, lethargy
2/52 ⓟ loin mass ↑ in size
PNW USS 31/12/99 suggests cyst.

EXAMINED

WHAT IS THE MAIN OBJECTIVE OF THIS EXAMINATION

Locate lump, suggest diagnosis

PROVISIONAL DIAGNOSIS or DIFFERENTIAL DIAGNOSIS

Hydatid cyst ? myosarcoma ? 2°

SUGGESTED REGIONS TO BE EXAMINED

Abdomen.

Pager No: ____ Date: 12/1/00

Sig: ____ Radiographer: ____

RADIOGRAPHER'S COMMENTS

120 cc 300 mgH.

OFFICE USE

18x24	24x30	30x40	35x43	18x43	35x35	OTHER	TOTAL
							10

(6)
LIB
12/01/2000 SIMP

CT – ABDOMEN

Appointments Phone

Names have been removed to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.