General Surgeon, Dr B

General Surgeon, Dr C

A District Health Board

A Report by the

Health and Disability Commissioner

(Case 10HDC00950)

Table of Contents

Executive summary 1

Complaint and investigation 2

Information gathered during investigation 2

Opinion: Breach — Dr B 9

Opinion: Breach — Dr C 10

Opinion: No breach — The DHB 11

Recommendations 11

Follow-up actions 11

Appendix A — Record of Mr A's pain score and analgesia administered from admission to surgery 13

Appendix C — Expert nursing advice to the Commissioner 19

Executive summary

1. This case concerns the untimely surgical management of acute abdominal pain. Mr A presented to the Emergency Department (ED) at a public hospital in the evening of 26 October 2009, with new, sudden onset, severe pain in his longstanding inguinal hernia.[1] Intravenous morphine was given by ambulance staff and again in ED for pain rated 10/10 in severity.

2. Surgeon Dr B saw Mr A approximately two hours after the onset of his pain. Dr B made a diagnosis of a painful, irreducible hernia, which required surgery, but not as an emergency. Dr B admitted Mr A for observation overnight, and Mr A continued to report severe pain overnight, requiring morphine.

3. Care was handed over to Dr C, the on-call surgeon, at 8.35am the following morning. Dr C agreed with the diagnosis of irreducible hernia and operated on Mr A at 3.40pm that afternoon. During surgery, it was found that Mr A had a small bowel volvulus,[2] and over two metres of dead bowel was removed.

Findings

4. Although the diagnosis of volvulus may not have been expected, the doctors should have recognised that Mr A was suffering a major intra-abdominal insult that required emergency surgery.

5. Dr B's assessment of Mr A, and Dr B's decision to delay surgery until the next day, were inappropriate and a breach of Right 4(1)[3] of the Code of Health and Disability Services Consumers' Rights (the Code).

6. Dr C's failure to recognise that Mr A required urgent surgery was also a breach of Right 4(1) of the Code.

7. The DHB provided ED and nursing care of a reasonable standard, and emergency operating services were available for Mr A at all times if his surgeons had felt this was needed. The DHB was found not to have breached the Code.

---

[1] An inguinal hernia is a protrusion of a portion of intestine through the abdominal wall in the groin. "Reducible" hernias can be pushed back into the abdominal cavity by applying manual pressure. "Irreducible" or "incarcerated" hernias cannot be pushed back. Some incarcerated hernias are chronic and painless. Surgery is the only repair option to avoid potentially serious complications of bowel obstruction and strangulation.

[2] Abnormal complete twisting of a loop of small intestine, which can impair blood flow (ischaemia). A volvulus can lead to gangrene and death of the involved segment of intestine, intestinal obstruction, perforation of the intestine, and peritonitis. The symptoms and signs of a volvulus may include abdominal pain, nausea, vomiting, and blood in the stool. The treatment is surgery to free the obstruction and ensure normal blood flow to the bowel. A volvulus is a surgical emergency.

[3] Right 4(1) states: "Every consumer has the right to have services provided with reasonable care and skill.

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Complaint and investigation

8. The Commissioner received an anonymous complaint about the surgical services provided to Mr A at a District Health Board (the DHB). The complaint was supported by Mr A's family. An investigation was commenced on 4 November 2011, and the following issues were identified for investigation:

- *Whether surgeon Dr B provided Mr A with an appropriate standard of care on 26 and 27 October 2009.*
- *Whether the District Health Board provided Mr A with an appropriate standard of care from 26 October to 5 November 2009.*

9. On 4 April 2012 the investigation was extended to include the following issue:

- *Whether surgeon Dr C provided Mr A with an appropriate standard of care from 27 October to 5 November 2009.*

10. The parties directly involved in the investigation were:

Dr B	General surgeon
Dr C	General surgeon
The DHB	Provider DHB
Ms D	Complainant (consumer's daughter)

Also mentioned in this report:

RN E	Registered nurse
Dr F	General surgeon

11. Independent expert advice was obtained from general surgeon Dr Stephen Kyle and is set out in **Appendix B**. Expert nursing advice was obtained from HDC's in-house nursing advisor RN Dawn Carey and is set out in **Appendix C**.

Information gathered during investigation

12. At the relevant time, Mr A was a 79-year-old man who weighed 65kg and had a history of multiple medical complaints including hypertension, angina, benign prostatic hyperplasia, chronic renal impairment, small bowel angiodysplasia, transient ischaemic attacks, and mitral valve prolapse.

26 October 2009

Sudden onset abdominal pain

13. On 26 October 2009, Mr A was at home when, following his evening meal, he suffered a sudden onset of abdominal pain. An ambulance was called at 6.58pm and paramedics found him "lying in bed in obvious pain, pale, cold", nauseated, complaining of severe abdominal pain rated 10/10, and with a very tender abdomen

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

on palpation. Ambulance staff administered 10mg of intravenous morphine and transferred Mr A to hospital.

Emergency Department assessment

14. On arrival in the Emergency Department at 8.16pm, Mr A's pain was still rated 10/10. The ED doctor assessed Mr A at 8.20pm, and noted that he was in marked distress from a painful right-sided inguinal/scrotal swelling, which appeared to be a hernia. The ED doctor attempted to reduce the hernia manually under additional analgesia (Mr A received a further 9mg of intravenous morphine in boluses between 8.25pm and 8.45pm) but the manipulation was unsuccessful. Mr A's abdomen was tense and he had occasional bowel sounds. A provisional diagnosis of "incarcerated/?strangulated[4] ® inguinal hernia" was made and the on-call consultant surgeon, Dr B, was called to ED to assess Mr A.

Surgical assessment — Dr B

15. Dr B saw Mr A at 9.15pm. Dr B told HDC that Mr A presented with pain in a longstanding right-sided inguinal hernia; he denied any vomiting or nausea, had eaten a large dinner approximately an hour before coming to the ED, and had had a normal bowel movement earlier that day. Dr B found "an obvious right sided inguinal hernia, which was painful" but no clinical evidence of peritonitis[5] or bowel obstruction. Dr B attempted to reduce the hernia under sedation (5mg midazolam) in ED. This resulted in a size reduction of around 25%, but the hernia could not be completely reduced. Dr B advised:

> "At no time was there any clinical evidence or suspicion of strangulation and it was decided to admit him for overnight observation and reassessment the following morning, rather than attempt surgery at that time of night. My diagnosis was of a painful, irreducible hernia. An irreducible hernia is different to a strangulated hernia and it is accepted surgical practice for them to be operated on soon but not as an emergency.
>
> The absence of clinical evidence of strangulation is important here. He had no raised white cell count, no vomiting,[6] no absolute constipation, his abdomen was not distended and no signs of peritonitis or shock. It is important to distinguish between an asymptomatic, a symptomatic and a strangulated hernia. [Mr A's] hernia was symptomatic but not strangulated, and as a result there were no indications for urgent surgery."

16. Dr B further advised that "it is standard practice with an incarcerated or obstructed hernia to operate on the next available operating list".

---

[4] A "strangulated" hernia is an irreducible hernia in which the entrapped intestine has its blood supply cut off from pressure on the blood vessels as they pass through the constrictive inguinal canal. This is a surgical emergency as it can lead to gangrenous (dead) bowel.

[5] Inflammation of the membranous lining of the abdominal cavity (peritoneum) usually from infection, rupture of a hollow organ or abdominal trauma.

[6] Dr B advised HDC that Mr A denied vomiting. A nurse triage note states that Mr A vomited once after the onset of pain. Ambulance staff reported nausea but no vomiting in their transport documentation.

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

17. Dr B advised HDC that Mr A's co-morbidities made him a "high-risk" patient after hours, which might necessitate ICU admission post-surgery. However, Dr B advised that this was not a factor influencing his decision not to operate that night. He stated: "The decision was made because [Mr A] did not have a strangulated hernia requiring emergency surgical treatment." Dr B advised:

> "There were no other operations that night and so if I considered that there was clinical evidence of strangulation, I would have had no hesitation in calling the anaesthetist to discuss whether to operate [here] or to arrange for [Mr A's] transfer to [a larger centre]."

Overnight observation on surgical ward

18. At 10.45pm, Mr A was admitted to the surgical ward for analgesia and observation overnight. The surgical team's instructions were to keep him nil by mouth, monitor his fluid balance, and to call the on-call house officer for review if there was increased pain, an increased heart rate, a fall in oxygen saturation, or if his systolic blood pressure fell below 90mmHg (normal range 90–140mmHg).

19. The overnight nursing documentation records that Mr A required three further doses of intravenous (IV) morphine (totalling 18mg) at 10.45pm, 1.30am and 4.00am for pain rated 10/10 (see **Appendix A** for a record of Mr A's pain score and analgesia administered). The IV morphine was noted to have given Mr A temporary relief, reducing his pain to 6–7/10 and allowing him to "doze".

20. Nursing staff did not call for a medical review during the night. RN E stated that this was because analgesia was given as prescribed and appeared to be effective, and Mr A's recordings appeared to be within acceptable parameters.

27 October 2009

Ward round handover to Dr C — 8.35am

21. At 8.35am the next morning, Mr A was reviewed on the combined consultant ward round by Dr B and Dr C, the on-call surgeon for 27 October 2009. The ward nurse manager and house surgeon were also present.

22. The notes from the ward round record that Mr A was still "uncomfortable ++" but had gained some relief from a further 6mg of morphine. His pulse rate was 100 beats per minute and his blood pressure was 192/106mmHg. Dr B advised that Mr A's abdomen was reassessed and he did not appear to be in acute distress, and there was still no sign of shock or peritonism, and the team felt that he should proceed to surgery for repair of his hernia that day. Dr B stated: "None of the clinicians present at [Mr A's] assessment expressed an opinion that the surgery needed to be performed urgently that morning", although it would have been possible to perform an emergency case that morning, if it was felt necessary.

23. At that stage, Mr A's care was handed over to Dr C, who agreed to perform the surgery as the surgeon on acute call.

24. Dr C advised HDC that he was told by Dr B that Mr A had presented acutely the evening before with severe abdominal pain, nausea and vomiting; that the working

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

diagnosis was incarcerated inguinal hernia, which could not be completely reduced under sedation; and that Mr A had been admitted for overnight observation and definitive hernia surgery the next morning.

25. Dr C stated: "I had no idea about [Mr A's] clinical status then compared to the previous evening when he was admitted … I had no records/update at all about his progress during the previous night following admission." In response to the provisional opinion, Dr C stated: "None of us examined [Mr A] during the ward round but [Dr B] as far as I can recollect."

26. Dr C explained that Mr A was not scheduled to undergo surgery first thing that morning, as the case was a "routine hernia" operation, Mr A's condition was stable that day during the ward round, and two other operating theatres were being used.

27. The 8.45am nursing note records: "[P]atient writhing in pain. Pain 10/10. Given total 8mg IV morphine in 2mg increments from 0815hrs to 0845hrs. Pain remains intense still 10/10."

28. At 9.40am, the nurse recorded that Mr A had been seen by the anaesthetist and prepared for the operating theatre.

Surgery — 3.49pm

29. Dr C commenced Mr A's surgery at 3.49pm that afternoon, some 20 hours after the onset of Mr A's pain. Dr B was present as an observer at the operation as he had finished his scheduled operating list for the day.

30. On opening the abdomen, it was found that Mr A had a small bowel volvulus, involving 2.1m of dead small bowel, which had to be removed, including small bowel in his known hernia. Dr C explained that Mr A's pre-existing incarcerated hernia was not the primary cause of his acute pain, as originally suspected; rather, it was the volvulus (with ischaemic bowel).

31. Dr C stated: "There was no way that either [Dr B] or myself would have known the morning of 27th October 2009 that [Mr A's] abdominal pain was indeed due to small bowel ischaemia from volvulus rather than incarcerated right-sided inguinal hernia ... [Mr A's] operation was carried out at an appropriate time frame with the tentative diagnosis of incarcerated right-sided inguinal hernia ... If the initial clinical findings and diagnosis were anything other than an incarcerated inguinal hernia, then [Mr A] would not have waited for surgery as in this case."

32. However, with regard to Mr A's 26 October presentation, Dr C commented: "A fair tentative diagnosis would be incarcerated/obstructed inguinal hernia until proven otherwise. An attempt at reduction under sedation was done and was appropriate as well, but because his abdominal pain failed to resolve then surgery should have been carried out that evening." He also commented:

> "The idea of early surgical intervention is to prevent ischaemic strangulation bowel within the hernial sac if present. It is noted from the records that [Mr A] had a lot of abdominal pain that failed to settle satisfactorily with repeated doses of IV

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

> Morphine. With the presence of a painful irreducible inguinal hernia one would normally suspect pending ischaemic bowel or omentum as the content of the hernia sac, hence the urgency to proceed to timely surgery."

33. Regarding the timing of surgery on 27 October, Dr C told HDC that he was available for the surgery to be done when a theatre was available, and "[i]t was definitely not intentional to deliberately delay [Mr A's] operation that day". Dr C stated that the delay to surgery was based on theatre availability, theatre staff, anaesthetist availability, and the time taken to assess Mr A and for the laboratory to do routine blood tests.

34. Both the DHB and Dr C confirmed that, although there were two elective theatre lists running that day, there was an operating theatre[7] and staff available earlier for Mr A, as an acute case, if needed. However, Dr C emphasised to HDC that this would not have altered the operative findings. He stated:

> "[T]he golden opportunity to salvage the blood supply to the involved small bowel segment had already been missed by admitting and observing [Mr A] for 14 hours instead of operating on him earlier. It is very important to [note] that the catastrophic event of small bowel ischaemia did not wait to occur during the 7 hours of waiting time [from] the time of the ward round at 0830 till 1549hrs when the operation was performed."

Subsequent events

35. Postoperatively, Mr A required transfer to a larger hospital to manage his complications of coagulopathy and gastrointestinal bleeding. Sadly, Mr A died during a subsequent admission to hospital.

36. Dr B advised HDC that, as he recalled, a Mortality and Morbidity conference, attended by all surgeons and anaesthetists at the hospital, was held in the month following Mr A's death. Dr B stated that no issues were raised regarding the decisions made in Mr A's care.

37. Dr B told HDC that he has discussed Mr A's case at length with his consultant clinical colleagues, and "we are all of the same opinion, that unless there is definite evidence of strangulation in a patient of this age and with these comorbidities, that we would admit and reassess and place on the next available operating list". Dr B therefore advised HDC that he has not made any changes to his clinical practice since this complaint.

38. Dr B referred HDC to the 2009 European Hernia Society guidelines on the treatment of inguinal hernia in adult patients,[8] which state, in relation to symptomatic hernias:

[7] There are four operating theatres at the hospital. Theatres 2 and 4 had elective day lists running. Mr A's operation was the only case performed in Theatre 1, and the first acute case to be performed on 27 October 2009.

[8] See: http://www.herniaweb.org/fileadmin/downloads/library/EHS_Guidelines.pdf (accessed on 3 June 2013).

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

"Symptomatic inguinal hernias give rise to symptoms of discomfort and/or pain. Large hernias can give rise to cosmetic complaints. Symptomatic inguinal hernias are operated on electively to reduce complaints and/or to prevent complications. Non-reducible hernias without complaints of incarceration have a theoretically higher chance of strangulation."

39. Dr B also advised HDC:

"[T]here has been widespread world literature on out-of-hours surgery, including the CEPOD[9] report from the UK which quite clearly states that in elderly patients with multiple comorbidities operated on out of normal working hours by tired surgeons, anaesthetists and theatre staff, there is a very highly significant increase in operative morbidity and mortality."

40. Dr B provided HDC with an opinion on this case that he obtained from General Surgeon Dr F. Dr F opined that:

"[a] distinction can be made between a tense painful hernia with evidence of bowel obstruction (which would be operated on immediately), and an irreducible but soft hernia without evidence of obstruction (which would be operated on in a more elective setting). … [T]he presence of [Mr A's] hernia was something of a distraction in his management, in that if it appeared clinically to be soft and non-strangulated a non-operative approach would be felt justified when in fact there was a more serious pathology developing within the abdomen."

41. Dr F also opined that while, in hindsight, it was not appropriate to observe Mr A on the evening of 26 October, rather than operate:

"[Mr A] was a 79 year old man with multi-system comorbidities for whom any surgery was considered 'very high risk'. It is recognised that outcomes from surgery late at night are materially worse, and there is an increasing move to operate on acute cases in working hours when possible … [Mr A's] observations on admission were satisfactory and the recorded findings of his abdomen do not suggest that he was in extremis."

42. Dr F further opined:

"[Mr A] had been in pain through the night, and his observations were deteriorating with increasing heart rate. He was complaining of '10/10' pain at 0845hrs. A non-operative approach was not appropriate from the point of his review in the morning, and [Mr A] should have been operated on as soon as possible, over any scheduled elective work."

43. The DHB has reviewed and changed its acute case theatre booking form to provide a clearer timeframe for the proposed surgery; the surgeon now must specify if surgery is needed within one, six, 24, or 48 hours.

44. The DHB also advised that in August 2010, although not as a direct result of this case, the Modified Early Warning Score (MEWS) Procedure and Observation chart was

[9] National Confidential Enquiry into Perioperative Deaths (see: http://www.ncepod.org.uk).

HDC

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

introduced throughout the adult inpatient areas of the DHB. The purpose of MEWS is to ensure recognition and early intervention for deteriorating patients.

Responses to the provisional opinion

Dr B

45. Dr B submitted that the provisional findings were too influenced by hindsight bias. He stated: "The situation that faced [me] on the evening of 26 October 2009 presented no definitive evidence of acute intra-abdominal pathology." Dr B provided HDC with a further opinion from Dr F, which states:

> "Bear in mind that [Dr B] was seeing [Mr A] 'early' in the evolution of his presentation ie at the two-hour mark. Add to that a confounding clinical finding of (ultimately non-strangulated) painful hernia, in a man with multiple severe medical comorbidities which made surgery highly risky … at night, and you have a difficult clinical challenge. Hindsight is very clear vision indeed …"

46. Dr B also reiterated his earlier comments to HDC that emergency surgery would not have been appropriate in this case, because of Mr A's age, because he had a full stomach, and because of his significant cardio-respiratory and renal comorbidities.

Dr C

47. Dr C stated that he agrees that standard practice for an irreducible acutely painful hernia is to arrange urgent surgery, and that strangulation can never be excluded on clinical grounds alone. He stated that a surgeon should not wait for bowel strangulation to exist before operating on an incarcerated inguinal hernia because "the whole idea of prompt early surgery is not to diagnose ischaemic bowel but to prevent it". Dr C noted that surgery was the right option for Mr A, and should have been carried out on the evening of 26 October 2009.

48. Dr C stated: "In the combined ward round the morning of October 27th 2009, all attending surgeons … agreed that surgery was indicated given [Mr A's] clinical status that day". With regards to the decision about the level of urgency that should have been attached to Mr A's surgery at that time, Dr C submitted: "We were all relying on [Dr B's] reassessment of [Mr A's] condition as he was the only surgeon who had seen him before." Dr C stated:

> "[Mr A] was reviewed by the surgical team the morning of admission and the only person who could have given the best assessment of his clinical status then was [Dr B] as he was the only one … who had seen him the previous evening. It was agreed that surgery was indicated not as an urgent case but as an 'obstructed inguinal hernia' operation. … [H]ad [Dr B] advised immediate surgery, then it would have been done earlier."

49. Dr C stated: "I again maintain that the time frame for [Mr A's] surgery [on] October 27th 2009, was appropriate." Dr C stated: "[T]he timing of surgery that day was totally irrelevant and a delay of 7hrs or so would not have prevented the final outcome of a major small bowel resection."

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Opinion: Breach — Dr B

50. In accordance with Right 4 of the Code, Mr A had the right to services of an appropriate standard. The issue as to whether Dr B provided services "with reasonable care and skill"[10] rests on whether his assessment of Mr A, and his decision to admit Mr A for overnight observation on 26 October 2009, rather than operate as an emergency, were appropriate. In considering this issue, I have obtained independent expert advice from general surgeon Dr Stephen Kyle.

51. Dr Kyle advised that Dr B's initial diagnosis of an acutely painful irreducible hernia was entirely reasonable, but that Dr B's response to that diagnosis was not reasonable. Dr Kyle advised that standard practice for an acutely painful irreducible hernia, as in Mr A's case, would be to arrange urgent surgery because the symptom of acute pain may suggest that the bowel contained in the hernia is undergoing strangulation, and prompt surgery can resolve this or reduce the risk of potential complications. Dr B does not dispute that, in the presence of a strangulated hernia, urgent surgery is required. However, he advised that in the case of an irreducible hernia (without strangulation) it is accepted surgical practice to operate "soon but not as an emergency". Dr B argued that although Mr A had an irreducible hernia, which was "painful" and "symptomatic", there was no sign of strangulation because there was no vomiting, constipation, abdominal distension or any sign of peritonitis or shock. Dr B advised that emergency surgery was therefore not indicated. Dr B also submitted that emergency surgery would not have been appropriate in this case because of Mr A's age, full stomach, and co-morbidities.

52. Dr Kyle noted that the lack of clinical evidence of bowel obstruction or peritonitis at the time of Dr B's review does not preclude the presence of a strangulating hernia "in this time frame". Dr Kyle advised that small bowel ischaemia can be difficult to diagnose on clinical grounds in the early stages, and "it is well known in the early stages pain can be out of keeping with the clinical signs". Dr Kyle stated: "With the dramatic severe pain [Mr A] experienced in his hernia strangulation should have been considered and could only reasonably be excluded by surgical exploration." Dr Kyle further advised that it is not standard practice to leave an acutely painful irreducible hernia to "the next available list", as Dr B has submitted.

53. It appears that Dr B may not have appreciated the severity and significance of Mr A's pain. However, the acute onset and severe nature of Mr A's pain is evident from the ambulance and ED records. Mr A required multiple doses of IV morphine to relieve pain rated as 10/10 in severity at 7.35pm and 8.25pm. By the time Dr B saw Mr A at 9.15pm, he had already received 19mg of morphine, given over a 70-minute period. I agree with my expert that, for a man of 65kg to require this amount of morphine, he must have been in severe pain.

54. I have considered Dr B's submissions in response to the provisional opinion. However, I accept Dr Kyle's advice and remain of the view that when Dr B examined Mr A at 9.15pm, two hours after onset of his pain, the diagnosis of painful irreducible hernia should have prompted Dr B to arrange urgent surgery for Mr A. Dr B should

[10] As required by Right 4(1) of the Code.

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

have recognised that Mr A was suffering a major intra-abdominal insult that required emergency surgery, given the sudden, new, severe nature of Mr A's pain. Accordingly, Dr B's plan to admit Mr A for observation was inappropriate, and I find that Dr B's assessment of Mr A and subsequent decision to delay surgery breached Right 4(1) of the Code.

Opinion: Breach — Dr C

55. Dr C took over Mr A's care at 8.30am on 27 October 2009. Dr C performed Mr A's surgery at 3.49pm. I am satisfied that the surgical procedure itself, and the postoperative care provided to Mr A by Dr C, were adequate. The issue is whether Dr C's assessment of Mr A and his subsequent failure to operate for 7½ hours were reasonable in the circumstances.

56. When care was handed over to Dr C on the morning ward round on 27 October, he was informed of Dr B's clinical diagnosis of incarcerated hernia. Dr C was present during the ward round assessment of Mr A, and agreed with this diagnosis. Dr C advised HDC that Mr A's condition was stable and his surgery was scheduled as a routine hernia.

57. At the time of his review of Mr A on the morning of 27 October, it should have been clear to Dr C that Mr A had suffered ongoing pain of severity 10/10 throughout the night, requiring repeated doses of intravenous morphine. I accept my expert's advice that, given the nature of Mr A's pain, "it is clear a significant abdominal insult was occurring", and that Mr A's history and presentation were not consistent with a routine hernia. On the one hand, Dr C has agreed that standard practice for an irreducible acutely painful hernia is to arrange urgent surgery and that Mr A's surgery should have been carried out on the evening of 26 October 2009. On the other hand, Dr C has submitted that the timeframe for Mr A's surgery on 27 October 2009 was appropriate. I have considered Dr C's submissions in response to the provisional opinion, but remain of the view that Dr C failed to recognise that Mr A's condition and diagnosis of an acutely painful irreducible hernia meant that he required urgent surgery. Accordingly, I find that Dr C breached Right 4(1) of the Code.

58. Despite Dr C's claim that he received no update about Mr A's progress on the morning of 27 October, and that he was relying on Dr B's assessment of Mr A, this information was clearly documented in the clinical notes and was available to Dr C on the ward round. As my expert commented, "[h]andover of care requires both a responsibility of quality delivery and a responsibility of quality acceptance". I remain of the view that, as the surgeon accepting responsibility for Mr A's care, the onus was on Dr C to ensure he had all relevant information before formulating an appropriate management plan. Reading the notes and talking with the patient are basic elements of quality care.

59. It is not clear why Mr A's surgery did not take place earlier than 3.49pm on 27 October, as an operating theatre and operating staff were clearly available. While the

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

delay in surgery on 27 October may not have altered the outcome in this case, I accept Dr Kyle's advice that Dr C's management should have been more proactive.

Opinion: No breach — The DHB

No direct or vicarious liability

60. I have no concerns about the standard of nursing or ED care provided to Mr A at the DHB. The clinical record appears detailed and complete. During the night of 26 October 2009, when Mr A continued to report 10/10 pain, nursing staff on the surgical ward did not call for medical review. However, I note that the nursing staff appropriately followed the instructions documented by Dr B. Mr A's reported pain improved after morphine, and his recorded observations remained within the clinical parameters set by the doctors. My in-house Clinical Nursing Advisor, Dawn Carey, advised me that the nursing care provided to Mr A on the evening of 26/27 October was of an appropriate standard, and I accept her advice.

61. I also accept that the DHB had provision for emergency surgery at all times during Mr A's admission. The diagnostic and management decisions made by Dr B and Dr C were based on their individual clinical judgement as consultant surgeons. Therefore, I do not find the DHB liable for the failings in Mr A's care.

Recommendations

62. I recommend that Dr B provide this Office with a letter, apologising to Mr A's daughter, Ms D, for his breach of the Code, by **10 July 2013**, for forwarding to her.

63. I recommend that Dr C provide this Office with a letter, apologising to Mr A's daughter, Ms D, for his breach of the Code, by **10 July 2013**, for forwarding to her.

64. I propose to write to the Medical Council of New Zealand and recommend that it consider conducting a review of Dr B's and Dr C's competence.

Follow-up actions

- A copy of this report with details identifying the parties removed, except the experts who advised on this case, will be sent to the Medical Council of New Zealand and the Royal Australasian College of Surgeons, and they will be advised of Dr B's and Dr C's names.

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

- A copy of this report with details identifying the parties removed, except the experts who advised on this case, will be placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Appendix A — Record of Mr A's pain score and analgesia administered from admission to surgery

Time	Pain score out of 10	Analgesia given
26 October		
1935	10	10mg morphine iv
2025	10	3mg morphine iv
2035		4mg morphine iv
2045		2mg morphine iv
2220		2mg morphine iv
27 October		
0130	10	2mg morphine iv
0135	10	
0140	10	2mg morphine iv
0145	10	
0150	10	2mg morphine iv
0155	9	
0200	8	2mg morphine iv
0210	6-7	
0400	10	2mg morphine iv
0405	10	
0410	10	2mg morphine iv
0415	10	
0420	9	2mg morphine iv
0425	9	
0430	8	2mg morphine iv
0815	10	2mg morphine iv
0820	10	2mg morphine iv
0830	10	2mg morphine iv
0835	10	
0845	10	
0850	10	2mg morphine iv
1115		5mg morphine elixir

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Appendix B — Independent surgical advice to the Commissioner

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

"***Purpose of report:***

To provide to the Commissioner, preliminary independent advice regarding [Mr A's] care during his admission to [a public] Hospital in October 2009.

Introduction:

I have been requested to provide advice in the knowledge that I am a Provincial Consultant General Surgeon who regularly manages acute General Surgical conditions.

For the purpose of providing advice, I have reviewed:

1. Complaint letter from […], pages 1–4.
2. Responses from [Dr B] (16 November 2010, 12 July 2011), pages 5–8.
3. The DHB clinical records from [Mr A's] 26 October 2009 admission, pages 9–220.
4. HDC phone record with [Ms D], 21 September 2011, page 221.
5. Response from the DHB (29 November 2011, 15 June 2012), pages 223–254.
6. Responses from [Dr C] (email 7 April 2012, letter 5 April 2012, email 8 April 2012), pages 255–264.
7. Responses from [Dr B] (7 December 2011, 18 July 2012), pages 265–275.
8. Guidelines for Independent Advisors.

Background provided by Commissioners Office:

On 26 October 2009, [Mr A] (now dec) aged 79 years, developed sudden onset abdominal pain at 7pm, following his evening meal. He presented via ambulance to [the public] Hospital A&E in marked distress, rating his pain at 10/10.

[Mr A] was seen by surgeon, [Dr B], at 9.15pm. [Dr B's] impression was of an incarcerated right inguinal hernia, without evidence of bowel obstruction or peritonism. Following an unsuccessful attempt to reduce the hernia under sedation in A&E, [Dr B] decided to place [Mr A] on the next day's acute theatre list, and [Mr A] was admitted overnight for observation and pain relief.

Overnight nursing notes record [Mr A] required 3 doses of morphine (2 hourly) for pain rated 10/10 with moderate relief.

[Mr A] was seen again by [Dr B] at 8.35am the next morning on the consultant ward round. At this time, his care was handed over to [Dr C], the on-call surgeon for 27 October 2009. The decision was made to proceed to reduction and repair of the hernia that day.

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Surgery was commenced at 3.49pm that afternoon (18 hours after onset of pain). It was the first operation of the day in the acute operating theatre. The DHB has advised that there was a theatre and staff available earlier, if needed.

At laparotomy, [Dr C] found approximately 8ft of ischaemic small bowel related to volvulus of the terminal ileum. This was resected, anastomosis made, and the hernia repaired.

[Mr A's] post-operative course was complicated by bleeding and coagulopathy, and he was transferred to [a larger] Hospital on 5 November 2009 (the care provided at [this hospital] is not subject to the HDC investigation).

Complaint:

- Whether surgeon [Dr B] provided [Mr A] with an appropriate standard of care on 26 and 27 October 2009.
- Whether surgeon [Dr C] provided [Mr A] with an appropriate standard of care from 27 October to 5 November 2009.
- Whether [the DHB] provided [Mr A] with an appropriate standard of care from 26 October to 5 November 2009.

Questions raised by the Commissioner:

Please advise on the appropriateness of care provided to [Mr A] by [the DHB] and individual surgeons, [Dr B] and [Dr C], during his admission from 26 October to 5 November 2009.

In your review of the care provided, please also comment specifically on:

1. *The reasonableness of [Dr B's] assessment and clinical decision-making regarding the timing of [Mr A's] surgery ie, to wait until the next day's acute list.*

[Mr A] presented by ambulance to [the DHB] on the 26/10/09 at 2016 hours, having developed severe right inguinal and right-sided scrotal pain (10/10 on Ambulance report) around1900 hours. He was a small man at 65 kg and was given Morphine 10 mg iv by the ambulance officers. He was given a further 9 mg of iv morphine by 2045 hours in increments for analgesia in the Emergency Department. It would seem obvious he was in very severe pain.

[Mr A] was diagnosed as having an acutely painful large irreducible right inguinal hernia. He had been known to have a long-standing right inguinal hernia, however the acute pain was a dramatic new event. [Dr B] examined [Mr A] at 2115 hours and found no clinical evidence of bowel obstruction or peritonitis at that time. This does not preclude the presence of a strangulating hernia in this short time frame. An attempted manual reduction of the hernia following iv Midazolam failed.

Standard practice for an irreducible acutely painful hernia would be to arrange urgent surgery. The concern is always that the contents of the hernia are undergoing strangulation, which can be resolved or potential complications

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

reduced by prompt surgery. [Dr B] states in his response that there was no sign of strangulation, certainly with the dramatic severe pain [Mr A] experienced in his hernia strangulation should have been considered and could only reasonably be excluded by surgical exploration.

It is not at all standard to leave an acutely painful irreducible hernia to 'the next available list' as [Dr B] describes.

[Mr A] had in fact a small bowel volvulus with around eight feet of strangulating small bowel within his abdomen including small bowel in his known hernia. Small bowel ischemia can be very difficult to diagnose on clinical grounds in the early stages. It is well known in the early stages pain can be out of keeping with the clinical signs. His hernia contained a segment of the strangulating bowel and would have become very tender. The initial diagnosis of an acutely painful irreducible (hence potentially strangulating) hernia was entirely reasonable, the inaction was not.

I would regard not proceeding to urgent surgery based on the presumed diagnosis as a moderate departure from accepted practice. [Dr B] has confused standard management of symptomatic inguinal hernias in the elective setting with the emergency management of acutely painful non-reducible hernias. There is a trend to support where reasonable emergency cases overnight to manage during daylight hours. Actual or potential cases of strangulated bowel require more urgent attention.

2. *The reasonableness of the 26 October management plan and care provided by the DHB on the ward overnight.*

[Mr A] was managed on a surgical ward with instructions for House Surgeon review should he have increasing pain or his recordings deteriorate. His pain was significant, requiring further doses of Morphine and at 0400hrs his pain was described as being 10/10. As the management plan did not include urgent surgery, the management plan was inadequate. Further Surgical assessment should have occurred when his pain deteriorated. I would regard this as a moderate departure from standard practice.

3. *The appropriateness of [Dr C's] decision-making regarding timing of surgery (after hand-over of [Mr A's] case to him on the 27 October ward round).*

It was clear in the morning of 27/10/09 that [Mr A] had experienced severe pain through the night and required surgery, which ideally would have occurred promptly following any required resuscitation. Operating theatres were potentially available that morning; hence he should have had his surgery earlier than 1549 hours when it eventually occurred.

Hand over of care requires both a responsibility of quality delivery and a responsibility of quality acceptance to ensure the optimal clinical information and plan is relayed, understood and acted upon. A combined round as happened that

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

morning with the notes available and both Surgeons being able to examine the patient is probably the best way to achieve this.

Despite having the benefit of hindsight, it is clear a significant abdominal insult was occurring. The presumptive diagnosis remained. He needed a prompt anaesthetic assessment, resuscitation as required and proceeding to surgery.

His nursing notes state he had his anaesthetic assessment by 0940. The assessment states he was not able to communicate because of pain and there did not seem to be any particular resuscitative measures required before surgery.

Theatres were potentially available that morning. Surgeons have to show leadership and be prepared to advocate to anaesthetists, theatre staff and colleagues to allow urgent cases prioritisation and expedient care.

I believe by not being more proactive [Dr C's] management would be a mild departure from standard practise. The delay was only realistically a few hours at most, as with the best of endeavours it often takes a couple of hours at least to get a patient to theatre.

4. *The significance/effect of the timing of [Mr A's] surgery on his clinical outcome.*

I totally accept the decision to operate early in a patient with small bowel volvulus can be extremely difficult. Within a few hours it should be apparent that a major intra abdominal event has occurred. In [Mr A's] case the presumptive diagnosis remained of a very painful irreducible inguinal hernia, which should have led to early surgery. Possibly if [Mr A] had surgery within a few hours of onset of his symptoms the volvulus could have been discovered at a reversible stage negating any resection. Having extensive small bowel infarction such as this carries an enormous physiological insult. Without surgery I doubt whether he would have survived another 12 to 24 hours. As each hour passes there is more physiological disturbance, which adds to the difficulty of recovery and potential for complications.

5. *The appropriateness of post-operative care provided to [Mr A] by the DHB and [Dr C] until his transfer to [a larger hospital].*

[Mr A's] postoperative care was not surprisingly complicated, though managed entirely satisfactorily by [Dr B] and [Dr C].

6. *Are there any aspects of the care provided by [Dr B], [Dr C], or the DHB, that you consider warrant additional comment?*

No

Mr Stephen Kyle
Date: 13.8.2012"

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

On 1 February 2013, Dr Kyle was asked to advise whether, if [Dr C] did not recognise the need to refer [Mr A] for urgent surgery based on the presumptive diagnosis, he would consider that a departure from satisfactory care. Dr Kyle provided the following further expert advice:

> "A 'routine hernia' does not get admitted by ambulance and have the recorded observations that [Mr A] had.
>
> I find the overall assessment and inaction by [Dr B] and [Dr C] on the face of it incompetent. However I must accept that the review is in hindsight and I was not there so have tempered my criticism.
>
> I would regard [Dr C's] assessment as inadequate with at least a mild if not moderate departure from standard practice."

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Appendix C — Expert nursing advice to the Commissioner

The following expert advice was obtained from in-house Nursing Advisor RN Dawn Carey:

"1. Thank you for the request that I provide clinical advice in relation to the complaint from an anonymous complainant […] concerning the care provided to the late [Mr A] whilst he was an in-patient at [a public] Hospital. I note that the anonymous complaint is supported by [Ms D], daughter of [Mr A]. In preparing the advice on this case to the best of my knowledge I have no personal or professional conflict of interest. I have read and agree to follow the Commissioner's Guidelines for Independent Advisors. I have been asked to specifically advise on the appropriateness of nursing care provided to [Mr A] by [RN E] on 26–27 October 2009.

I have reviewed the information on file: [complaint]; responses from [the DHB]; response from [RN E]; [public hospital] clinical notes; [larger hospital] clinical notes; correspondence between [Ms D] and HDC.

2. The complaint from […] relates to the [long] delay encountered between [Mr A's] presentation to [the public hospital] with abdominal pain on 26 October 2009 and his eventual surgery. The nursing aspects within the complaint relate to the failure to address [Mr A's] poor response to high doses of intravenous morphine and the failure to seek a timely surgical review.

3. On 26 October 2009 at 9.15pm, [Mr A] was seen in the ED by [the public hospital] Surgeon, [Dr B]. [An on-call house surgeon (OCHS)] is the scribe for this assessment. [The OCHS] records that [Mr A] was presumed to have a *right sided inguinal hernia, incarcerated. Attempted reduction under sedation (5mg midazolam) — initially unsuccessful. Will review later — Reviewed at 9.30pm — hernia reduced in size.* Clinical observations are recorded as *BP 157/76, HR 90* SpO_2 *90% (post midazolam).*

The documented plan is to *admit, nil per mouth, IV fluids, monitor urine output, fluid balance, analgesia. If ↑ pain, HR, ↓*SaO_2 *or ↓BP<90 — call OCHS for review.* [Mr A's] analgesia prescription included *morphine 1mg–2mg* at a minimal interval of *5 minutes* with a *maximum dose of 10mg over one hour* and *paracetamol 1g po q4.*

Comment: At the documented time of surgical assessment, [Mr A] had received a total of 19mg morphine intravenously (IV) — 10mg pre hospital — and 5mg midazolam IV. There is no documentation concerning pain assessment during his surgical review. Prior to transfer to [the] ward, [Mr A] was given a further 2mg morphine IV at 10.20pm. As there is only one documented pain score recorded by ED nursing staff — 10/10 at 8.25pm — it is difficult to evaluate the trend of [Mr A's] responsiveness to the administered analgesia whilst in ED. There is also no documented tally of the

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

total amount of IV analgesia [Mr A] had received prior to his admission to the ward.

Documenting and discussing the total administered analgesia and the patient's response facilitates transfer of care across departments. Whilst I acknowledge that administered medications are a usual, typical feature of nursing handover, documenting it means an accurate synopsis of patient care is available to colleagues on subsequent shifts. I note that [RN E] commenced her night shift shortly after [Mr A] was admitted to [the] ward. The nursing admission documentation at 10.45pm reports *…fairly comfortable on ward post morphine and midazolam in A&E…* I presume that this was the information that was handed over to [RN E].

4. In her response, [RN E] reports that [Mr A] was one of her allocated patients on her night shift on 26 October 2009. Her response was written almost two years after nursing [Mr A], which she acknowledges impacts on her recollection of the night in question. [RN E] does not recollect [Ms D] or [Mr A] raising *any particular concerns with me over my duty. I have documented that his daughter remained with him during the night and had there been any concerns raised with me I would have documented them (as is my usual practice) and would have done everything possible to address them…*She also reports that *[Mr A's] condition was observed and monitored…and medication was given in accordance with the written medication order by the duty RMO…and the resulting effectiveness of it noted. [Mr A's] pain appeared to decrease and he appeared to become more comfortable and was noted to be dozing for a time after the analgesia was given. Recordings taken…appeared to be within acceptable parameters.*

5. The clinical notes completed by [RN E] are detailed; 11.30pm *trying to settle, some discomfort but dozing.* 12am *Daughter remains present.*1.30am *PO Panadol 1gm given, becoming more distressed. IV morphine as per orders — total 8mg given, recordings stable throughout.* 2am *more settled, pain level 6/10 and now dozing.* 2.30am *now appears settled and comfortable. IDC draining.* 3.30am *appears to be settled at the moment.* 4am *Woke, feels pain 10/10. IV morphine given — total 8mg.* 4.30am *Pain level 7/10, has become more settled and comfortable. Recordings stable.* 6.15am *SB duty RMO. IV fluid rate altered to 125mls/hr. General = R/V am, NNO* (nothing new ordered). 6.50am *Daughter remains.*

   The [public hospital] IV Narcotic Bolus Recording Sheet records the instances of morphine administration, [Mr A's] pain scores and clinical observations.

   Comment: The administration of morphine and [Mr A's] recorded observations between 11.30pm and 4.35am fits within the clinical parameters set by [Dr B] and documented by [the OCHS]. Accepting that peak analgesia occurs 20 minutes after IV administration the reported pain scores trends do not appear of concern.

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

The 6.15am review by duty RMO was not accompanied with any new orders or concerns raised. Whilst there is not a documented entry within the clinical notes by the RMO for this time, I can see no reason to doubt the veracity of [RN E's] contemporaneous entry. I note that when [Mr A] was later reviewed at 8.35am he was assessed as BP 192/106, *uncomfortable* ++...

This hypertensive state and pain is corroborated by the RN entry *Pt writhing in pain…given total 8mg IV morphine in 2mg increments from 8.15am to 08.45am. Pain remains intense still 10/10.*

Comment: In the absence of evidence to the contrary I consider that [Mr A] was gaining relief from the administered morphine analgesia up to a time period between 6.50am and 8.15am.

6. As a RN peer I consider the nursing care provided by [RN E] to [Mr A], on 26–27 October 2009 to be of an appropriate standard of nursing care.

Dawn Carey (RN PG Dip)
Nursing Advisor
Health and Disability Commissioner
Auckland."

Names have been removed (except the experts who advised on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.