HEALTH & DISABILITY COMMISSIONER
TE TOIHAU HAUORA, HAUĀTANGA

A Decision by the Health and Disability Commissioner (Case 21HDC02106)

Introduction

1. This report concerns a referral from the Coroner and a complaint from Mr A about the care provided to Mr A's late wife, Mrs A, by Health New Zealand | Te Whatu Ora (Health NZ) Wairarapa.[1] In addition, the report comments on the care provided by surgeon Dr D, general practitioner (GP) Dr C and Health NZ Capital, Coast and Hutt Valley. My sincere condolences go to Mr A and his family for their loss.

2. The following issue was identified for investigation:

- *Whether Health New Zealand | Te Whatu Ora Wairarapa provided Mrs A with an appropriate standard of care between 1 July 2021 and DayC August 2021.*

3. The parties directly involved in the investigation were:

Mr A	Complainant/husband
Ms B	Daughter
Health NZ Wairarapa	Provider
Dr D	Provider/surgeon
Health NZ Capital, Coast and Hutt Valley	Non-subject provider
Dr C	Non-subject provider/GP

4. Also mentioned in the report is the local medical centre […], medical oncologist Dr F and surgeon Dr E.

5. Independent clinical advice was obtained from general surgeon Dr Mike Hulme-Moir (Appendix A) and medical oncologist Dr Orlaith Heron (Appendix B). In-house clinical advice was obtained from GP Dr David Maplesden (Appendix C).

6. Health NZ Wairarapa completed an Event Review Report (ERR), which is discussed in this report. The recommendations are included in Appendix D.

7. Further information was obtained from the Coroner.

[1] On 1 July 2022, the Pae Ora (Healthy Futures) Act 2022 came into force, which disestablished all district health boards. Their functions and liabilities were merged into Te Whatu Ora | Health New Zealand (now called Health New Zealand | Te Whatu Ora).

Information gathered during investigation

Introduction

8. In May 2021, Mrs A underwent investigation for rectal bleeding and was ultimately diagnosed with locally advanced colorectal cancer. She commenced chemotherapy on 5 August 2021. About seven days post-chemotherapy, Mrs A presented to Wairarapa Hospital's Emergency Department (ED) with severe abdominal and rectal pain. Subsequently, she later deteriorated and passed away in the process of transfer by helicopter to Wellington Hospital.[2]

9. Following her death, Mr A raised several concerns about the standard of care Mrs A received, including whether her cancer diagnosis was delayed, whether a bowel perforation was considered by Health NZ as a cause of Mrs A's deterioration in August 2021, and whether she received an appropriate standard of care in the days leading up to her death.

Primary care management

10. Approximately a year prior to her death on 3 August 2020, Mrs A, then aged 54 years, contacted her local medical centre, […] after experiencing rectal bleeding. She was examined at the local medical centre on 5 August 2020 by her GP, Dr C,[3] who talked to Mrs A about her colorectal symptoms. Dr C recorded that there had been no changes in Mrs A's bowel pattern and there was no family history of colorectal cancer. Dr C then completed a proctoscopy[4]and a digital rectal examination (DRE), which showed no palpable masses. No abdominal examination was completed. Following the examination, Dr C diagnosed Mrs A with internal haemorrhoids[5] and prescribed a topical ointment. The local medical centre stated that this was the first presentation of rectal bleeding and haemorrhoids recorded at the practice.[6] Dr C did not document any safety-netting advice provided to Mrs A. However, Dr C stated that she is 'confident' that she provided her usual advice to return to the local medical centre if the bleeding did not stop within four weeks.

11. Approximately six months later[7] (on 2 February 2021), Mrs A telephoned her local medical centre and spoke to a nurse about a recent flare-up of haemorrhoids and rectal bleeding. She was provided with a repeat prescription of topical ointment and advised to contact the local medical centre if the symptoms did not settle down within a week. Dr C told HDC that

[2] Health NZ stated that the Acute Service at Wairarapa Hospital consists of the ED and the High Dependency Unit (HDU). However, the tertiary provider of Intensive Care Unit (ICU)-level care is based at Health NZ Capital, Coast and Hutt Valley, and the transport of critically unwell patients is managed by the Wellington Life Flight Retrieval Service.

[3] Dr C told HDC that she booked Mrs A for an examination during her admin/break slot on 5 August 2020, as there were no available appointments that week.

[4] A medical procedure that uses a proctoscope (a thin, tube-like instrument with a light and lens) to examine the inside of the rectum and lower part of the colon.

[5] Swollen veins in the anus and lower rectum that can cause pain, itching, and bleeding.

[6] The local medical centre noted that clinical records from Mrs A's previous GP had been imported, a review of her medical history and clinical observations had occurred during a new patient appointment on 11 July 2019, and a medication review and consultation had occurred on 26 July 2019.

[7] Mrs A attended another (unrelated) appointment on 3 December 2020. Dr C stated that during this appointment Mrs A did not mention experiencing any further bleeding.

she did not ask Mrs A to come into the practice for a further review, as she had seen a haemorrhoid at the initial consultation and considered that this was the source of the bleeding (noting that previously Mrs A's bleeding had settled in response to the treatment in August 2020).

12. On 20 May 2021, Mrs A contacted the local medical centre about further rectal bleeding. A nurse practitioner completed an examination. No haemorrhoids and no bleeding site were evident during the proctoscopy, and the DRE was reported as normal. Blood tests were also unremarkable. Mrs A's weight was recorded, but the documentation at this point does not indicate whether she had any symptoms of weight loss. After examining Mrs A, the nurse practitioner completed a referral for a colonoscopy (as there was no clear cause for the ongoing bleeding).

Cancer diagnosis

13. On 30 June 2021, Mrs A underwent a private colonoscopy, which identified a low rectal tumour.[8] Following a colorectal multidisciplinary meeting (MDM) on 9 July 2021, the surgical team proposed that Mrs A undergo chemotherapy to shrink the tumour before surgery (called total neoadjuvant therapy). A PET-CT scan[9] on 20 July 2021 confirmed local lymph node enlargement and likely pulmonary metastases (spread of the cancer to the lungs).

14. Medical oncologist Dr F discussed the PET-CT scan and colonoscopy findings and the proposed treatment plan with Mrs A during an appointment on 21 July 2021. Dr F was in favour of proceeding with the total neoadjuvant therapy, and she proposed the use of the chemotherapy regimen Folfirinox,[10] noting that Mrs A was 'fit enough to withstand the side effects of this approach'. It is documented that Dr F discussed that this approach was associated with an improved disease-free survival rate and a metastases-free survival rate[11] (when compared with the previously used standard approach[12]) and that the chemotherapy would be delivered through a PICC line.[13] In addition, Dr F considered that Mrs A required a defunctioning stoma (colostomy)[14] prior to undergoing chemotherapy, given her symptoms

[8] A cancer in the rectum located within 6cm from the anus.
[9] Positron emission tomography combined with computerised tomography — an imaging technique used to detect and assess diseases by showing the functioning of the body's tissues and organs.
[10] This regimen involved fortnightly treatments of a combination of chemotherapy drugs (irinotecan, oxaliplatin, folinic acid, and fluorouracil) over six cycles or 12 weeks.
[11] Dr F documented that, in a clinical trial, the three-year disease-free survival rate of this approach was 76% (versus 69%), and the metastases-free survival rate was 79% (versus 74%).
[12] Dr F stated that a standard approach involved concurrent chemoradiation and surgery, followed by adjuvant chemotherapy.
[13] Peripherally inserted central catheter — a long, thin, flexible tube inserted into a vein in the upper arm, giving access to a central vein near the heart. It provides a route for administering fluids or medications or to measure central venous pressure.
[14] A surgically created opening in the large intestine (colon) to divert the faecal flow away from a diseased or traumatised segment of the colon into an external bag.

of an impending bowel obstruction.[15] This approach was confirmed at a colorectal MDM on 23 July 2021.

Colostomy

15. On 29 July 2021, Mrs A underwent a laparoscopic sigmoid colostomy[16] at Wairarapa Hospital, performed by Dr E. Health NZ stated that the colostomy was undertaken without incident. Clinical records show that Mrs A recovered well on the ward and was discharged routinely on 2 August 2021. Mrs A commenced chemotherapy on 5 August 2021.

11 August 2021 — community review

16. On 11 August 2021, Mrs A was reviewed by a registered oncology nurse after developing severe abdominal pain and collapsing at home. The nurse recalled that, on her arrival, Mrs A's episode of abdominal discomfort, dizziness, and light-headedness had settled, her stoma was active, she was taking oral fluids, and her observations were satisfactory (within normal limits). The nurse stated that Mrs A was advised to monitor her stoma output, maintain fluid intake, and seek medical review through the ED if she were to deteriorate or exhibit a rising temperature. This review and the advice provided to Mrs A was not documented.

17. Mr A is concerned about the level of support provided to Mrs A and the family around this time, as the sole cancer care coordinator went on leave during this period, and nobody was filling the role in that person's absence. Health NZ stated that there were several telephone consultations with Mrs A in July and August 2021[17] and that the cancer care coordinator handed over care for all patients to oncology nurses on 5 August 2021 (which aligned with the commencement of Mrs A's chemotherapy). In response to the provisional decision, Mr A stated that the family were not informed that the cancer care coordinator had delegated responsibility to oncology nurses. Health NZ also noted that all patients were advised to contact their GP[18] or attend the ED if they required additional support while the cancer care coordinator was on leave.[19] However, Health NZ noted that improvements to this service have occurred since the events (discussed further below).

DayA post community review — ED admission and transfer to Medical Surgical Ward (MSW)

18. At 8.14am on DayA August 2021, Mrs A presented to Wairarapa Hospital ED with nausea, vomiting, abdominal and rectal pain, and collapse.

[15] Where a bowel blockage is developing or is likely to occur. This is a serious condition that requires prompt medical attention.
[16] A surgically created opening in the sigmoid colon (a part of the large intestine) to allow waste to exit the body.
[17] There were four telephone consultations between 2 and 13 July 2021, an in-person meeting on 15 July 2021, and three further telephone consultations between 26 July and 10 August 2021.
[18] The local medical centre told HDC that Mrs A had an appointment with its Health Improvement Practitioner for assessment and support on 13 July 2021 (following her diagnosis).
[19] Health NZ emphasised that this role was focused on the coordination of a patient's overall cancer treatment (as opposed to providing acute or emergency care).

19. Following an initial assessment, Mrs A was transferred to the MSW for management of her symptoms, including rehydration and pain control. Clinical records show that Dr E was advised of Mrs A's arrival at Wairarapa Hospital, noting that Mrs A had been discharged on 2 August 2021 after the colostomy surgery performed by Dr E.

20. At 12.45pm, Mrs A's Early Warning Score (EWS)[20] was recorded as 2. The EWS is a tool to assist clinical staff in determining appropriate actions to take when a patient deteriorates. It provides a score based on the patient's vital signs and describes how care should be escalated according to those scores. The higher the score, the more urgent the escalation pathway. For example, a score of 10+ requires an emergency response.

21. After investigations (including a chest X-ray), staff considered that Mrs A was experiencing chemotherapy-related sepsis,[21] and she was provided with intravenous (IV) fluids and broad-spectrum antibiotics.

22. Mr A questioned the cause of Mrs A's sudden abdominal pain on DayA August 2021. Health NZ stated that the cause of this pain remains 'uncertain', but, in its view, a large bowel obstruction identified the following day was the most likely cause of the abdominal pain (discussed further below).

DayB August 2021 — deterioration

23. Overnight on DayA/DayB August 2021, Mrs A's EWS was between 2 and 3, and her vital signs were monitored every four hours.

24. Health NZ Wairarapa's policy titled 'Adult Vital Signs and Early Warning Score Measurement, Recording and Escalation' states that, for patients with an acute illness, a minimum frequency of four-hourly vital sign measurement is required, but more frequent measurement may be needed depending on the clinical status of the patient. Further, at all times, staff should use their clinical judgement regarding the frequency and interpretation of the vital signs.

25. It is documented that Mrs A was unsettled throughout the night and experienced nausea, vomiting, and pain. She received IV pain relief at 1am and 7.15am (tramadol) and at 5.25am (morphine) on DayB August 2021.

26. At 8.50am, the medical team reviewed Mrs A on the morning ward round. The medical team documented that she had a temperature, was pale and sweaty, had normal blood pressure with a distended but minimally tender abdomen, she had passed urine at midnight, and her colostomy bag had been changed four times in the previous 24 hours. In addition, Mrs A's blood results were abnormal, indicating infection. At 9.15am, she received IV pain relief

[20] Assigns a score based on a patient's core vital signs to determine the actions staff must take on a mandatory, graded escalation pathway. The EWS escalation pathway has four 'zones', which correspond to required actions: 1–5 (yellow zone), 6–7 (orange zone — 'acute illness or unstable chronic disease'), 8–9 (red zone — 'likely to deteriorate rapidly') and 10+ (blue zone — 'immediately life-threatening critical illness').

[21] A life-threatening condition that arises when the body damages its own tissues and organs in response to an infection.

(morphine), and at 9.30am, Mrs A's blood pressure was recorded as 113/82mmHg (normal) and her EWS was 1.

27. At approximately 10am, the medical team reviewed Mrs A and referred her for a CT scan. A further treatment plan was formulated (IV fluids, pain relief, and medication). At 11.15am, a patient-controlled analgesia (PCA) pump[22] with morphine was commenced.

CT scan and large bowel obstruction

28. A CT scan (abdominal) was performed at 11.30am. Health NZ stated that the scan showed signs of a large bowel obstruction, but there was no evidence of a bowel perforation at this time (as there was no free air or free fluid present). The interpretation of the scan result was supported by an external radiologist review conducted by Health NZ after Mrs A's death as part of a review into her care.

29. The fact that no bowel perforation was seen at this time is important, as following her death it was identified that Mrs A's bowel had perforated approximately 21cm from the end of the stoma. How, and when the perforation occurred is relevant information to assist in determining whether an appropriate standard of care was met.

30. Following the CT scan, surgeon Dr E reviewed Mrs A and used a Foley catheter[23] to drain the colon via the colostomy. It was documented that 1,100mL of faecal fluid was extracted and that Mrs A felt better after this procedure, as her abdomen was 'not so tight'. Mr A and Ms B[24] were both present during the procedure and noted that Mrs A 'recovered rapidly and positively' following the extraction.

31. At 1.50pm, Mrs A's blood pressure was recorded as having dropped to 86/54mmHg (low blood pressure). Health NZ's policy states that each time the vital signs are measured, the EWS must be calculated and the relevant escalation actions must be taken, or there must be a clear rationale for not taking action, which must be documented in the clinical records immediately. Health NZ said that, at this time, Mrs A's EWS was 7, but this was not calculated on the chart and the mandatory escalation actions did not occur (such as a Resident Medical Officer (RMO) review within 20 minutes).[25] In addition, the EWS chart shows that from 4.20pm on DayB August 2021 to 7.25am on DayC August 2021, the EWS was not calculated.

[22] A method of providing IV pain relief, where a patient can self-administer pain relief when required (within prescribed limits).

[23] A type of indwelling urinary catheter that remains in place in the bladder, usually for several days or weeks, to drain urine continuously.

[24] Ms B told HDC that she is an experienced HDU/ICU registered nurse (RN) and Clinical Nurse Educator.

[25] Health NZ's EWS chart stated that the mandatory escalation actions for an EWS score of 6–7 were: RMO or Nurse Practitioner review within 20 minutes, inform the nurse in charge, monitor vital signs every 30 minutes until the EWS is less than 6 and/or ongoing monitoring plan documented, consider involving the Senior Medical Officer (SMO).

The EWS chart further shows that modifications to the blood pressure and heart rate parameters were applied sometime during DayB August 2021.[26]

32. Between 4.20pm on DayB August 2021 until Mrs A's death (at 10am on DayC August 2021), her vital signs were measured half-hourly to one hourly.

33. Mrs A's blood pressure showed a further deterioration (to 79/48mmHg) at 4.20pm. At this time, her vital signs were within the 'red zone'[27] of the EWS pathway (indicating that rapid deterioration was likely and urgent escalation of care was required).

34. Retrospective clinical notes written by the on-call RMO (at 9.33pm) stated that he was aware of Mrs A's deteriorating blood pressure at 4.20pm and had discussed it with the SMO, who advised that Mrs A should receive further IV fluids. Clinical records show that Mrs A received IV fluids at 4.45pm, 5.30pm and at 6pm.

35. The RMO also documented that he had a discussion with the anaesthetist, who advised that the PCA pump should be stopped until Mrs A's blood pressure improved. Clinical records show that the pump was discontinued at 6pm.

Portable monitor

36. While in the MSW, Mrs A was placed on a portable monitor for intermittent recording of her vital signs.

37. At some point in the afternoon Mrs A's deteriorating vital signs as captured by the monitor were recognised by staff in the High Dependency Unit (HDU) – however, there was a delay in reviewing Mrs A due to the monitor being allocated to another patient who could not be located. It transpired that a former patient's details had not been removed from the monitor prior to being allocated to Mrs A. HDU staff escalated their concerns to the Duty Nurse Manager, and it was eventually identified that Mrs A was the patient in question. By that time, the Medical Emergency Team (MET) had been called (as discussed below).

MET call

38. At 7.20pm, a MET call was made for Mrs A's low blood pressure and fast heart rate, and it was noted that Mrs A was not responding to the IV fluid. Mr A and Ms B were both present when the MET call was made.

39. Health NZ acknowledged that the sudden activation of the emergency bell (following the MET call) was distressing for both Mrs A and her family, who were not advised by the nurse of its imminent activation.

[26] That is, the parameters were altered, which would change the point at which care would be escalated. Health NZ's policy states that modifications to EWS vital sign parameters can be made in specific circumstances. However, this requires discussion with and review by relevant clinical staff, and for documentation requirements to be followed.

[27] Health NZ's EWS chart stated that the mandatory escalation actions for any vital sign in the red zone were: Immediate RMO review, call the consultant, and inform the nurse in charge.

40. The on-call house officer on the MET team was not carrying his pager, so he did not receive the MET activation message immediately. Health NZ acknowledged that the standard practice is for the designated house officer to carry the MET pager at all times. Health NZ stated that, in this instance, the house officer attended the call quickly after nursing staff contacted him.

41. Mrs A's EWS chart shows that the trigger for a MET call, that is, a vital sign in the 'blue zone', occurred around 5.05pm.[28] It is unclear why the MET call was not made earlier than occurred.

Transfer to HDU

42. Mrs A was transferred to the HDU at 8pm, where she was managed with an arterial line, fluids, and medication to help her blood pressure.[29]

43. Mr A stated that the transfer to the HDU was 'traumatic', as Mrs A 'panicked and no-one informed her of what was happening'. Health NZ said that the decision to transfer Mrs A occurred under emergency conditions, but it acknowledged that there was a lack of proper communication with Mrs A and her family at this time.[30]

44. The on-call RMO reviewed Mrs A, completed a bedside echocardiogram (to check her heart, which was not contracting well), reviewed the earlier CT scan, and noted the finding of a clot associated with the PICC line.[31] At this time, Mrs A's blood results indicated that she was in a significantly septic/infected state.

Attempts to drain colostomy

45. At 9pm, on-call surgeon Dr D reviewed Mrs A and documented that she had persistent low blood pressure, fast heart rate, and a low JVP level,[32] despite being given IV fluids and supportive blood pressure medications. Dr D told HDC that this meant he was faced with a rapidly deteriorating situation in a patient, despite the use of supportive therapy.

46. Dr D noted that Mrs A's abdomen was distended but not particularly tender and that both stoma orifices were unobstructed. He stated that the most notable feature was Mrs A's dilated colon, and the cause of this was uncertain.

47. In response to the provisional decision, Dr D stated that he considered the 'only option that might materially help was a further attempt at decompression' as this had given Mrs A temporary relief earlier. He stated that he was 'seriously concerned that the colon was at

[28] Health NZ's EWS chart stated that the mandatory escalation actions for any vital sign in the blue zone were: Dial 777 and state 'MET', stay with the patient and manage immediate life-threatening issues, inform the SMO and the patient's family.
[29] Mrs A was given inotropes (noradrenaline) for blood pressure support.
[30] In addition, Health NZ queried in its ERR whether the sudden activation of the emergency bell was necessary, given that Mrs A had been unstable for some time.
[31] It is documented that this was 'probably due to a low-lying PICC', and heparin (a blood anticoagulant) was commenced at 10.45pm.
[32] Jugular venous pressure — a clinical measurement used to assess right atrial pressure.

risk of perforation or ischaemic necrosis leading to gangrene'[33] and that the presence of bowel distension, low blood pressure, and the requirement for inotropes was 'already a critical combination'.

48. Accordingly, Dr D made two attempts to drain Mrs A's colostomy. First, he 'tried gently to decompress the bowel as Dr E had done with a soft catheter', but this had no significant result (achieving approximately 150mL volume of faeces). Dr D stated that he considered that the catheter may have been kinking[34] or that the faeces were too thick to pass up, and therefore he 'very gently' inserted a chest drain into the stoma. Dr D stated that, as there was 'no further drainage', he 'rapidly desisted' with this approach. In response to the provisional decision, Dr D told HDC that at no time did he feel signs of a perforation,[35] and he did not see blood on the end of the catheter or in faeces adjacent (a sign of mucosal injury) after the second aspiration attempt.

49. In contrast to Dr D's account, Mr A stated that he witnessed Dr D make a sudden and forceful 'ramming' motion when he inserted the chest drain into the stoma. Mr A stated that Dr D 'unilaterally took the decision to conduct a second attempt, using a chest drain' and 'did not inform or consult [the family] about the risk'.

50. Ms B also witnessed the procedure and told HDC that the second aspiration attempt with the chest drain catheter was 'rushed and traumatic to watch'. She described the experience as less organised than the earlier aspiration undertaken by Dr E.

51. In response to the provisional decision, Dr D told HDC that at 'no time did [he] use uncontrolled force, and [he] is dismayed that the family would have interpreted anything [he] did to give this impression'. Dr D stated that he has 'no hesitation in apologising for that impression and any distress [his] actions may have caused [the family] at that time'.

52. In the event review following Mrs A's death, on the question as to whether insertion of the chest drain could have perforated Mrs A's bowel, Dr D stated that '[f]or the catheter drainage to have been the proximate cause [of the bowel perforation] the bowel would have to have been severely weakened in the first place'. Health NZ noted that the perforation was 21cm proximal to the stoma, which it said would have represented a very deep insertion of the catheter, which it considered 'unlikely'. There is conflicting evidence on this point as the forensic pathologist who conducted the post-mortem examination was of the view that the chest drain was the most likely source of the acute bowel perforation she observed (this is discussed further below at paragraph 71.).

[33] This means tissue death resulting from diminished blood flow.

[34] In response to the provisional decision, Dr D highlighted that foley catheters are soft and very flexible and are therefore unlikely to cause injury. However, in practice, this means that the catheter tends to bend and kink rather than be negotiated round the corners of the convoluted bowel lumen.

[35] Dr D stated that 'a bowel wall gives a rubbery elastic feel, and this warns against too forceful a push'. He stated that signs of a perforation would include a 'sudden loss of resistance, afterwards allowing effortless insertion of the catheter as it would travel into the peritoneal cavity'.

53. Health NZ told HDC that it was unable to obtain the make or brand of the chest drain used, as there was a system change in 2022 resulting in historical data becoming unavailable.

54. In response to the provisional decision, Dr D stated that a 'portex thoracostomy tube' is what is 'usually available and what [he] recall[ed] using'. He commented that these types of tubes are not rigid.

Attempted transfer to ICU

55. Given Mrs A's clinical situation and the potential need for surgery, Dr D discussed Mrs A's case with colleagues and determined that ICU transfer to Wellington Hospital was needed as soon as possible. However, Health NZ stated that 'timely transfer was not possible due to a combination of [a] lack of beds [in Wellington Hospital] and inclemency of weather', which it accepted 'potentially had a negative impact on the final outcome [for Mrs A]'. Health NZ stated that a management plan was therefore established for overnight care.[36]

56. Ms B stated that the last significant conversation her family had with Health NZ staff was when they were told that Mrs A was stable enough to wait for transfer to Wellington Hospital.

DayC August 2021 — further deterioration and death

57. Mrs A continued to deteriorate overnight, with calls being made by staff at 1.23am and 1.40am on DayC August 2021.

58. Ms B told HDC that Health NZ's communication overnight on DayB-DayC August 2021 with her family and herself was 'entirely non-existent'. She recalled becoming increasingly frustrated that no one had reviewed Mrs A in person (noting her rapid decline and poor response to noradrenaline) and being very concerned about the level of pain Mrs A was experiencing at this time and the possibility of another obstruction. Ms B stated that she expressed these concerns to the RN and asked where the doctors were.

59. Health NZ stated that the staff caring for Mrs A were very focused on providing her care overnight on DayB-DayC August 2021 and commented that at the time of events Wairarapa Hospital was in the same situation as other similar-sized hospitals around New Zealand, in that the only on-site medical cover overnight was at the House Officer level. While Health NZ acknowledged that this was a 'recognised point of vulnerability', it stated that in this case the on-call house officer was in regular contact with the on-call RMO (in compliance with its clinical guidelines), who was aware of Mrs A's condition overnight and continued to give advice to the house officer regarding management.[37]

60. At 2.44am, the on-call house officer reviewed Mrs A and consulted with the on-call RMO and ICU registrar. A nasogastric tube was inserted, and increased pain relief, high flow

[36] Health NZ stated that the on-call RMO was present until approximately 11pm on DayB August 2021, communicated the management plan to the on-call house officer, and remained available by telephone overnight.

[37] Health NZ submitted that there is no evidence to suggest that the on-call RMO attending in person would have resulted in any significant change to management, or the outcome in this case.

oxygen, medications, and fluids were given to Mrs A. At 4.10am, Mrs A received her first dose of fentanyl.

61. At 5.20am, the Wellington flight team and ICU retrieval team were contacted.

62. It is documented at 6am that Mrs A had 'markedly deteriorated since last night' and that her abdomen was distended, tender, but soft. There were also concerns about inadequate blood supply to her colon given Mrs A's prolonged hypotension.

63. At 6.30am, the on-call anaesthetist inserted a breathing tube for Mrs A, in preparation for the transfer team's arrival at 7am. Ms B stated that the severity of Mrs A's condition was not communicated to her or her family until a discussion with the on-call anaesthetist at this time, who informed them that Mrs A was extremely unwell and may not survive intubation. Ms B told HDC this was 'a severely traumatic event for us all, made worse by the lack of honest communication from everyone'.

64. A bedside chest X-ray at 7.30am showed no signs of free air under Mrs A's diaphragm, which would have indicated a bowel perforation.

65. Health NZ stated that the retrieval team were delayed further due to weather conditions and did not arrive until 7.50am. Clinical records state that Mrs A left the HDU at 9.30am and was subsequently transferred into the helicopter. Unfortunately, before take-off, Mrs A's blood pressure dropped, and she went into cardiac arrest. An attempt to resuscitate her was unsuccessful, and further treatment was abandoned after a real-time consultation with the ICU consultant in Wellington. Sadly, Mrs A died at 10am.

Event Review Report

66. On 13 May 2022, Health NZ Wairarapa completed its ERR into Mrs A's care. The ERR noted the following key deficiencies in her care:

Deteriorating vital signs and lack of escalation — EWS non-compliance

a) The EWS process was not managed appropriately, and the escalation of care should have been made earlier.

b) Mrs A spent a considerable length of time being managed in the MSW despite her vital signs deteriorating on the afternoon of DayB August 2021 to the point where they reached the criteria for activating the MET. This resulted in a significant delay in transferring Mrs A to the HDU. Health NZ stated that this was the critical point of failure in the system and, coupled with her not being transferred to the ICU in a timely manner, potentially impacted negatively on the outcome.

Communication

a) There was a poor standard of communication with Mrs A and her family during her transfer to the HDU on DayB August 2021.

b) The pathway of communication between Wairarapa Hospital and the Wellington ICU consultant resulted in poor detail about Mrs A's overnight physiological state on DayB-

DayC August 2021 being shared with the ICU consultant. Specifically, there was reliance on discussions the Wairarapa House Officer had with the overnight Wellington ICU Registrar, who had not, in turn, discussed Mrs A's presentation with the Wellington overnight ICU consultant.[38]

c) There was no communication with the family at the beginning of the Clinical Event Review Group process (after Mrs A's passing). Health NZ acknowledged that this was a significant error of judgement and led to further distress for the family.

d) Health NZ informed Mr A that it was conducting an internal review of this incident only after he made contact with the Nationwide Health and Disability Advocacy Service. Health NZ stated that this delay was not acceptable or in line with policy.

After-hours staffing

a) There was a significant backlog of patients in the ED yet to be seen, assessed, and treated when the shifts changed at 11pm on DayB August 2021, caused by a lack of staff on the afternoon shift.[39]

b) On the night of DayB-DayC August 2021, a first-year house officer was managing the ED alone, with a second-year house officer managing all hospital inpatients (including MET calls, HDU, and a patient in the Acute Assessment Unit) and supporting the ED with the significant patient load.

c) There was a need for on-duty house officers to have more direct access to senior support, as evidenced by only one on-call SMO covering the overnight shift.[40]

67. Health NZ made several recommendations in the ERR (see Appendix D).

Further information — Coroner

68. In August 2021, a forensic pathologist conducted a post-mortem examination and reported that the direct cause of Mrs A's death was septic complications of a large bowel perforation [41] due to the colostomy (noting the underlying condition of rectal adenocarcinoma).

69. In May 2022, Health NZ stated in its ERR that the autopsy findings did not, in its view adequately take into account the clinical course of Mrs A's illness. Health NZ stated that the review team favoured an alternative sequence of events — that Mrs A developed a large bowel distension[42] possibly secondary to mechanical obstruction or, alternatively, it was the result of an ileus (paralysis of the gut). Therefore, it was submitted that the bowel perforation noted in the post-mortem developed late in the course of Mrs A's illness as a

[38] However, Health NZ stated that there is no evidence that had the ICU consultant been involved directly overnight, this would have altered the outcome for a patient already critically ill with advanced septic shock.
[39] Health NZ stated that one house officer was unwell and was unable to be replaced.
[40] Health NZ noted that the 'Delegated Responsibility of Resident Medical Officers (RMOs)' policy at the time referred to situations when the on-call SMO should be contacted, but it did not state any expectations regarding presenting out of hours when the need is identified.
[41] A 0.8cm perforation was identified 21cm away from the stoma.
[42] Abnormal swelling of the large intestine. This can lead to serious complications, including bowel ischaemia (lack of blood supply), perforation, and sepsis if not treated promptly.

result of ischaemia (lack of blood supply) of the bowel wall, due to her low blood pressure and the distension of the bowel.

70. In January 2025, a forensic pathologist provided a further consultation report in response to HDC's investigation. The pathologist told HDC that a distended bowel seen on the CT scan (on DayB August 2021) was a sign of ileus (poor bowel motility) and should have been the first sign of complications of bowel injury.

71. Regarding the cause of Mrs A's bowel perforation, the forensic pathologist stated:

> 'Had I known [of] the insertion of a rigid catheter (a chest drain) into the bowel through the stoma, I would have considered that a more likely cause of the perforation, despite the assurance by [Health NZ] that an insertion of this depth would have been "unlikely". The fact that this attempted aspiration used a rigid catheter and that it was performed *after* the CT scan, which showed no perforation, the paucity of inflammation and ischemia in the surrounding bowel wall, and the patient's deterioration thereafter, suggests strongly that this catheterization was the source of the trauma.'
>
> '[E]ven if [the insertion of the chest drain] wasn't as deep as 21cm, the bowel can telescope (fold in on itself) and bend, so it is plausible that even gentle insertion of a rigid device could have irritated a loop of bowel adjacent to the stoma, one that was looped near the opening on insertion, but shifted elsewhere later as the patient was moved or manipulated during resuscitation.'
>
> 'To my recollection and upon reviewing the autopsy photos, this loop of bowel containing the perforation was in the left upper quadrant of the abdomen and closer to the stoma than it was to the adhesions or adenocarcinoma.'

Responses to provisional decision

Mr A

72. Mr A was provided with an opportunity to respond to the 'information gathered' section of the provisional decision. Mr A told HDC that he believes a 'culture change' is needed within Health NZ to ensure that continuity of care is carefully put in place and not abandoned; families are included in decision-making; the concerns of nurses are taken seriously; doctors are communicative; and care is thoughtful and not transactional.

73. Further comments made by Mr A have been incorporated into this report where relevant.

Ms B

74. Ms B was provided with an opportunity to respond to the 'information gathered' section of the provisional decision, and her comments have been incorporated into this report where relevant.

Health NZ Wairarapa

75. Health NZ Wairarapa was provided with an opportunity to respond to relevant sections of the provisional decision. Health NZ Wairarapa stated that it accepted my findings and

remains committed to implementing recommendations and ensuring continuous improvement in the quality and safety of care provided. It had no further comment to make.

Dr D

76. Dr D was provided with an opportunity to respond to relevant sections of the provisional decision, and his comments have been incorporated into this report where relevant.

Health NZ Capital, Coast and Hutt Valley

77. Health NZ Capital, Coast and Hutt Valley was provided with an opportunity to respond to relevant sections of my provisional decision and had no further comment to make.

Dr C

78. Dr C was provided with an opportunity to respond to the provisional decision and had no further comment to make.

Decision: Introduction

79. Again, I offer my sincere sympathies to Mr A for the loss of his wife and to Ms B for the loss of her mother.

80. The following discussion and conclusions focus on the core issues for my investigation. Specifically, I have identified the key issues for consideration:

a) Whether Mrs A's rectal bleeding was appropriately investigated and managed by her GP;

b) Whether it was appropriate for Mrs A to undergo chemotherapy seven days following her surgery;

c) During her hospital admission did clinicians appropriately investigate Mrs A's symptoms (including for a potential bowel perforation)?;

d) Given the possibility that the insertion of the chest drain on DayB August 2021 caused Mrs A's bowel perforation, was the drain insertion performed in accordance with the reasonable standard of care?;

e) Was Mrs A's deteriorating condition identified appropriately, and her care escalated in accordance with the reasonable standard of care, including management of her pain?; and

f) Was Mrs A and her family appropriately communicated with?

81. For the sake of completeness, it is important to acknowledge that throughout this investigation, considerable information about other issues has been obtained, including in relation to the management of Mrs A's PICC (where a clot had formed), the pathway of communication between Wairarapa Hospital and Wellington Hospital ICU regarding transfer and acceptance, the inability to despatch a helicopter sooner than occurred because of

inclement weather, staffing levels overnight at Wairarapa Hospital, and communication failings with Mrs A's family following her death.

82. These matters are no doubt of concern to Mrs A's family; however, I have elected not to focus my investigation on those matters, noting that they have been canvassed with Health NZ (including as part of this investigation) and there has been a considerable learning response from Health NZ with quality improvement measures put in place to address these matters (as outlined below). In respect of the helicopter transfer, while I note that Mr A has provided comment to suggest that the weather was not so bad as to have impacted the ability of the helicopter to fly, I do not consider it within my jurisdiction to challenge the safety assessment of the pilots at the time. In this respect, the clinical staff were entitled to rely on the information they had been provided about the inability of the helicopter to arrive earlier than it did.

83. To assist my determinations, I obtained independent clinical advice from Dr Hulme-Moir in relation to the clinical care in Wairarapa Hospital, Dr David Maplesden in relation to the GP care provided to Mrs A, and Dr Orlaith Heron, in relation to Mrs A's oncology care.

84. It is also important to clarify my role, which is to determine whether the standard of care was met at the time the clinical care was provided, with reference to the information available to the treating clinicians at the time. I must guard against the potential for hindsight bias and the bias that comes from knowing the outcome. Additionally, my role is not to determine the cause of death, which is within the jurisdiction of the Coroner.

Decision: Dr C — educational comment

85. Dr C was Mrs A's GP at the time of the events. Dr C reviewed Mrs A when she presented with rectal bleeding over a six-month period between August 2020 and February 2021. There is concern as to whether Mrs A's colorectal cancer could have been diagnosed earlier.

86. My in-house clinical advisor, Dr David Maplesden, has not identified any serious departures from the standard of care in relation to Dr C's management of Mrs A, and therefore I conclude there has been no breach of the Code of Health and Disability Services Consumers' Rights (the Code). I also consider that Dr C has reflected on this incident and has made appropriate changes to her practice (discussed further below).

87. However, for the purpose of educational comment, I take the opportunity to highlight Dr Maplesden's advice that when investigating colorectal symptoms, best practice includes checking for unexplained weight loss. In addition, I concur that clearly documenting safety-netting and follow-up advice, and formal monitoring of a patient's response to treatment, is particularly important. As discussed by Dr Maplesden, advancing age is a risk factor for colorectal cancer, and, if symptoms persisted (despite treatment or rapid recurrence), Mrs A may have met criteria for further care.

Decision: Health NZ

Introduction

88. Under Right 4(1) of the Code, Health NZ had an organisational duty to provide health services to Mrs A with reasonable care and skill.

89. Health NZ Wairarapa agreed to the ERR forming the basis for establishing a breach of Right 4(1), given the presence of several systemic and organisational issues at Wairarapa Hospital at the time of events, including a lack of communication, non-compliance with the EWS pathway, failure to escalate care appropriately, and staffing inadequacies.

90. However, during the course of this investigation, it was determined that independent clinical advice was required, given the differing views of the parties and the additional information provided by the Coroner's Office.

91. I will now discuss each of the issues in turn.

Decision: Health NZ Capital and Coast – no breach

Timing of chemotherapy

92. Mrs A underwent chemotherapy seven days after her colostomy surgery. Mr A is concerned that chemotherapy started too soon after Mrs A's surgery.

93. My oncology advisor, Dr Heron, stated that the timing of the commencement of chemotherapy is individualised and takes into consideration factors such as the type of surgery, chemotherapy agent/s, intent of treatment (curative versus palliative) and the patient's recovery. Dr Heron advised that a one- to two-week period between surgery and the commencement of chemotherapy is acceptable, noting the balance between allowing sufficient time for healing without delaying systemic treatment for too long (resulting in the progressive symptoms and cancer growth).

94. Dr Heron further stated that the standard of care is to review a patient post-surgery before the administration of chemotherapy. In her view, there appeared to be no early signs that the planned chemotherapy date needed to be altered. However, Dr Heron was critical at the lack of documentation of the pre-chemotherapy clinical assessment (described as a moderate departure), which in her view inhibited the ability to determine whether the timing was appropriate or not. Dr Heron stated that the timing of the chemotherapy was acceptable if Mrs A had remained well post-surgery.

95. In response, Health NZ stated that Mrs A was assessed in accordance with the standard of care and that, while there was no explicit documentation regarding the absence of abdominal symptoms, there is documentation confirming that there were no clinical concerns. Health NZ referred to that documentation.

96. I am satisfied from the statements of Health NZ and some minimal clinical documentation that there were no post-surgical concerns to suggest that the timing of Mrs A's chemotherapy should be altered. In that context, I am not critical of its timing. While I agree with my advisor that clinical documentation is important, in the current circumstances I am

exercising my discretion not to find a breach in this respect but, rather, to suggest that Health NZ reflect on my advisor's comments and its documentation practices regarding such assessments.

Decision: Health NZ Wairarapa – breach

Bowel perforation – no breach

97. Mr A told HDC that he is concerned that Mrs A's bowel perforation was missed during treatment, and he questioned whether Dr D's attempts to drain the colostomy caused the perforation. In my view, the issue here is whether, on the available information at the time, clinicians appropriately investigated Mrs A's symptoms (including for a potential bowel perforation), and whether, given the possibility that the insertion of the chest drain on DayB August 2021 caused the perforation, the drain insertion was performed in accordance with the reasonable standard of care.

98. The post-mortem examination clearly established that there was a bowel perforation 21 cm from the stoma, and I am satisfied that the insertion of the chest drain into the stoma on DayB August 2021 *may* have damaged Mrs A's bowel (my emphasis – discussed further below).

99. In respect of appropriate investigations for a potential bowel perforation, my advisor Dr Hulme-Moir stated that the most sensitive way of diagnosing a bowel perforation is with radiological examination – that is, through imaging such as scans and X-rays. Upon review of the investigations that were performed on Mrs A (two chest X-rays on DayA and DayC August 2021 and a CT scan on DayB August 2021), Dr Hulme-Moir advised that he could not find any evidence of a bowel perforation such as leakage of air into the abdominal cavity and/or free fluid. Dr Hulme-Moir's opinion is consistent with the findings of Health NZ's external radiologist, who on review of the imaging concluded the same thing.

100. Dr Hulme-Moir further advised that a bowel perforation would 'almost always' lead to the development of peritonitis,[43] resulting in severe abdominal pain and a rigid abdomen. However, the clinical record consistently described Mrs A's abdomen as soft and non-tender, which is not consistent with a diagnosis of peritonism.

101. I note the forensic pathologist's comments that there was 'scant' peritoneal inflammation surrounding the area of the bowel perforation, which the pathologist believed was likely due to chemotherapy-related suppression of the immune system or as a result of a perforation very close to the time of Mrs A's death. The pathologist therefore commented that, if clinicians were relying on the physical examination to determine perforation, they may have erred because Mrs A would not have been expected to demonstrate clinical signs of rebound tenderness or abdominal pain.

102. I acknowledge the possibility that Mrs A's symptoms were masked as a result of her immunocompromised status and the use of steroids, and (as also acknowledged by the

[43] Inflammation of the peritoneum (the thin tissue that lines the inner wall of the abdomen and covers most of the abdominal organs).

pathologist) that the perforation may have developed relatively late into her clinical course (that is after the aspiration attempts at 9pm on DayB August 2021).

103. However, I am satisfied, having regard to all the evidence including my expert advice, that on Mrs A's clinical presentation and the clinical evidence available to clinicians at the time of events, there was nothing to suggest Mrs A had a bowel perforation on admission or during the course of her care necessitating a different clinical approach to that taken.[44] I am also satisfied that appropriate investigations were undertaken and interpreted and that such investigations (the standard of care) did not indicate a bowel perforation, even at the time of the X-ray on DayC August 2021 just prior to Mrs A's death. Accordingly, I am not critical of clinicians in this respect. That said I am highly critical of the failure to adequately respond to Mrs A's deterioration (discussed immediately below). I also address the issue of the chest drain insertion later in this opinion.

Non-compliance with EWS pathway – breach

The most significant issue in this matter was the failure by staff at Health NZ Wairarapa to comply with the EWS pathway, which resulted in an unacceptable delay to escalate Mrs A's care, denying her the opportunity of more timely treatment. In particular, I am highly critical of the failure to calculate the EWS on DayB August 2021, together with the failure to escalate (including on the basis of clinical judgement) when the significant deterioration in Mrs A's blood pressure was noted at 1.50pm on DayB August 2021.

104. My advisor, Dr Hulme-Moir, identified a delay in the management of Mrs A's hypotension on DayB August 2021. He noted that a persistent drop in blood pressure was first documented at 1.50pm (and not documented further until 4.20pm). A MET call was not made until 7.20pm (despite clear parameters having been met by her EWS score and in Health NZ Wairarapa's EWS policy document). Dr Hulme-Moir advised that this was a severe departure from the accepted standard of care. This is consistent with Health NZ's ERR, which concluded that it was on the afternoon of DayB August 2021 that the need for escalation of care should have been identified, and that this was the critical point of failure (as it resulted in a significant delay in transferring Mrs A to the HDU).

105. Further, Health NZ identified in its ERR that on the afternoon of DayB August 2021, Mrs A's deteriorating blood pressure was captured by a portable monitor; however, the monitor still contained a former patient's details when it was assigned Mrs A, delaying her identification (by the time this was recognised, a MET call had been made). I am highly critical of this. It reflects an inadequate system to ensure the correct assignment of the portable monitor and represented another missed opportunity for Health NZ staff to recognise Mrs A's deterioration and escalate her care accordingly.

[44] I note that, if it is accepted that the bowel was perforated by the chest drain, the treatment pathway was unlikely to have changed, as shortly after that the decision was taken to transfer Mrs A to Wellington ICU – which could not have been facilitated earlier than occurred because of bed state and the weather. Efforts overnight were therefore appropriately focused on trying to stabilise Mrs A for transfer.

106. I accept Dr Hulme-Moir's advice and consider that Health NZ Wairarapa failed to respond to Mrs A's deterioration on DayB August 2021 in a timely manner and escalate care appropriately, which may have had a negative impact on the outcome.

Communication – breach

107. Health NZ Wairarapa has accepted that it provided a substandard level of communication during the period of care, including with Mrs A and the [A] family.

108. Notwithstanding the emergency that was presenting at the time, I am critical of the failure to adequately communicate to Mrs A and her family about her transfer to the HDU on DayB August 2021, which resulted in unnecessary stress and confusion, especially for Mrs A.

109. The family have also expressed concern about the failure to communicate with them and Mrs A once she had been transferred to the HDU. Ms B has stated they were not clear on the severity of Mrs A's situation until the conversation with the on-call anaesthetist on DayC August 2021, and for them, the failure to honestly communicate compounded the trauma of the situation for everyone.

110. Health NZ has acknowledged the [A] family's comments that there was a significant lack of communication from its staff as Mrs A deteriorated overnight on DayB-DayC August 2021 and is apologetic that this aspect of care was overlooked.

111. Despite the workload pressures overnight on DayB-DayC August 2021, I am nevertheless critical of Health NZ's failure to communicate with the [A] family during this time, particularly in light of Mrs A's further deterioration. In my view, it is essential that clinicians communicate openly and honestly in emergency situations to enable the consumer and their family to understand what is occurring, make informed decisions, and maintain trust at a time of heightened vulnerability.

Pain relief – breach

112. Mr A and Ms B were concerned that pain relief was not provided to Mrs A within a reasonable period when she experienced abdominal and pelvic pain at Wairarapa Hospital.

113. Clinical records show that, on DayB August 2021, Mrs A received IV pain relief at 1am and 7.15am (tramadol) and at 5.25am and 9.15am (morphine). At 11.15am, a PCA pump was commenced (morphine) but was discontinued at 6pm because of Mrs A's low blood pressure (prior to the MET call). Health NZ acknowledged that Mrs A's pain was 'poorly controlled prior to the PCA being commenced' and that there does not appear to be a reason for additional pain relief not being provided before the PCA. Health NZ stated this is the normal expectation if a patient is in pain and accepted that there was a delay in commencing the PCA.

114. Health NZ also stated that, while the discontinuation of the PCA pump was appropriate given Mrs A's low blood pressure (as opioids are known to lower blood pressure), an alternative pain relief should have been sourced (noting that the first dose of fentanyl was administered to Mrs A at 4.10am on DayC August 2021).

115. Having considered this evidence and Health NZ Wairarapa's comments, I am highly critical of the delay in the provision of pain relief to Mrs A before the commencement of the PCA pump and the failure to source an alternative pain relief after discontinuation of the pump at 6pm on DayB August 2021. I am saddened that this would have undoubtedly negatively impacted Mrs A. I concur with the ERR that intravenous analgesia was not utilised well and there was no reason for additional pain relief not being provided to Mrs A at these times.

116. Further, I am critical of the delay in prescribing a PCA itself. As identified by Health NZ Wairarapa, there was a lack of understanding that the pain team could provide verbal permission for a house officer to prescribe a PCA if required. I consider that this demonstrates a need for staff training, including in organisational procedures and pain relief.

Conclusion

117. It is my opinion that there were several systemic and organisational failings at Health NZ Wairarapa at the time of events. These included non-compliance with the EWS pathway and the failure to correct assign a portable monitor (which led to the failure to escalate care appropriately), a lack of communication, and inadequate pain relief provided to Mrs A. I accordingly find that Health NZ Wairarapa failed in its organisational duty to provide services to Mrs A with reasonable care and skill, and as such, breached Right 4(1) of the Code.

118. I acknowledge that, after this event, Health NZ Wairarapa conducted a comprehensive event review and has made several changes (discussed further below).

Decision: Dr D — no breach

119. Dr D made two attempts to drain Mrs A's colostomy on the night of DayB August 2021. The first attempt using a Foley catheter (as used by Dr E previously), was unsuccessful. Dr D considered that the catheter may have been kinking or that the faeces were too thick to pass up, and so a second attempt was made by inserting a chest drain into the stoma. Dr D stated that he stopped quickly when there was no further drainage.

120. As noted at paragraphs 47 and 48, the force of the second insertion is contested between Mr A and Dr D. The forensic pathologist has stated that there is a strong suggestion that the second attempt was the source of the bowel perforation (discussed at paragraph 71). While acknowledging Mr A's perception that the insertion was forceful, and that generally the family had concerns about the manner in which this insertion occurred, I am not prepared to conclude that undue force was used by Dr D when attempting this aspiration.

121. As I have noted above, there is a possibility that insertion of the chest drain on DayB August 2021 caused Mrs A's bowel perforation – although I accept also that it could have occurred later as a consequence of Mrs A's deteriorating condition. However, the key issue here is whether, in the context of Mrs A's presentation, insertion of the chest drain was appropriate – with reference to the standard of 'reasonableness of care and skill' set out in the Code.

122. It is relevant to note Dr D's intention, which was to decompress the dilated colon as a means of providing relief for Mrs A, but also to manage other risks associated with her bowel distension.

123. My advisor, Dr Hulme-Moir, stated that the use of soft catheters to drain obstructed stomas is a well-established technique that he and his colleagues have used often. Chest drains are not used for this purpose, although they are regularly used to drain complex collections in the abdominal cavity. Whilst Dr Hulme-Moir has referenced a 'moderate departure' in relation to the drain, he commented further that the use of a chest drain was 'not completely outside the parameters of accepted practice' but was 'unusual', and there was a corresponding need for 'extreme care'.

124. Since receiving Dr Hulme-Moir's opinion, Dr D has said that he recalls using a portex thoracostomy tube, which is not rigid, although it is a less flexible catheter than a Foley catheter. He has also said this was the only option available to him. He stated it would not have been his first choice as it could have a higher chance of causing bowel injury. Nevertheless, he considered it the only viable option available to him that would have the benefit of a sustained and adequate decompression, and he does not believe (based on the sensation of insertion) that he perforated the bowel.

125. Noting all the circumstances, including Mrs A's clinical presentation at that time, and noting that the use of a chest tube was not completely outside the bounds of accepted practice, I am not critical of Dr D's actions. That said, I acknowledge Dr Hulme-Moir's advice that extreme caution needs to be exercised in using more rigid catheters for such drainage and large bore foley catheters are to be preferred.

126. I am also satisfied that Dr D has reflected significantly on this case, although recent information from the family recounts their experience of the decompression, which I will make available to Dr D for his further consideration in relation to his future practice.

Changes made since events

Dr C

127. Dr C told HDC that this incident has 'profoundly shaped' her and her practice, and she has made the following changes since the events:

a) She takes care to repeat safety-netting advice to consumers and explicitly advises on the chance of cancer (if symptoms are not improving).

b) She has significantly improved her clinical documentation.

c) She is more protective over appointment times and break times. Dr C stated that she no longer 'squeeze[s] in appointments' or does short telephone consultations as she is aware that this may impact the quality of care provided.

d) She gives 'very little weight' to the findings of a proctoscopy. If one is conducted, it is mainly to differentiate fissures[45] from haemorrhoids (to determine initial treatment while awaiting further investigation).

e) She will refer all patients aged over 50 years and with outlet bleeding with an apparent benign cause (haemorrhoid or fissure) for further investigation. If this is declined in the public system, she will strongly advise a private referral or a referral to the charity hospital.

f) She is more aware of cognitive biases at work and questions her assumptions.

g) She discussed Mrs A's presentation (in an anonymised form) and events that followed with colleagues in her peer group to prevent this from occurring again.

128. In light of these changes, I do not propose to make any further recommendations in relation to Dr C.

Health NZ Capital, Coast and Hutt Valley

129. Health NZ Capital, Coast and Hutt Valley told HDC that it offers its sincere condolences to the family and loved ones of Mrs A. It recognises the profound impact that the loss of a patient has on all involved and stated that it remains committed to ongoing learning and quality improvement.

Health NZ Wairarapa

130. Health NZ Wairarapa told HDC that it has a profound sense of regret for these events and expressed its condolences to Mr A and the family for their very sad loss. Health NZ Wairarapa acknowledged that the family's grief is 'compounded by the deficiencies in the care that Mrs A received' and stated that it has made the following changes since the events:

a) The 'Deteriorating Patient Working Group' was stood up in July 2022 and comprises members of the clinical and operational staff and the ICU in Wellington. Generally, it meets monthly, with three subgroups (relationships with Wellington ICU; MET calls and medical handover; and Emergency Warning Scores). The Group reports to the Clinical Board (the overarching clinical governance body).

b) Guidelines[46] have been drafted relating to clinical documentation for the management of critically ill patients at Wairarapa Hospital.[47]

c) The expectation for clear documentation of all clinical assessments or patient encounters and that all patient notes should be collated and kept within the patient file or electronic health record has been emphasised to staff.

[45] A small tear or split in the skin around the anus, often causing pain and bleeding.
[46] Health NZ stated that, when a patient is referred to the ICU in Wellington, the referring clinician will enter a file note outlining the current situation and reasons for referral. This will then be able to be read remotely (for example, by staff in the ICU). In cases where the ICU declines to accept the transfer of a patient, the ICU clinician making the decision is required to enter a file note outlining their rationale.
[47] Health NZ stated that this was an outcome of the 'Deteriorating Patient Working Group'.

d) Six-monthly audits of clinical documentation occur as part of its routine patient tracer audits. Health NZ stated that this process enables a review of a patient's file from admission to discharge in relation to the completeness and standard of documentation. Health NZ said that, when a variance from clinical standards is identified, a large sample of the specific practice will be reviewed to determine whether this is a one-off event or a trend.

e) The 'Patient at Risk (PAR) nurse team' was created in March 2023 and is staffed by nurses with advanced skills and experience in acute and/or ICU care. It operates from 2.45pm to 11.15pm, seven days a week, and covers Acute and Inpatient Services.

f) A 'Sepsis Review Group' has been tasked with updating the pathways for sepsis management within Wairarapa Hospital.

g) A multidisciplinary group was formed to introduce the 'Shared Goals of Care' framework[48] to Wairarapa Hospital, and Health NZ Wairarapa has begun to draft the accompanying policy. Health NZ stated that, in preparation for the roll-out of the initiative, the goals of care framework was the subject of a hospital grand round presentation on 16 May 2023, which was widely attended by medical and other clinical staff. In addition, a 'Train the Trainer' workshop on the Te Tāhū Hauora Health Quality & Safety Commission Serious Illness Conversation Guide was held on 29 and 30 May 2023, with external facilitators engaged to provide education for several senior medical and nursing staff.[49]

h) Hospital-wide guidelines have been drafted around the use of the ISBAR clinical communication tool,[50] which is used by all staff when verbally requesting clinical advice, patient review, and escalation of patient care and during handover of care.

i) A request for the permanent appointment of a surgical nurse coordinator was submitted.[51] In addition, a cancer care coordinator role has been established, which supports the surgical nurse coordinator role.

j) All serious events are now overseen by a General Manager — Quality, Risk and Innovation (this position was vacant at the time of the events).

k) All events are audited for compliance by the Quality team.

[48] Health NZ stated that this is an initiative promoted by Te Tāhū Hauora Health Safety & Quality Commission that allows clinicians, patients, and whānau to explore patients' values and the care and treatment options available and to agree on the goals of care for the current hospital admission, including in the event of the patient's deterioration. Conversations with patients and whānau are a key part of the Goals of Care process.
[49] Health NZ stated that this was a 'very significant step' forwards in ensuring that clinicians are enabled to communicate effectively with patients and whānau, especially at times of critical illness.
[50] ISBAR stands for Identify, Situation, Background, Assessment, Request/Recommendation.
[51] Health NZ stated that this role would focus on the support of surgical patients (specifically those with cancer) and is intended to partially offset some of the latent risks to continuity of care at Wairarapa Hospital associated with the proportionately high use of locum surgeons. In addition, Health NZ stated that this role would be able to provide mutual support and back-up for the existing Cancer Care Co-ordinator Nurse.

l) Wairarapa Hospital has consulted with the pain clinical nurse specialist and advised that focused education would be provided to staff regarding the use of PCA and analgesia in general.

m) Wairarapa Hospital has liaised with Health NZ Capital, Coast and Hutt Valley to standardise practices around PICC line management/central venous access device (CVAD) policy.

n) An SMO is now on site at Wairarapa Hospital from 10pm to 8am to provide support for complex case management in the ED and clinical oversight to house officers (alongside the existing ability to contact the on-call SMO for support and advice for admitted medical and surgical patients).

Dr D

131. Dr D told HDC that he 'commiserate[s] deeply with the family for their tragic loss'. He stated that there has not been a single week over the past four years in which he has not reflected on this incident and that it was 'one of the most traumatic cases over a very long surgical career'.

132. Dr D stated that, if faced with a similar situation again, he would enlist the additional assistance of his colleagues, and ensure that the rationale, risks, and method of his actions were more clearly explained to the family.

Recommendations

133. I recommend that Health NZ Wairarapa:

a) Provide a formal written apology to Mr A and Ms B for the breach of Right 4(1) of the Code identified in this report. The apology is to be sent to HDC, for forwarding to Mr A, within three weeks of the date of this report.

b) Provide HDC with a copy of its new/updated policies, including but not limited to, clinical documentation of critically ill patients, sepsis management pathway, 'Shared Goals of Care', PICC line, CVAD management, and the ISBAR clinical communication tool, within three months of the date of this report.

c) Undertake a random audit of 10 consumers looking at clinical records over a six-month period at Wairarapa Hospital to determine the level of compliance with EWS and relevant escalation policies. An outcome report, with any corrective actions to be implemented, is to be provided to HDC within three months of the date of this report.

d) Confirm the implementation and review the effectiveness of the recommendations set out in its ERR, within three months of the date of this report. Please include:

   i. an update on after-hours staffing levels, and whether a Surgical Nurse Co-ordinator role has been established; and

   ii. evidence of education provided to staff on PCA and analgesia use.

Follow-up actions

134. A copy of this report will be sent to the Coroner.

135. A copy of this report with details identifying the parties removed, except Health NZ Wairarapa, Health NZ Capital, Coast and Hutt Valley, and the clinical advisors on this case, will be sent to Te Aho o Te Kahu | Cancer Control Agency and placed on the Health and Disability Commissioner website (www.hdc.org.nz) for educational purposes.

Appendix A: Independent clinical advice

Complaint:	**Mrs [A]/Health New Zealand**
Our ref:	**C21HDC02106**
Independent advisor:	**Dr Mike Hulme-Moir**

I have been asked to provide clinical advice to HDC on case number 21HDC02106. I have read and agree to follow HDC's Guidelines for Independent Advisors.

I am not aware of any personal or professional conflicts of interest with any of the parties involved in this complaint.

I am aware that my report should use simple and clear language and explain complex or technical medical terms.

Qualifications, training and experience relevant to the area of expertise involved:	BSc, MBChB, FRACS 1998. I am head of the colorectal unit at North Shore Hospital, Health NZ Waitematā, and have over 20 years' experience managing acute colorectal problems.
Documents provided by HDC:	<u>Complaint</u>: 1. Letters of complaint dated 20 August 2021 and 2 September 2021 and post-mortem examination report dated 16 August 2021. <u>Clinical records:</u> 1. Clinical records from Health NZ Capital, Coast and Hutt Valley covering the period July 2021–August 2021. 2. Clinical records from Health NZ Wairarapa covering the period July 2021–August 2021. 3. Operation note dated 29 July 2021. <u>Responses:</u> 1. Health NZ Capital, Coast and Hutt Valley's response dated 15 February 2022 2. Health NZ Wairarapa's response and attachments dated 31 May 2023 3. Health NZ Wairarapa's Event Review Report and attachments 4. Summary report dated […] August 2021
Referral instructions from HDC:	1. Were Mrs [A]'s symptoms investigated appropriately and in a timely manner? 2. Were there any findings on the investigations undertaken during Mrs [A]'s admission to Wairarapa Hospital, and taking

	into account her symptoms and assessment findings that might have raised concerns for an underlying bowel perforation as the cause of Mrs [A]'s deterioration? 3. Was the use of chest drain tubing via the stoma, as attempted on DayB August 2021, an appropriate and reasonable management strategy? 4. The adequacy of Health NZ Wairarapa's Event Review Findings and remedial measures. 5. Any other matters in this case that you consider warrant comment (if applicable).

Factual summary of clinical care provided complaint:

Brief summary of clinical events:	There is limited information available with respect to Mrs [A]'s investigation for rectal bleeding by her general practice. She contacted her general practice on the 3/8/20 for rectal bleeding and was seen in person for proctoscopy (visual exam of the anal canal and low rectum) plus blood tests. This was reported as showing internal haemorrhoids and treatment offered with a request to re-present in 4 weeks if the bleeding persisted. Mrs [A] didn't re-present until 2/2/2021 when she was offered haemorrhoid treatment but with the caveat that she should contact the practice if the symptoms didn't settle down within a week. Mrs [A] recontacted the practice on the 20/5/21 and spoke with the nurse practitioner. More blood tests were arranged, and she was seen in person on the 25/5/2021 to discuss these results. At this consultation it was decided to refer her to a private specialist as there was no clear cause for the ongoing bleeding. 30/6/21 Colonoscopy in private for rectal bleeding confirmed rectal cancer, low-grade adenocarcinoma. CT chest/abdo/pelvis 2/7/21 showed possible lung metastatic disease. MRI pelvis 6/7/21 showed locally advanced rectal cancer with positive CRM (circumferential margin) and EMVI (extra mural vascular invasion). PET Scan 20/7/21 confirms three right lung metastases confirming a pre-treatment stage of rT4N2M1a (radiological Tumour stage 4 Nodes stage 2 Metastases stage 1a).

	MDM review 9/7/21 suggested total neoadjuvant treatment (chemotherapy followed by chemoradiation and then restaging plus or minus definitive surgery) (referral made 9/7/21). Laparoscopic colostomy formation 29/7/21 for severe rectal symptoms. Discharged to community 2/8/21. PICC line insertion 3/8/21. Seen in oncology clinic 5/8/21 and commenced first cycle of FOLFIRINOX (5-Flurouracil, Oxaliplatin and Irinotecan) chemotherapy followed by Filgrastim (medication to stimulate white cell growth). Developed severe abdominal pain on 11/8/21 and reviewed by registered oncology nurse. [DayA]/8/21 Presented to ED approximately 0800 with nausea, vomiting, abdominal and rectal pain and collapse, admitted, bloods taken and given IV fluids and broad-spectrum antibiotics (meropenem) with presumed diagnosis of chemotherapy-related complication/sepsis. Note normal WCC (white cell count) with decreased lymphocytes and CRP (c-reactive protein) 56 (this suggests low-grade inflammation with no effect on white blood cell count). On examination, her abdomen was described as soft, non-distended with lower abdominal tenderness. Mrs [A] was tachycardic (fast heart rate), normotensive (normal blood pressure) and had a slightly raised temperature. She was unable to void urine in ED, and a note made by doctor at 1317 for bladder scan if not voiding on ward. Transferred to acute medical ward at approximately 1435. Minimal urine out recorded, though patient was up to toilet independently so not measured. Mrs [A] received 5 L of IV fluids over the 24-hour period. Urine sample recorded at 1400, which was a small volume and dark in colour. Reviewed by House Officer sometime between 1630 and 1900 with a note to continue antibiotics until all cultures back. [DayB]/8/21 0850 reviewed by medical team, noted to be febrile, pale and sweaty, normotensive with a distended minimally tender abdomen but had passed urine at midnight and changed the colostomy bag 4 x in 24 hours. Husband estimated 1 L loss over that time. CRP had increased to 319 and

	her white count to 2.5 with neutrophils of 1.8. (These blood results suggest active infection with increased CRP and dropping WCC and neutrophils). A CT scan was requested. CT at 1130 showed thin-walled dilated colon up to the level of the colostomy. There was minimal free fluid and no free air. (This suggests either an obstruction at the level of the abdominal wall or Ileus, which is where the bowel stops working due to sepsis resulting in a functional obstruction). [DayB]/8/21 Reviewed by Dr [E] (surgeon) after the CT, who used a foley catheter (urinary catheter) to drain the colon via the colostomy. 1.1 L faecal fluid was extracted. Notes document that Mrs [A] felt better after this. BP recorded at 0930 113/82 with a drop to 86/54 at 1350 and then not again until 1620 when Mrs [A] remained hypotensive at 79/48. There doesn't appear to have been any escalation of care during this period. A MET (medical emergency team) call was made at 1920 for hypotension (low blood pressure) and tachycardia not responsive to IV fluid. Decision made to move Mrs [A] to HDU in consultation with anaesthetics, surgery, and medicine, where she was managed with an arterial line, fluids, inotropes (noradrenaline for blood pressure support) and indwelling catheter. Heparin was commenced after discussion with on-call surgeon and a CTA (CT angiography) ordered. Bloods showed markedly raised CRP of 381 with decreased WCC 1.7 and neutrophils of 0.7. (This suggests progressive sepsis.) They also showed renal compromise with creatine of 138 and decreased eGFR ([estimated glomerular filtration ratio] measure of renal function) of 38. Na+ 128 and K+ 4. All combined reflect a significant septic state. Review by on-call surgeon at 2100. He documented persistent hypotension, tachycardia, and low JVP (jugular venous pressure, which is a clinical measure of blood volume and is also indicative of a thorough examination) despite adequate IV fluid and inotropes. He found her abdomen distended but not particularly tender. Both stoma orifices were patent, and a further unsuccessful attempt was made to drain the colostomy, initially with a foley and then with a chest tube. He noted that he felt laparotomy was not likely to be helpful in [home town], particularly with the lack of high-level ICU support. He discussed the clinical situation with the anaesthetist and physician, who

	collectively considered ICU transfer to Wellington needed. He also spoke with the ICU consultant in Wellington. This [transfer] was not initially possible due to weather. 2300 Nursing notes document increasing inotropic requirements, continuing abdominal distention and persistent tachycardia and hypotension. [DayC]/8/21, 0244 on-call House Officer review and discussion with on-call physician and ICU registrar in Wellington. NGT (nasogastric tube) inserted. ABG (arterial blood gas) shows increasing lactate and acidosis. Increased pain relief, high-flow oxygen, bicarbonate, and fluids all given. 0520 Wellington flight team contacted, along with ICU Wellington. Request made for vasopressin, which was not available. 0600 ICU Wellington suggested increasing noradrenaline to 30mL/hour and adding in adrenaline. Surgical Consultant arrived in HDU. Surgical note documents marked deterioration in patient's condition. Abdomen noted to be distended and tender but still soft. He documented concerns about colonic ischaemia (inadequate blood supply) with prolonged hypotension. Discussed with ICU Wellington, who requested intubation in preparation for the transfer team, who were scheduled to arrive around 7am. 0630 intubated by anaesthetist. 1045 transfer team notes document cardiac arrest in the helicopter. Unsuccessful attempt was made to resuscitate Mrs [A], and further treatment was abandoned after real-time consultation with ICU consultant in Wellington. Mrs [A] certified dead at 1129 am.
Question 1: Were Mrs [A]'s symptoms investigated appropriately and in a timely manner?	
List any sources of information reviewed other than the documents provided by HDC:	Ministry of Health NZ. Referral Criteria for Direct Access Outpatient Colonoscopy or Computed Tomography Colonography 2019 (online)

	HNZ Waitematā 'Febrile Neutropenia — Initial Management (Adults) WDHB Clinical Practices Manual' Canterbury District Health Board 1. Management of Oncology Patients with Neutropenia (attached)
Advisor's opinion:	1. In my opinion, Mrs [A] initially received appropriate and timely investigations at her General Practice. Her rectal bleeding was investigated with appropriate investigations, including blood tests and physical examination with a proctoscope. This identified internal haemorrhoids, which were treated with symptomatic treatment. She was asked to re-present if further bleeding occurred and only did so some months later, on the 2/2/2021. Once again, she was offered haemorrhoid treatment on the understanding that if her symptoms didn't settle within a week she would contact the practice. At her next contact on the 20/5/2021 she was reinvestigated, leading to a face-to-face meeting on the 25/5/2021 and referral to a specialist and colonoscopy on the 30/6/21. Treatment after this was rapid and appropriate. Rectal bleeding is a very common symptom, and the chance of having a cancer is extremely low. It should, however, always be taken seriously. Her GP saw her in person and examined her appropriately. Mrs [A] was asked to re-present early if her symptoms persisted, which in my view is good advice. Once it became clear that her haemorrhoids were not the cause, she was sent for further investigation. 2. Mrs [A] received timely and appropriate investigations during her acute admission on the [DayA]/8/2021. Mrs [A] was seen and investigated with a full septic screen (blood tests, a urine test later in the day, and a chest X-ray) and a presumptive diagnosis of chemotherapy-related sepsis was made. Her treatment with broad spectrum antibiotic (meropenem) and IV fluid was appropriate. Of note, her white cell count and neutrophil count were

	within normal limits on admission and she had a small rise in her CRP of 56 (c-reactive protein, which is a nonspecific marker of inflammation). Chest Xray on the [DayA]/8/21 didn't show any cause for her symptoms and in particular no evidence of free air suggesting bowel perforation. After review on the morning of the [DayB] [h], Mrs [A] was referred for a CT because of ongoing abdominal pain and distention. A surgical opinion was also obtained. Appropriate action, namely decompression of the stoma with a foley catheter, was undertaken, and it is recorded that her symptoms improved.
What was the standard of care/accepted practice at the time of events? Please refer to relevant standards/material.	Yes
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	1. General practice/specialist investigation no departure from standard of care or accepted practice. 2. Acute admission no departure from standard of care or accepted practice. Please see comments regarding the ongoing care she received after admission.
How would the care provided be viewed by your peers? Please reference the views of any peers who were consulted.	The initial management of Mrs [A]'s cancer diagnosis was excellent and expedient. The use of diverting colostomy prior to chemotherapy or radiation therapy for rectal cancer is well-established standard practice. The commencement of chemotherapy within a week of surgery is quick, but there were no reasons I can see why this was too quick. Mrs [A] recovered well and without complication from her surgery and had no internal bowel anastomoses (joins between bowel ends) that might have put her at a greater risk of infection. Initial management during her acute admission was appropriate and timely. There was some delay in inserting a catheter (see below) and a slow response to her blood pressure drop on [DayB].

Please outline any factors that may limit your assessment of the events.	
Recommendations for improvement that may help to prevent a similar occurrence in future.	I have two observations regarding her acute admission that I believe could have been done better. Firstly, it is documented that she had poor urine output on [DayA]. She was unable to void in ED, and a bladder scan showed an empty bladder. When she did pass urine later in the day it is recorded as being concentrated and small volumes. In my opinion, given the other findings, I would have inserted an IDC (indwelling catheter) early to measure urine output. It is a very useful indicator of a patient's medical state and response to treatment. In fairness to the medical team, Mrs [A] was noted as mobilising and using the toilet, but nonetheless her illness and poor output was an indication for early placement of IDC. The second point pertains to the delay in responding to Mrs [A]'s hypotension. There was a persistent drop in blood pressure first documented on [DayB]8/2021 at 1350 and then not again until 1620. A MET call was not put out until 1920. This was despite clear parameters in her EWS score and in the Wairarapa EWS policy document. I believe this is a severe departure from standard care. This was identified and comprehensively dealt with [in] the WDHB Event Review Report RXB8035 pg 11.
Question 2: Were there any findings on the investigations undertaken during Mrs [A]'s admission to Wairarapa Hospital, and taking into account her symptoms and assessment findings, that might have raised concerns for an underlying bowel perforation as the cause of Mrs [A]'s deterioration?	
List any sources of information reviewed other than the documents provided by HDC:	Effectiveness of plain radiography in diagnosing hollow viscus perforation: Study of 1,723 patients of perforation peritonitis. Emergency Radiology 2011;19(2):115–19. DOI:10.1007/s10140-011-1007-y[#] Kothari et al. Nontraumatic large bowel perforation: spectrum of etiologies and CT findings. Abdom Radiol

	2017;42:2597–2608. DOI: 10.1007/s00261-017-1180-x* Large Bowel Obstruction Waitematā General Surgical Guidelines Dec 2022 (attached)
Advisor's opinion:	Diagnosis of bowel perforation is usually based on a combination of investigations and clinical examination. The most sensitive (reliable) way of diagnosing a perforation is with radiology. (Both plain X-rays and CT can be used.) On reviewing the results of the investigations performed on Mrs [A] during her admission, I can't find any evidence of a bowel perforation. She had two chest X-rays on [DayA and DayC], which showed no sign of free air under her diaphragm. Plain radiology has a sensitivity of over 89% for free air#. CT is a very reliable and standard technique used for investigating acute abdominal conditions. Its accuracy for identifying large bowel perforation is in the order of 90%*. The CT scan done on [DayB]8/2021 didn't show any free air (i.e. air outside the bowel lumen) and minimal free fluid, which was not adjacent to the perforated area. Given she had distended colon, I would have assumed that a long-standing perforation would lead to the leakage of air into her peritoneal cavity (abdominal cavity). The CT has been reviewed by an external radiologist, who also agreed with the original report. Bowel perforation almost always leads to the development of peritonitis. A patient with peritonitis will usually have severe abdominal pain and a rigid or board-like abdomen. There are numerous abdominal examination findings documented in the notes that describe Mrs [A] as having a soft tender distended but not peritonitic abdomen. Mrs [A] was immunocompromised and was receiving steroids, and both can mask the abdominal findings. In the setting of the clinical findings and the radiological findings, I think it likely the perforation was a late-onset condition as outlined in the second

	to last paragraph on page 4 of the HNZ Wr response letter 31-05-2023.
What was the standard of care/accepted practice at the time of events? Please refer to relevant standards/material.	Yes, with respect to the possibility of bowel perforation, Mrs [A] was investigated appropriately.
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	No departure
How would the care provided be viewed by your peers? Please reference the views of any peers who were consulted.	I haven't discussed this with my peers as I feel the diagnostic decisions made with respect to Mrs [A]'s symptoms and radiological findings were logical and appropriate.
Question 3: Was the use of chest drain tubing via the stoma, as attempted on [DayB] August 2021, an appropriate and reasonable management strategy?	
List any sources of information reviewed other than the documents provided by HDC:	Kulasegaran et al. Prophylactic foley catheter insertion into defunctioning ileostomy to reduce obstruction after colorectal surgery: pilot randomized controlled trial. ANZ J Surg. 2020;90:1637–1641. Doi: 10.1111/ans.15714[#]
Advisor's opinion:	The use of soft catheters to drain obstructed or partially obstructed stomas (colostomy or ileostomy) is a well-established technique. It is one that my colleagues and I at Health NZ Waitematā have used often. We looked at its efficacy as a prophylactic measure to reduce postoperative obstruction after formation of an ileostomy[#]. Mostly foley catheters, which are soft flexible rubber or silicon catheters designed for insertion into the bladder, are used for this purpose. I have discussed this with my colorectal colleagues, and other catheters, for instance, firm nelaton catheters, can be used. None of us have used a chest tube/drain to clear an obstructed stoma before, but

	we do use them regularly to drain complex collections in the abdominal cavity. The common chest tubes are large calibre drains made of silicon that come with a metal trochar (spike) that can be removed if not needed. Without the trochar, the drains are flexible but much stiffer than a foley and slightly more rigid than the firm nelaton catheters. I note that, in the surgeon's description of using the chest tube, that: 1. he had tried unsuccessfully to use a foley catheter 2. he removed the trochar from the chest drain 3. he describes inserting it gently and stopping quickly when it didn't work. (Last paragraph, pg 23 of HNZ Wr response letter 31 May 2023) I also note that this is not consistent with the family's recollection of the procedure, where they describe it being 'rammed' into the stoma (pg 6, section 1.2 HNZ Wr response letter 31-May-2023). I am unable to comment on the discrepancy between the two accounts, which has been dealt with in both the HNZ Wr response letter 31-May- 2023 and the HNZ event review report. There is very little literature available on this topic. By definition, the procedure is a 'blind one', i.e. the catheter is inserted without the ability to see where it is going. This creates a risk of bowel perforation, hence extreme care is needed when performing this, particularly with a more rigid catheter such as a chest drain. If drainage is unsuccessful, as it was when initially tried with a large foley catheter, then in my view using a larger drain is probably not going to be successful.
What was the standard of care/accepted practice at the	Tube drainage of obstructed stomas is an accepted practice. The use of a chest drain is unusual but not

time of events? Please refer to relevant standards/material.	completely outside the parameters of accepted practice.
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	Moderate departure (use of chest drain)
How would the care provided be viewed by your peers? Please reference the views of any peers who were consulted.	I have discussed this with my peers and, whilst they had not used this particular catheter before, they have used semi-rigid catheters (firm nelaton) before. None of us have used a chest drain before and would counsel caution due to its rigidity.
Please outline any factors that may limit your assessment of the events.	There is not enough information to make any other comment about the use of the chest drain, e.g. the make or brand is not specified. I have already pointed out the discrepancy in the two accounts of the procedure.
Recommendations for improvement that may help to prevent a similar occurrence in future.	I would be more comfortable with using large bore foley catheters. It should be performed by an expert.
Question 4: The adequacy of Health New Zealand's Event Review Findings and remedial measures.	
List any sources of information reviewed other than the documents provided by HDC:	
Advisor's opinion:	All of the reports are detailed and comprehensive. In particular, they identify the shortfalls found on review and apologise for them. In addition, there is a detailed description of the processes put in place to prevent similar occurrences in the future.
What was the standard of care/accepted practice at the time of events? Please refer to relevant standards/material.	Yes There appears to have been a long delay in getting both the event report and the final letter finished. Ideally, this would be done quicker. This is

	commented on in both documents and also in the email correspondence with Mrs [A]'s husband.
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	No departure
Question 5: Any other matters in this case that you consider warrants comment (if applicable).	
List any sources of information reviewed other than the documents provided by HDC:	[Not applicable to investigation]
Advisor's opinion:	[Not applicable to investigation]
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	[Not applicable to investigation]
Recommendations for improvement that may help to prevent a similar occurrence in future.	[Not applicable to investigation]

Signature:

Name: Dr Mike Hulme-Moir
Date of Advice: 31 January 2025

Appendix B: Independent clinical advice

Complaint:	**Mrs [A] / Health New Zealand**
Our ref:	**21HDC02106**
Independent advisor:	**Dr Orlaith Heron**

I have been asked to provide clinical advice to HDC on case number 21HDC02106. I have read and agree to follow HDC's Guidelines for Independent Advisors.

I am not aware of any personal or professional conflicts of interest with any of the parties involved in this complaint.

I am aware that my report should use simple and clear language and explain complex or technical medical terms.

Qualifications, training and experience relevant to the area of expertise involved:	MbBChBAO FRACP Medical Oncologist
Documents provided by HDC:	<u>Complaint</u>: 1. Letters of complaint dated […] August 2021 and 2 September 2021 and post-mortem examination report dated […] August 2021. <u>Clinical records:</u> 1. Clinical records from Health NZ Capital, Coast and Hutt Valley covering the period July 2021–August 2021. 2. Clinical records from Health NZ Wairarapa covering the period July 2021–August 2021. 3. Operation note dated 29 July 2021. <u>Responses:</u> 1. Health NZ Capital, Coast and Hutt Valley's response dated 15 February 2022 2. Health NZ Wairarapa's response dated 31 May 2023 3. Health NZ Wairarapa's Event Review Report 4. Summary report dated […] August 2021 <u>Other relevant information:</u> 1. Capital, Coast and Hutt Valley's Chemotherapy patient information document.

Referral instructions from HDC:	1. Whether the timing of the commencement of chemotherapy was appropriate. 2. Any other matters in this case that you consider warrant comment.

Factual summary of clinical care provided complaint:

Brief summary of clinical events:	**Summary of Timeframe:** 21/07/2021 New Patient Medical Oncology clinic. Symptoms concerning for impending bowel obstruction. 23/07/2021 MDM agrees with defunctioning stoma. 29/07/2021 Elective admission for defunctioning loop sigmoid colostomy. 02/08/2021 Discharged. 04/08/2021 PICC line placed. 05/08/2021 Clinical review prior to commencement of chemotherapy the same day.
Question 1: Whether the timing of the commencement of chemotherapy was appropriate?	
List any sources of information reviewed other than the documents provided by HDC:	Nil
Advisor's opinion:	Given the death of Mrs [A] in close proximity to surgery and her first cycle of chemotherapy, you asked that I comment on whether the timing of commencement of chemotherapy was appropriate. Timing was likely appropriate, but I cannot fully confirm this due to a lack of documentation.
What was the standard of care/accepted practice at the time of events? Please refer to relevant standards/material.	There are no international guidelines for the appropriate timing of chemotherapy commencement after surgery in this scenario. Timing is individualised, taking into consideration factors including the type of surgery, chemotherapy agent(s) to be administered, intent of treatment (curative vs palliative) and the patient's recovery. A chemotherapy start date needs to be planned in advance for drug compounding and

	delivery but can be deferred if the date is no longer clinically appropriate. Dr [F] consulted with the treating General Surgeon, Dr [E], in making this decision. FOLFIRINOX was administered on the 7th day after defunctioning surgery. Most Medical Oncologists would agree a 1- to 2-week period is sufficient healing time. It's an acceptable balance of allowing time for healing without delaying systemic treatment too long, resulting in progressive symptoms and cancer growth. Both the inpatient and discharge documentation suggest Mrs [A] recovered quickly and had an uncomplicated hospital stay. She went on overnight leave prior to official discharge. Dr [E] was aware of the imminent chemotherapy start date and there were no signs of early surgical complication to necessitate a delay in systemic treatment. The standard of care is to review a patient who has had surgery prior to administration of chemotherapy. Mrs [A] was seen in clinic the same day as chemotherapy administration. The clinic letter has chemotherapy consent information but there is no documentation of clinical assessment. The review was by a registrar under the supervision of Dr [F].
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	Yes, there was a moderate departure from the standard of care. The pre-chemotherapy review in a post-surgery situation is part of the chemotherapy timing decision-making process. There were no early signs that the planned chemotherapy start date needed to be altered, but without documentation of a pre-chemotherapy clinical assessment, I cannot definitively say that the timing remained appropriate.
How would the care provided be viewed by your peers? Please reference the views of any peers who were consulted.	I believe the majority of my peers would agree with the above. The timeline history shows efficient oncological care. There was communication between the Surgical and Medical Oncology teams in deciding the timing of systemic treatment. There were no surgical concerns on discharge, and they documented the planned chemotherapy date. Mrs [A] appropriately had a pre-chemotherapy clinic appointment. Presuming she

	remained well post-discharge; timing of chemotherapy was acceptable. However, the clinic letter does not document Mrs [A]'s clinical well-being, including presence or absence of abdominal symptoms.
Please outline any factors that may limit your assessment of the events.	Lack of documentation
Recommendations for improvement that may help to prevent a similar occurrence in future.	Documentation of the clinical well-being of the patient and the presence or absence of clinical concerns. Lack of documentation does not infer there were no clinical concerns present.
Signature: 	
Name: Dr Orlaith Heron	
Date of Advice: 31 March 2025 and 16 April 2025	

Appendix C: In-house clinical advice

FROM : David Maplesden

CONSUMER : Mrs [A](dec)

PROVIDER : Dr [C]; [Mrs A's local] [m]edical [c]entre

FILE NUMBER : C21HDC02106

DATE : 13 January [2025]

1. My name is David Maplesden. I am a graduate of Auckland University Medical School, and I am a vocationally registered general practitioner holding a current APC. My qualifications are MB ChB 1983, Dip Obs 1984, Certif Hyperbaric Med 1995, FRNZCGP (Dist) 2003. Thank you for the request that I provide clinical advice in relation to the complaint from Mr [A] about the care provided to his late wife, Mrs [A], by Dr [C] of [the local] [m]edical [c]entre. In preparing the advice on this case, to the best of my knowledge I have no personal or professional conflict of interest. I agree to follow the Commissioner's Guidelines for Independent Advisors.

2. I have reviewed the following information:

- Complaint from Mr [A]
- Response from [the local] [m]edical [c]entre […]
- Response from Dr [C]
- Clinical notes [the local medical centre] […]
- Clinical notes Wairarapa Hospital (WaiH)

3. Mrs [A] (B: 1965) first reported symptom of intermittent rectal bleeding to Dr [C] in August 2020. Following assessment, Mrs [A] was diagnosed with, and treated for, haemorrhoids. Her symptoms apparently settled but recurred in February 2021 when further haemorrhoid treatment was provided. Following a further recurrence of symptoms in late May 2021, Mrs [A] was referred privately for colonoscopy (gastroenterologist Dr [G]). Colonoscopy undertaken by Dr [G] on 30 June 2021 revealed a low rectal tumour, with biopsy findings confirming adenocarcinoma of the rectum and two dysplastic colonic polyps. Subsequent imaging confirmed local lymphadenopathy and likely pulmonary metastases (PET-CT 21 July 2021). A defunctioning colostomy was performed laparoscopically on 29 July 2021 with a plan for neoadjuvant chemotherapy (commenced 5 August 2021) and consideration of tumour resection following this. Mrs [A] was admitted to WaiH on [DayA] August 2021 with increasing unwellness and sadly died there […] with post-mortem findings of bowel perforation. My condolences go to the whānau of Mrs [A] on their sudden loss. This advice examines the appropriateness of Mrs [A]'s management in primary care leading up to her diagnosis.

4. I do not have access to notes relating to Mrs [A]'s medical history prior to her transfer to [the local medical centre] […] in September 2019, but a report from Dr [G] dated 30 June

2021 refers to absence of any significant past medical history other than childbirth, no family history of colorectal cancer (CRC) and no history of altered bowel pattern. Dr [C] states she had a telephone consultation with Mrs [A] on 3 August 2020 (Covid alert level 1) in which symptom of rectal bleeding was reported. Prior [local medical centre] […] notes showed no reports of such symptoms. Clinical notes read:

Blood on toilet paper when wiping after BM, did drip into toilet bowel earlier this week No lightheadedness, no SOB. Can see a little vein — now disappeared. Has had haemorrhoids before. No constipation. Has been doing heavy lifting — this is what has triggered it for her in the past. No fam Hx bowel ca … Plan: bring in for proctoscopy on Wed — discussed procedure, bloods prior.

If abnormalities on bloods or not clearly haemorrhoids on exam then refer colonoscopy, proctosedyl cream after examination

Comment: Management was reasonable. Outlet type bleeding[1] was described consistent with haemorrhoid diagnosis but digital rectal examination (DRE) and proctoscopy was required to confirm a local cause for the bleeding. Details of the previous haemorrhoid history are unclear, although it is implied Mrs [A] may have had episodes of rectal bleeding prior to her transfer to [her local medical centre] […], which were treated as haemorrhoidal, although apparently no reported episodes since at least September 2019. It appears bowel pattern history and family history of CRC were explored. Best practice is to check also for symptom of unexplained weight loss when investigating colorectal symptoms[2].

5. Dr [C] examined Mrs [A] on 5 August 2020. Blood test results received on 4 August 2020 showed normal ferritin, normal haemoglobin (148 g/L) and red cell parameters and normal liver enzymes. Examination notes are recorded as: *no external haemorrhoids or fissures, no masses on PR, some distended veins on proctoscopy.* Dr [C] notes in her response: *On physical examination on 5th August, I saw internal haemorrhoids. There was no rectal mass on rectal examination. Her blood tests were all normal. I diagnosed haemorrhoids and prescribed proctosedyl. Whilst this is not documented I am confident I would have given her my usual safety netting advice to return if the bleeding had not stopped in 4 weeks*. A prescription for Proctosedyl ointment was provided.

Comments:

(i) Mrs [A] was just short of her 55th birthday. She had described outlet-type rectal bleeding, which had apparently been attributed in the past to haemorrhoids after heavy lifting, with heavy lifting preceding the current symptoms. There was no change in bowel pattern and no family history of CRC. There was no evidence of current iron deficiency anaemia or liver abnormality. There was some evidence of internal haemorrhoids on proctoscopy, although

[1] Outlet-type bleeding is a type of rectal bleeding that is characterized by bright red blood on toilet paper or in the toilet bowl but not mixed in with stool. It is usually associated with an obvious anal cause such as haemorrhoids (painless bleeding), fissure (painful bleeding) or occasionally anal cancer.
[2] 3D Community Health Pathways. *Colorectal Symptoms.* https://3d.communityhealthpathways.org/ Accessed 13 January 2024

no reference to current signs of bleeding from the haemorrhoidal vessels. There was no mass palpable on DRE (although DRE by Dr [G] almost 11 months later revealed a craggy mass palpable at the anal margin). Performing an abdominal examination is accepted practice in patients with colorectal symptoms, presence of an abdominal mass being a potential high-risk concerning feature. I am mildly critical there is no record of abdominal examination being performed in this case although note Dr [C] was conscientious in performing proctoscopy and this appeared to show a likely benign cause for the outlet-type bleeding. I am mildly critical there is no documentation of safety netting or follow-up advice, which I believe was particularly important in this case given Mrs [A]'s age (advancing age being a risk factor for CRC), although Dr [C] states it was likely such advice was provided. Mrs [A] did not currently fulfil the criteria for direct access to outpatient colonoscopy[3], but if her symptoms persisted despite therapy or rapidly recurred (benign anal causes treated) she would satisfy the 'six-week' criteria for such access, and I believe it was important to formally monitor response to treatment.

(ii) It could be debated that despite Mrs [A] not fulfilling current criteria for direct access to outpatient colonoscopy, she might have been considered for general surgical referral with a view to (at least) flexible sigmoidoscopy (FS). On this aspect of management, the local approach appears to differ from some international recommendations such as those presented in Uptodate,[4] which include (for patients with history of minimal bright red blood per rectum — BRBPR):

Age 50 or older — Most authors agree that colonoscopy is the test of first choice in patients aged 50 years and older. Colon cancer screening is recommended for patients with 'average risk' beginning at age 45 years. For these reasons, patients aged 50 years and older with scant rectal bleeding should undergo colonoscopy regardless of the presence or absence of identified anorectal pathology on clinical examination.

Ages 40 to 49 — Patients with minimal BRBPR who are aged 40 to 49 and who do not appear to be at increased risk for colorectal cancer based on their presentation and history should undergo at least a sigmoidoscopy. Although there is a lack of high-quality evidence to support this approach, we would generally suggest a colonoscopy for most patients, particularly those ≥45 years of age, if no cause of bleeding was identified on sigmoidoscopy.

The local Health Pathway recommendations regarding management of haemorrhoids[5] does not include referral for further investigation such as sigmoidoscopy or colonoscopy if any bleeding is consistent with the finding of haemorrhoids, and I am unsure that had Mrs [A] been referred for general surgical review in August 2020 (with a diagnosis of internal haemorrhoids and occasional outlet-type bleeding in the absence of any other sinister colorectal symptoms), such a referral would have been accepted. However, in the event of

[3] https://www.health.govt.nz/system/files/2019-02/referral-criteria-direct-access-outpatient-colonoscopy-computed-tomography-colonography-feb19-v2.pdf Accessed 13 January 2025
[4] Penner R. Approach to minimal bright red blood per rectum in adults. Uptodate. https://www.uptodate.com/ Accessed 13 January 2025
[5] 3D Community Health Pathways. *Haemorrhoids.* https://3d.communityhealthpathways.org/ Accessed 13 January 2024

treatment failure (persistence or worsening of symptoms), I believe referral for colonoscopy was mandatory. Whether or not recurrence of bleeding symptoms some months after apparently successful local haemorrhoid treatment (as occurred in this case — see below), when the nature of the bleeding remained as outlet-type and there were no new concerning colorectal symptoms, might be described a treatment failure could also be debated as such a presentation is not uncommon in patients with haemorrhoids. It may be that more explicit Pathways recommendations on investigation of outlet-type bleeding consistent with international practice, but taking into account local resource constraints, might be considered in the future.

6. On 14 August 2020, Mrs [A] requested repeats of her usual long-term medications (loratadine, Flixonase, cilazapril) which was provided. On 11 November 2020, there was another phone request for repeats, which was provided although Mrs [A] was advised GP review was required and this was undertaken by Dr [C] on 3 December 2020 (including routine cervical smear and treatment of a finger cyst). There is no reference to persistence or recurrence of any colorectal symptoms and no request over this period for further supplies of Proctosedyl ointment.

7. On 2 February 2021 a practice nurse has recorded telephone contact from Mrs [A] describing *a flare up of haemorrhoids again. Has noticed blood on toilet paper after wiping, Passing more flatus. Did have constipation but this has subsided. Trigger is doing some heavy lifting in the Garden. Had the same as above as per ER notes dated 03 August 2020. Have sent task to* [Dr [C]]. *Does she need to make an apt or are you happy to do a prescription*. A prescription for Proctosedyl was completed by Dr [C] on 18 February 2021 with her recording a response to the nurse message on 19 February 2021 as: *sorry-super-late-with task I sent script to* [local pharmacy] *— if-bleeding-not-setting with ointment after approx 1 week then needs review*. Dr [C] states in her response: *I did not ask* [Mrs [A]] *to come in for further review because I saw a haemorrhoid at the initial consultation which I felt was the source of initial bleeding. In addition, her bleeding had settled with the proctosedyl and recurred with further heavy lifting and constipation. I asked the nurse to advise Mrs [A] to book an appointment if the bleeding had not subsided within one week of starting treatment.* It is not clear if the nurse passes on to Mrs [A] the recommendation for review if her symptoms failed to settle within a week.

Comment: The clinical picture provided to Dr [C] was of a 55-year-old lady with internal haemorrhoids noted on examination six months previously as the likely cause of an episode of outlet-type bleeding at that time, to have recurrence of the bleeding under similar circumstances (heavy lifting). There had been an apparent response to haemorrhoid treatment in August 2020 with no report of PR bleeding symptoms in the six months since that treatment until the current episode. There was no report of persistent change in bowel pattern or other new colorectal symptoms. Safety netting advice was provided (or at least intended to be provided) for Mrs [A] to return for review if her symptoms persisted beyond one week of treatment (Proctosedyl). I believe many of my peers might have managed Mrs [A] as Dr [C] did at this stage but note the previous discussion regarding what might be regarded as best practice in management of patients aged over 55 years with outlet-type bleeding whether or not there is an apparent benign cause evident. Haemorrhoids and CRC

may co-exist, and I have seen many cases of this dual pathology contributing to the delay of CRC.

8. On 19 February 2021 Mrs [A] requested a repeat of regular medications, which were supplied (no Proctosedyl). On 20 May 2021, Mrs [A] spoke with nurse practitioner Ms [H] requesting repeat of usual medications but noting also: *has placed script order but has recurring problem with haemorrhoids, seen in August and rx proctosedyl but now more frequent exacerbations, bleeding for last week, no problems with constipation so bloods and then see and refer as has private insurance*. Blood tests dated 21 May 2021 showed normal ferritin, haemoglobin (142 g/L) and red cell parameters. Ms [H] reviewed Mrs [A] on 27 May 2021 noting *here re haemorrhoids, not constipated, easy to pass motion, no straining, proctosedyl made a slight difference, never had surgery for haemorrhoids*. Negative family history of CRC noted. Weight was 79.4kg (no reference to unexplained weight loss). There were no haemorrhoids and no bleeding site evident on proctoscopy, and DRE was reported as normal but was followed by mucousy PR bleeding. Referral to gastroenterologist Dr [G] was made the same day and review by him with colonoscopy undertaken a month later leading to Mrs [A]'s diagnosis of rectal cancer. Blood tests ordered by Dr [G] showed normal ferritin, CRP and haemoglobin but elevated tumour marker CEA.

Comment: Mrs [A]'s management by Ms [H] was appropriate given the recurrence and persistence of the rectal bleeding symptom despite relatively recent haemorrhoid treatment. Direct questioning regarding unexplained weight loss and performing an abdominal examination are accepted components of managing a patient with colorectal symptoms, but I note an appropriate referral was made in any case. Had an abdominal mass been detected (and in hindsight there was no palpable mass) this might have resulted in slightly earlier review. Ms [H] might reflect on her DRE technique noting the low rectal tumour was apparently easily palpated by Dr [G] prior to performing colonoscopy a month after Ms [H]'s review.

10. In summary, Mrs [A]'s presentation was notable for the reporting of very intermittent outlet-type bleeding, presence of haemorrhoids on proctoscopy and apparent response to treatment for the haemorrhoids (all supporting the diagnosis of haemorrhoids) while there was an absence of additional alarm symptoms for CRC such as non-outlet-type rectal blood loss, alteration in bowel pattern, iron deficiency anaemia or (apparently) unexplained weight loss. I believe these aspects of Mrs [A]'s presentation contributed to a delay in her diagnosis. However, an earlier diagnosis when rectal blood loss was first reported is likely to have somewhat improved Mrs [A]'s prognosis and facilitating access to colonoscopy for patients aged over 50 years with outlet-type bleeding whether or not there is an apparent benign cause evident might be regarded as consistent with international practice per the Uptodate citation. Dr [C] has outlined in her response various remedial measures undertaken by her since receipt of Mr [A]'s complaint, and these appear appropriate.

Appendix D: Recommendations from Health NZ's Event Review Report

a) Health NZ Wairarapa's policy is adhered to in regard to open disclosure and early engagement with patients/family/whānau during all aspects of health service delivery.

b) Multi-disciplinary education regarding the importance of clear and consistent communication with patients/family/whānau during all aspects of health service delivery.

c) Implementation of the Kōrero Mai initiative to enable family/whānau ability to escalate their concerns around deterioration with a formulated expected response.

d) The current fixed-term FTE (full-time equivalent) supporting the Cancer Care Co-ordinator becomes a permanent position to enable ongoing support in this role.

e) Clear documentation is recorded for all clinical assessments or patient encounters. Contemporaneous documentation of all significant events is a baseline standard of practice. All patient notes should also be collated and kept within the patient file or alternatively captured on Concerto under the patient's name.

f) House Officer handover of care, pager systems and duties occur in line with Health NZ Wairarapa's policies.

g) EWS policy is updated to ensure identification and escalation of the deteriorating patient, urgent medical review and the MET activation process. Delivery on an education package focused on critical thinking, patient advocacy and escalation of concern across Health NZ Wairarapa to ensure understanding of process and expectations are clear. Use case review and outcome as real example and consequence of working outside of this policy.

h) Focussed education for ward-based nurses of the importance of pain management, breakthrough pain, PCA use and best practice associated with patient-focused care.

i) Process in regard to the formal capture of patient details and discharge process for portable monitors in MSW to be refined to ensure accurate capture of which patients are being monitored and why at all times. All staff to be educated in regard to the refined process.

j) CVAD policy to be developed and current forms/guides reviewed to ensure best practice. Education packages to be reviewed and aligned to policy.

k) Overnight Senior Clinical Decision Maker support in the form of an SMO based in the ED additional to the two House Officers.

l) Health NZ policy of expectation of the on-call SMO requirements to be reviewed to ensure best practice.

m) Review of Physician FTE to enable a sustainable on call roster, along with active recruitment.

n) Clear pathway for multidisciplinary communication between HDU and ICU Consultant.

o) Improve utilisation of ICU level of support for patients accepted to ICU but stranded due to bed capacity or weather issues.

p) Improve support to family/whānau following the death of a patient — recommend the need for a family liaison person to co-ordinate communication and support for the family/whānau.