Wairarapa District Health Board

A Report by the
Health and Disability Commissioner

(Case 17HDC00316)

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Executive summary

1. On 15 March 2016 at 3.41pm, Mr A (72 years old at the time) presented to the Emergency Department (ED) of a public hospital. Mr A had fallen approximately three metres and sustained injuries to his left hip and left side of his chest. A senior Emergency Department consultant, Dr B, ordered an urgent CT[1] scan of the chest, abdomen, and pelvis. At 5.40pm, Mr A was admitted to the surgical ward. His care in this ward was supervised by consultant surgeon Dr C.

2. On 16 March 2016 at 7.17am, full reporting of the CT scan was entered into the information technology (IT) system. The final report noted numerous enlarged meso-rectal lymph nodes and suggested endoscopic examination to rule out a rectal tumour. On 19 March 2016, Mr A was discharged from hospital. The final CT scan report was not sighted until November 2016, eight months after discharge.

Wairarapa DHB's IT environment

3. Wairarapa DHB advised HDC that at the time of events its IT system did not allow for electronic sign-off of test results. There was no alert system to notify a doctor that a result had arrived, nor was there a doctor-specific list of results to review. Clinicians had to proactively look up the results of tests they had ordered, on an individual patient basis. Wairarapa DHB acknowledged that this was a significant weakness in its system and, until this could be improved, there was no protection from recurrence.

Findings

4. Wairarapa DHB had a weak IT system that did not allow for electronic sign-off, and it did not have a clear, effective, and formalised system in place for the reporting and following up of test results. Wairarapa DHB did not provide services to Mr A with reasonable care and skill, and breached Right 4(1) of the Code of Health and Disability Services Consumers' Rights.[2]

Recommendations

5. It was recommended that Wairarapa DHB:

   a) Provide a written apology to Mr A.

   b) Update HDC on the progress and effectiveness of its IT system upgrade (webPAS), including the development of policies and procedures with respect to electronic sign-off of test results and radiology reports.

   c) Advise whether sticky notes are still being used under the new IT system, and what measures have been taken to ensure that they are used as a preliminary reporting tool only, and that the final reports are also reviewed.

   d) Audit, over a period of three months, the management of test results ordered at ED where patients have been transferred to another ward.

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

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e) Take steps to ensure that discharge summaries accurately reflect available final diagnostic reports, and report back to HDC on the steps that have been taken.

f) Develop policies and procedures on the management of test results and radiology reports.

Complaint and investigation

6. The Commissioner received a complaint from Mr A about the services provided by the public hospital (Wairarapa District Health Board (DHB)). The following issue was identified for investigation:

- *Whether Wairarapa District Health Board provided Mr A with the appropriate standard of care in 2016.*

7. The parties directly involved in the investigation were:

Mr A	Consumer/complainant
Wairarapa DHB	Provider

8. Further information was received from:

Dr B	Emergency physician
Dr C	General surgeon
Dr D	Radiologist
Medical centre	General practice

Also mentioned in this report:

Dr E	Radiologist
Dr F	General practitioner
Dr G	General practitioner

9. Independent expert advice was obtained from a general surgeon, Dr Julian Speight (**Appendix A**), and in-house clinical advice was obtained from general practitioner (GP) Dr David Maplesden (**Appendix B**).

Information gathered during investigation

Introduction

10. On 15 March 2016 at 3.41pm, Mr A (72 years old at the time) presented to the ED of the public hospital. Mr A had fallen approximately three metres and sustained injuries to his

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left hip and the left side of his chest. Senior Emergency Department consultant, Dr B, ordered an urgent CT scan of the chest, abdomen, and pelvis.

Wairarapa DHB's information technology (IT) environment

11. Wairarapa DHB told HDC that laboratory and radiology results are received electronically. However, because of the age of the patient administration system within the DHB IT environment, an automatic process of electronic sign-off for results for all doctors is not able to be achieved.

12. Wairarapa DHB explained that at the time of the events there was not an alert system to notify a doctor that a result had arrived, nor was there a doctor-specific list of results to review. In other words, a doctor could not look up all the results of tests or procedures he or she had ordered that day apart from on an individual patient basis. The DHB advised that this was a "significant weakness" in its system.

Sticky notes

13. When reporting on urgent CT scans, a preliminary acute report was issued to help determine the immediate care of the patient. In the DHB's PACS[3] system, this is referred to as a "sticky note". The sticky note mechanism is an immediate, rough tool to assist clinicians to proceed with treatment of the patient and to answer the immediate clinical questions. The case is then fully reported, usually within 24 hours.

Urgent CT scan at ED

14. Mr A underwent a CT scan at approximately 4.20pm.

15. Wairarapa DHB advised that CT scan images can be viewed in three ways:

   a) Via RIS,[4] which synchronises the PACS images with the documentation in RIS.

   b) Directly, without the RIS intervening.

   c) Via Vue Motion, which is a more compact, web-based version of PACS widely used by hospital clinicians and GPs.

16. At 4.39pm, a radiologist accessed the images directly and typed the following sticky note in the PACS system:

> "[Fracture] left 8th and 9th rib with assoc[iated] small [to] mod[erate] pneumothorax. No pulm[onary] contusion and non tension. Trace effusion. Mediastinum [no abnormalities detected].
>
> Spine [no abnormalities detected].
>
> Non displaced [fracture] pubic ramus and prob[able] ant[erior] left pubic ramus with extension into anterior margin acetabulum.

[3] Picture archiving and communication system.

[4] Radiological information system — a system for the electronic management of imaging.

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Solid organs normal. No free fluid or free air. Prominent perirectal nodes largest 16mm ? cause. Clinical correlation to exclude rectal lesion may be helpful."

17. At 4.52pm, radiologist Dr E was working through the list of acute cases in RIS and typed a sticky note that said:

    "L[eft] 8th [and] 9th rib fractures.
    L[eft] pneumothorax.
    No splenic, hepatic or renal injury.
    Fracture anterior R[ight] pubic bone [and] adjacent superior pubic ramus.
    Fracture antero medial margin of left acetabulum.
    Thickening of the pericardium at its antero inferior aspect — NOT convincingly an effusion."

18. The Clinical Head of Radiology, Dr D, advised HDC that two radiologists accessing the CT scan ensured that at least one sticky note with basic answers to the clinical question would be in place. This is standard policy towards the end of the day when the workload exceeds the reporting resource in the department.

19. Dr D reported that "both sticky notes would immediately be visible, with the newest ([Dr E's]) on top" and "a clinician's bias would be not to search for an additional note and that they may not even notice that there is a second note".

20. Wairarapa DHB reported that the ED acted on Dr E's sticky note, which did not mention the rectal lymph nodes. Mr A was treated with pain relief and transferred to the surgical ward for ongoing care.

DHB radiology reporting policy

21. Dr D told HDC that the primary ways to flag unexpected or non-urgent potentially serious findings are the sticky notes in PACS, as well as in the conclusion of the formal report. He noted that this did occur and is consistent with existing policy. Dr D added that life- or limb-threatening findings are immediately communicated verbally.

22. Wairarapa DHB advised that another DHB supplies the radiology service to the public hospital, and therefore the second DHB's procedures applied. Wairarapa DHB provided HDC with a copy of the second DHB's radiology policies and procedures. The IT policy provides:

    "<u>PACS Emergency Department Reporting</u>

    - All ED reporting will be done ASAP during normal working hours.
    - The reporting Radiologist will notify ED of 'critical alerts' by telephone.
    - ED officers will use the 'sticky note' facility at all times to indicate their diagnosis to the Radiologist …
    - All ED reports are reviewed by ED SMO for electronic sign-off."

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Transfer to surgical ward

23. At 5.40pm, Mr A was admitted to the surgical ward. His care in this ward was supervised by consultant surgeon, Dr C.

Final report

24. On 16 March 2016 at 7.17am, full reporting of the CT scan was entered into the IT system. The final report stated:

> "8th and 9th rib fractures on the left with a small left-sided pneumothorax.
> Mediastinum and hila appear normal.
> The liver, spleen and pancreas appear unremarkable. No intra-abdominal collection or free fluid seen.
> Fracture of the right superior pubic ramus, without displacement. Fracture of the anterior pillar of the left acetabulum.
> No displacement.
> Note is made of numerous enlarged meso rectal lymph nodes. Suggest endoscopic examination to rule out the rectal tumour.
> Small hypodense lesions are noted in segments 4 and 8 of the liver. Too small to characterize.
>
> Comment:
> Rib fractures, pubic rami fracture and small left-sided pneumothorax. Please note remarks about the meso rectal lymph nodes."

25. Wairarapa DHB advised that final reports of imaging are printed by radiology office staff and delivered to the referring department, in this case ED. Dr B told HDC that the public hospital has a double-check/safety net method in place for cases where the ED team receives results for patients who have been transferred to another ward. This involves the final report being sent to the ED "in-tray", which is checked by the senior medical officer (SMO) on duty at the time. The written paper report found to be abnormal would then be checked against the notes on the hospital system. The SMO reviewing would then respond as appropriate. In this case, Dr B said: "I imagine the result would have been forwarded to the relevant surgical team as care had been handed over to that team." Dr B was unable to confirm whether anyone on his team sighted the hard copy report, and Dr C advised that he did not receive a paper copy of the report.

Responsibility for final report

26. Dr B told HDC that "responsibility for results is handed over when patients are transferred to another ward". He explained that the final CT report became available after Mr A's care was handed over to the surgical team, and therefore he did not review the final report. Dr B stated that this has been his usual practice, which is consistent with the Australasian College for Emergency Medicine's "Policy on the Follow-up of Results of Investigations Ordered from Emergency Departments". He said that the policy states that results of all investigations from the ED should be reviewed by the ordering clinicians, unless the responsibility for care of that patient has been handed over to another clinician.

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27. Dr C told HDC that he was not aware of the final CT scan report, and was not aware of anyone on his team having reviewed the images after 15 March 2016. He stated that his usual practice is to sign off on all paper reports of investigations that he has ordered, which are delivered to his mailbox. However, as he was not the practitioner who ordered the CT scan, he did not receive a paper copy of the report. Dr C acknowledged that the final CT scan should have been reviewed. However, based on his practice at the time, he did not, and would not have done so because he was never on the forwarding list for the final written results. Dr C regrets that he did not actively look for the final electronic report, and he now reviews the final electronic report whether or not he has ordered the test.

Discharge from hospital

28. On 19 March 2016, Mr A was discharged from hospital. The surgical ward discharge summary noted that a key investigation carried out was a CT scan, and quoted Dr E's sticky note:

> "LEFT 8th and 9th rib fractures.
> Left pneumothorax.
> No splenic or hepatic injury.
> Fracture anterior RIGHT pubic bone and adjacent superior pubic ramus.
> Fracture anteromedial margin of LEFT acetabulum."

29. The ED discharge summary quoted the same CT scan findings. In addition, under the title "Suspicion of Cancer" it is noted that "[t]here is NOT A HIGH suspicion of cancer". Neither discharge summary noted the radiologist's sticky note or the final CT report. Mr A advised HDC that he was unaware of the final CT report and the existence of meso-rectal lymph nodes.

30. Mr A's discharge plan was to be followed up with an X-ray in the fracture clinic in six weeks' time. Physiotherapy follow-up was also planned. The surgical discharge summary advised Mr A to follow up with his GP if there were any ongoing concerns. Mr A told HDC that he did not receive physiotherapy or an X-ray six weeks after discharge.

Management of CT scan report by the medical centre

31. The discharge summaries and the final CT scan were sent to Mr A's medical centre. The medical centre told HDC that the results were filed in Mr A's clinical records by a locum GP who has since returned overseas. The practice explained that it would have expected the abnormalities relating to the meso-rectal lymph nodes that were reported while Mr A was an in-patient to be followed up by the hospital during the admission.

32. The medical centre said that any result ordered within an ED setting in which the patient is subsequently admitted, or ordered while the patient is a current inpatient, is assumed to have been dealt with appropriately by the inpatient team. The practice stated that given the number of hospital admissions and the significant number of abnormal results generated in an inpatient setting, it is not possible for general practice to follow up all of these results to see whether they have been dealt with appropriately.

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33. The medical centre stated that with the discharge of a patient from the hospital setting, a discharge letter is generated. The practice expects any significant result, and any subsequent outstanding follow-up that needs to be addressed by the GP team, to be outlined in this document.

Presentations to the medical centre

34. Over the following eight months, Mr A had several GP consultations with different doctors, at which he presented with symptoms of altered bowel pattern (alternating constipation and diarrhoea), abdominal bloating, perianal irritation, and bleeding. Mr A was also concerned about sudden and significant weight loss.

35. On 15 July 2016, Mr A was seen by another locum GP (who has also since returned overseas) with a change in bowel pattern (less formed stools twice daily). The documented assessment is unremarkable, and Mr A was prescribed domperidone (an anti-nausea/gastric motility agent). A faeces sample sent for analysis returned a normal result.

36. On 8 August 2016, Mr A reported to a practice nurse that he was experiencing alternating diarrhoea and constipation and had a lot of wind. An appointment was made for review with Dr F on 12 August 2016. Mr A reported that his bowel motions were beginning to firm up, and that he had some pain and irritation in the anal area. He was passing some clear fluid per rectum when he passed wind, but denied any per rectum blood loss. A rectal examination was performed and was painful, with perianal irritation noted. Mr A was prescribed a bulking agent, anti-inflammatory ointment, and suppositories. He was asked to return for review in 2–3 weeks' time. A repeat of the medication was supplied on 23 August 2016 when Mr A reported to a nurse that "his symptoms were improving but not fully resolved".

37. On 1 September 2016, Dr F reviewed Mr A as planned. Mr A was passing formed but soft stools 1–3 times daily, most days. He had noticed a small amount of blood on the toilet paper two days previously but none since. His appetite was normal and he had no fever. Dr F told HDC that, on rectal examination, there was no inflammation of the anus and no abnormality on digital rectal examination. Mr A told HDC that he does not recall this rectal examination occurring. Dr F reported that he was reassured by the apparent resolution of Mr A's symptoms and normal physical examination. Dr F asked Mr A to return for review if the symptoms had not resolved fully over the next 2–4 weeks. Dr F told HDC that he is confident that he would have reviewed Mr A's previous notes on each of the occasions Mr A consulted him.

38. On 20 October 2016, Dr G reviewed Mr A and noted symptoms of weight loss from 110kg to 88kg, with a rectal mass evident on examination. Dr G reviewed the CT result from March 2016 and referred Mr A for an urgent colonoscopy and blood tests, leading to the diagnosis of stage IIIa squamous cell carcinoma of the anus. Mr A required chemo-radiotherapy treatment and surgery.

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Subsequent events

39. Wairarapa DHB carried out an internal investigation into the care provided to Mr A. It found that there was a failure to read and act on the final CT scan report. An audit of the final CT scan report showed that it was not sighted until November 2016.

Further information — Wairarapa DHB

40. Wairarapa DHB advised that it has been in the process of installing a new IT system to allow for electronic sign-off of results. The DHB acknowledged that whilst the old system operated "there [was] … no other protection against this happening again".

41. In January 2018, Wairarapa DHB went live on the regional webPAS patient administration system. The webPAS system is part of the Regional Health Informatics Programme — a large programme of work across the Central Region DHBs. It enables more efficient and safer delivery of health services through the centralisation and appropriate sharing of patient records between DHBs in the lower North Island.

Further information – the medical centre

42. The medical centre advised HDC that this matter was investigated within the practice and the practice has reviewed its policies and procedures in an attempt to ensure that such a situation does not recur. The medical centre undertook a practice review on 5 April 2017 and the following changes were made:

a) The practice began undertaking active follow-up of complex discharges from hospital by telephoning the patient and ensuring that everything related to the patient's admission had been dealt with satisfactorily; and

b) The test result policy was reviewed and updated to state that two nurses would look through the discharge summaries and identify any complex cases, and would telephone the patient. If concerns were raised during the conversation, the patient would be visited at home.

43. Dr F added that with the benefit of hindsight, he can see that in this case, an earlier referral would have been appropriate and helpful for Mr A and, for this, he is sorry. Dr F noted that when he saw Mr A on 1 September 2016, he considered that Mr A's symptoms had improved, and unfortunately he did not get a chance to review Mr A again. Dr F concluded that had he seen Mr A and been aware that his bowel symptoms had clearly deteriorated, he is confident that he would have referred him for further investigations.

Responses to provisional opinion

Mr A

44. Mr A was given an opportunity to comment on the "information gathered" section of the provisional opinion. Where relevant, his response has been incorporated into the "information gathered" section above.

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Wairarapa DHB

45. Wairarapa DHB was given an opportunity to comment on the provisional opinion. It advised that it accepts fully the HDC findings and recommendations.

The medical centre

46. The medical centre was given an opportunity to comment on the provisional opinion. Where relevant, its response has been incorporated into the "information gathered" section above.

Opinion: Wairarapa DHB — breach

Introduction

47. District health boards are responsible for the operation of the clinical services they provide, and are responsible for any service failures. As I have commented in a previous case, the basic system principle with respect to the follow-up of test results is clear — the person who orders the test must follow up, or know by whom and how in the system it will be.[5]

48. My expert advisor, Dr Speight, advised that most hospital systems provide for timely sighting and signing off of final reports for imaging:

> "In most institutions this would be an electronic process, and the report would be made available electronically to the requesting physician. Most commonly, the report is also electronically forwarded to the team under whose care the patient has been transferred (or at least the requesting physician can forward an electronic copy to the current team). In other institutions, the hard copy of the report is provided to the clinician, but this lacks the ability for the system to track if the report has been sighted, as is the case here."

49. Dr Speight added:

> "Clearly improvements need to be made regarding the IT system and electronic sign-off of results. This will allow significant results to be forwarded electronically from the requesting physician to the team caring for the patient."

50. I agree with Dr Speight. The care provided to Mr A in March 2016 highlighted systems failures in the public hospital's management of CT scan reports, particularly the management of incidental findings. I discuss these below.

Wairarapa DHB's IT environment

51. Wairarapa DHB advised HDC that at the time of events its IT system did not allow for electronic sign-off of test results. There was no alert system to notify a doctor that a result

[5] See decision 15HDC01204 (issued 30 June 2017).

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had arrived, nor was there a doctor-specific list of results to review. Clinicians had to proactively look up the results of tests they had ordered, on an individual patient basis. Wairarapa DHB acknowledged that this was a significant weakness in its system and, until this could be improved, there was no protection from recurrence.

52. Whilst I expect clinicians to be clear on who is responsible for following up test results, the inability of Wairarapa DHB's IT system to allow for electronic sign-off was a critical system and practice failure. It presented a major risk to patients. In particular, and as was the case for Mr A, important and significant results could be easily missed under this system.

53. I am also thoughtful about the use of the "sticky note" function. I emphasise that this function is only a preliminary reporting tool that answers the immediate clinical question. It should not be relied on in place of the final report.

Safeguards

54. In my view, it does not appear that Wairarapa DHB implemented effective safeguards to strengthen its systems. Dr B advised that the ED had a "double-check/safety net method" in place, where the hard copy of test results would be delivered to ED, and the duty SMO would respond appropriately. However, it could not be confirmed whether Mr A's CT scan report had been received by ED and dealt with appropriately. I further note that although Dr B opined that the hard copy of the report would have been delivered to the surgical ward, he could not confirm this, and Dr C has advised HDC that he did not receive a hard copy of the report.

55. It appears to me that the ED double check/safety net method was an attempt to ensure that test results ordered by ED were transferred to the treating clinician. However, I am critical that there appears to be no way to know whether this safeguard was fulfilling its purpose. Certainly in Mr A's case, this safeguard failed.

Clinical responsibility

56. As outlined above, Dr B considered that this responsibility was handed over when Mr A was transferred to another ward. On the other hand, Dr C advised that as he was not the practitioner who ordered the CT scan, he did not receive a paper copy of the report, and therefore did not and would not have reviewed the final CT scan report. There appears to be a lack of clarity around who was responsible for following up and acting on the results of the CT scan once it was reported on.

57. I would note, however, that as the responsible clinician who received handover for Mr A's care, Dr C should have considered all of Mr A's clinical information before discharge, including reviewing his final CT scan. I am therefore concerned that this did not occur.

58. Wairarapa DHB has not provided HDC with its position on this matter, and there are no specific internal policies or procedures related to the issue. The lack of clarity around clinical responsibility for the following up and acting on the CT scan results indicates to me a failure on the part of the DHB to communicate its expectations to staff clearly. This is particularly concerning in light of the acknowledged weaknesses in Wairarapa DHB's

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systems. I would expect that in the absence of robust systems, the DHB would take further steps to ensure that its staff understood where responsibilities lay for actioning all test results and radiology reports.

Conclusion

59. Wairarapa DHB had a weak IT system that did not allow for electronic sign-off, and it did not have a clear, effective, and formalised system in place for the reporting and following up of test results. This systems failure resulted in a number of opportunities being missed by clinicians to review and action Mr A's final CT scan report, and a delayed diagnosis of squamous cell carcinoma of the anus. In addition, the basic principle with respect to the follow-up of test results is clear. I note with concern the inconsistencies in clinicians' understanding of how this principle applies at their hospital. It is not acceptable that systems and clinicians lacked clarity on this. In my view, Wairarapa DHB did not provide services to Mr A with reasonable care and skill, and breached Right 4(1) of the Code.

Opinion: Medical centre

60. Following Mr A's discharge from the public hospital in March 2016, a copy of Mr A's discharge summary and CT scan report was sent to the medical centre. Mr A also presented to the medical centre on a number of occasions with symptoms related to his bowels. In October 2016, he was finally referred for an urgent colonoscopy and blood tests, leading to a diagnosis of squamous cell carcinoma of the anus.

Management of CT scan report

61. My in-house clinical advisor, Dr Maplesden, advised:

> "I think many of my colleagues would read the ED notes and discharge summary in some detail with the expectation that if significant abnormality had been detected on imaging results or in blood tests there would be reference to the abnormality, and its management, in the clinical notes particularly of the discharge summary. It is not possible for me to say whether the locum actually saw and acknowledged the CT scan result, but had he done so, I think it would have been a reasonable assumption that the result would be acted on appropriately during hospital admission by the clinician ordering the test …"

62. Dr Maplesden added:

> "[Mr A] was admitted to hospital for three days and there was ample opportunity for the formal CT result to be reviewed and managed appropriately during this admission. Unfortunately, once the CT result had been filed and with no reference to the finding of meso rectal node enlargement in the hospital discharge summary … the opportunity for subsequent providers to relate [Mr A's] gastrointestinal symptoms and the abnormal CT result was lost."

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63. Dr Maplesden considers that the medical centre's management of Mr A's CT scan results was not a departure from accepted practice.

1 September 2016 consultation — adverse comment

64. By 1 September 2016, Mr A had presented to the medical centre on two previous occasions with symptoms related to altered bowel patterns. At this consultation, Mr A also complained of rectal bleeding for the first time. In Dr Maplesden's view:

> "There were sound clinical indications to refer [Mr A] for specialist review/colonoscopy given the persistence of his altered bowel pattern, his age and his new symptom of rectal bleeding without apparent local cause. I think there should have been further determination of potential 'red flags' with direct questioning regarding weight loss, and blood test to check for anaemia."

65. Dr Maplesden concluded that he is "mildly critical" that Dr F did not consider referring Mr A for a specialist review, enquire about the red flag of unexplained weight loss, and consider a repeat blood test to check for anaemia.

66. I note that there is a discrepancy between Dr F's and Mr A's recollection of whether a rectal examination occurred at this consultation. I am not able to resolve this factual dispute and, as my concerns relate to Dr F's consideration of a referral for a specialist review, I do not consider that further enquiry into this matter is necessary.

Conclusion

67. Mr A made repeated visits to the medical centre, complaining about bowel-related symptoms. I am mindful of Dr Maplesden's comments that the medical centre's failure to detect the abnormal CT results contributed to Mr A's delayed diagnosis. In these circumstances, I remind the medical centre and its clinicians that it is good practice to review clinical notes, particularly relevant diagnostics.

Recommendations

68. I recommend that Wairarapa DHB:

a) Provide a written apology to Mr A. The apology should be sent to HDC within three weeks of the date of this report, for forwarding to Mr A.

b) Update HDC on the progress and effectiveness of its IT system upgrade (webPAS), including the development of policies and procedures with respect to electronic sign-off of test results and radiology reports. Wairarapa DHB should report back to HDC on this and provide HDC with evidence that the new system reliably captures all relevant data, within three months of the date of this report.

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c) Advise whether sticky notes are still being used under the new IT system, and what measures have been taken to ensure that they are used as a preliminary reporting tool only, and that the final reports are also reviewed. Wairarapa DHB should report back to HDC on this within three months of the date of this report.

d) Audit, over a period of three months, the management of test results ordered at ED where patients have been transferred to another ward. Wairarapa DHB should report back to HDC with an analysis of this audit within four months of the date of this report.

e) Take steps to ensure that discharge summaries accurately reflect available final diagnostic reports, and report back to HDC on the steps that have been taken, within six months of the date of this report.

f) Develop policies and procedures on the management of test results and radiology reports. Wairarapa DHB should provide HDC with a copy of the policy within six months of the date of this report.

Follow-up action

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

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Appendix A: Independent advice to the Commissioner

The following expert advice was obtained from a general surgeon, Dr Julian Speight:

"Thank you for asking me to provide an opinion on the care provided to [Mr A] at the surgical ward of [the public hospital] between 15th March 2016 and 19th March 2016. I have read and agree to follow the guidelines laid out in the 'Guideline for independent advisors' June 2016.

Qualifications: Mr Julian Speight BSc (Hons) MBBS(Lond) FRCS(Ed) FRACS

I am a consultant General Surgeon working at Kew Hospital, Southern DHB. I hold a current New Zealand practicing certificate (vocational registration in General Surgery) 25548. I am a Fellow of the Royal Australasian College of Surgeons, and a Fellow of the Royal College of Surgeons of Edinburgh. I am a Clinical Lecturer for the University of Otago and the Vice President of the New Zealand Association of General Surgeons (NZAGS). I also sit on the executive committee for the Rural Section of the Australasian College of Surgeons (RSS). The Commissioner has requested I comment on whether I '*consider the care provided to [Mr A] was reasonable in the circumstances, and why*?'. I have been requested to focus comments on the care provided by the surgical ward of [the public hospital], and in particular to comment on the following:

1. *The appropriateness of the management of [Mr A's] CT scan results during his admission to the surgical ward at [the public hospital].*
2. *Whether [Mr A's] CT scan results should have been viewed prior to discharge and the appropriateness of [Mr A's] discharge on 19th March 2016.*
3. *The adequacy of Wairarapa DHB's systems, policies and procedures around CT scan reporting and the management of the incidental finding.*
4. *Whether further expert advice should be obtained by any other peer group. For example emergency medicine, radiology and/or orthopaedics. If so, explain why. Any other matters in this case that you consider warrant comment.*

For each question, please advise:

a. *What is the standard of care/accepted practice*
b. *If there has been departure from the standard of care or accepted practice, how significant a departure do you consider this to be?*
c. *How would it be viewed by your peers?*
d. *Recommendations for improvement that may help to prevent a similar occurrence in future.*

1. The appropriateness of the management of [Mr A's] CT scan results during his admission to the surgical ward at [the public hospital].

<u>The timeline of [Mr A's] admission is as follows</u>:

[Mr A] was admitted to the Emergency Department (ED) at 15:41 on the 15th March 2016. Having been involved in a fall from a significant height a trauma call was

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appropriately activated. He was discharged to the care of the on-call General Surgical team at 17:23 the same day (1 hr 42 minutes after admission to ED). [Dr B] reports (letter dated 11th August 2017) that the Surgical team and ED team were 'simultaneously' involved in the trauma team. However it was [Dr B] who was the requesting physician for the acute CT undertaken at 16:20 on the 15/3/16. It is my understanding that an initial CT report was available electronically on PACS as a 'sticky note'. A copy is provided by [the] (WDHB CMO) in the information provided to me by the HDC. The report must have preceded the second 'sticky note' time-stamped at 16:39 (only 6 minutes after the CT had been completed), but no time-stamp is provided. According to [the CMO] it was printed out at 16:52, which is 13 minutes after the updated 'sticky-note' describing the mesorectal lymphadenopathy. This initial report made mention of left rib fractures, a left pneumothorax, pubic bone and pubic ramus fractures and a fracture of the left acetabulum. It also recorded '*no splenic, hepatic or renal injuries',* plus *'thickening of the pericardium not thought to be related to a pericardial effusion'.* Importantly, the initial CT report quoted by [the CMO] makes no mention of the mesorectal lymphadenopathy.

[The radiologist] added a revised 'sticky note' at 16:39:34 with the heading 'purpose' recorded as '*For Surgery*'. The revised interim report ('sticky note') read:

> *'#left 8th and 9th rib with assoc small–mod pneumothorax. No pulm contusion and no tension. Trace effusion. Mediastinum nad. Spine nad. Non displaced #right pubic ramus with extension into anterior margin acetabulum. Solid organs normal. No free fluid, or free air. Prominent perirectal nodes largest 16mm ?cause. clinical correlation to exclude rectal lesion may be helpful.'*

On the electronic log provided to me there is also a record of [Dr E] accessing the 'sticky note' at 16:52:38 on 15/0/16 and added under the heading 'purpose' the phrase: 'of interest'. I am uncertain who [Dr E] is (reference is briefly made to [Dr E] in [the CMO's] letter dated 11/9/17).

[Mr A] was discharged from the Emergency Department at 17:23, and [Dr B's] letter from 11/11/17 indicates that he did not see the revised sticky note (from 16:39) prior to the patient's discharge from his department.

It would appear that the surgical and ED team managing [Mr A] saw the first 'sticky note' (time-stamp not available) and acted on this information. [Dr D] makes no reference to this 'initial sticky note' in his response to the HDC provided by [the] (WDHB CMO) 14/8/17. Presumably there was also a verbal report from the radiologist to the team caring for [Mr A] at that time, although this has not been documented in the written record. It is not entirely clear to me if anyone subsequently saw the revised 'sticky note' from 16:39 (I am assuming it would be possible to view an electronic log of when [Mr A's] CT was viewed and by whom?). The ED doctor completing the ED-discharge form at 17:44 on 15/3/16 (Dr […]) completed the section 'Suspicion of Cancer' as: 'Select a SCAN Code: 20 There is NOT A HIGH suspicion of cancer'. This must have been based on the 'initial sticky note' (time-stamp not

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available), rather than the subsequent revised 'sticky note' time-stamped 16:39. It seems odd that the CT was not viewed by either an ED doctor, a doctor from the admitting General Surgical Team or the Orthopaedic Team involved in [Mr A's] care after 16:39. It is my understanding that anyone accessing the CT images/reports after this time would have automatically viewed the 'sticky note'.

I would consider [Mr A's] initial management by both the Emergency Department staff and the Surgical Team entirely appropriate. He had been admitted with injuries secondary to a fall from a height, and these were identified on CT and managed appropriately.

However, there appear to be two issues:

a) With whom does the responsibility lie to check the updated 'sticky note' and final full CT-report? Was this the responsibility of the requesting doctor ([Dr B]), or the Surgical Team who accepted the patient's care (Dr C and his team)? '*Right 4(4): Every consumer has the right to have services provided in a manner that minimizes the potential harm to, and optimizes the quality of life of, that consumer.'*
b) Whether anyone subsequently saw the revised report (Sticky note timed 16:39) or the final formal report (available from 7:17am on 16th March 2016) prior to the patient's discharge on 19th March 2016. There is no mention made of the revised interim report or final report having been sighted in the written medical record (integrated clinical notes). There is also no mention made of the incidental findings of enlarged mesorectal lymph-nodes on the discharge summary dated 19/3/16. '*Right 4(5): Every consumer has the right to co-operation among providers to ensure quality and continuity of services.'*

Both of these issues are addressed below.

2. Whether [Mr A's] CT scan results should have been viewed prior to discharge and the appropriateness of [Mr A's] discharge on 19th March 2016.

Checking the final written report of an acute CT is advisable. This is mostly to ensure that additional injuries have not been identified after the initial verbal report. It is also not uncommon for additional incidental findings to be noted in the final report. A recent study in the *British Journal of Radiology* suggests 31% of CTs have an incidental finding.[4] Another study looking specifically at incidental findings from trauma CTs showed 43% had an incidental finding, of which 6% were immediately life threatening, and a further 9% required early investigation (as in [Mr A's] case).[5] However, I do not think failing to sight the final written report prior to discharge could be considered a significant departure from the standard of care, provided there is some provision made within the system for timely sighting and signing-off of the final report. In most institutions this would be an electronic process, and the report would be made available electronically to the requesting physician. Most commonly the report is also electronically forwarded to the team under whose care the patient has been transferred (or at least the requesting physician can forward an electronic

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copy to the current team). In other institutions the hard copy of the report is provided to the clinician, but this lacks the ability for the system to track if the report has been sighted, as is the case here. I do believe that the requesting physician has an obligation to sight and acknowledge the final report of any test requested in their name, and to action any results appropriately. I also believe that failing to do so is a departure from the standard of care, as indicated in 'Right 4(4)' of the Code. In this case the requesting physician was [Dr B]. Had another doctor accessed the revised 'sticky note' or final report, then they too are obliged to action any abnormal findings, including any incidental findings. Right 4(5) of the Code of patient Rights (The Code) requires cooperation among providers to ensure continuity of care, and if a patient's care is handed from one clinician to another both clinicians have responsibilities regarding following-up investigations. A clinician who accepts care of a patient is expected to actively review results of tests already performed.[6/7] The Medical Protection Society undertook a review of precisely this topic in 2015, and concluded: '*The primary responsibility for following up abnormal results rests with the clinician who ordered the tests. However, the HDC has an expectation that an abnormal result will be followed up by a treating doctor regardless of who ordered the test to avoid patients falling through the cracks.*'

In his letter dated 11/8/17 [the] (CMO WDHB) quotes [Dr B] as follows: '*The final CT report became available after [Mr A's] care was handed over to the Surgical Team, and therefore I did not review the final report. This has been my usual practice, which is consistent with the Australasian College for Emergency Medicine policy 54 "Policy on the Follow-up of Results of Investigations Ordered from Emergency Departments". This policy states that the results of all investigations from ED should be reviewed by the ordering clinician, unless the responsibility for care of that patient has been handed over to another clinician. Responsibility for results is handed over when patients are transferred to another ward.*'[10]

The recommendation from *Cole's Medical Practice* regarding the follow up of results is as follows: '*If you order investigations it is your responsibility to review, interpret and act on the results. If you go off duty before the results are known, you should alert the incoming doctor that there are results outstanding. Further, you should check the results when you are next on duty.*'

In light of the fact the revised interim report (available on PACS as a 'sticky note') was available at 16:39, and the patient was not transferred out of ED until 17:23 (as per ED discharge summary), then it seems reasonable to infer that [Mr A] was still under the care of ED with regards to the revised report being issued.

I would like to return to ACEM's policy 54 later.

3. The adequacy of Wairarapa DHB's systems, policies and procedures around CT scan reporting and the management of the incidental finding.

This is probably best commented on by a radiologist, and I have addressed this in (4) below. However, as per [Dr D's] letter dated 14th August 2017, it should be noted that

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the incidental findings were mentioned in an electronic preliminary report ('sticky note') within 6 minutes of the conclusion of the scan. The protocol at the time was to telephone through any 'life-threatening or very urgent findings'. 'Sticky notes' were used for immediate feedback, and then a final report was signed-off and visible on both PACS and Concerto. This would seem to satisfy Right 4 (4)&(5) of The Code, and in my opinion would not be considered a departure from the standard of care or accepted practice.

The Wairarapa DHB Event Investigation Report (18th February 2017) acknowledges the shortcomings of the IT system at the time of this event, and is mitigating the risk with an upgrade of the IT system to include electronic sign-off (to be completed by November 2017).

4. Whether further expert advice should be obtained by any other peer group. For example emergency medicine, radiology and/or orthopaedics. If so, explain why.

a) Australasian College of Emergency Medicine (ACEM):

I think an opinion should be sought from an Emergency Medicine Specialist regarding the responsibilities of an Emergency Department (ED) doctor to sight the final report of a test requested in their name. I believe that The Australasian College for Emergency Medicine policy 54 (Policy on the Follow-up of Results of Investigations Ordered from Emergency Departments)[10] contradicts the basic tenet of good medical practice stated in *Cole's Medical Practice* that: '*if you order investigations it is your responsibility to review, interpret and act on the results. If you go off duty before the results are known, you should alert the incoming doctor that there are results outstanding. Further, you should check the results when you are next on duty.*'[1]

I recognise that this places a huge responsibility and associated workload upon Emergency Physicians, who no doubt order many tests (both radiological and blood tests) on patients who are later admitted under a different team. However, applying the basic tenet that 'whoever orders the test is responsible for acting upon the result' provides a fail-safe mechanism to ensure it is clear whose responsibility it is to check and act upon test results. It would perhaps be appropriate for the Commissioner to seek clarification regarding Policy 54 directly from ACEM? If Policy 54 is to be accepted as standard practice, then there needs to be robust systems in place to ensure that the test results are re-directed away from the requesting physician (recorded on the request-slip) and to the physician currently caring for the patient. In my opinion this still opens avenues for error, as the patient may be managed by more than one team (as is often the case in multiple trauma for example), or may be handed over from team to team on more than one occasion in a single inpatient stay (for example from ED to surgery to medicine and then to Elderly-care/rehab).

b) New Zealand College of Radiologists (RANZCR)

I am uncertain what the responsibilities are for the reporting radiologist to alert a clinician to the findings of an investigation. Clearly it is impossible for a radiologist to verbally report every positive finding to a Team, and on the whole a written final report

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must be considered adequate. However, in the case where an initial verbal or written report has significant variance (either with an incidental finding or a change in the original diagnosis), then there should be a robust mechanism by which this can be brought to the attention of the requesting physician (and/or the current team responsible for the patient, as above). I believe this issue has been dealt with in previous HDC cases?[8]

c) The Royal New Zealand College of General Practitioners

The CT result was also sent to the patient's GP, and it is my understanding that either the result was never seen, or it was seen but not acted upon. Once again, the HDC have already made comment on cases in the past of test results requested within the Hospital being sent to the GP and not being adequately actioned.[9] Although the GP is not the requesting physician, they still have an obligation to act upon any abnormal result copied to them as per 'Right 5' of the Code.

5. Any other matters in this case that you consider warrant comment.

In Summary:

Unless Policy 54 of ACEM can be considered to overrule the basic tenet that the requesting physician holds the ultimate responsibility to check and act upon any results requested in their name, then unfortunately [Dr B] must be considered to have departed from the standard care of practice.

If there is any subsequent electronic evidence to suggest that any ED doctors or members of [Dr C's] team viewed the CT images (and therefore the 'sticky note') after 16:39 on 15/3/16 and did not act upon the revised information regarding the meso-rectal lymphadenopathy, then they too could be considered to have transgressed Right 4(5) of the Code, and would therefore have departed from the standard care of practice.

As a copy of the final CT report was also sent to the patient's GP practice, the 'rule of thumb' detailed by HDC Commissioner Ron Paterson's article in the *New Zealand Doctor* (13th Feb 2008) seems applicable: '*Although the primary responsibility for following up abnormal results of tests ordered in hospital lies with the clinician who ordered the test, if the abnormal results are reported to the patient's GP, the GP has a residual responsibility to check whether any significant abnormality that clearly needs follow-up has been followed up."* This would also seem to constitute a departure from standard care of practice based on Right 4(5) of the Code.

In [Dr C's] statement contained within [the CMO's] letter from 11th August 2017, he states that it would be his usual practice to review both paper copies of results, and also review results on the electronic system to keep track of any changes. He recognises that: '*regrettably, I did not review the final report on the hospital electronic system on this occasion'.* He states that he does not recall why he did not check the final result, but comments that the patient had no ano-rectal symptoms during his admission. Although I believe checking the final CT report is the standard of care for

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any patient transferred from one specialist to another, this cannot be considered a significant departure as there is a reasonable expectation that the requesting physician will have seen and signed-off on the result. Of course, had [Dr C] been made aware of the mesorectal lymphadenopathy by any of his team members, then he would have been responsible by reason of Right 4(5) of the Code. In this case I think my Colleagues would agree that 'ignorance' of the result is a reasonable mitigating factor as [Dr C] was not the requesting physician.

It is disappointing that [Mr A's] mesorectal lymphadenopathy was identified and electronically reported within 6 minutes of his Trauma CT being completed, and that there were many opportunities to recognise and act upon this information in a timely manner. The information was available to the ED Team prior to the patient being transferred to the Surgical Team. The patient was an inpatient for a further 4 days without the revised 'sticky note' or final CT result being seen. The Final CT result was also sent to the GP practice. Clearly improvements need to be made regarding the IT system and electronic sign-off of results. This will allow significant results to be forwarded electronically from the requesting physician to the Team caring for the patient. However it is my opinion that the final responsibility still lies with the physician requesting the test (or more specifically the consultant in whose name the request was made). This simple approach meets with recommendations made in *Cole's Medical Practice*, and negates any confusion regarding who is responsible to check and act upon abnormal test results.

There appears to be a slight inconsistency between the electronic record and that quoted by [Dr B], in that the copy of the initial 'sticky note' (from which it appears both ED, and subsequently the admitting Surgical Team worked from) does not mention the mesorectal lymphadenopathy. This copy is provided by [Dr B] in the information provided to me, and was apparently printed-out at 16:52 on 15/3/16 (13 minutes after the 'sticky note' containing the information on mesorectal lymphadenopathy was available). Yet the only electronic record of a 'sticky note' is the one published at 16:39, which contains reference to the mesorectal lymphadenopathy. It would be useful to identify at what time the 'sticky note' containing no comment on the incidental finding of the mesorectal lymphadenopathy was issued (as this was presumably earlier than 6 minutes after the completion of the CT). If indeed the only 'sticky note' published contained information about the mesorectal lymphadenopathy all along, then I would have to reconsider my findings. Under these circumstances it would be reasonable to infer that both the ED Team and the admitting General Surgical Team were aware of this incidental finding, but simply did not act upon it. Under these circumstances both the ED Team and the Surgical Team would be in breach of Right 4(4).

Kind regards

Julian Speight, BSc MBBS FRCS(Ed) FRACS
General and Colorectal Surgeon"

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Appendix B: In-house clinical advice to the Commissioner

The following expert advice was obtained from GP Dr David Maplesden:

"1. Thank you for the request that I provide clinical advice in relation to the complaint from [Mr A] about the care provided to him by doctors at [the medical centre]. 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. I have reviewed the information on file: complaint from [Mr A]; response from Wairarapa DHB; [public hospital] clinical notes; response from [Dr F] of [the medical centre]; [medical centre] GP notes.

2. [Mr A] was seen in [the] ED on 15 March 2016 having suffered multiple injuries after falling […]. Investigations included an urgent CT scan, the preliminary report confirming left side rib fractures and pneumothorax, acetabular fracture left hip and pelvic fractures. Later formal report also showed numerous enlarged mesorectal lymph nodes and the radiologist noted endoscopic examination was suggested to rule out a rectal tumour. A copy of the final report was forwarded to [the medical centre]. [Mr A] was admitted to [the public hospital] for pain management and mobilization and was discharged on 19 March 2016 for orthopedic follow-up. [Mr A] was unaware of the final CT report and recommendation for endoscopy and the DHB has undertaken an internal review to determine how this situation arose. Over the following eight months, [Mr A] states he had several GP consultations with different doctors at [the medical centre], at which he presented symptoms of altered bowel pattern (alternating constipation and diarrhoea), abdominal bloating, perianal irritation and bleeding. He states: *I was also concerned at the sudden and significant weight loss … None of the first three doctors physically examined me or suggested examination by way of a colonoscopy …* In October 2016 [Mr A] was eventually referred for further investigations which revealed an advanced malignant rectal tumour (squamous cell carcinoma of the anus) visible at the anus. He has required chemo-radiotherapy and surgery. [Mr A] is concerned that his GPs failed to act on the abnormal CT report of March 2016, and failed to appropriately investigate his ongoing symptoms, resulting in delays in the diagnosis of his anal cancer.

3. E mail correspondence on file refers to the fact that of the four doctors attending [Mr A] at [the medical centre] over the period in question, only [Dr F] is still working at the facility and he has provided a response. He includes the following comments in the response:

(i) [Mr A's] CT scan results and some blood results related to his admission to [the public hospital] in March 2016 were received at [the medical centre] on 16 March 2016 (prior to [Mr A's] discharge from hospital) and were filed by [an overseas]-trained locum who has since returned [overseas].

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(ii) [Mr A] was seen at [the medical centre] initially on 23 March 2016 with complaints of ankle swelling and shortness of breath related to his injuries. Pain management was optimized, flu vaccination administered and rehab physiotherapy confirmed.

(iii) On 15 July 2016 [Mr A] was seen by [a locum] with a change in bowel pattern (less formed stools twice daily). Documented assessment was unremarkable and [Mr A] was prescribed domperidone (anti-nausea/gastric motility agent) and faeces sample sent for analysis (normal).

(iv) On 8 August 2016 [Mr A] reported to a [medical centre] nurse that he was experiencing alternating diarrhoea and constipation and had a lot of wind. An appointment was made for review with [Dr F] on 12 August 2016. He reported his bowel motions were beginning to firm up and he had some pain and irritation in the anal area. He was passing some clear fluid PR when he passed wind but denied any PR blood loss. Rectal examination was performed and was painful, with perianal irritation noted. [Mr A] was prescribed a bulking agent and anti-inflammatory ointment and suppositories and was asked to return for review in 2–3 weeks. A repeat of the medication was supplied on 23 August 2016 when [Mr A] reported to a nurse that *his symptoms were improving but not fully resolved.*

(v) [Dr F] reviewed [Mr A] as planned on 1 September 2016. *He was passing formed but soft stools 1–3 times daily, most days. He had noticed a small amount of blood on the toilet paper two days prior but none since. His appetite was normal and he had no fever. On rectal examination, there was no inflammation of the anus and no abnormality on digital rectal examination.* [Dr F] was reassured at the apparent resolution of [Mr A's] symptoms and normal physical examination and asked him to return for review if the symptoms *had not fully resolved over the next 2–4 weeks.* [Dr F] is confident that he would have reviewed [Mr A's] previous notes on each of the occasions he consulted with [Mr A].

(vi) [Dr G] reviewed [Mr A] at [the medical centre] on 20 October 2016 and noted symptoms of weight loss from 110kg to 88kg with a rectal mass evident on examination. [Dr G] reviewed the CT result from March 2016 and referred [Mr A] for urgent colonoscopy and blood tests, leading to the diagnosis of stage IIIa squamous cell carcinoma of the anus.

(vii) [Dr F] states that the practice has discussed the management of [Mr A's] CT result and has assumed the [overseas] locum filed the result presuming the recommendation for endoscopy would have been actioned while [Mr A] was an inpatient at [the public hospital]. Further internal review has been undertaken by the practice (5 April 2016) to determine what processes need to be implemented to prevent a recurrence of this scenario.

4. GP notes review

(i) Inbox records indicate documentation was received electronically from [the public hospital] ED on 15 March 2016. This included ED notes, blood test results, plain X-ray

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and CT results. The CT result noted [Mr A's] multiple injuries and included in the body of the report: *Note is made of numerous enlarged mesorectal lymph nodes. Suggest endoscopic examination to rule out the rectal tumour. Small hypodense lesions are noted in segments 4 and 8 of the liver. Too small to characterize … .Please note remarks about the mesorectal lymph nodes.* Blood results showed normal haemoglobin. Further chest X-ray results and ED notes were received on 16 and 17 March 2016. On 19 March 2016 the formal hospital discharge summary was received (annotated [the medical centre] as were the results from 15 March 2016). There is no reference in the ED notes or [the public hospital] discharge summary to the CT scan finding of meso-rectal node enlargement, or that any investigation was undertaken in this regard while [Mr A] was an inpatient or arranged as an outpatient.

Comment: Multiple results were received by [the medical centre] from [the public hospital] while [Mr A] was an inpatient. It would require quite careful review of the individual results to detect the CT comment regarding mesorectal lymph node enlargement and need for colonoscopy. I think many of my colleagues would read the ED notes and discharge summary in some detail with the expectation that if significant abnormality had been detected on imaging results or in blood tests there would be reference to the abnormality, and its management, in the clinical notes particularly of the discharge summary. It is not possible for me to say whether the locum actually saw and acknowledged the CT scan result, but had he done so I think it would have been a reasonable assumption that the result would be acted on appropriately during hospital admission by the clinician ordering the test, which is expected practice unless there has been formal deputisation of that responsibility (which there wasn't). On reviewing the final discharge summary, and noting there was no further reference to the CT abnormality, there might have been some concern regarding follow-up which could have been clarified by the GP with a call to either the patient or the clinician concerned. However, it is quite possible the GP might not have reviewed in detail the copies of every inpatient result received on [Mr A] and I would not necessarily regard this as a departure from common practice. I acknowledge the failure by the GP to detect the abnormal CT result had not been acted on appropriately by [Mr A's] DHB clinicians did contribute significantly to subsequent events and his delayed diagnosis. This situation might be regarded as somewhat different to the more common situation of GPs receiving results regarding a patient who has been seen and discharged from ED in one day, when formal radiology reporting (often received a day or so later) might reveal pathology missed by the ED clinician (as evident from the ED discharge summary). In cases of that type, which usually relate to missed fractures, I would expect the DHB to have some process in place to follow-up such results unless that responsibility was formally deputized to the GP in the discharge summary. It is a reasonable expectation that the GP in that situation might also contact the patient to ensure they are aware of the result and that it has been acted on. However, in this case [Mr A] was admitted to hospital for three days and there was ample opportunity for the formal CT result to be reviewed and managed appropriately during his admission. Unfortunately, once the CT result had been filed, and with no reference to the finding of mesorectal node enlargement in the hospital discharge summary (which

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would be the document most commonly reviewed when seeing the patient again), the opportunity for subsequent providers to relate [Mr A's] GI symptoms and the abnormal CT result was lost. **I recommend [the medical centre] provide the Commissioner with their current policy on handling of investigation results and referrals for review, together with a summary of any measures undertaken as a result of the practice review scheduled for 5 April 2017. Information on the orientation process for locum doctors, particularly around lab results management, should also be sought.**

(ii) Subsequent GP notes have been summarised accurately in [Dr F's] response. There was no reference to GI symptoms in the consultation dated 23 March 2016. On 15 July 2016 provider DDJ notes [Mr A's] complaint of *less formed stools, BP twice a day, has stopped laxsol and lactulose, not on codeine, also c/o abdominal bloatedness, these sx since his last admission — fall — pneumothorax.* Abdominal examination was unremarkable. Faeces culture was ordered and was normal.

Comment: There is no reference to any symptom of rectal bleeding, rectal pain or weight loss at the consultation of 15 July 2016. Haemoglobin in March had been normal. [Mr A] had required opioid analgesia for some time after his accident and had been using laxatives to prevent the constipation commonly associated with such medication, although opioids and laxatives had since been stopped. A reasonably comprehensive examination is documented and was unremarkable. In the absence of any additional 'alarm' features, I think under the circumstances it was reasonable for DDJ to assume the change in bowel pattern might have been related to recent medication use or current infection and to initially manage [Mr A] symptomatically. I am mildly critical there is no 'safety-netting' advice documented and no diagnostic formulation has been recorded.

(iii) Nursing notes dated 8 August 2016 refer to [Mr A's] comment: *The domperidone stopped everything — now swinging in between diarrhoea and constipation … booked for r/v.* Notes for the consultation with [Dr F] on 12 August 2016 refer to [Mr A] developing constipation in association with codeine use following his injury but on no medication currently and *seems grad improving — with stools starting to firm up … Eats well. Pain and irritation in anal areas. Some clear fluid on passing wind. No blood … OE PR = pain and visible perianal inflammation. DRE painful.* Konsyl-D and Proctosedyl ointment and suppositories were prescribed with review arranged for two to three weeks.

Comment: [Mr A] described a persisting but possibly slowly resolving change in bowel pattern towards looser stools. There is no reference to weight loss and there was no rectal bleeding. There was some local (anal) pain and irritation. Medication no longer appeared to be a contributing factor. Rectal examination showed a local cause for the discomfort and irritation (perianal inflammation). Local guidelines[1] suggest that patients with the following features should be triaged as high suspicion of bowel

[1] http://www.melnet.org.nz/uploads/hscan_defns_final_updated_2_sept_2015.pdf Accessed 22 May 2017

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cancer: *Altered bowel habit (looser and/or more frequent) > 6 weeks duration* ***PLUS*** *unexplained rectal bleeding (benign anal causes treated or excluded)* ***AND*** *aged ≥ 50 years.* Earlier primary care guidelines for suspected cancer[2] include the following recommendation: *A person aged 60 years and older with a change in bowel habit to looser stools and/or more frequent stools persisting for 6 weeks or more without rectal bleeding should be referred urgently to a specialist* and the following 'good practice point': *A person at low risk of colorectal cancer with a significant symptom (rectal bleeding or a change in bowel habit) and a normal rectal examination, no anaemia and no abdominal mass, should be managed by a strategy of treat, watch and review in three months.* I think at this point further consideration might have been given to referring [Mr A] for specialist review given his persistent alteration in bowel pattern, no longer readily attributable to medication side effects. At 72 years of age the possibility of colorectal cancer needed to be discounted. Somewhat reassuring factors were the apparent absence of rectal bleeding and weight loss, bowel pattern perhaps improving, and apparently normal abdominal and rectal examinations (in terms of absence of a mass). However, while the perianal inflammation found might have explained [Mr A's] anal discomfort and irritation, it did not explain the persisting change in bowel pattern. Importantly, [Dr F] scheduled a review of [Mr A] in two to three weeks and this review was undertaken in a timely fashion.

(iv) Nurse notes on 23 August 2016 include [Mr A's] comment that *things are improving but not resolved.* At the review by [Dr F] on 1 September 2016, notes include: *Gen passing most days semi-loose stools x 1–3/day. Noticed sl red blood on paper 2/7 ago, none since. App ok. No fever. O/E PR ok and no perianal inflammation. P: Stop Konsyl D as v good diet and fluid intake. r/v 2–4/52 if not back to normal.*

Comment: [Mr A's] altered bowel pattern was persisting. He had a new symptom of PR blood loss, albeit scant and 'outlet' type. There was no local cause to account for the bleeding (PR and peri-anal examination now recorded as normal). Taking into account the discussion above, I believe there were sound clinical indications to refer [Mr A] for specialist review/colonoscopy given the persistence of his altered bowel pattern, his age and his new symptom of rectal bleeding without apparent local cause. I think there should have been further determination of potential 'red flags' with direct questioning regarding weight loss, and blood test to check for anaemia. I note [Dr F] did repeat the rectal examination, and did give 'safety-netting' advice which [Mr A] heeded. It is difficult to comment on whether or not the rectal mass subsequently revealed should have been evident at this point as I am unsure what the rate of growth might have been or if the mass was prolapsing (evident externally at some times but not at others). Under the circumstances, I am mildly to moderately critical that [Dr F] did not consider referring [Mr A] for specialist review following the assessment of 1 September 2016.

[2] New Zealand Guidelines Group. Suspected cancer in primary care: guidelines for investigation, referral and reducing ethnic disparities. Wellington: New Zealand Guidelines Group; 2009.

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(v) [Mr A] reported to a nurse on 17 October 2016: *Alternating constipation and diarrhoea and lump in the rear end that bleeds on occasions. He doesn't wish to complain but has been to several doctors and feels he is getting nowhere. Keen to see an older GP with fresh ideas.* On 20 October 2016 [Mr A] was reviewed by provider [initials] who noted the previous abnormal CT scan result, weight loss (from 110kg in March 2016 to 88kg currently). Normal abdominal examination but on rectal examination: *fresh blood at anus, digital exam nodular tender circumscribed lesion at anus, unable to advance scope beyond anal mass. Assessment: rectal bleeding with rectal mass and weight loss. Plan: GI referral, CBC, CEA.*

Comment: Management on this occasion was consistent with expected standards of care. Even without reference to the previous CT scan findings, urgent specialist review was required and was undertaken. It appears [Mr A's] symptoms of rectal bleeding and weight loss had become more marked in the six weeks since his last consultation with [Dr F]."

The following further in-house clinical advice was obtained from Dr Maplesden:

"1. I have reviewed the response dated 8 August 2017 received from director of [the medical centre], [Dr F]. On the basis of the documentation reviewed in providing my original advice, I remain of the view that there were sound clinical indications to refer [Mr A] for endoscopy following the consultation with [Dr F] on 1 September 2016. As discussed previously, [Mr A] was 72 years old and presented with a persistent change in bowel pattern towards softer more frequent stools (now lasting several months) and more recent outlet type rectal bleeding (single episode). Previous potential causes considered for his symptoms could now be discounted (possible medication side effect initially then signs of perianal inflammation which had been treated and were no longer evident). The bowel pattern change was noted to have improved but not resolved following treatment initiated almost three weeks previously, and the bleeding was a new symptom. I feel [Mr A] met the criteria for urgent referral for endoscopy at this time. I acknowledge the subsequent delay of seven weeks (when he was next seen at [the medical centre]) until his diagnosis is unlikely to have impacted significantly on [Mr A's] subsequent clinical course. I have also considered as mitigating factors the adequacy of assessments recorded by [Dr F] on 12 August and 1 September 2016 (the results not being alarming and providing, at least initially, a possible local cause for [Mr A's] symptoms), the provision of 'safety netting' advice on 1 September 2016 to be reviewed in two to four weeks if symptoms failed to resolve, the absence of anaemia in blood tests taken in March 2016 and the absence of a history of unexplained weight loss until October 2016 (although it is not apparent there were any direct enquiries made regarding this potential red flag at prior appointments). [Dr F] states that if [Mr A] had presented to him with persisting symptoms within the two to four week timeframe advised on 1 September 2016, it is likely he would have referred him for endoscopy. Under the circumstances, I have reconsidered my initial advice and I am of the view that the failure by [Dr F] to have referred [Mr A] for urgent endoscopy on 1 September 2016 represents a mild departure from expected standards of care as was the failure to enquire about the red

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flag of unexplained weight loss and to consider repeat blood test to check for anaemia. I note [Dr F] has reflected on his management strategy and this case has been discussed with his general practice team.

2. I have reviewed the relevant [medical centre] practice and policies regarding management of clinical correspondence including investigation results and I feel these processes and documents are consistent with expected practice. I agree that it is impractical for GPs to check that all abnormal results, when initiated by a secondary care provider during the course of a hospital admission and not formally deputised to the GP to action, have been actioned appropriately. However, I think GPs still have a responsibility to advocate for their patient to ensure there is timely intervention (whether that is investigation or treatment) for suspected or demonstrated disease. How to achieve this on a practical basis is difficult as an unwell patient may have numerous abnormal results copied to the GP during a hospital admission. The most critical oversights I have seen in the past generally relate to a situation such as the one demonstrated in [Mr A's] case — lack of action following an abnormal imaging result (often an abnormal chest X-ray recommending follow-up for an indeterminate or atypical radiographic abnormality). I think it is reasonable to expect GPs to exercise their clinical acumen in determining which results copied to them might require further action such as a recall or alert to check the patient's status (with respect to outstanding follow-up) at a pre-scheduled time or opportunistically. This may become less of an issue once there is more widespread uptake of patient portals allowing patients to view their own results."

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