Waikato District Health Board
Medical Officer of Specialist Scale, Dr C
Medical Centre

A Report by the
Health and Disability Commissioner

(Case 20HDC00717)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

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Executive summary

1. This report concerns the care provided to a woman by an emergency department clinician and the woman's GP practice. In particular, it concerns a missed finding of a mass-like lesion on a chest X-ray. In the report, the Commissioner emphasises the importance of timely reporting on radiology imaging and comprehensive safety-netting to ensure that significant abnormal test findings are acted upon.

2. The woman presented to the emergency department with stomach pain and nausea, and a chest X-ray was taken as part of the clinical investigations. Although a subsequent radiology report described a significant abnormal mass on the woman's lung, the ED clinician who ordered the X-ray overlooked the comment, and no further action was taken until the radiology report was noted when the woman attended the emergency department again three years later. As a result of the delay, the opportunity to diagnose cancer at an earlier stage was missed.

Findings

3. The Commissioner considered that a delay of 11 days for the district health board (DHB) to send the X-rays offsite for radiology reporting by a third party was unreasonable and increased the possibility of harm to the consumer. The Commissioner found that the DHB's failure to ensure that radiology reporting was completed in an acceptable timeframe amounted to a breach of Right 4(1) of the Code.

4. The Commissioner considered that the primary responsibility for taking further action on the radiology report lay with the ED clinician. In overlooking the reporting radiologist's comment about the significant abnormal mass and, consequently, failing to take any follow-up action, the ED clinician failed to provide services to the woman with reasonable care and skill, and breached Right 4(1) of the Code.

5. The Commissioner was critical that the woman's GP practice — to which the chest X-ray and radiology reports were sent — did not follow its own policies, and safety-netting intended to prevent abnormal test results from being missed was not engaged, and another opportunity to follow up the abnormal X-ray result was missed.

Recommendations

6. The Commissioner recommended that the DHB audit compliance with its electronic results acknowledgement policy; update the Commissioner on the changes made as a result of its serious adverse event review, and any further changes made since the recommendations of the review were implemented; report to the Commissioner on median reporting times for radiology results; consider whether improvements can be made to reduce delays in radiology reporting times; consider implementing a system to highlight all significant or abnormal test results to requesting clinicians; and apologise to the woman's family.

7. The Commissioner recommended that the ED clinician conduct an audit of radiology reports acknowledged by him. In accordance with the recommendation in the provisional opinion, the ED clinician provided an apology to the woman's family.

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8. The Commissioner recommended that the medical centre conduct an audit of test results ordered by third parties, to identify whether appropriate follow-up action is being taken and to assess compliance with its own policies.

Complaint and investigation

9. The Health and Disability Commissioner (HDC) received a complaint from Ms B about the services provided by Waikato District Health Board (WDHB) to her mother, Mrs A. The following issues were identified for investigation:

- *Whether Waikato District Health Board provided Mrs A with an appropriate standard of care in March 2017.*
- *Whether Dr C provided Mrs A with an appropriate standard of care in March 2017.*
- *Whether the medical centre provided Mrs A with an appropriate standard of care in March–April 2017.*

10. The parties directly involved in the investigation were:

Ms B	Complainant/daughter
WDHB	Provider
Dr C	Provider/Medical Officer of Specialist Scale (MOSS)[1]
Medical centre	Provider

11. Further information was received from:

Radiology service
Accident Compensation Corporation (ACC)

12. Also mentioned in this report:

Dr D	Radiologist
Dr E	GP
Dr F	GP

13. Independent expert advice was obtained from an emergency medicine specialist, Dr William Jaffurs (Appendix A), and a radiologist, Dr David Milne (Appendix B).

14. In-house clinical advice was obtained from Dr David Maplesden (Appendix C).

[1] A MOSS is a non-training position for a doctor who has not yet specialised or not yet gained a postgraduate qualification.

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Information gathered during investigation

Background

15. This report concerns the care provided to Mrs A by WDHB in March 2017, in particular the finding of a mass-like lesion on a chest X-ray, and the lack of follow-up by the responsible clinician and the GP. The missed opportunity to undertake additional investigations resulted in a delayed diagnosis of cancer. Sadly, Mrs A died from her illness. I take this opportunity to extend my condolences to her family.

16. Mrs A was aged in her sixties at the time of events. She had a history of high blood pressure, depression and anxiety, diabetes, chronic obstructive pulmonary disease,[2] high cholesterol, arthritis, and diverticulitis.[3]

2017 presentation to Emergency Department

17. On 11 March 2017, Mrs A attended the Emergency Department (ED) at Hospital 1 complaining of stomach pain and nausea since breakfast time. She was triaged[4] at 3.11pm, and it was noted that she had had a recent bladder infection. Her observations were normal, and her pain score was 5/10[5] (moderate).

18. Mrs A was reviewed by Dr C,[6] a MOSS at the ED. Dr C told HDC:

> "On examination, the abdomen was soft with slight tenderness on the right side. Observations were normal and [Mrs A] was able to move about the ED without any difficulty."

19. Dr C ordered blood tests, urine tests, and X-rays of Mrs A's chest and abdomen to look for any evidence of bowel perforation or obstruction.[7]

20. The chest X-ray and abdominal X-ray were performed at 6.47pm, and Dr C reviewed the images. He told HDC: "On review of the X-ray I noted right hemicolon loading (constipation)." At this point, no radiology report was available to Dr C, and he reviewed the images in light of Mrs A's presenting symptoms. As is normal practice in ED, specialist radiology reporting on the X-rays was to follow at a later time.

21. Dr C considered Mrs A's history and her chest and abdominal X-rays. He noted that her urinalysis indicated a trace of blood, and that the blood tests showed a slightly raised white blood cell count. Otherwise, the results of the blood and urine tests were normal.

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[2] A group of lung diseases that block airflow and make it difficult to breathe.
[3] An inflammation or infection in one or more small pouches in the digestive tract. Symptoms include abdominal pain, fever, nausea, and a change in bowel habits.
[4] An assessment of the level of urgency to decide the order of treatment.
[5] Zero indicates the absence of pain, while 10 represents intense pain.
[6] Dr C was the Senior Medical Officer (SMO) on duty at the ED at the time of these events.
[7] An erect chest X-ray is ordered in circumstances of acute abdominal pain to search for free air under the diaphragm, which is a sign of bowel perforation.

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22. Dr C told HDC: "My impression was constipation and possibly UTI." He prescribed Mrs A a trial of laxatives for constipation, and an antibiotic[8] to take if she developed increasing signs of a urinary tract infection. Dr C recommended that she follow up with her GP if her symptoms worsened or did not improve.

23. The clinical notes record that Mrs A was comfortable during her visit to ED, and was up and about and went out for cigarettes.

Discharge from ED

24. At about 8.20pm, Mrs A was discharged home from hospital. The discharge/transfer section of the Adult Emergency Assessment form records that she did not require transport assistance, she was walking unaided, and verbal instructions were given to her.

25. The discharge summary records Mrs A's symptoms and the treatment prescribed, and notes that chest and abdominal X-rays were taken. In respect of the X-rays, the summary records: "CXR AXR shows some Right hemicolon loading[9]." In the "Plan" section of the summary, "F[ollow] U[p] with GP" is recorded. There are no specific instructions to the GP to follow up on the X-rays or any other investigations. The discharge summary was sent to Mrs A's GP, Dr E, and a copy of the discharge summary was given to Mrs A.

Reporting of chest X-ray

26. WDHB told HDC that its radiology service takes around 2,000 to 2,500 images every week. The images go into a queue to be reviewed by radiologists, who then determine whether they will be read in-house or outsourced to the radiology service. The radiology service is contracted to WDHB to provide radiology services remotely. WDHB is able to send only 1,000 images to the radiology service per week.

27. WDHB told HDC that in the case of the ED at Hospital 1, owing to a shortage of radiologists, much of the reporting on radiology images is outsourced to external providers. In this case, Mrs A's images were sent to the radiology service.

28. There was a delay of 11 days between the image being taken on 11 March 2017 at the ED, and the image being sent to the radiology service on 22 March 2017. WDHB told HDC:

> "The delay was caused by the volume of work that was waiting to be reported. Within radiology the demand that we have for plain film reporting is higher than the capacity we have …"

29. WDHB said that a wait of 12 days (or longer) for the electronic report to be available is not unusual. It is likely that Mrs A's images sat in a queue at WDHB for some days before being reviewed to determine whether or not to send them to the radiology service for reporting.

[8] Trimethoprim.
[9] i.e, the X-rays show signs of constipation.

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30. On 23 March 2017, the X-rays were reviewed by radiologist Dr D, who reports remotely for the radiology service. Dr D wrote the following brief report:

> "FINDINGS:
>
> CHEST
>
> …
>
> Anterior to the second right rib, there is a rounded area of patchy density measuring 22mm. This may represent an infective focus, but the possibility of a mass-like lesion is not excluded. Please correlate clinically and compare with previous chest X-rays, with a low threshold for CT chest if there are no symptoms to support this represents a focal pneumonia."

31. Dr D signed the report and sent it electronically to the ED on 23 March 2017, at which point it would have been available for viewing on the WDHB electronic system, Clinical Workstation. The report would also have appeared on Dr C's list of unacknowledged results.

32. The radiology service told HDC that the turnaround time for the review and reporting of Mrs A's X-rays was 31 hours, and this timing was in accordance with its policy. Dr D stated:

> "The density within the right lung was identified and reported. This could have potentially represented a round area of pneumonia, but as mentioned in my report a mass-like lesion also required exclusion."

33. Dr D considers that the report was concise and accurate, and that it directed Dr C on how best to proceed.

Dr C — review of radiology report

34. At 5.31pm on 24 March 2017, Dr C acknowledged the X-ray report by Dr D electronically. Dr C took no further action in respect of the chest X-ray or the radiologist's report. He told HDC:

> "I … overlooked the comment by [the] radiologist about the mass detected and the recommendation to correlate it clinically and compare with previous chest X-rays with a low threshold for chest CT scan if there were no symptoms to support a focal pneumonia. Had I seen this comment, I would have made a specific comment and additional note on the discharge form regarding the plan for follow up, which would have included further investigation with a chest CT scan. Regrettably I did not do this, which meant that [Mrs A] was not advised of the presence of the mass and further investigations were not undertaken."

35. Dr C told HDC that he believes his oversight was caused by fatigue, which led him to overlook both the comments in the radiology report about the mass in Mrs A's chest and the recommendation for follow-up action. Dr C also raised the possibility that he may have accidentally clicked on the "acknowledge" button and did not actually review the report at all. He stated that at the time of Mrs A's admission in 2017, responsible staff were under

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instruction from hospital management to clear the backlog of unacknowledged results, and he made time to do this towards the end of his shift, when fatigue had likely set in.

36. WDHB has acknowledged that an error was made in that the acknowledgement of the radiology report was completed without actioning the follow-up of the chest X-ray findings. WDHB told HDC:

> "Safety netting was in place in the body of the report, with a recommendation to make clinical correlation and consider a low threshold for CT if a focal pneumonia was not thought to be the diagnosis. Further safety netting was in place as all radiology reports are sent to the patient's named general practitioner. On this occasion relevant safety netting occurred."

37. The WDHB policy, "Electronic Result Acknowledgement: The Responsibilities of Senior Medical Officers and the Delegation of Responsibility to Resident Medical Officers" (the DHB Policy) provides that acknowledgement of a result implies that any follow-up action that is required has been taken or is being organised by the responsible SMO (see Appendix D).

Communication of X-ray to GP

38. Dr D's report on Mrs A's chest X-ray was also copied to Mrs A's GP practice.

39. No one at WDHB gave any specific instructions to the medical centre in relation to the chest X-ray or the subsequent radiology report.

40. The DHB Policy also addresses the relationship between hospital emergency departments and GPs. The DHB Policy states that it cannot be assumed that GPs will follow up on test results. It does allow for delegation of responsibility for the follow-up of a result to a GP, but, according to the DHB Policy, the GP must explicitly be requested to accept the responsibility for following up results, and that requires either a discussion with the GP, or explicit delegation of the responsibility in the discharge summary. The DHB Policy also provides that if responsibility for action has been delegated to a GP and the result requires urgent attention, it is prudent to check that action is being taken by telephoning the GP. The responsibility for following up on Mrs A's results was not delegated to the medical centre, either explicitly or otherwise. No action was taken by anyone at WDHB to check whether follow-up action was being taken by the medical centre.

Medical centre

Events

41. The medical centre received Mrs A's blood test results on 11 March 2017, her discharge summary on 12 March 2017, and her urine test results on 13 March 2017.

42. On 14 March 2017, the results and discharge summary were filed in Mrs A's patient record by her GP, Dr E. No concerns were noted. The medical centre told HDC: "[T]he blood results and urine results were unremarkable and the discharge summary noted CXR AXR shows some right hemi-colon loading. There were no flags of concern …"

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43. At 8.23am on 24 March 2017, the radiologist's report was received at the medical centre and acknowledged by Dr F, who was not Mrs A's usual GP. Dr F initialled the report and typed a comment in the electronic patient management system stating: "[P]atchy change at Right 2nd rib region ?focal pneumonia." There was no mention of the suspected mass finding or the recommendation for follow-up.

44. Dr F sent the report with his comment attached to Dr E, who filed the report in Mrs A's electronic patient record. The medical centre told HDC:

> "When [Dr E] received the X-ray report from [Dr F], he was not alerted to any red flags by [Dr F's] comment nor any indication follow-up action was required. For this reason, he filed the report."

45. Neither Dr E nor anyone else at the medical centre followed up on Mrs A's 2017 chest X-ray. There is no further significant mention of chest or lung issues in Mrs A's GP medical file until the events in 2020 described below.

46. The medical centre told HDC that it cannot recall the reason why Dr F reviewed Mrs A's results, rather than Dr E.

47. The medical centre said that Dr F was new to general practice, having previously worked in the hospital system, and he assumed that the responsibility to arrange Mrs A's follow-up lay with the Emergency Department doctor who had ordered the chest X-ray. The medical centre told HDC that this was reinforced by the wording in Dr D's radiology report, which advised the requesting doctor to "correlate clinically and compare with previous chest X-rays". As Mrs A had been seen only in the ED, the medical centre did not have access to any previous X-rays, and Dr F took the wording as indicative that the advice of the radiologist was directed to the ED clinician.

48. The medical centre also told HDC that Dr F, being a second-year registrar, was not fully aware of the safety-netting in place and, because he did not know the patient, left ongoing responsibility for Mrs A's care with Dr E. The medical centre attributes the lack of any discussion or active handover of care to the time of day Dr F reviewed the radiology report.

49. The medical centre told HDC that Dr E's usual practice when receiving results like these is to contact the patient to follow up and arrange a review if required. Normally he would also request a follow-up chest X-ray. On this occasion, when he read Dr F's comments on the report, Dr E assumed that Dr F had completed any necessary actions and was advising him of this.

50. The medical centre also said that after this length of time, it is unable to recall whether anyone felt that there were enough reasons for concern to actively follow up on Mrs A's results or to clarify whether a repeat chest X-ray had been requested by WDHB clinicians.

51. Excerpts from the medical centre's policy "Management of Patient Test Results and Medical Reports" are annexed to this report at Appendix F. The policy includes the following:

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a) Where a result comes into the practice electronically, and that result is abnormal or requires some further action, then this should be marked in the comment box with clear instructions on what action is required and who is to do this.

b) The abnormal result should remain in the inbox until it has been actioned. Once actioned, the comment should be initialled to show that it has been completed, and then filed.

c) An abnormal result should be communicated to the patient, and significant abnormal results may require a face-to-face consultation.

d) Any significant abnormal tests should be marked in the patient's electronic records and an appropriate alert generated to ensure that the tests are followed up.

e) Normally test results are managed by the provider who requests them. However, if a result comes in to the practice from a third party, it should be managed by the patient's normal provider. If a provider is absent, then the provider should nominate a deputy to review their results.

Subsequent events

Lung cancer diagnosis

52. Mrs A's GP records indicate that following her 11 March 2017 presentation at the ED, she had ongoing issues with constipation and abdominal pain, but there is no indication that she returned to a hospital emergency department for similar symptoms during the period covered by this report, and it appears that no further chest X-ray was taken until the events described below.

53. On 29 January 2020, Mrs A presented to the ED with a suspected stroke. During Mrs A's visit to ED, the treating consultant reviewed Mrs A's 2017 chest X-ray report and noted Dr D's comments. A chest X-ray and CT scan of the chest and upper abdomen were ordered for suspected lung cancer. A tissue biopsy at Hospital 2 on 13 February 2020 confirmed a diagnosis of terminal lung cancer.[10]

54. On 31 January 2020, Dr C and the treating consultant met with Mrs A to discuss the missed diagnosis.

Serious Adverse Event Review

55. Following these events, WDHB carried out a Serious Adverse Event Review (SAER) into the care provided to Mrs A. In summary, the SAER was critical that the 2017 discharge summary did not contain the information that Mrs A's X-ray results had not yet been reported on. It also found that Dr C did not implement follow-up actions on receipt of the radiology report, and it identified the "potential competing demands of acknowledging results within required time frames, clinical workloads and demands, alongside the need to ensure follow-up actions have been commenced or completed".

[10] Malignant, metastatic non-small-cell carcinoma.

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56. The SAER found that 12 days (or longer) for an electronic radiology report to be available is not unusual.

57. The SAER was also critical that the radiology report included no summary, and instead the abnormal finding was included in the body of the report. The SAER is included as Appendix E.

Further information

Ms B

58. Ms B told HDC: "We are very sad that the outcomes may have been different with better systems and checks in place in 2017." She also asked that system improvements be implemented at WDHB so that other people do not suffer the same consequences as her mother, and that better checks and balances be put in place for others. In her response to the provisional opinion, Ms B stated that the diagnosis failure had a devastating effect on the lives of her mother and family.

Dr C

59. Dr C told HDC that he is extremely sorry for his mistake and the significant impact this had on Mrs A and her family. Dr C said that he is sorry that he failed to arrange for the necessary follow-up care for Mrs A in March 2017.

60. Dr C also advised HDC that this is the first occasion in many years of practice where he has misread a report and not acted on comments or recommendations, or failed to follow up on an abnormal or significant test result.

WDHB

61. WDHB told HDC that it is very sorry for the distress and ongoing suffering caused to Mrs A's family.

62. In relation to the delay in reporting on Mrs A's 2017 chest X-ray, WDHB told HDC:

> "Ideally, formal reporting would be completed within a couple of days, however it is variable depending on workload and staffing. Twelve days for a report turnaround on a plain film is longer than would usually be expected."

63. However, the SAER found that anecdotally a wait of 12 days or more for the electronic report to be available is not unusual.

Medical centre

64. The medical centre told HDC that it is very sorry that it missed an opportunity to realise that Mrs A's 11 March 2017 test results had not been followed up.

65. The medical centre told HDC:

> "Although primary responsibility for following up test results generally lies with the doctor who ordered the test, general practice is in a unique position to act as a safety net to preserve continuity of care and ensure test results are followed up and actioned

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> appropriately. Regrettably, the opportunity to ensure [Mrs A's] test results were investigated was missed in this instance."

66. The medical centre provided information to HDC about the orientation and training provided to new GPs and locums. The medical centre said that orientation includes a discussion on management of results, and a checklist is used to ensure that all aspects of orientation are covered. Orientation is managed by a number of practitioners, each covering their specific area of expertise. The medical centre also said that a manual is available for new staff and locums to refer to, which includes a copy of the medical centre's test management policy. For junior staff, senior GPs also provide regular catch-up meetings.

Responses to provisional opinion

67. Ms B, Dr C, WDHB, the medical centre, and the radiology service were all given the opportunity to respond to the relevant sections of the provisional opinion.

Ms B

68. Ms B's comments have been incorporated into the "information gathered" section of the report as appropriate.

Dr C

69. Dr C told HDC:

> "I will always remain extremely sorry for the mistake I made in [Mrs A's] case. … I have taken this case and outcome seriously, and reflected extensively on the process of this error and how it could be avoided in future and my actions around and after this."

WDHB

70. WDHB told HDC that it considers that the report is fair and that the recommendations are appropriate.

The medical centre

71. The medical centre told HDC that it accepts the provisional findings. The medical centre also stated:

> "As a practice, this incident has had a profound effect on our staff and reminded us of the important safety net General Practice provides. Strengthening support for junior staff and communication within the practice remains an importance focus for our senior staff."

72. The medical centre advised that, sadly, Dr E has passed away.

73. Dr F told HDC that since these events he has spent considerable time reflecting on his own practice and management of his inbox. He said that he is more careful in his documentation, and more vigilant in ensuring adequate follow-up of unexpected abnormal findings.

Radiology service

74. The radiology service told HDC it had no further comments to make.

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Opinion

Introduction

75. This report primarily concerns a clinician's inadequate review of a radiology report and its recommendations when a significant finding was made. The report highlights the challenges associated with follow-up of test results ordered in an emergency department — an issue seen across complaints to HDC. In this situation, primary care services can be a particularly important safety-net to ensure that results are reviewed and followed up. Clear communication between emergency department clinicians and GPs, and a shared understanding about responsibility for the follow-up of test results is essential to patient safety in this regard.

Opinion: Waikato District Health Board — breach

Delay in sending X-ray to radiology service — breach

76. On 11 March 2017, X-rays of Mrs A's chest and abdomen were taken at the ED, and the images was transferred to the radiology service. There was a delay of 11 days before the X-ray images were reviewed by a radiologist, who then sent them externally to the radiology service for reporting. The radiology service carried out its review and reporting obligations in 31 hours, and provided a report on the X-rays to the ED on 23 March 2017. The delay between taking the X-rays and reporting on the results occurred while the X-rays were in the WDHB system.

77. WDHB submitted to HDC that, ideally, radiology reporting would be carried out within a couple of days. While WDHB accepts that 12 days is longer than would be expected, I note that WDHB also told HDC that a turnaround time of 12 days is not unusual.

78. As part of my investigation, I obtained expert advice from radiologist Dr David Milne. Dr Milne advised:

> "12 days is an undesirable delay in getting the report back to the referring clinician. They will have forgotten the patient and the delay contributes to treatment delays if treatment is required. However, in the current DHB climate, this delay is not unexpected and is not the specific fault of the reporting radiologist or the reporting DHB radiology service.
>
> The reporting delay is a moderate departure from the standard of care based on ideal circumstances. However, this departure would be typical across many DHB radiology departments."

79. I agree with Dr Milne's advice that 12 days is an undesirable delay for a report to be made to the referring clinician. I note that, for 11 of those days, the images were in a queue with WDHB. As Dr Milne pointed out, in ideal circumstances there would not be such a long delay

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between taking an image and reporting on it. Long delays raise the potential for significant patient harm in that such delay raises the likelihood that the ordering clinician will have forgotten the patient, and will contribute to treatment delays if treatment is required.

80. WDHB's evidence conflicts as to whether a delay of 12 days for radiology reporting is common. WDHB told HDC that 12 days is longer than expected, but also that a delay of 12 days is not unusual. I do not find it necessary to resolve this conflict. As Dr Milne points out, in the current DHB climate, a delay of 12 days would be typical, but undesirable.

81. I am, of course, aware of the pressure radiology services are under at a national level due to increase in demand paired with workforce shortages and recruitment challenges. Fundamentally, however, it is my view that healthcare consumers have the right to expect X-rays to be read in fewer days than occurred in this case. That such delays are common does not excuse the delays, and I am concerned that if a culture of tolerance of unacceptable delays develops across DHBs, this will become normalised and patients will be put at risk. The passage of time between seeing a patient and reviewing a radiology report does not support good clinical decision-making, and the timely reporting of radiology results is a critical systems issue.

82. Having considered all the evidence and the advice of my expert advisor, I find that WDHB did not provide services to Mrs A with reasonable care and skill, and breached Right 4(1) of the Code of Health and Disability Services Consumers' Rights (the Code).[11]

Opinion: Dr C — breach

83. Dr C was the MOSS on duty in the ED at the time of Mrs A's admission on 11 March 2017. He had primary responsibility for her care at that time. Dr C ordered a chest X-ray for Mrs A to search for free air under the diaphragm. He viewed the X-ray on the same day, and remained responsible for Mrs A's care when Dr D's radiology report was sent back to the ED on 23 March 2017. Dr C reviewed and acknowledged the radiology report on 24 March 2017.

84. Although not related to Mrs A's acute presentation, the chest X-ray showed evidence of a mass in Mrs A's right lung. Dr C did not identify the mass when he viewed the X-ray on 11 March. As part of my investigation, I obtained emergency medicine advice from Dr William Jaffurs, who advised that it is acceptable for emergency medicine doctors to read X-rays in a preliminary manner, and that they are not expected to interpret them to the standard of a trained and better-equipped radiologist. I accept that advice.

85. On 24 March 2017 (12 days after Mrs A presented to the ED), Dr C received the radiologist's report that noted the mass in Mrs A's right lung and identified it as either the presence of infection, or a "mass-like lesion". The report recommended comparison with previous X-rays and a chest CT scan if there were no symptoms to support a finding of focal pneumonia.

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

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As noted above at paragraph 78, radiologist Dr Milne advised me that the delay of 12 days is undesirable because the requesting clinician will have forgotten the patient (and the delay may contribute to a delay in necessary treatment). Dr C acknowledged the radiology report in the Clinical Workstation electronic system, indicating that he had read it and that appropriate follow-up action was underway in accordance with the DHB Policy. However, Dr C took no follow-up action himself. He did not take steps to compare the report to previous X-rays or request a further chest CT scan as recommended in the X-ray report.

86. Dr C has acknowledged his error on several occasions, and he accepts that primarily it was his responsibility to follow up on the recommendations in the radiology report. He submitted the following to HDC (which he states is by way of explanation rather than excuse):

> "Around the time of [Mrs A's] admission to ED, we were under instruction from hospital management to clear the backlog of unacknowledged results as there were significant delays in acknowledging/actioning results. This meant I was constantly trying to review and action results/reports (for myself and other practitioners), and I made time to do this towards the end of a night shift where fatigue can set in. I believe fatigue is likely to have been the reason why I overlooked the comments about the mass and recommendation by the radiologist and I deeply regret this."

87. Dr Jaffurs noted that a copy of the discharge letter was sent to Mrs A's GP at the medical centre, but that no specific request was made in the letter to follow up on X-ray or laboratory reports. Nevertheless, Dr Jaffurs advised me that the discharge summary and advice to the GP satisfies an acceptable standard of care. I accept that advice.

88. If Dr C's intention was for the medical centre to follow up on the X-ray results, the DHB Policy required him to specifically delegate this responsibility to the GP. Given that GPs cannot acknowledge radiology reports received by the ED, Dr C would also have been required to follow up with the GP to ensure that action was being (or had been) taken. It is clear that no delegation, or attempted delegation, was made to Mrs A's GP.

89. Dr Jaffurs advised that "some further action was required once the radiology report was received [by Dr C]", and that this constitutes a significant departure from the expected standard of care. I agree with Dr Jaffurs' advice. As stated in previous Commissioner reports,[12] doctors owe patients a duty of care in handling patient test results, including advising patients of, and following up on, abnormal test results. The primary responsibility for following up abnormal test results rests with the clinician who ordered the tests. Dr C held this responsibility in Mrs A's case. I am critical that after accessing the radiology report on 24 March 2017, Dr C either did not review the report or, if he did review the report, missed vital abnormal findings. As a result, he failed both to inform Mrs A of the abnormal result and to arrange timely follow-up.

[12] See, e.g., 16HDC01980, at paragraph 59.

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90. In summary, Dr C:

a) Overlooked the radiologist's comment that a mass had been detected in Mrs A's lung; and

b) Failed to follow the DHB Policy in that he acknowledged the result without taking any further action, and he did not delegate responsibility for following up the result to Mrs A's GP (either by discussion with the GP or explicitly in the discharge summary) or to anyone else.

91. As a consequence, Mrs A was not advised of the presence of the mass, and opportunities were missed to diagnose and treat the tumour at an earlier time.

92. In my view, Dr C failed to provide an appropriate standard of care to Mrs A, and breached Right 4(1) of the Code.

Opinion: Medical centre — adverse comment

93. It is incumbent upon GP practices to ensure that they have in place adequate systems and procedures to manage patient test results — both those ordered by clinicians from the practice, and those that arrive in the practice from third parties. Although I do not find that the medical centre breached the Code, I do have some concerns about aspects of the care provided by the medical centre to Mrs A, and the implementation of procedures and policies in place at the medical centre at the time of the events described above.

94. On 11 March 2017, Mrs A's discharge summary was sent by WDHB to the medical centre. The summary did not contain any information to suggest an unactioned abnormal result. No chest X-ray abnormality was noted in the summary. "FU with GP" was noted in the summary, but I accept that this referred to Mrs A's acute presentation at ED and not to the chest X-ray that was still to be reported on by a radiologist.

95. On 24 March, Mrs A's chest X-ray report was received by the medical centre, and this included the radiologist's findings of a suspected mass in Mrs A's lung. No instructions were given by staff at the public hospital for the medical centre to follow up this result. No specific request was made to take further action, and no delegation (or attempted delegation) of responsibility to the medical centre for follow-up was made. Dr F read the radiology report and added his own comment on it in Mrs A's patient record, indicating that he had noted the abnormality. He then forwarded it to Dr E, who also took no further action on either the report or Dr F's comment.

96. Neither Dr F (who was new to GP practice) nor Dr E (Mrs A's usual GP), nor anyone else at the medical centre, can recall why Dr F was reviewing results received for Dr E on 24 March 2017. Dr F assumed, on the basis of his prior hospital experience and the directions in the radiologist's report, that the ordering clinician at WDHB was following up on the results, and Dr E assumed that Dr F had taken the required action. There is no evidence of any discussion

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or handover between Dr F and Dr E about Mrs A's radiology report, or of any discussion with WDHB about the report.

97. The relevant excerpts from the medical centre's policies are included at Appendix F. In summary, the medical centre did not follow its own policies as follows:

a) In respect of Mrs A's abnormal chest X-ray result, Dr F did not give clear instructions on what action was required and who was to take it.

b) The chest X-ray result was not managed by Mrs A's normal GP, Dr E, and there is no evidence that Dr E nominated a deputy to review his results.

c) Mrs A was not informed of the abnormal chest X-ray result.

d) No alert was generated in Mrs A's electronic record to ensure that the abnormal chest X-ray result was followed up.

98. My in-house clinical advisor, Dr David Maplesden, is critical of Dr F and, in particular, his failure to take adequate steps to ensure that Mrs A received appropriate follow-up in regard to the chest X-ray abnormality he identified and acknowledged. Dr Maplesden is critical of both Dr F and Dr E for the assumptions they made about who would follow up on Mrs A's test result.

99. Despite these criticisms, Dr Maplesden advised me that these omissions represent only a mild departure from the standard of care. Generally, he cites the lack of clarity around the handling of results ordered by secondary care providers with copies going to primary care providers, and that ultimately the clinician who ordered the result is responsible for the failure to follow up on it. In Dr F's case, his omissions are mitigated by the fact that he was new to general practice, having previously worked in the hospital system, and he was therefore aware of the hospital policy that follow-up of test results is the responsibility of the ordering clinician.

100. Dr Maplesden also advised that in any case where the result is suggestive of significant pathology that may require a time-critical response, and it is not clear who is taking responsibility for that response, both the test requester and those in receipt of the result have a responsibility to ensure that it is managed appropriately and in the best interest of the patient. Dr Maplesden advised:

> "If a general practitioner is in receipt of information that is of particular concern about a patient's health (a markedly raised PSA, for example), **there is the expectation that they would act on this test even if they were not the doctor who ordered it** [my emphasis].[13]"

101. I agree with Dr Maplesden's advice. I am concerned that no clinician at the medical centre followed up on Mrs A's abnormal chest X-ray result, or ensured that someone else had taken responsibility for following up on that result. This reflects poorly on the systems in place at

[13] Quoting Lillis, S. The management of clinical investigations. In: Morris KA (editor), *Cole's Medical Practice in New Zealand*, 13th ed. Wellington: Medical Council of New Zealand (2017).

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the medical centre to provide important safety-netting. Although Dr Maplesden advised me that the medical centre had adequate processes in place in 2017 to facilitate appropriate management of test results, Dr F did not receive sufficient training on this, and I am concerned that the medical centre did not ensure that Dr F was fully aware of the safety-netting in place. There also does not appear to have been sufficient clarity around the allocation of responsibility where a GP who is not a patient's normal GP receives abnormal test results. Since these events, the medical centre has strengthened its test management policy and now provides training to new GPs on the policy. I consider this to be appropriate.

102. In all cases, it needs to be very clear who is responsible for following up test results and ensuring any required action is taken. Although it is normal practice for that responsibility to fall on the clinician who ordered the test, this may not always occur. In addition, human error is inevitable, especially given the pressures and stresses on clinicians. My expectation is that where the result may suggest significant pathology that may require a time-critical response, and where there is a lack of clarity for who is taking responsibility for following up an abnormal test result, it will be followed up by a treating doctor regardless of who ordered the test, to ensure a timely response. I also expect general practitioners to reflect this in their policies — i.e., that policies will require clinicians to follow up on all abnormal test results if the responsibility for acting on those results is unclear. Any ambiguity in where any such responsibility lies should be resolved in favour of taking action on the test result, and not in favour of assuming that another clinician will take any necessary action. I note with approval that the medical centre's policy did require GPs to ensure that all significant abnormal results were followed up irrespective of who ordered them.

Opinion: Radiology service — other comment

103. When Mrs A's chest X-ray was sent to the radiology service on 22 March 2017, the radiology service reviewed and reported on the X-ray within 31 hours, which I note is an acceptable turnaround time and within the timeframe expected by WDHB.

104. Dr D identified the mass in Mrs A's lung and reported on it appropriately. I obtained advice from a radiology expert, Dr David Milne, who advised me that the report fits the framework as outlined by the Royal Australian and New Zealand College of Radiologists (RANZCR). Dr Milne advised that the radiology service met its responsibilities and obligations in respect of Mrs A's chest X-ray.

105. Dr Milne also advised that despite the findings above, he does have issues with the style of Dr D's report, which requires the clinician to detect critical findings mid-report rather than having critical findings reported either first or last (and therefore making them harder to miss). Dr Milne commented that this report style is slightly unhelpful.

106. The radiology service stated that it respectfully disagrees with Dr Milne's advice, and considers that Dr D's report is succinct and targeted, and it fits into the framework outlined by RANZCR.

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107. Although I do not make any adverse comment in respect of the radiology service, I do invite the radiology service to reflect on Dr Milne's suggestion that any abnormal findings be presented separately from the body of the report, and consider whether any useful learnings can be taken from the events described in this report. In addition to including abnormal findings in a separate summary, ideally a visual alert such as red highlighting or an electronic alert would be added to reports that contain abnormal or significant results.

Changes made

WDHB

108. Since these events, WDHB has made the following changes:

a) Established a part-time medical position to address the issue of locum-requested investigations and the acknowledgement list arising from this.

b) The Emergency Department SMO working group is exploring an approach to formalise the time spent doing acknowledgements, to support and encourage good practice to undertake acknowledgements at an optimal time, and to reiterate the requirements of the acknowledgement process.

c) An unexpected findings folder is now centralised in the radiology service, where cases are added and an administrator ensures, by checking with a telephone call, that the GP practice or specialist has seen the result.

109. WDHB also made relevant changes to the DHB Policy in June 2018, including that Radiology now has an obligation to telephone the requesting clinician with any results when timely intervention may prevent or reduce harm, and, if a result requires urgent or significant action, the GP must be telephoned to check that action has been, or will be, taken.

110. The SAER made a number of recommendations, including:

a) That SMO orientation information be updated to include:

   i. A recommendation that time should be set aside to complete acknowledgement of results, preferably during business hours when follow-up can be arranged.

   ii. A requirement that discharge summaries note any results that are still awaiting reporting.

   iii. A requirement that discharge summaries be amended to include any follow-up action taken on the basis of abnormal results.

   iv. Examples of learnings from incidents that are specific to Hospital 1.

   v. The investigation of an opportunity to develop a WDHB Rural Hospital-wide information package.

b) A group will be appointed to review the ED medical staff documentation processes and the information that is documented.

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c) Learnings from this incident will be shared with the Radiology Department as an improvement opportunity for Radiology to:

i. Define timely reporting, develop key performance indicators, and audit compliance.

ii. Review the current use of summary reporting for incidental findings.

iii. Consider the use of highlighting for significant findings.

iv. Provide feedback on these actions to the Serious Event Panel.[14]

Dr C

111. Dr C told HDC that he now dedicates time during day shifts when he is not fatigued to review and acknowledge test results, and that he has anonymously discussed Mrs A's case with colleagues and advised them of his error.

Medical centre

112. The medical centre told HDC that it has:

a) Developed an orientation for new doctors and locums that deals specifically with management of results.

b) Included the test management policy in the locum manual for new staff.

c) Initiated regular catch-up meetings for junior staff to review progress and difficulties, and initiated weekly information sharing meetings.

d) Developed an Inbox Management quick reference sheet that deals explicitly with when abnormal results should be filed in the patient records, and the management of a GP's inbox when they are on leave.

Recommendations

113. I recommend that WDHB:

a) Provide a formal written apology to Mrs A's family for the DHB's breach of the Code. The apology is to be sent to HDC within three weeks of the date of this report, for forwarding to Mrs A's family.

b) Audit compliance with the policy "Electronic Result Acknowledgement: The Responsibilities of Senior Medical Officers and the Delegation of Authority to Resident Medical Officers and Others", and report the results of the audit to HDC within three months of the date of this report.

c) Provide an update to HDC on the changes made as a result of the SAER, within three months of the date of this report.

[14] The WDHB group that investigated these events and produced the report following the SAER.

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d) Report on any further changes that occurred following the implementation of the recommendations in the SAER, within three months of the date of this report.

e) Report to HDC on the current median reporting times for radiology results. WDHB is to consider whether improvements can be made to reduce any delays in radiology reporting times, and report back to HDC on the median reporting times and the details of any improvements planned or made as a result, within three months of the date of this report.

f) Consider implementing a system, or confirm implementation of a system (as appropriate), whereby significant or abnormal test results are highlighted to requesting clinicians, to include reporting carried out by external providers, and to include situations where the significant or abnormal test result is not likely to be related to the acute presentation. Please provide HDC with evidence of the changes that have occurred, and report on the effectiveness of the changes, within three months of the date of this report.

114. I recommend that Dr C conduct an audit of radiology reports acknowledged by him in order to identify whether significant findings are being identified, and report the results of the audit to HDC within three months of the date of this report.

115. In accordance with the recommendation in my provisional opinion, Dr C provided a formal written apology to Mrs A's family, and this has been forwarded to the family.

116. I recommend that the medical centre conduct an audit of test results ordered by third parties, to identify whether appropriate follow-up action is being taken and to assess compliance with medical centre policies. The medical centre should report the results of the audit to HDC within three months of the date of this report.

Follow-up actions

117. A copy of this report with details identifying the parties removed, except Waikato DHB and the experts who advised on this case, will be sent to the Medical Council of New Zealand, and it will be advised of Dr C's name in covering correspondence.

118. It is essential that the issues highlighted by Mrs A's case are shared nationally. A copy of this report with details identifying the parties removed, except WDHB and the experts who advised on this case, will be sent to Te Aho o Te Kahu/the Cancer Control Agency, Health New Zealand, and the Health Quality & Safety Commission, and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

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Appendix A: Independent clinical advice to Commissioner

The following expert advice was obtained from Dr William Jaffurs, an emergency medicine specialist:

> "I am responding to your letter of 29 September 2020 requesting expert advice regarding the care given to [Mrs A] in the Emergency Department of [Hospital 1] (Waikato District Health Board). Thank you for your request to review the above complaint. In doing so I have reviewed the documents sent to me including:
>
> Your letter, with a brief clinical summary of events and specific questions
>
> Letter of Complaint in a structured form submitted to HDC
>
> Response letters from [Dr C] and [the] Executive Director Hospital and Community Services
>
> Pertinent clinical records from [Hospital 1] including ED visits for 11 March 2017 and 30 January 2020, and various pertinent Radiology and Laboratory reports
>
> Waikato District Health Board's Policy issued 12 June 2018: Electronic Result acknowledgement: The Responsibilities of Senior Medical Officers and the Delegation of Authority to Resident Medical Officers and Others
>
> I am currently a Fellow of the Australasian College of Emergency Medicine since 1998 and work as an Emergency Medicine Specialist at Whangarei Base Hospital since 1997. I was Director of the Emergency Department for my first seven years. I also hold Fellowship with the American College of Emergency Medicine. Having reviewed the persons and entities in this case I can see no conflict of interest on either a personal or professional level. I have read your guidelines for expert advisors.
>
> Case summary with comments regarding appropriateness of care:
>
> [Mrs A] then aged [in her sixties] presented on 11 March 2017 to [the] Emergency Department at 1511 hours with nausea and abdominal and chest pain since breakfast time. She was triaged to a code of 4 (towards a less acute spectrum of urgency), had a pain score of 5/10, had relatively normal vital signs and taken to a room. She declined stop smoking advice at that time. She was given paracetamol and awaiting blood test results by 1750. She was eventually up and about per the nursing notes. She was assessed by [Dr C], ED MOSS time not noted. The note is complete with history suggestive of urinary tract problems and constipation, full past medical history and medications, relevant focused abdominal exam, appropriate blood urine and x ray investigations results noted. She is eventually discharged to try laxatives, a prescription to fill if she develops symptoms of urinary tract infection, and a note to 'FU with GP'.
>
> Twelve days later the chest xray is reported by the Radiologist as suspicious for a mass like lesion, consider CT scan and accepted electronically by [Dr C]. He took no further action. The x ray report was copied to [Mrs A's] GP as well, which due to locum cover was also not followed up or acted upon.

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Conspicuously, there are no documents included to either confirm or rule out intervening visits with her capitation registered GP or other health care sought or delivered until her next visit to ED in 2020. [Mrs A] returned to ED on 31 January 2020 with a stroke and was found to have a right upper lobe tumor on chest x ray in the area of the previously sighted abnormality. She was eventually determined to have an advanced stage of Lung cancer with limited life expectancy and few treatment options.

In response to your questions:

Please … advise whether you consider the care provided to [Mrs A] by [Dr C] and Waikato District Health Board was reasonable in the circumstances. In particular comment on:

1. [Mrs A's] presentation to ED in March 2017, specifically [Dr C's] actions when the radiology report was received.

[Mrs A's] care while in ED was exemplary. Her interactions, assessments, and advice were comprehensive and well documented. Investigations and decision making were appropriate. She was up and about and apparently pain free when she was discharged with a plan to treat her abdominal pain with a trial of laxatives and GP follow up. She was offered interventions to quit smoking. The ominous chest X-ray finding was not apparent to [Dr C] at the time of the visit and the Radiologist's report would not be available until 12 days later. It is acceptable for ED doctors to read X-rays in a preliminary manner, but not to the expected standard of a trained and better equipped Radiologist.

[Dr C] eventually received the report, and acknowledged this in a manner consistent with the DHB's policy. He indicates no further action was taken, even though the report suggested consideration of Chest CT scan for a visualized abnormality. He is both honest and profoundly apologetic about this in his letter included with your submission. I do note that a copy of the discharge letter was sent to her established GP following her ED visit. No specific request is made to follow up on xray or laboratory reports as specified in the DHB policy. Page 9 of this policy states: 'If the result, when available, requires urgent or significant action, the General Practice must be telephoned to check that the action has been or will be taken.' This was not done. Taking into account that this policy was put in place over one year after the ED visit in 2017, I still consider some further action was required once the radiology report was received, and that this constitutes a significant departure from the expected standard of care expected in a New Zealand Emergency Department.

2. The appropriateness of the safety netting advice provided to [Mrs A] upon discharge.

Safety netting is a term commonly applied in the New Zealand Health system that relies on interconnected services, in this case, the Emergency Department, Hospital based services including Radiology, and Laboratory, and General Practice. One component commonly relies on another to take care of patients with acute problems and depends

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on the patient or their family understanding clearly what to do next in the setting of acute illness. [Mrs A] is an older adult with a number of medical problems and risk factors for significant illness. She attended the Emergency Department in 2017 for an acute illness, improved while there, and was directed to follow up with her GP in the discharge letter. This is routine practice for an experienced ED doctor who would recognize that episodic care in an ED would not meet her need for general health surveillance. The follow up instruction to see her GP is brief and could have been both more extensive and specific, but it is there in the discharge summary, and would meet the expected standard of care for discharge advice.

3. The appropriateness of the discharge summary and advice provided to [Mrs A's] GP.

The discharge summary gives a clear picture to the GP of what happened in ED, including the interpretation by the ED doctor of the chest X-ray which does not include noting an abnormality in the chest images. There are no specific instructions to the GP other than the requested 'GP follow up' noted in the plan, which I presume was given to the patient at the time of discharge, and also sent to her GP. This is generally taken to mean please schedule a follow up visit with your GP to make sure you are getting better. [Mrs A's] presentation was nonspecific as is often the case with abdominal pain, and the test results available at the time were reassuringly normal except for a slightly raised white blood count and trace of blood in her urine. I think an experienced GP would know what to do at the requested follow up visit including, but not confined to, reviewing test results without being directed by the ED doctor. It is noted that the X-ray report was sighted and signed off by a locum GP covering for her established GP without checking up on the situation unfortunately. One part of the safety net failed here.

I am aware that there is some tension between Hospital-based doctors and General Practice. Problems with access to services, less than perfect communication, and high workloads result in holes in the safety netting mentioned above. I think in this case it would have been incumbent upon [Mrs A] to schedule a follow up visit with her GP for general review of her acute condition and various health problems. In answer to your question, the discharge summary and advice to GP satisfies an acceptable standard of care for the situation described for [Mrs A's] ED visit.

4. Whether the relevant policies were adequately followed in this circumstance?

The policy provided to me: Waikato District Health Board's Policy issued 12 June 2018: Electronic Result acknowledgement: The Responsibilities of Senior Medical Officers and the Delegation of Authority to Resident Medical Officers and Others, is dated one year after the March 2017 ED visit. If a similar policy or expectation was in place in 2017, the policy was not followed, as discussed above in question 1.

Any other comments you wish to make:

I have attached two articles for your information and that lay out what I see to be the general expectations for managing test results in the time frame of [Mrs A's] case. The POLICY BRIEF FROM THE ROYAL NZ COLLEGE OF GENERAL PRACTITIONERS April 2016

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discusses in practical terms the challenges in managing patient test results and refers to a number of relevant HDC cases.

Also attached is an article from BPACnz August 2014 which cites the Medical Council (MCNZ) endorsement of best practice principles laid out in 'Coles Medical Practice in New Zealand.' This comprehensive article describes the multiple problems, pitfalls, and suggested solutions to managing test results. Although aimed at General Practice, the principles have general acceptance in our hospital system as well.

I have not been provided with the relevant X-ray images to review, but the clear presumption is that the abnormality on the 2017 chest X-ray led directly to [Mrs A's] diagnosis of lung cancer in 2020. Accepting this as true, and indeed likely, early diagnosis and treatment generally, but not always, leads to better outcome depending on the tumor type and staging. Radiologists at our hospital now call or physically come over to ED to speak to the duty ED doctor about significant unexpected X-ray findings not noted on our provisional report recorded at the time the X-ray is viewed by the ED doctor on the computer viewing software. Being subjected to the same pressures as [Dr C], this is one fairly effective way of focusing our follow up efforts on an important finding that could conceivably be overlooked in a written report arriving in an inbox with many others.

I reviewed a similar case for the Health and Disability Commissioner in 2015 involving another Health Board, details provided on request. Both cases highlight problems with electronic reporting and sign off by responsible clinicians. In the 2015 case there was evident a technical problem with the sign off software, and no safety netting with GPs being sent reports as back up. Such early problems have, for the most part, been overcome, but no system is perfect. Many GPs now have patient accessible programs such as 'My Health' that make a patient's reports and results directly available to the patient, providing an additional component to the safety net.

Our electronic signoff system gets over two hundred reports daily for review and signoff so the workload this produces is significant. As [Dr C] has described, the reports are often signed off at the end of a busy shift when fatigue is a factor. [Hospital 1] has thankfully provided some extra work hours for this specific task. Despite improvements, such systems will continue to rely on the other components involved including the patient and their GP to prevent such an unintended and unfortunate error that has had tragic implications for [Mrs A], her family, and the health care professionals involved in her care.

If I can be of further assistance please contact me,

Sincerely yours,

William Jaffurs, MD FACEM
Emergency Medicine Specialist

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References:

https://bpac.org.nz/BT/2014/August/testresults.aspx

https://www.rnzcgp.org.nz/gpdocs/New-website/Advocacy/PB6-2016-Apr-Managing-patient-test-results.pdf"

On 18 October 2021, HDC sent Dr Jaffurs the version of the policy, "Electronic Result acknowledgement: The Responsibilities of Senior Medical Officers and the Delegation of Authority to Resident Medical Officers and Others" that was in force in 2017, at the time of the events referred to in this report. He responded as follows:

> "Thank you for providing the DHB policy in effect at the time this case occurred. The policy dated 26 November 2015 is both concise and clear indicating the SMO has ultimate responsibility for acknowledging test results and acting upon results as necessary (item 4).
>
> The expected process for patients seen in the Emergency Department who have a GP who would be available to deal with abnormal results, and the method of communicating this information to the GP, are well described in the Appendix items 1 and 8.
>
> I no longer have the original case notes for review, but I think the additional information you have provided in the form of the 2015 policy does not change my opinion."

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Appendix B: Independent clinical advice to Commissioner

The following expert advice was obtained from a radiologist, Dr David Milne:

"I have been asked by your office to provide opinion on the medical care delivered to [Mrs A] following a presentation to [Hospital 1] ED with abdominal pain.

Background

[Mrs A] presented to ED at [Hospital 1] on 11/3/2017 with right sided abdominal pain and was seen by [Dr C], the attending physician at the time. He requested plain radiographs of the chest and abdomen. No abnormality was noted on the imaging by [Dr C] at the time and [Mrs A] was discharged back to the care of her GP. Subsequently, 12 days later, [Dr C] electronically signed off the radiology report which had noted an abnormality in the right upper lobe on the chest radiograph, the report raising the possibility of a mass-like lesion. He did not act on this finding. In January 2020 [Mrs A] was admitted to [Hospital 1] with a suspected stroke but was found to have advanced stage lung cancer on subsequent imaging and further investigations.

HDC has requested advice around the reporting of the imaging performed in 2017, how this reporting was communicated to the referring clinician and the delays in the reporting of the imaging.

How the chest imaging was reported

Clinical notes:

Constipation. Right-sided pain with tenderness in the right upper quadrant

Findings:

Heart size measures at the upper limit of normal with a CTR of 0.51. Anterior to the second right rib, there is a rounded area of patchy density measuring 22mm. This may represent an infective focus, but the possibility of a mass-like lesion is not excluded. Please correlate clinically and compare with previous CXRs with a low threshold for CT if there are no symptoms to support this represents a focal pneumonia. The remainder of the lungs are clear. There are no pleural effusions. There is no free sub diaphragmatic gas.

My review of the imaging

There is an irregular 2cm mass in the right upper lobe suspicious for a primary lung malignancy. No mediastinal or hilar adenopathy is shown. No pleural or skeletal disease.

Comment:

Suspect RUL lung cancer. Urgent specialist referral with view to further imaging is recommended.

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Answers to specific HDC questions

In my replies, I have incorporated numerical data from ADHB as an example of how real life DHB radiology practice is constrained by resource and how this affects actual rather than desired performance. I have been Clinical Director of Radiology at ADHB for many years.

The reporting of [Mrs A's] chest X-ray from March 2017 including the omission of the 'key summary' section of the radiology report.

RANZCR has published guidelines on Clinical radiology Written reports. The following excerpt:

2.6 Findings

Relevant imaging findings should be characterised as specifically as possible including description of:

- *Precise anatomical location using accepted anatomical terminology and modality — specific best practise;*
- *Size or extent;*
- *Other anatomical imaging characteristics relevant to diagnosis or treatment.*

Normal findings should be noted when:

- *The absence of abnormality has direct bearing on diagnosis or subsequent management;*
- *The absence of abnormality is part of the recognised staging of the severity of a disease process;*
- *The usual standard of care is to comment on structures within the field of view*
- *The omission of a specific statement about the normality or abnormality of a standard item can create ambiguity of meaning; and*
- *The clinical situation of the patient suggests that certain relevant negative information would be useful to the referrer.*

2.7 Addressing the clinical question/differential diagnosis

2.7.1 Addressing the clinical question

Specific clinical questions asked by the referrer must be addressed. When it is not possible to answer these specific clinical questions, the reason(s) for this should be clearly stated and recommendations included regarding more appropriate means of answering the questions.

2.7.2 Diagnosis/differential diagnosis

Where possible, state the most likely specific diagnosis or a limited number of the most likely alternatives with an indication of their relative likelihoods. Where imaging findings

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are non-specific or indeterminate this should also be stated, and consideration given to recommendation about how a more specific diagnosis might be reached.

2.8 Conclusion

The conclusion should provide a concise, clinically relevant interpretation of the previously described imaging observations, including comparison with previous studies where appropriate. If findings are normal or likely non-significant, this should be stated explicitly. Where there is an accepted classification of imaging findings that affects management, this should inform the report descriptors and conclusion. In short or less complex reports, the conclusion may not require a separate section, but the clinical radiologist's interpretation remains an integral report component.

This is a short and uncomplicated report. There is an abnormality which is most likely a lung cancer. The report does not require a summary section based on these guidelines or my own practice.

I do have issues with the report style which mixes observation and conclusions through the central part of the body of the report creating a volume of text which is much larger than it needs to be and requires the clinician to detect the critical finding in the mid report rather than having it presented either first or last. The report style is considered slightly unhelpful, but the report fits into the framework as outlined by RANZCR.

No departure from the standard of care.

The adequacy of the actions and omissions of the radiologist after identifying the patchy density. Please advise whether more steps and/or communications ought to have occurred to alert the responsible clinician of the incidental finding.

ADHB has adopted the critical results policy developed by CDHB. The level of communication of the finding of a right upper lobe mass on a chest radiograph as an incidental finding is specifically mentioned under the Level 3 or yellow alert heading.

Three levels of critical finding or results and pathways for their communication have been defined:

1. Level 1 or red alert require communication within minutes
2. Level 2 or orange alert require communication within hours
3. Level 3 or yellow alert require communication within days

Level 3 results, yellow alert, communicate within days

Definition

Level 3 results are any new/unexpected findings on an imaging study that suggest conditions that could result in significant morbidity if not appropriately treated, but are not immediately life-threatening. Examples of level 3 results include: a lung nodule on a chest X-ray or a solid renal mass.

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Requirement for communication is within days

Level 3 results require notification of the referring medical officer or a covering clinician or other team member who can initiate the appropriate clinical action for the patient. The communication must be completed within 3 days of the time that the finding was noted.

At ADHB communication of this type of result will be via the Éclair electronic report distribution process. No other communication will be required of Radiology, whose expectation is that result sign-off will occur within 3 days of report distribution. Referring clinicians and clinical services will be responsible for establishing and managing processes related to these results, including monitoring for viewing and signing of results in the Éclair system and associated escalation policies.

The Radiologist's responsibility is to create a report on the imaging and to have that report distributed. The Clinician's responsibility is to read the report and act on the report contents as clinically appropriate.

According to this policy, the reporting Radiologist did not depart from the standard of care.

Whether the reporting time of 12 days (from when the scan was taken to when the report was available) was consistent with accepted standards.

Work volumes in DHB Radiology Departments have increased tremendously over the past 10 years. At ADHB CT volumes have increased from 18,236 in 07/08 to 58,000 in 20/21, an increase of 39,764 examinations. A lesser percentage increase in plain films over that time interval but regardless examination numbers have increased by 27,000. MR, US and other modalities have all increased substantially. Radiologist FTE at ADHB has increased by 7% in the same time interval.

Our target at ADHB is to have 85% outpatient imaging reported within 48 hours but our compliance is around 50–60% with no mitigation.

12 days is an undesirable delay in getting the report back to the referring Clinician. They will have forgotten the patient and the delay contributes to treatment delays if treatment is required. However, in the current DHB climate, this delay is not unexpected and is not the specific fault of the reporting Radiologist or the reporting DHB Radiology service.

The reporting delay is a moderate departure from the standard of care based on ideal circumstances. However, this departure would be typical across many DHB Radiology Departments.

Recommendations for improvements

The Respiratory and Radiology services at ADHB have recognized that the volume of imaging reports returning to clinicians can be difficult to manage and while there is an acceptance that radiology reports are the responsibility of the referring clinician to

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chase, read and act on, anything that the Radiology Department can do in the patient's interests that does not disturb the workflow of the over worked Radiologist should be considered. To this end we have set up a cancer tracker email address where reporting Radiologists reviewing chest radiographs from the Community or outpatient referrers can email name, NHI and cancer suspected to the cancer tracker email address in the DHB and there will be a clerical activity to bring the report to the attention of a Respiratory Physician in the case of a described lung lesion. This is an additional safety net.

Other DHBs can use an alerts folder for imaging reports containing what the reporting Radiologist might think is an unexpected finding based on the clinical information provided. They would dictate 'alerts folder' at the end of their report or signal this if using speech to txt reporting and there would be a clerical action to email the referring doctor a note to check a forthcoming report which may contain an unexpected finding. ADHB does not use this system as there can be uncertainty about what is an unexpected finding on imaging due to inaccurate supplied clinical information. CMDHB does use this system.

In the absence of guidelines, it is up to individual DHBs to come up with a pathway for alerts to referring clinicians which works in their specific environment. A modern PASC/RIS system might have an email report option direct from the Radiologist reporting station. However many DHB systems are not current and some are past end of life and would not support this facility.

The National Lead for Radiology, Dr … (also works at ADHB), has been working with the MOH to highlight the lack of capacity in DHB Radiology Departments. This lack of capacity includes both machinery and staff at all levels. At ADHB I look forward to having the capacity to meet our ever increasing demand.

I would be happy to provide further advice in this case if required.

Yours sincerely

Dr David Milne
Radiologist"

The following advice was obtained by telephone from Dr Milne:

"Dr Milne returning my call. I advised I was near the end of preparing the Commissioner's provisional opinion and that I had one brief follow up question. I asked him what a reasonable timeframe was for the administrative act of sending images to an external provider for radiology reporting. Dr Milne advised that, in his opinion, reporting would be completed within 2 days, but that up to approximately five days was acceptable. He advised that 11 days was outside a reasonable period for sending images externally for reporting."

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Appendix C: In-house clinical advice to Commissioner

The following expert advice was obtained from Dr David Maplesden on 12 October 2020:

> "1. Thank you for the request that I provide clinical advice in relation to the complaint from [Ms B] about delays in diagnosis of lung cancer in her mother, [Mrs A]) secondary to an abnormal chest X-ray from March 2017 not being appropriately followed up. 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: complaint from [Mrs A]; response from [the medical centre]; [medical centre] GP notes and relevant practice policies; response from Waikato DHB; DHB clinical notes ([Hospital 1]).
>
> 2. [Mrs A] ([DOB]) had a history of hypertension, dyslipidaemia, depression, type 2 diabetes, diverticular disease and previous DVT. She had a long smoking history and was a current smoker with smoking cessation advice recorded as having been provided on numerous occasions. On review of GP notes there is no reference (prior to March 2017) of symptoms suspicious for underlying lung malignancy (as per High Suspicion of Cancer definitions[1]).
>
> 3. On 11 March 2017 [Mrs A] attended ED at [Hospital 1] with complaint of abdominal/flank pain. This was investigated by way of plain abdominal and chest X-ray (chest X-ray to exclude air under the diaphragm which, if present, raises the possibility of bowel perforation). There is no reference to complaint of any respiratory symptoms. The attending MO noted evidence of faecal loading in the abdominal X-ray and absence of sub-diaphragmatic free air. The ED discharge summary sent to [the medical centre] GP [Dr E] refers to the X-ray findings as *CXR AXR shows some Right hemicolon loading.* [Mrs A] was discharged with treatment for likely constipation and standby antibiotics if she developed further urinary symptoms. There is a note *FU with GP* but no specific request to follow-up formal radiology or other investigation reports.
>
> 4. The Waikato DHB response notes a lesion on the chest X-ray was not identified during the ED consultation. The specialist radiology report was made available on 23 March 2017 and was acknowledged on 24 March 2017 at 0531hrs by the requesting MO. The report includes: *Anterior to the second right rib, there is a rounded area of patchy density measuring 22 mm. This may represent an infective focus, but the possibility of a mass-like lesion is not excluded. Please correlate clinically and compare with previous chest X-rays, with a low threshold for CT chest if there are no symptoms to support this represents a focal pneumonia.* There was no summary of key findings to further emphasise the abnormality detected (see Appendix 1 for original formatting). The DHB response includes: *the error at this stage was that acknowledgement was completed without actioning the follow up of the CXR findings.* The report was apparently filed by

[1] https://nsfl.health.govt.nz/system/files/documents/publications/high_suspicion_of_cancer_definitions_0.pdf Accessed 12 October 2020

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the reviewing MO with no further action undertaken (no revised discharge summary, no contact with patient or GP).

5. A copy of the X-ray report was sent to [Mrs A's] GP. [The medical centre] response includes the following points:

(i) [Mrs A's] X-ray report was received at [the medical centre] and acknowledged by [Dr F], one of the Centre's GPs. The Centre has been unable to establish why the report was reviewed by [Dr F] rather than [Mrs A's] usual GP, [Dr E].

(ii) [Dr F] initialled the report and annotated it: *patchy change at Right 2nd rib region?focal pneumonia.* [Dr F] then sent the report, together with his comment, to [Dr E]. [Dr E] read the comment and filed the report in [Mrs A's] electronic patient file.

(iii) At the time of these events, [Dr F] was new to general practice and having recently worked in the Hospital system his assumption was that the responsibility to arrange [Mrs A's] follow-up lay with the ED doctor who had requested her chest X-ray. This was reinforced by the fact the Radiologist who had reported the X-ray recommended that the requesting doctor 'correlate clinically and compare with previous chest X-rays'. As [Mrs A] had only been seen in ED and the Centre did not have access to any previous X-rays, [Dr F] thought this was indicative that the advice of the Radiologist was directed to the ED doctor who had seen the patient.

6. [Mrs A] was not contacted regarding her chest X-ray report and there was no review or follow-up undertaken. On review of GP notes since March 2017 I could not find any attendance or pattern of symptoms presented that might have raised suspicion of an underlying lung malignancy or prompted repeat chest imaging. There was a consultation on 7 September 2018 for right upper quadrant pain thought to be bowel related, and on 24 December 2018 there was a consultation for cough (chest clear to auscultation) with no ongoing respiratory symptoms reported subsequently. [Mrs A] was seen on numerous occasions over this period with symptoms primarily related to bowel and renal issues and which were appropriately investigated.

7. [Mrs A] attended [Hospital 1] ED on 30 January 2020 after developing neurological symptoms. An incidental finding on chest X-ray was a large right upper lobe lung mass and subsequent investigations confirmed this to be advanced (Stage IV) non-small cell lung cancer unrelated to the neurological symptoms. It appears in hindsight that an opportunity for earlier diagnosis of this cancer was missed as a consequence of the recommendations in the March 2017 radiology report not being actioned.

8. [The medical centre] have provided copies of their policies related to follow-up of patient test results and investigations. The policies in place in March 2017 were consistent with those I have viewed from other medical centres and I would regard them as being consistent with accepted practice. [The medical centre] has since strengthened its policies by requiring provision of further detail on annotation of test

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results requiring follow-up to ensure the need and responsibility for follow-up is clearly defined.

9. The RNZCGP outlines its position on management of test results in a 2016 publication[2] (which references previous publications) entitled *Managing patient test results.* The publication does not specifically address the issue of abnormal test results originating from an external referrer but notes: *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.*

10. The latest (2017) edition of Coles Medical Practice in New Zealand[3] refers to a 2015 MPS article[4] on managing test results and concludes: The Medical Protection Society article 'Handling test results' looks at the issue of doctors' responsibility for tests they did not order and notes 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. **This makes sense. If a general practitioner is in receipt of information that is of particular concern about a patient's health (a markedly raised PSA, for example), there is the expectation that they would act on this test even if they were not the doctor who ordered it** [my emphasis].

11. A comprehensive 2015 BPAC article[5] on management of test results commented on the specific example of receiving copies of test results ordered by other clinicians as follows:

(i) When multiple clinicians are copied in on a request form for a test, results will be sent to each clinician. This can create a particular risk of error if it is unclear who has responsibility for following up results and whether follow up has occurred. It needs to be made very clear who is responsible for following up the test results. Although best practice is for the clinician who ordered the test to be responsible for following up the results, this may not always occur. For example, if a test has been ordered from an after-hours clinic and the result is not urgent, it may be assumed that the patient's usual doctor, who is copied into the results, will follow this up.

(ii) **Unless communication has been received about who is responsible, clinicians who have been copied in to test results should double check that the result has been actioned and the patient has received appropriate follow up** [my emphasis]. One way

[2] https://www.rnzcgp.org.nz/gpdocs/New-website/Advocacy/PB6-2016-Apr-Managing-patient-test-results.pdf Accessed 12 October 2020
[3] Lillis S. The management of clinical investigations. In: Morris KA, editor. Cole's Medical Practice in New Zealand, 13th ed. Wellington: Medical Council of New Zealand; 2017.
[4] https://www.medicalprotection.org/newzealand/casebook-may-2015/handling-test-results Accessed 12 October 2020
[5] https://bpac.org.nz/BT/2014/August/testresults.aspx Accessed 12 October 2017

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to avoid confusion about responsibility for following up results is instead of copying other clinicians in to results, they can be informed about the results (if necessary) in an email or letter.

(iii) A common scenario is for primary care clinicians to be copied in to multiple results from tests performed on patients in secondary care, or to be sent instructions to follow up tests, or request additional tests, in a discharge letter. Often the primary care clinician will be unaware of the clinical situation regarding the patient, and they may not have been seen in the general practice for several years, and may even be no longer registered with the practice. It is then very difficult to take responsibility for following up results. In addition, the clinician may feel hesitant to counsel a patient about a result or undertake further investigations when they are uncertain about the clinical context. Responsibility may extend to informing the secondary care clinician who ordered the test that follow up will not be undertaken (or that further information is required).

12. This case has many similarities to a previously published HDC report C15HDC01204 which addressed both the GP and DHB contribution to delayed follow-up of an abnormal radiology report originating in secondary care. A Commissioner recommendation from that report was: *the National CMO group work to put in place clear practice guidelines regarding the interface between emergency departments and general practitioners in relation to follow-up of test results, within all DHBs. A report back on the outcome of this recommendation should be provided to HDC by the Chair of the National CMO group within six months of the date of this report. The National CMO group has undertaken to comply with this recommendation.* I am not sure of the final outcome of the National CMO group consultation but it does not appear there was any clear guidance in place within the Waikato DHB region, at least in March 2017, regarding the interface between ED clinicians and GPs with respect to follow-up of abnormal results originating in ED.

13. It was clinically appropriate that [Mrs A] have formal follow-up of her chest X-ray following her ED consultation in March 2017. She was at increased risk of lung cancer given her age and smoking history, and an upper lobe abnormality had been detected — possibly infective in nature but it was important to exclude an underlying malignancy that might have caused, or been obscured by, the possible infection. Initially, review to determine whether there were any signs or symptoms of chest infection was warranted and treatment of infection if suspected. Local primary care guidelines on suspected lung cancer include the recommendation that a person with risk factors for lung cancer who has consolidation on an initial chest X-ray should have a repeat chest X-ray within six weeks to confirm resolution. It could also be argued that the chest X-ray was sufficiently suspicious for cancer that an immediate HSCAN referral was warranted, particularly if [Mrs A] did not exhibit any additional signs or symptoms suggestive of chest infection.[6] The abnormalities were described in the body of the report with no final summary of

[6] HealthPathways Section on 'Suspected lung cancer'. Accessed 12 October 2020

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relevant findings but I believe even a superficial scan of the report should have drawn the reviewer's attention to the abnormalities.

(ii) [Mrs A's] chest X-ray was ordered by the ED MO and interpreted by him as showing no significant abnormality (in relation to the abdominal symptoms presented by [Mrs A]). Whether the upper lobe abnormality should have been noted by the MO is outside the terms of the advice requested. Given the absence in the discharge summary of any reference to a possible chest X-ray abnormality or any explicit instruction to the GP regarding follow-up or responsibility for actioning abnormal results, I would expect the ED MO, on reviewing the formal X-ray report, to have contacted the GP by telephone or in writing to clarify who was taking responsibility to notify [Mrs A] of the need for repeat imaging and arranging of the imaging. It was reasonable to defer this responsibility to the GP, with the GP's consent, if there was explicit communication. Unless there was an accepted process in place that GPs would automatically action any abnormal results originating from ED that they had been copied in to, I think these expectations are consistent with the discussion in sections 9–11 above.

(iii) Notwithstanding the statement above, I believe most GPs would recognise the process of being copied in to results originating from ED (or from other outpatient services) as being a form of 'safety-netting' with the goal being cooperation of clinicians to ensure the best outcome for the patient. In [Mrs A's] case, I believe there were factors that heightened the importance of the GP acting as a safety net by contacting the patient or referring clinician to confirm suitable follow-up was in place: [Mrs A] was at increased risk of lung cancer; the chest X-ray raised the possibility of lung mass or infection; the ED discharge summary did not refer to the presentation being for chest infection; the ED discharge summary did not refer to any chest X-ray abnormality noted at the time of consultation or that follow-up was required. I note the GP reviewing the X-ray result may not have viewed [Mrs A's] ED discharge summary but he did recognise the report was abnormal and he annotated the presence of an abnormality suggesting possible infection although did not mention a possible mass. It appears there were assumptions made by both [Dr F] (see section 5(iii)) and [Dr E] (that [Dr F] would have facilitated any follow-up that was required) leading to a failure to facilitate any follow-up for [Mrs A]. Because [Mrs A] was not aware of the abnormal results, and she did not present any symptoms suspicious for underlying lung malignancy over the next almost three years, there was no 'prompt' for review of the previous X-ray results or to confirm appropriate follow-up had been undertaken. I believe [the medical centre] had adequate processes in place in 2017 to facilitate appropriate management of test results but the changes made since this complaint further strengthen the existing policy. I am critical of the failure by [Dr F] to take adequate steps to ensure [Mrs A] received appropriate follow-up in regard to the chest X-ray abnormality he identified and acknowledged. Such steps might have included, in the first instance, the practice nurse contacting the patient to establish if the DHB had initiated follow-up, or making it clear that follow-up was required and whose responsibility it was to undertake the follow-up (per clear verbal or written communication with [Dr E] if [Dr E] was expected to provide follow-up). This is a mild criticism taking into account the ongoing debate over clinician responsibilities in the situation described and acknowledging the clinician ordering the

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test in this case must take ultimate responsibility for the delay in appropriate follow-up, that delay having devastating consequences for [Mrs A].

(iv) As I have noted previously, this case, including the content of the various responses, illustrates the lack of clarity that surrounds handling of results ordered by secondary care providers with copies going to primary care (or vice versa). I think it is an unreasonable expectation that a GP will follow-up every potentially abnormal result they are copied in to from a secondary care clinician with a more reasonable expectation being that the clinician ordering the test and receiving the result manages that result in an appropriate fashion (which includes notification of the patient where appropriate), which might include formally deputising management of the result to a third party verbally or in writing (with that action recorded). However, I feel that in any case where the result is suggestive of significant pathology that might require a time critical response, and it is not clear who is taking responsibility for that response, both the test requester and those in receipt of the result have a responsibility to ensure it is managed appropriately and in the best interest of the patient as per the comments in sections 10 and 11(ii)."

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Appendix D: Waikato DHB Policy, "Electronic Result Acknowledgement: The Responsibilities of Senior Medical Officers and the Delegation of Responsibility to Resident Medical Officers"

The following policy was in effect at Waikato District Health Board between 26 November 2015 and 25 November 2018:

"**1. Purpose of this policy**
The purpose of this policy is to ensure the efficient and timely electronic acknowledgement of results for Waikato DHB patients. It outlines the responsibility that Senior Medical Officers (SMOs) have for acknowledgement and how that may be delegated to Resident Medical Officers (RMOs).

2. Principles of Electronic Acknowledgement
All laboratory and radiology results are to be acknowledged electronically using the Clinical Workstation (CWS). Paper copies of laboratory and radiology results are no longer to be generated.

Electronic Acknowledgement is the electronic equivalent of signing a paper result and acknowledgement implies that any action required has been taken or is being organised.

If results are not acknowledged there may be uncertainty as to whether the result has been seen and any required action taken. For this reason no results should be left unacknowledged.

The expectation is that all results are acknowledged within 3 working days of being finalised. Any results not acknowledged within 10 days of being finalised will be considered non-compliant with acceptable clinical practice, and will be investigated by the team management.

To facilitate timeliness of acknowledgement, all doctors should set up unacknowledged work lists.

3. Process of acknowledgement
Clinicians must log in to CWS in their own name to ensure the responsible clinician is identified.

Results should normally be acknowledged as soon as they have been viewed and action taken.

All clinicians should set up an unacknowledged results work list and check it regularly.

See Unacknowledged Work List, Electronic Acknowledgement for details of how to do this.

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If you receive a result that has been sent to you incorrectly you should either send the result/report to the responsible clinician, if you can identify them, or back to the Laboratory or Radiology, who will re-route the result to the correct clinician or team. There is a 'How to' guide that details how to do this.

4. Principles of Responsibility of SMOs for Electronic Acknowledgement

SMOs are ultimately responsible for the management of patients in hospital under their care or seen in clinic under their name. Having responsibility for patients includes taking responsibility for acknowledgement of results and actions required after tests performed on their patients.

SMOs' annual performance reviews will include unacknowledged results as a KPI, along with other KPIs, for discussion with their clinical director.

While it is generally considered that the requestor of a test should take responsibility for checking and acting on the result, in hospital practice many tests will not be requested by the SMO.

Tests may be requested by team RMOs, registered nurses (RN) acting under delegated authority, or may be performed during the ED assessment but responsibility for action passes on to the responsible admitting SMO.

Test requestors must always ensure that the appropriate responsible SMO or team is identified when the test is ordered so the results appear on the appropriate unacknowledged work list.

RMOs will acknowledge the majority of results and they do this under the delegated authority and it is the responsibility of the SMO to ensure that results are acknowledged in a timely manner and ensure the result is finalised within a maximum of 10 days.

It is the responsibility of SMOs to instruct RMOs (or delegate) of their expectations and indicate:

- when the RMO/delegate can independently acknowledge results,
- what results the RMO/delegate should not acknowledge (for example histology),
- what results the RMO/delegate should inform the SMO about before or after acknowledging.

5. Principles of Delegated Responsibility for Electronic Acknowledgement to RMOs

RMOs work under delegated responsibility. RMOs should clarify what their delegated responsibilities are for acknowledging results, if there are results only the SMO can acknowledge and when the SMO wants to be informed about significant results.

While SMOs are ultimately responsible for the decisions and actions of RMOs, RMOs also have a responsibility to remain within their area of competence and to seek assistance when required.

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It is expected that results for all inpatients are reviewed each weekday by RMOs, and the SMO informed of any result which might lead to significant patient impact or changes in management.

Potentially significant but unexpected incidental findings should be discussed with the SMO.

The on call RMOs need to be informed about any results that need to be followed up out of hours or at weekends. This should be included in written weekend action plans and at handovers.

By acknowledging a result one is taking responsibility for any action required. RMOs should speak to their SMO if they have any concerns about whether to acknowledge a particular result.

Through acknowledging a result that result will also disappear off all work lists and so RMOs must not acknowledge results that should be viewed and actioned by another doctor.

6. Responsibility of Departments

Each department needs to develop a process for ensuring all results are acknowledged. The Clinical Director must accept or delegate responsibility for this happening in their department.

There must be a process for acknowledging results of patients when SMOs are on leave. This is best done by arranging for a SMO colleague to set up and check the absent SMO's unacknowledged work list.

The department should generate a regular Compliance Summary Report and feedback to SMOs to identify variance from acceptable clinical practice and enable appropriate action to be taken.

7. Organisational Responsibility

The organisation is responsible for ensuring there is a reliable process to notify SMOs of the test results of their patients. Currently this is done using the CWS unacknowledged work lists.

Every month a Compliance Summary Report will be circulated to all SMOs to inform them of their outstanding unacknowledged results. This will be monitored by the Chief Medical Officer and Executive Directors.

The organisation will provide appropriate computer access and support to allow SMOs to review results electronically and initiate any action required to acknowledging those results.

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8. Responsibility of Radiology and the Laboratory
A timely electronic report must be generated and preliminary results finalised as soon as possible, so they can be acknowledged.

The test requestor will be contacted only if there are potentially life-threatening findings that were unexpected and/or require urgent action. See the Laboratory Phone Out Limits for details.

Any significant findings, including incidental findings, which may require action, should be included in the report summary.

If a report is amended after it has initially been issued, and there are significant changes in the diagnosis as a result, the requestor or the responsible consultant should be contacted by the radiologist/pathologist completing the final report.

If results appear on the wrong unacknowledged work list Radiology and the Laboratory will take responsibility for redirecting results to the responsible clinician.

Appendix:
Business Rules to ensure the timely electronic acknowledgement of investigations ordered by Waikato District Health Board clinicians

The following rules apply to specific results or situations:

1) Investigations ordered in the Emergency department (ED)

Patients only seen by ED doctors
- If an Emergency department (ED) doctor orders an investigation and discharges the patient home, an ED SMO (or delegate) is responsible for acknowledging the result.
- The ED doctor should electronically acknowledge all results that are finalised prior to patient discharge and record in the patient's discharge letter any results which are not known on discharge (especially microbiology and radiology) and which require follow up.
- The patient's General Practitioner (GP) can be asked to follow up on results but the patient must have a GP and the GP must be explicitly requested to do so. This requires either a discussion with the GP to ensure they are prepared to accept responsibility or the explicit delegation of that responsibility in the discharge summary.
- GPs are unable to acknowledge results electronically so an ED doctor will still have to acknowledge the results. If responsibility for action has been delegated to the GP and the result requires urgent attention, it is prudent to check that action is being taken by telephoning the GP.
- Note that GPs do not automatically get copies of any results unless 'cc' GP is included on the request form or the laboratory are specifically asked to ensure the result is copied but GPs can now access results on the hospital system. *See below for the 'cc' rules.

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Patients in ED referred to a specialist team

- If an ED doctor orders an investigation and then refers the patient to an inpatient team who take over care and/or admit the patient into hospital, the admitting team will also take over responsibility for the acknowledgement of the results of all investigations ordered while the patient is in ED.
- Results of tests done in ED on patients who are admitted are now automatically redirected to the inpatient teams' work lists; the inpatient team must accept responsibility for any action required, including for results (microbiology, radiology) which may not have been finalised before discharge.

Tests requested in ED for or by specialist teams

- If a non-ED team orders an investigation while a patient is in the ED, the responsibility for acknowledging the investigation lies with the team who ordered the investigation.
- If a patient is admitted the results should follow the patient. However, to ensure results appear on the work list of the specialist team if a patient is discharged from ED, the request form 'Emerg' must be crossed off the label and replaced with the full name and speciality of the inpatient SMO on call according to Amion. This also applies if an ED doctor orders an investigation on behalf of a team.

Use of ED stickers

- To ensure that results for admissions go to the correct team or SMO 'Emerg' Emergency sticker should never be used on any investigation requested outside of ED.

2. Investigations ordered on outpatients

- The SMO or clinician who orders an investigation for an outpatient is responsible for acknowledging the results of that investigation.
- SMOs are also responsible for ensuring that tests requested by a RMO or delegate seeing a patient in outpatients on their behalf are also acknowledged.
- In preadmission clinics, all investigations requested in order to facilitate safe anaesthesia and surgery will be ordered under the name of the surgeon intending to operate on the patient. Anaesthesia will review the implication of any abnormal results for the upcoming anaesthetic/operation and act accordingly (with the main focus being to prevent a day of surgery cancellation). It will remain the surgical teams' responsibility to acknowledge all such investigations, with the exception of any specialised tests that it would be unreasonable to expect them to interpret. These will be acknowledged by Anaesthesia.
- It cannot be assumed that GPs will follow up on tests results. This requires either discussion or the explicit delegation of that responsibility for action in the clinic letter. *See below for the 'cc' rules. If the result is highly abnormal and urgent attention is required, telephone the GP.

3. Investigations ordered while a patient is in the Intensive Care Unit

- All investigations ordered primarily by the Intensive Care (ICU) team remain the responsibility of ICU to acknowledge.

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- All results should be acknowledged, if possible, before the patient is discharged from ICU.
- Unfortunately some results (which are not finalised) will not be able to be acknowledged so will then have to be acknowledged by their inpatient team after the patient is discharged from ICU.

4. Investigations ordered by other teams consulting on patients not under their care

- If a SMO (or delegate) is requested to consult on a patient and orders an investigation, the responsibility for acknowledging that investigation (and taking appropriate action) lies with the team who ordered it.
- The SMO or team who ordered the investigation must clearly be identified on the request form. This will ensure that the result appears on their work list.

5. Investigations ordered by Registered Nurses

- Registered Nurses may be authorised to acknowledge investigations (within their area of speciality and supported by the clinical team).
- The appropriate process is outlined in the Registered Nurse management laboratory requests and results policy. The RN must be a Clinical Nurse Specialist or working as an expert nurse on the professional development and recognition programme.

6. Investigations ordered by Nurse Practitioners

- Nurse Practitioners may work independently and, as such, may order investigations and acknowledge accordingly (within their scope of practice).
- Nurse Practitioners working within a multidisciplinary team will need clarity from the team as to which investigations they may independently acknowledge.

7. Investigations ordered by Lead Maternity Carers (LMCs)

- LMCs with access agreements to deliver care on our campus will have appropriate access to order and acknowledge results electronically.
- Responsibility for ensuring that this occurs will lie with the Clinical Midwife Director at Waikato DHB

8. Results of investigations on inpatients not finalised or available before discharge

- It cannot be assumed that GPs will follow up on tests results. This requires either a discussion with the GP to ensure they are prepared to accept responsibility or that the explicit delegation of that responsibility is documented in the discharge summary. If the result is highly abnormal and urgent attention is required, telephone the GP.
- GPs do not get automatically copies of any results unless 'cc' GP is included on the request form or the laboratory has been asked to ensure the result is copied. *See below for the 'cc' rules.
- GPs are not able to acknowledge results electronically. A hospital doctor will still have to electronically acknowledge the investigation.
- For significant results the doctor should record in the patient's notes or annotate the result to indicate that the GP has agreed to, or has been asked to, follow up. If the result is highly abnormal and urgent attention is required, telephone the GP.

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- As noted in the 'cc' rules below it is prudent to check that action is being taken for significant results.
- If a SMO or RMO wishes to send a copy of a test result to a GP where the result becomes available after the patient has been discharged, they can send a memo to the Laboratory in CWS, with a request that a copy be sent to the GP. The SMO will need to provide the GP's name and practice.
- The Laboratory will process memos during office hours. Alternatively, the Laboratory can be telephoned during office hours.

9. Histology results

- Histology results must always be acknowledged by a consultant.
- In the event of an unexpected abnormal test result Pathology Services will endeavour to liaise with the lead clinical consultant by phone or hospital email, but ultimate responsibility will lie with the consultant whose team ordered the test.

10. Multiple radiology reports

- If there are a series of radiology reports for a patient, for example CT head and neck or CT chest, abdomen and pelvis, all the reports will need to be acknowledged.

11. Investigations ordered where Laboratory cannot identify responsible SMO

- If the Laboratory cannot identify the responsible SMO to send the laboratory results to, the Laboratory will allocate these results to the 'unknown doctor' code 196GH.
- If a SMO has not received results for an investigation ordered, the SMO can check this code in Clinical Workstation. Alternatively the result can be found by looking up the patient's NHI.

12. 'CC' Rules

- Results will only be copied to a GP if 'cc GP' is included on the request form. A GP name should be included on the patient sticker. Confirm this is the current GP. If not, handwrite the GP name and practice. If a patient does not have a GP then alternative options for follow up are needed.
- Results cannot be 'cc'd' to hospital doctors. Writing 'cc' to a Waikato doctor or team will not result in a copy being sent to them.
- Results can only appear on one team's or SMO's unacknowledged work list.
- If responsibility for action has been delegated but the result requires urgent or significant action, it is prudent to check that action has been taken. If urgent action is required, telephone the GP/practice to ensure that this will happen."

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Appendix E: Serious Adverse Event Review report

Waikato DHB produced the following report in late 2020 following a Serious Adverse Event Review:

"**Review of Care**
For Incident (event) Number: …
Date of Event: 11 March 2017 identified … 2020

Purpose
To review the incident and identify areas that went well, what could have gone better (identifying any care delivery or systemic issues), and what, if anything, could be improved.

1. Executive Summary
This process review was undertaken following the report of a significant delay in follow-up care which was identified [in] 2020 during [Mrs A's] acute admission to [Hospital 1].

[Mrs A] had chest and abdominal X-ray's taken in [Hospital 1] in March 2017 as part of an investigation into abdominal pain.

The x-ray report was acknowledged by [Dr C], Emergency Department (ED) Senior Medical Officer (SMO) on Clinical Work Station on 24 March 2017 at 05:31 hours.

The Datix incident reported 29 January 2020 identify that no follow up actions had occurred for the incidental finding of 'a rounded area of patchy density measuring 22 millimetres' on [Mrs A's] chest x-ray.

2. Background and Context
[Hospital 1] is a secondary level hospital and is one of the Waikato District Health Boards four rural hospitals. … [Hospital 1] has a 24 hour emergency department (ED), and covers the usual range of general surgery and general medicine.

Wednesday 29 January 2020
Following a medical review and advice from her General Practitioner [Mrs A] and her husband presented acutely to the [Hospital 1] Emergency Department (ED) as [Mrs A] had symptoms of a Transient Ischemic Attack (TIA). It was noted in [Mrs A's] emergency assessment that she had had a small Cerebrovascular Accident (CVA).

Transient Ischemic Attack
A TIA has the same presentation as a stroke; however the signs last for a short amount of time and no longer than 24 hours.

Cerebrovascular accident (CVA)
Is the sudden death of some brain cells due to lack of oxygen when the blood flow to the brain is impaired by blockage or rupture of an artery to the brain. A CVA is also referred to as a stroke. Symptoms of a stroke depend on the area of the brain affected.

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[Mrs A] was admitted to the [Hospital 1] medical ward under the care of General Medical Team and commenced on Dual Antiplatelet Therapy (DAPT), in this instance, aspirin was combined with Clopidogrel.

Dual Antiplatelet Therapy
These medications decrease platelet activation resulting in reduced clotting in the arterial circulation.

[Mrs A] underwent a chest x ray which noted:
Findings & Conclusion
Compared with 11 March 2017 further growth in size and density of the previously mentioned right upper lobe nodule. Increased fullness of the right suprahilar area, suspicious for hilar lymphadenopathy. Suggestion of a few small nodules in the right lung. No pleural effusion.

Lobes of Lungs
[A consultant] explained the chest X -ray findings to [Mrs A] and that there was the possibility of cancer in her right lungs right upper lobe, it was explained to [Mrs A] that further investigation of this finding was necessary.

[Mrs A] underwent a chest and upper abdominal computed tomography scan (CT) with Contrast.

A computed tomography (CT or CAT) scan
This allows doctors to see inside the body. It uses a combination of X-rays and a computer to create pictures of organs, bones, and other tissues. It shows more detail than a regular X-ray. Before having the scan, the patient may be given a special dye called a contrast to help improve the quality of the images.

Following the CT, the reported impression was: Right upper lobe malignant looking mass partially tethered to the pleura and right oblique fissure. Extensive right hilar and bilateral mediastinal lymphadenopathy. Bilateral lung metastases. Dubious liver lesion. Adrenal glands appear stable/normal.

While X-rays and CT scan may help to evaluate the extent of a lung mass and suggest the likelihood of cancer. A diagnosis of lung cancer, however, requires a biopsy and [Mrs A] underwent further investigation.

13 February 2020
Following transfer and admission to [Hospital 2] [Mrs A] underwent a needle biopsy which was reported as:
Conclusion:
Transbronchial Biopsy Right Upper Lobe: Non-Small Cell Carcinoma.

Biopsy
Biopsy is the removal and examination of biological tissue, cells or fluids.

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3. The Investigation Process

Panel Membership
[Clinical Director], [Hospital 1].
[Quality and Patient Safety Facilitator, Review Team Leader].
Level of investigation
Serious Assessment Code (SAC) 1 which required a review utilising [Mrs A's] clinical record.
Scope
The scope of this review was from [Mrs A's] presentation to the [Hospital 1] Emergency Department on the 11 March 2017 until the acknowledgement of her X-ray results on 24 March 2017.

Documentation reviewed
Patient clinical record, including electronic results and reports.
Waikato District Health Board Electronic Result Acknowledgement: The Responsibilities of Senior Medical Officers (SMO) and the Delegation of Authority to Resident Medical Officers (RMO) and Others Policy 1452, Version 03.
[Hospital 1] Emergency Senior Medical Officer orientation information.

4. Involvement and support of patients and relatives/whānau
As soon as the delay in follow-up was identified [the treating consultant] explained to [Mrs A] the chest X -ray findings, the possibility of having cancer and that further investigation of this finding was necessary.

[Mrs A] also received an explanation and apology from [Dr C] (who had acknowledged the March 2017 X-ray) for not being more aggressive in arranging follow-up of the March 2017 chest X-ray results.

[Dr C] also explained to [Mrs A] that this delay had resulted in her missing the opportunity for safer earlier treatment.

At the time of this review [Mrs A] was aware of the final diagnosis and the circumstances of the delay in her diagnosis of lung cancer.

[Mrs A] was unwell at the time of the review and was not contacted by the review team leader.

5. Full chronology of events.

Saturday 11 March 2017, 15:11 hours
[Mrs A] presented acutely to [Hospital 1] ED with thoracic, right upper quadrant pain, she was nauseated and it was noted that she had had a bladder infection three weeks earlier, which had been treated.

Her vital signs (temperature, pulse, blood pressure, respirations and oxygen saturations) were noted to be normal. [Mrs A] also had blood tests performed.

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[Mrs A] had an intravenous line (IV) inserted and [Mrs A] had chest and abdominal x rays taken as part of investigation of her abdominal pain. The X-ray request form specified the investigation was for seeking evidence of bowel perforation or obstruction. An erect Chest X-ray is requested when searching for *free air under the diaphragm.

*Acute abdominal pain with air under the diaphragm is a sign of gastrointestinal (bowel) perforation.

15:30 hours
[Mrs A] was given Panadol 1 gram for her pain and this was reported as having had a good effect. [Mrs A's] clinical record noted that she was 'up and about'.

17:50 hours
The clinical record noted that [Mrs A] was waiting to be seen. (Indicating waiting to be reviewed by the doctor)

18:45 hours
The clinical record noted that [Mrs A] was comfortable, up and about, went out for a cigarette and was wishing to go home but that she would wait to see doctor. This was the last entry on Adult Emergency Assessment Nurse's notes record section.

19:50 hours
[Mrs A's] blood results were acknowledged by [Dr C] (acknowledged indicates the process where electronic results are reviewed by the doctor) and a copy of the results was also sent to [Mrs A's] General Practitioner (GP).

20:20 hours
The discharge transfer section of the Adult Emergency Assessment noted that:

- Cannula removed (indicating IV line removed)
- Discharge process completed by doctor.
- [Mrs A] required no transport assistance and was walking unassisted.
- The box to indicate verbal instructions given was ticked. (no evidence was found of what those instruction were)

A discharge letter was given to [Mrs A], with a copy sent to [Mrs A's] General Practitioner (GP).

The discharge letter contained the information:

- On examination [Mrs A] was moving about the department well.
- Observations were normal.
- Abdomen was soft with slight right sided tenderness.
- 'CXR AXR (chest x ray and abdominal x ray) shows some Right Hemi colon loading'.

The [Hospital 1] ED doctors review their patients X-rays at the time of a patient's ED attendance as there is typically no same day reporting. [Dr C] viewed the X-rays prior to

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[Mrs A's] discharge, at this time the focus was investigation of [Mrs A's] abdominal pain. [Mrs A] had no reported respiratory symptoms of concern at this time.

Thursday 23 March 2017 17:36 hours
12 days after the X-rays had been taken, the results of [Mrs A's] chest and abdomen X-rays were reported by radiologist:

Findings:
Chest
Heart size measures at the upper limit of normal, with a CTR of 0.51. Anterior to the second right rib, there is a rounded area of patchy density measuring 22 mm. This may represent an infective focus, but the possibility of a mass-like lesion is not excluded. Please correlate clinically and compare with previous chest X-rays, with a low threshold for CT chest if there are no symptoms to support this represents a focal pneumonia. The remainder of the lungs are clear. There are no pleural effusions. There is no free subdiaphragmatic gas.

Abdomen.
There is a non-specific bowel gas pattern, with no dilated large or small bowel loops. Constipated stool is noted throughout the right side of the colon. There are no features to suggest bowel obstruction or perforation.

The significant finding was contained within the body of the report, was not highlighted and the report did not contain a summary of significant or incidental findings. (See Waikato DHB Policy 1452, Version 03, Section 8)

Friday 24 March 2017 05:31 hours
(At this time [Mrs A] was not a patient in [Hospital 1].)
The results of [Mrs A's] chest and abdomen X-rays were acknowledged by [Dr C] with a copy to [Mrs A's] GP also noted on the results page.
There were no additional actions taken by [Dr C] as at this time.

6. Key Issues

Detection of incident
[In] 2020 during [Mrs A's] acute presentation to [Hospital 1] it was identified that [Mrs A] had not had follow-up of her March 2017 chest x ray findings. This was a time span of nearly 3 years.

Care and service delivery problems identified.
The review team identified that the Electronic Result Acknowledgement: The Responsibilities of Senior Medical Officers (SMO) and the Delegation of Authority to Resident Medical Officers (RMO) and Others Policy 1452, Version 03 Effective date: 26 November 2015 Expiry Date: 25 November 2018 (This version of the policy was in use at the time and has since been updated) included:

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'Principles of Electronic Acknowledgement

- Electronic Acknowledgement is the electronic equivalent of signing a paper result and acknowledgement implies that any action required has been taken or is being organised.
- If results are not acknowledged there may be uncertainty as to whether the result has been seen and any required action taken. For this reason no results should be left unacknowledged.
- The expectation is that all results are acknowledged within 3 working days of being finalised. Any results not acknowledged within 10 days of being finalised will be considered noncompliant with acceptable clinical practice, and will be investigated by the team management.
- To facilitate timeliness of acknowledgement, all doctors should set up unacknowledged work lists.

Appendix
1) Investigations ordered in the Emergency department (ED) Patients only seen by ED doctors

- If an Emergency department (ED) doctor orders an investigation and discharges the patient home, an ED SMO (or delegate) is responsible for acknowledging the result.
- The ED doctor should electronically acknowledge all results that are finalised prior to patient discharge and record in the patient's discharge letter any results which are not known on discharge (especially microbiology and radiology) and which require follow up.
- The patient's General Practitioner (GP) can be asked to follow up on results but the patient must have a GP and the GP must be explicitly requested to do so. This requires either a discussion with the GP to ensure they are prepared to accept responsibility or the explicit delegation of that responsibility in the discharge summary.
- GPs are unable to acknowledge results electronically so an ED doctor will still have to acknowledge the results. If responsibility for action has been delegated to the GP and the result requires urgent attention, it is prudent to check that action is being taken by telephoning the GP.'

At the time of this incident [Dr C] was the ED SMO and therefore had the responsibility for his own patient's care. The discharge summary did not contain the information that [Mrs A's] x-ray results were still pending reporting.

'Responsibility of Radiology and the Laboratory include:

- Timely electronic report must be generated and preliminary results finalised as soon as possible, so they can be acknowledged.
- The test requestor will be contacted only if there are potentially life-threatening findings that were unexpected and/or require urgent action. See the Laboratory Phone Out Limits for details.
- Any significant findings, including incidental findings, which may require action, should be included in the report summary.'

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The review team found that:

- No summary was included in the x-ray report.
- The finding was within the body of the report and [Dr C] was not alerted to the finding.
- The chest X-ray finding was significant and did require follow-up.
- The finding was not related [Mrs A's] 2017 ED presentation, [Dr C] had requested the X-ray with the aim of identifying any air under the diaphragm.
- There was no definition of 'timely' and anecdotally a wait of 12 days (or longer) for the electronic report to be available is not unusual.

Positive factors
When the failure to act on the March 2017 chest X ray finding was identified in … 2020 staff immediately explained the situation to [Mrs A] and apologised.

[Mrs A] was provided with treatment for her presenting condition and arrangements were made for the investigation, and follow-up of the chest X-ray finding.

An additional part time medical position has been established at [Hospital 1] to reduce the risk associated with a delay in acknowledging medical investigation results.

Contributory factors
While [Dr C] complied with the requirements to acknowledge electronic results prior to the end of his shift and within Policy1452 time frames i.e. results to be acknowledged within 3 working days of being finalised, he did not implement follow-up actions.

The review identified the potential competing demands of acknowledging results within the required time frames, clinical workloads and demands, alongside the need to ensure follow-up actions have been commenced or completed.

In this incident [Mrs A's] CWS results were reported on Thursday, 23 March 2017, at 17:36 hours and acknowledged by [Dr C] on Friday 24 March 2017 at 05:31 hours.

Key Learning Points
1. The [Hospital 1] Emergency Senior Medical Officer orientation information does not include the importance of not acknowledging CWS results until required follow-up actions have been commenced or completed.
2. It is the responsibility of Radiology to generate timely electronic reports; however there is no definition of 'timely'. There is an opportunity for Radiology to investigate determining and defining a reporting timeframe. This would also provide a Radiology reporting timeframe to clinicians and an auditable performance indicator.
3. The Radiology reporting did not appear to meet the policy requirement that 'any significant findings, including incidental findings, which may require action, should be included in the report summary'. There is an opportunity for Radiology to consider the use of highlighting significant findings, for example, Laboratory reporting uses a red highlight for outside of normal values.

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4. During the review of [Mrs A's] March 2017 clinical record entries there was no medical documentation completed by the reviewing doctor. The reviewing doctors' documentation was contained in the discharge letter completed on the electronic clinical workstation application. The current practice in the [Hospital 1] ED continues to be that most Medical Officers enter the clinical documentation as an electronic discharge letter and not in the patient's clinical record.

9. Recommendations

9.1 The [Hospital 1] Emergency Senior Medical Officer orientation information will be updated to include:

- Recommend that time should be set aside to complete the acknowledgement of CWS results and commence/complete any required follow up actions. That (where possible) such time occurs during business hours, when appropriate follow up can be arranged.
- Require that the Electronic Discharge Summary (EDS) note any results that are still pending reporting.
- Require an amendment made to the Electronic Discharge Summary (EDS), for any follow up actions that have been taken, on the basis of an abnormal/unexpected CWS result.
- Include examples of learnings from incidents that are specific to [Hospital 1].
- As part of the review of the [Hospital 1] Emergency Senior Medical Officer orientation information and opportunity to develop a Waikato DHB Rural Hospital wide information package will be investigated.

Lead Responsibility: [District Service Manager]
Completed By: 30 November 2020

9.2 A group will be appointed to review the usual/current [Hospital 1] ED medical staff documentation processes and the information that is documented.

- One of the outcomes for the group will be to determine if medical entries are required in the paper based record as well as the completion of a discharge letter.
- Any identified opportunities for best practice improvements will then be implemented.
- The chairperson of the Serious Event Panel requested [the Service Manager] to provide him with the outcome of the review.

Lead Responsibility: [District Service Manager]
Completed By: January 2021

9.3 That the learnings from this incident are shared with Radiology as an improvement opportunity for Radiology to:

- Define timely reporting, develop key performance indicators and audit compliance.
- Review the current use of summary reporting for incidental findings.
- Consider the use of highlighting significant findings.

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- The Serious Event Panel requested that [Director Community and Clinical Support] provide feedback of the outcomes of these actions to them.

Lead Responsibility: [Director Community and Clinical Support]
Completed By: February 2021"

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Appendix F: Medical centre policies and procedures

The following are excerpts taken from the policy "Management of Patient Test Results and Medical Reports" dated June 2016:

"**Procedure**:

1. Incoming test results

Best practice statement: all incoming medical reports are seen and actioned by the appropriate member of the practice team who requested these or a designated deputy.

Test results are received either electronically, or in hard copy.

(a) Electronic results.

These results are allocated to the provider's inbox, where they are reviewed by the provider and actioned as necessary. The provider should mark in the 'comment' box with initials to show that the results have been reviewed and any additional instructions or remarks should also be placed here.

If the result is normal and no further action is required, the result should then be filed by clicking the file tab.

If the result is abnormal or requires some further action then this should be marked in the comment box with clear instructions of what action is required and who is to do this. These results should remain in the inbox until they have been actioned. Once actioned the comment should be initialed to show it is completed and then filed. It is recommended that significant abnormal results are communicated to the patient by the doctor in a face to face consultation. In some circumstances the doctor may choose to speak to the patient by telephone or via patient portal but this would be infrequent, at the doctor's discretion and only if the patient is known to the doctor.

…

If the patient needs to be recalled following review of the results, they should be contacted preferably by telephone or via patient portal and an appointment made. If there is no telephone or patient portal contact then a letter should be sent. The results should remain in the provider's inbox until the patient is seen as this will serve as an alert to the provider if the patient does not attend, so further recall attempts can be made. Likewise hard copies should be returned to the provider (rather than filed in the notes).

Records of all attempted contacts with patients should be made and the notes should indicate the type of contact, when made and by whom.

In general all test results should be managed by the provider requesting them. However if results come in to the practice from outside (e.g. from clinics, hospital admissions, another G.P.) they should be managed by the patients normal provider. If a provider is

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absent (on leave, sick etc), then the provider should nominate a deputy to review their results.

…

2. Patient Notification:

Best practice statement: Patients are provided with information about the practice procedure for notification of test results.

In general the practice will inform patients of any abnormal or significant results, usually by telephone or via patient portal, but by letter if this is not possible.

…

3. Tracking Test Results and Medical Records:

…

Any significant abnormal tests should be marked in the patients electronic records and an appropriate alert generated to ensure these tests are followed up. This alert may be in the messaging system, inbox system, or the screening/recall system depending on the particular test.

When a provider has significant clinical concerns regarding a patient an electronic alert should be set up so that the provider is able to check that the relevant tests have been carried out and the results have been received and checked. As a backup the patient should be instructed to contact the provider at an appropriate interval after the test to have the results discussed and appropriate follow up arranged."

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