Southern District Health Board

A Report by the

Health and Disability Commissioner

(Case 15HDC00268)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Table of Contents

Executive summary

1. In 2013 Mrs A went to a public hospital's emergency department (ED) because she had been experiencing a cough and chest tightness for about four days. ED medical officer Dr C examined Mrs A and gave her nebulisers, after which she was noted as being much improved.

2. Dr C ordered an X-ray of Mrs A's chest and did not note anything of concern. She diagnosed chronic obstructive pulmonary disease (COPD) with acute asthma. Mrs A was discharged home with her care discharged to her GP. Her discharge report did not mention a pending X-ray report.

3. Five days later, the formal radiologist's report regarding Mrs A's X-ray identified a 15 x 10mm mass. The report documented that "a significant lung nodule cannot entirely be excluded", and recommended a chest X-ray or a CT scan in six weeks' time. The report was sent electronically to Dr C's inbox.

4. Two days later, Dr C reviewed Mrs A's X-ray report. The following day, Dr C was going away on leave for 10 days, and she did not acknowledge the results as she wanted to review the X-ray and discuss it with the radiology consultants. She said that the results were not immediately urgent, and she considered it appropriate to action them on her return. She assumed that the result would still be visible in the memo tab on her return, and was not aware that the memo would drop off from her view after 24 hours.

5. When Dr C returned from leave, Mrs A's chest X-ray results were no longer visible in the memo tab of Dr C's inbox, and Dr C did not recall the report.

6. Mrs A did not receive the recommended follow-up X-ray or CT scan, and the X-ray results were not sent to her.

7. About 20 months after Mrs A's X-ray, Mrs A returned to the ED having felt unwell for the last few days with a constant headache, right-sided weakness, poor coordination, and having recently experienced eight to ten falls. A review of her electronic clinical history resulted in the discovery of the non-actioned X-ray report, which showed a mass on Mrs A's lung. Sadly, Mrs A died a short time later.

8. Southern District Health Board's (SDHB's) investigation into these events found that its IT system allowed results to disappear from the view of the memo tab, once results were opened/viewed in the memo tab, after 24 hours (regardless of whether they were acknowledged) by dropping to the bottom of the queue. All unattended and unacknowledged reports remained in the "unacknowledged work list". However, "the ED were unaware of this distinction in the functionality", and ED staff were using only the memo tab.

9. SDHB acknowledged that while staff were introduced to, and instructions provided in the use of, the "unacknowledged work list" when the feature was first introduced in 2005, it is not clear how much emphasis had been given in the IT training to ensure that no such confusion existed between the use of the memo tab versus the unacknowledged work list.

10. Furthermore, there was no process at the public hospital to ensure that reports or results were acknowledged within a certain length of time, and there was no warning system to alert clinicians to the existence of unacknowledged reports.

Findings

11. It was found that SDHB failed to have in place an appropriate system for the management and acknowledgement of test results. While a system was in place, SDHB's clinicians were not trained adequately to use the system. There was clearly widespread misunderstanding within SDHB's ED regarding the functionality of the IT system, which clinicians should have been able to rely on and use adequately. There was inadequate initial and on-going training in relation to the system. This failure resulted in Dr C not following up on Mrs A's report. In addition, SDHB did not have in place an appropriate system to ensure that Mrs A's GP received the X-ray report, and did not have a process to ensure that reports or results did not go unacknowledged by SDHB clinicians. Accordingly, it was found that SDHB failed to provide Mrs A with an appropriate standard of care and breached Right 4(1) of the Code of Health and Disability Services Consumers' Rights.[1]

12. Adverse comment was made about Dr C not putting in place any safety-netting strategies. However, overall it was considered reasonable for her to rely on the system in these circumstances.

Recommendations

13. It is recommend that SDHB:

a) Provide a report regarding the outcome of the Electronic Acknowledgement Project to HDC and DHB Shared Services.

b) Provide an audit of four months' data regarding the time taken to acknowledge reports.

c) Consider having a warning system added to its IT system to alert clinicians to the existence of unacknowledged results.

d) Arrange for an impartial IT expert with a medical background to examine its electronic management system to determine whether user warnings and updates need to be built in to the software and training sessions.

e) Provide a report to HDC regarding the actions taken in respect of the recommendations as outlined in the SDHB Serious Adverse Event Review.

f) Provide a written apology to Mrs A's family.

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

Complaint and investigation

14. The Commissioner received a complaint from Mr B about the services provided by Southern District Health Board to Mrs A. The following issue was identified for investigation:

- *Whether Southern District Health Board provided Mrs A with an appropriate standard of care between 2013 and 2015.*

15. An investigation was commenced on 28 July 2015.

16. The parties directly involved in the investigation were:

Mr B	Complainant
Southern District Health Board	Provider
Dr C	Provider

17. Information from ACC, Dr D, and a medical centre was also reviewed. Also mentioned in this report:

Dr E	Emergency medicine doctor
Dr F	Emergency medicine consultant
Dr G	General medicine physician consultant

18. Independent expert advice was obtained from Dr William Jaffurs, an emergency physician (**Appendix A**).

Information gathered during investigation

Background

19. Mrs A (aged 66 years at the time of these events) lived at home with her husband. She was a patient of the medical centre. Prior to these events, her last consultation at the practice was in 2010. Her general practitioner (GP) was Dr D. Mrs A was a smoker.

Emergency Department

20. In 2013, Mrs A began feeling unwell with a cough and chest tightness. Three days later she began coughing and could not stop. At 1.16pm she went to the ED. At 1.25pm she was seen in triage by a registered nurse (RN). The RN documented that Mrs A had been feeling lethargic and generally unwell, with a worsening cough over the past four days. Her vital signs were taken and noted to be normal (temperature 37°C, pulse 95 beats per minute, and respiratory rate 22 breaths per minute). Mrs A was given a priority code of "4" (to be seen within 60 minutes).

21. At 2.32pm Mrs A was seen by ED Medical Officer Dr C. Dr C noted that Mrs A was reporting symptoms of chest tightness and shortness of breath on exertion, and that she complained of having been unwell with a cough and chest tightness over the past few days,

which had become worse that day. Mrs A's pain was documented as being "++", and she denied any "fevers/sweats/chills/rigors" and was otherwise well.

22. Dr C examined Mrs A and documented her observations as stable and her abdomen soft and non tender, but that she "look[ed] short of breath", and her chest had "decreased air entry with wheeze throughout".

23. Dr C ordered a chest X-ray. In a statement provided as part of SDHB's Serious Adverse Event Review, Dr C advised that this was "to look for signs of pneumonia".

24. Mrs A's nursing progress notes document that at 2.50pm she was given two nebulised bronchodilators and oral prednisone (a steroid).

25. The X-ray was taken at 3pm and subsequently received by Dr C, who reviewed it and noted that there was "no focal consolidation".[2] The X-ray was not reported formally by a radiologist at that time.

26. At 3.36pm Dr C noted that Mrs A was "much improved post nebs [after receiving nebulisers]". Dr C's impression was that of chronic obstructive pulmonary disease (COPD),[3] with acute asthma. Dr C prescribed prednisone (40mg to be taken over five days) and Augmentin[4] (625mg to be taken over seven days). At 3.37pm Dr C discharged Mrs A.

27. Dr C told HDC:

> "Unfortunately, due to the time which has elapsed since [Mrs A] was seen by myself … I cannot remember exactly what I discussed with her on her discharge … However, it is my standard practice, to discuss with any patients I see, that I have xrayed, that I am not a radiologist, and that their xray will be read by a radiologist (a specialist in radiology) within a few days. I then discuss with the patient that if there are any abnormalities on the xray, which I have not picked up, that I will get in contact with them to discuss the abnormality, and further management of this abnormality."

28. SDHB told HDC that it had no written guidelines around what doctors should discuss with patients prior to discharge. It said that "the expectation" was that relevant information would be discussed with the patient, including that if "formal reporting of imaging differed from the initial reading and that a change in management or additional management was required, the medical team who cared for the patient must make contact with the patient and make the necessary arrangements for their ongoing care".

29. SDHB told HDC that at the time of discharge, Mrs A would have been provided with a copy of her discharge report, as this was common practice. A copy was also sent to her GP electronically. Mrs A's discharge report documented "discharge to gp", and did not mention a pending X-ray report.

[2] Unusual fluid or scarring in the lungs, which could indicate pneumonia.
[3] Chronic Obstructive Pulmonary Disease (COPD) is a term used to describe obstructive lung diseases such as chronic bronchitis. COPD is characterised by breathlessness, and cigarette smoking is the leading cause.
[4] An antibiotic.

SDHB process for receiving radiology results

30. SDHB told HDC that at the time of these events, all plain film images (X-rays) were read off site by an externally contracted company (external radiology service). Once a patient's X-ray report had been generated by a radiologist it was then sent to the public hospital's Radiology Service, and matched with the patient's medical record. The report then became available for the requesting clinician to review in his or her inbox on SDHB's IT system.[5] External radiology service radiologists are registered with the Medical Council of New Zealand.

31. When there were new results to review, SDHB's system was to send the clinician a memo including the results. The memo appeared in the "memo tab" of the clinician's inbox and, at the same time, results were also sent to an "unacknowledged worklist" tab. The process was that the results would be reviewed, acted upon if necessary, and then acknowledged (electronically).

32. SDHB told HDC that at this time clinicians in ED were unaware that once memos were opened/viewed in the memo tab, after 24 hours they would drop to the bottom of the queue, where they were no longer visible, regardless of whether or not they had been acknowledged. Results in the unacknowledged worklist remain visible until acknowledged, and do not drop to the bottom of the queue after 24 hours. ED staff were unaware of the distinction between the memo tab and the unacknowledged worklist, and were working only within the memo tab.

The X-ray report

33. Five days later Mrs A's X-ray was reported formally by an external radiologist and sent to SDHB for processing. Also on that day the report was sent electronically to Dr C's inbox as the ordering clinician. The radiologist's report documented that a "15 x 10 mm somewhat lentiform[6] opacity[7] in the right mid zone" had been identified. It also documented that "a significant lung nodule cannot entirely be excluded", and that, as a minimum, a follow-up chest X-ray in six weeks' time or a low radiation dose CT[8] was recommended. The X-ray results were not sent to Mrs A or her GP.[9]

34. SDHB's Serious Adverse Event Report (following an investigation after these events) stated that at the time of Mrs A's triage her GP details were documented on the triage nurse's initial assessment sheet, but were not documented on the stickers generated to be used for forms during Mrs A's time in ED (including X-ray request forms). SDHB's Serious Adverse Event Report states: "[I]t is assumed that when the ED adhesive label stickers were generated, one was not able to automatically include the GP details and a 'default' sticker without the GP details was created."

35. SDHB's Serious Adverse Event Report documented:

[5] No paper report was sent to Dr C, as some years previously the ED had opted out of paper reports and had been relying on electronic sign-off reports. An electronic management system was used at SDHB at the time.
[6] Shaped like a lens.
[7] Not transparent — implying that something is there.
[8] A computed tomography (CT) scan produces multiple images of the inside of the body.
[9] The ED electronic record relating to this presentation was transmitted to the recorded general practice within 24 hours. However, the chest X-ray report was not included, as at that point it was pending.

> "There has been no agreed process to allow radiologists to alert a clinician if there is a significant abnormality on a patient's chest x-ray."

36. The report noted that the current system "[had] potential weaknesses", including that if details were missing, such as the patient's GP details (as in this case), "the report [would] be issued regardless".

37. At 1.39pm two days later, Dr C viewed the formal X-ray report using the memo tab, but she did not acknowledge[10] it electronically, as she was about to go on leave for 10 days. Dr C explained to the Serious Adverse Event Review Group why she did not acknowledge the report on the day she viewed it initially:

> "[I]t was not immediately urgent, and could have been done on my return from leave. … I may have not been able to find a radiology consultant at the time I was viewing the report, to discuss the [X-ray] and the findings with them. This is not unreasonable, as they are very busy, and to leave the report to discuss with them on my return from leave is also not unreasonable, as a follow up [X-ray] was suggested in 6 weeks, and my leave of 10 days finished well within this time … It is standard to view results and leave those that may need to be acted on in the [memo tab] until they are acted on, and then acknowledge them, so that the results are then deleted."

38. SDHB also told HDC that commonly clinicians viewed but did not acknowledge a result when they wanted to investigate the result further, and hence wanted to leave the result "live" on the system. It told HDC that this practice is still in place today.

39. SDHB's Serious Adverse Event Report documented:

> "[Mrs A's radiology report did] not suggest specifically that there was concern about a cancerous growth. The recommendation … would have meant the need for a case review. Such a case review includes a 'second' look at the [X-ray], a review of the patient's record, consultation with one of the [public hospital's] 'in-house' radiologists. All of this is time consuming and therefore only feasible after completion of the more immediate daily duties."

40. Dr C told HDC that, in preparation for going on leave, she changed the settings in her results inbox, so that any new results that came into her inbox while she was on leave would be forwarded to an ED consultant.

41. SDHB told HDC that it has no specific guidelines or policies for the acknowledgement of radiology or laboratory test results in ED. It said that the Medical Council of New Zealand (MCNZ) guidelines for the follow-up of results are the de facto guidelines, which outline that the ordering clinician is responsible for the result of any test he or she orders.

42. SDHB told HDC that at the time of these events the usual process regarding follow-up of radiology reports ordered by ED clinicians was the following:

[10] Once results have been viewed and, if necessary, acted on, they are then electronically acknowledged by the clinician. Once results are acknowledged electronically they are no longer visible in the inbox.

> "All members of the senior medical staff were individually responsible for checking and acknowledging all radiology and laboratory tests that were ordered under their name. They undertook this using the 'memo' functionality of the [IT] (clinical intranet) system — when there were new results to review the system sends the clinician a 'memo' to indicate the presence of new results. The process was that the results would be reviewed, acted upon if necessary and acknowledged using the electronic system."

43. SDHB's Serious Adverse Event Report acknowledged: "At [the public hospital] there had been no process to ensure that unacknowledged reports (or any other results) do not go unacknowledged for any length of time." It noted that there was no process to "escalate" automatically or pass on unacknowledged reports to another clinician or the Clinical Director, and no warning system to alert clinicians to the existence of unacknowledged reports.[11]

Return from leave

44. Dr C told HDC that upon returning from 10 days' leave she did not recall Mrs A's X-ray report. The result was no longer visible in the memo tab, even though the report had not been acknowledged.

45. Dr C told the Serious Adverse Event Review Group:

> "I regret that I did not remember this report to follow up, even when it had disappeared from my inbox, but with the number of reports which come through our inboxes, it is impossible to remember every single report, especially after 10 days. This is the reason that I did not acknowledge the report immediately, as I needed to follow it up. As it had not been acknowledged, the report should have still been in my inbox on my return, for me to action."

46. Mrs A did not hear from the public hospital in relation to the report, and did not receive the recommended follow-up X-ray or CT scan.

2015 — return to ED

47. About 20 months after her X-ray, Mrs A went to a second medical centre,[12] as she had been feeling unwell for a few days. An RN documented that Mrs A complained of having had "a constant headache" for the past four days, right-sided weakness, and poor coordination, and that recently she had experienced eight to ten falls. It is noted that she was anxious and vague and had decreased strength in her right hand. Mrs A was referred to the ED.

48. At 12.48pm, Mrs A presented to the ED and was seen by a triage nurse who documented that Mrs A was complaining of right-sided altered sensation, decreased grip in her right hand, altered gait, headache easing with analgesia, but no visual disturbances, and that her symptoms came on after a mechanical fall five days previously. She was given a priority code of "3" (to be seen within 30 minutes).

49. At 2.09pm Mrs A was seen by Dr E. Mrs A told Dr E that about five days previously she had tripped when walking up steps to a door, and had fallen on to her right side and hip. She

[11] SDHB told HDC that these issues are currently being addressed by SDHB.
[12] A clinic closer to where Mrs A lived in comparison to her usual GP practice.

denied any preceding symptoms, and denied hitting her head or experiencing a loss of consciousness. She advised Dr E that the next day she had developed a constant headache at the back of her head, and now felt some weakness in her right side. She also said that she had lost confidence with stairs. Dr E noted that Mrs A reported feelings of a loss of coordination and of feeling muddled, that she had no facial droop or slurring of speech and no visual symptoms, and that she was a lifelong smoker, smoking five cigarettes a day.

50. Dr E's impression was that Mrs A had experienced an intracerebral event (bleeding within the brain) or a subdural event (bleeding outside the brain). Dr E discussed Mrs A with an emergency medicine consultant, Dr F, and the decision was made to order a CT scan of her head.

51. A CT scan was carried out at 2.57pm. The CT report documents:

> "There are three ring enhancing lesions in the left parietal lobe with the largest measuring 17 mm in diameter. There is surrounding vasogenic oedema[13] with some compression of the adjacent left lateral ventricle.[14] There is no midline shift. Appearances are consistent with metastases.[15]"

52. At 4.28pm Dr E documented in Mrs A's clinical notes that Mrs A's CT scan showed "multiple cerebral [metastases]". Due to the intracranial findings showing appearances consistent with metastases, a set of CT scans of her chest and abdomen were arranged.

53. The overall results stated:

> "Findings consistent with right lung lower lobe bronchus carcinoma with metastasis in the right lung upper, middle and lower lobe as well as mediastinal lymph node metastases and possible left adrenal metastasis."

Review of notes

54. Following receipt of the CT reports, Dr F carried out a full review of Mrs A's clinical history and discovered the non-actioned X-ray report from 2013.[16]

55. Mrs A's care was then transferred to the general medicine department. A medical registrar and a general medicine physician consultant, Dr G, took over the care of Mrs A. Dr F informed the medical registrar and Dr G about the 2013 X-ray result that showed a 10mm x 15mm mass in Mrs A's lung. It is documented that Dr G informed Mrs A and her family that Mrs A had cancer originating from the lung, and that it had spread to her brain. Mrs A was admitted to the acute ward at 6.40pm.

56. Dr G ordered a chest X-ray, which was carried out. The radiology report documented: "The lungs are well expanded. On the right side, a right peripheral abnormality is associated with more bulky central lesions." It was also noted: "The left side is stable compared with [the X-

[13] Swelling caused by the accumulation of fluid in the brain.
[14] A structure within the brain that contains cerebrospinal fluid.
[15] Cancer (or other disease) that has spread from one organ or part of the body to another.
[16] SDHB's system shows that the result was acknowledged by Dr F in 2015.

ray of 2013].” The report concluded: “Progressive right-sided changes consistent with pulmonary neoplasm.[17]”

Disclosure

57. Dr G documented in Mrs A’s clinical notes that she had advised Mrs A that the X-ray taken in 2013 had shown a mass in her lung, and that this had not been acted upon in error. It is further documented that Mrs A and her family were advised that Mrs A’s cancer was terminal, and that any treatment would be palliative.

58. Mrs A was discharged home for on-going palliative management. Follow-up was arranged with Radiation Oncology, and she was referred for hospice care.

59. Dr G and the Service Manager Medical Directorate met Mrs A’s family to apologise on behalf of the DHB for the fact that the original X-ray had not been acted upon, and to inform them that an investigation had commenced.

60. Sadly, Mrs A died a short time later.

Further information

SDHB

61. Following these events, SDHB conducted an immediate investigation into the incident, which identified that “[i]t was erroneously believed” by clinicians that the results remained visible in the memo tab until they had been acknowledged. SDHB told HDC that after 24 hours, once results are opened/viewed in the memo tab, the results drop to the bottom of the queue, where they are no longer visible (regardless of whether they have been acknowledged). Both read and unread memos remain in the memo tab unless deleted. SDHB said that this resulted in the read memos getting “bogged down”. It said that the position of a particular memo could move down several pages from the top of the list. SDHB said: “All unacknowledged reports remain in the ‘unacknowledged worklist’ but the ED were unaware of this distinction in the functionality.”

62. SDHB told HDC that there “is no ‘fault’ in the system but a lack of understanding from the clinicians in the ED as to the functionality of the system”. It said that while the report disappeared from view in the memo tab, it did not disappear from the system.

SDHB’s investigation — Serious Adverse Event Review

63. SDHB’s investigation highlighted that “[t]here is potential confusion with regard to the best process of viewing and acknowledging results electronically in the PMS used at [the public hospital]”. The report documented that one option was to use the memo tab option on [the system]. When opening [the] start page, a link to “unread memos” appears, which then lists all unread results/reports for both inpatients and outpatients. The second option was to use the “unacknowledged work list”.

64. The review noted that clinicians could work off both the memo tab and the “unacknowledged worklist”, but always needed to check the “unacknowledged worklist” for anything that may have been missed. It documented that the “unacknowledged worklist” shows whether results are still unattended, and is the catch-all method to show the clinician any unacknowledged

[17] An abnormal growth in the lung.

results. The review noted that using the memo tab resulted in a risk that some results might not be acknowledged. The report also noted that both options (the memo tab and the "unacknowledged worklist") "may be cumbersome as the linkage back to a respective patient's electronic health record is only indirect (i.e. one will have to go in and out of the site repeatedly. This makes it virtually impossible to check and deal with results 'on the run', i.e. during the course of the other daily clinical duties)."

65. The investigation noted that staff were introduced to, and instructions provided in the use of, the "unacknowledged work list" when the feature was first introduced (in 2005[18]), but said that "it is not clear how much emphasis [was] given in the IT training to ensure no such confusion existed". Furthermore, it noted: "It has now become clear that many clinicians have not been aware of the differences."

66. In addition, the investigation noted: "It is not clear what [clinical] staff IT training is being provided/made compulsory in order to ensure that [the] IT system's capabilities are indeed fully utilised."

67. Several recommendations were made as a result of the Serious Adverse Event Review, including the following:

- Reporting of results in the electronic patient management system and clearly defining a process for the paperless acknowledgement of results, for the escalation/passing on of unacknowledged results within specific time frames, for the process to act upon those results and the documentation of those respective actions in the patient's electronic medical record.
- A system for the flagging of abnormal imaging results of tests completed at the public hospital's medical imaging department, including reviewing the possibility of having plain X-rays read and reported on by the on-site radiologists.
- Capture of relevant patient details (i.e., GP details), to ensure good communication to primary care after each contact with the ED.
- Electronic requesting of medical imaging investigations.
- Staff orientation and training to ensure systems are utilised properly (including the system used for managing patients, the electronic sign-off of results/reports, the process to ensure proper communication to other medical practitioners, the electronic requests of tests, etc).
- Additional radiology training for non-radiology staff to enhance their interpretation of plain X-ray films.
- Enhanced care pathways for patients with COPD and lung cancer, and evaluation of mental health patients with significant smoking history, for the presence of respiratory symptoms or respiratory conditions.
- Consideration of improved consumer engagement through the development of a process to copy patients with reports of certain investigations.

[18] Dr C was a member of staff at SDHB when the IT system was introduced. SDHB told HDC that it has no specific records of the training she received at that time.

Changes made

68. SDHB told HDC:

> "A significant number of other radiology results that had not been acknowledged due to the same issue within the system were identified and the ED consultant medical staff are in the process of checking these results and if necessary contacting patients where any further action is needed."

69. SDHB set up an organisation-wide Electronic Acknowledgement Project to develop the recommendations outlined above and to focus on improving the systems and practices regarding unacknowledged results.

70. Regarding the number of radiology results that had not been acknowledged, SDHB said that, of these, 23 results were identified as requiring some form of follow-up, and that, of those, one required an ultrasound scan. The remainder did not require any further action other than a more in-depth review or a telephone call to the patient.

71. SDHB told HDC that the ED team has changed the way in which it uses the IT system, and that it now uses the "unacknowledged work list" functionality as opposed to the memo functionality.

72. SDHB further advised:

> "[We continue] to be very concerned as an organisation regarding the problem of radiology result reports (and other results) that are lost to follow-up and we acknowledge the serious problem that this has [caused] for a small but significant number of our patients and their relatives. We have begun to address the long standing problems with the dual systems, paper and electronic, used for the acknowledgement of diagnostic results; in particular the large volume of unacknowledged electronic radiology and laboratory results. Of note these are not necessarily unreviewed results. [SDHB] has initiated a project based on [a successful project at another DHB] to resolve this problem."

Dr C

73. Dr C told HDC that predominantly she had used the memo tab to view and manage results from tests she had ordered, and that previously she had left results in the memo tab to action later, as she had not known of the potential for them to drop from view if they were left for a length of time. She stated:

> "I had no reason to believe that [the system] would not work as it was designed to do, and I trusted that my results would remain in the memo tab until I acknowledged them … Had I been aware that there was a chance that this report (or any others) would have been lost, I would have employed back up strategies."

74. Dr C told the Serious Adverse Event Review Group:

> "I did not fail to action an abnormal result, the disappearance of the result from my inbox, for reasons beyond my control, prevented me from completing this task."

Response to provisional opinion

75. Mrs A's family and Southern DHB were asked to comment on the relevant sections of my provisional opinion.

76. Mrs A's family chose not to provide a response. Southern DHB responded and said that it accepted the findings and advised that it would implement the proposed recommendations.

Opinion: Dr C — Adverse comment

77. The formal radiologist's report regarding Mrs A's X-ray (from five days previous) identified a 15 x 10mm mass in her lung, and recommended a follow-up chest X-ray or CT scan in six weeks' time. The report was sent to Dr C's inbox electronically as the ordering clinician.

78. SDHB's expectation was that its senior medical staff were individually responsible for checking and acknowledging tests that were ordered under their name.

79. Dr C reviewed Mrs A's X-ray report. Dr C was about to go on leave for 10 days, so she did not acknowledge the results (and left them in the memo tab), as she wanted to review the X-ray and discuss with the radiology consultants what follow-up would be most appropriate. She assumed that the result would be visible in the memo tab on her return, and was not aware of the possibility that it could drop off from her view.

80. However, when Dr C returned from leave, Mrs A's chest X-ray results were no longer visible in the memo tab of Dr C's inbox. Dr C did not recall the report on her return. She said: "[W]ith the number of reports which come through our inboxes, it is impossible to remember every single report, especially after 10 days."

81. As part of this investigation I obtained expert advice from an emergency physician, Dr William Jaffurs. Dr Jaffurs advised that Dr C dealt with Mrs A's X-ray report (on receipt by her) "in a manner that would allow for considered follow up". He advised that Dr C's intention to follow up on the necessary action when she returned from leave rather than assign this responsibility to anyone else was acceptable. Dr C said she thought that she could rely on the IT system to remind her to do this. She believed that, as the result had not been acknowledged, it would still be in her inbox when she returned from leave.

82. I note Dr Jaffurs' advice that he considers "[Dr C] to be caught in a moderate, if unintentional departure from the standard of care for not following up this ominous report at some point in the future, but not necessarily at the time of first viewing". Dr Jaffurs also acknowledged: "Unfortunately an important chest x-ray result was lost in an information system trusted by [Dr C]."

83. However, Dr Jaffurs advised that other options could have been exercised by Dr C for dealing with the report. She could have called Mrs A or Mrs A's GP, or written a note in the form of an addendum to Mrs A's discharge summary and mailed it to her. Dr C also could have printed a paper copy to use as a reminder. Dr Jaffurs advised me that "[t]hese options are the

safety net an experienced practitioner creates when dealing with imperfect patient information systems".

84. While ideally Dr C would have employed safety-netting strategies such as those outlined by Dr Jaffurs, I also note that Dr C was not aware that she was working with an imperfect patient information system. Dr C said: "Had I been aware that there was a chance that this report (or any others) would have been lost, I would have employed back up strategies." I consider that it was reasonable for her to rely on the system in these circumstances.

85. While I am concerned that Dr C did not follow up on Mrs A's X-ray report, overall, having considered the circumstances, I am of the view that the failure to follow up on Mrs A's X-ray results was largely caused by systems errors within SDHB.

Opinion: Southern District Health Board — Breach

Presentation to ED — 2013

86. Mrs A went to the ED because she had been experiencing a cough and chest tightness for a couple of days. Dr C examined Mrs A and found that her chest had "decreased air entry with wheeze throughout". Mrs A was given nebulisers, after which she was noted as being much improved.

87. Dr C ordered an X-ray of Mrs A's chest. At the time of these events, X-rays were reviewed off site and not reported immediately by a radiologist. After the X-ray had been carried out, Dr C reviewed it and could not see anything of concern. She diagnosed COPD with acute asthma. Mrs A was discharged home, with her care discharged to her GP. Her discharge report made no mention of a pending X-ray report.

88. Dr Jaffurs advised that Dr C's impression that Mrs A had COPD was "an entirely reasonable assumption", and that discharging her care to her GP was appropriate. He also advised that the standard for reading a chest X-ray in this situation was met.[19] I am satisfied that Dr C read the X-ray appropriately, and that her diagnosis and her decision to discharge was appropriate in the circumstances. Accordingly, I am not critical of the standard of care provided to Mrs A.

Follow-up of X-ray results

89. Five days later, the formal radiologist's report regarding Mrs A's X-ray identified a 15 x 10mm mass. It documented that "a significant lung nodule [could] not entirely be excluded", and advised, as a minimum, a follow-up chest X-ray or a CT scan in six weeks' time. The report was sent to Dr C's inbox electronically.

90. SDHB's expectation was that individually its senior medical staff were responsible for checking and acknowledging tests that were ordered under their name. When there were new results to review, the system sent the clinician a memo to indicate this. The process was that the results would be reviewed, acted upon if necessary, and acknowledged electronically. At

[19] As is discussed in more detail below, the X-ray report later noted a mass, which Dr Jaffurs advised is commonly noted by ED physicians only after being pointed out by a radiologist.

SDHB it was, and still is, standard practice to view results and leave in the inbox those that require attention, until they are acted on, and then acknowledge them.

91. Dr C reviewed Mrs A's X-ray report. The following day, Dr C was going on leave for 10 days, so she did not acknowledge the results (and left them in the memo tab), as she wanted to review the X-ray and discuss with the radiology consultants what follow-up would be most appropriate. She said that the results were not immediately urgent (as follow-up was suggested in six weeks' time, and she was away for only 10 days), and therefore she considered it appropriate to action them on her return. She assumed that the result would be visible in the memo tab on her return, and was not aware that the memo would drop off from her view after 24 hours.

92. When Dr C returned from leave, Mrs A's chest X-ray results were no longer visible in the memo tab of Dr C's inbox. In addition, Dr C did not recall the need to action the report on her return. Dr C said: "[W]ith the number of reports which come through our inboxes, it is impossible to remember every single report, especially after 10 days."

93. Dr Jaffurs advised that Dr C dealt with Mrs A's X-ray report (on receipt by her) "in a manner that would allow for considered follow up". He advised that Dr C's intention to follow up on the necessary action when she returned from leave rather than assign this responsibility to anyone else was acceptable. Dr C said she thought that she could rely on the IT system to remind her to do this. She believed that, as the result had not been acknowledged, it would still be in her inbox when she returned from leave.

94. I note Dr Jaffurs' advice that he considers "[Dr C] to be caught in a moderate, if unintentional departure from the standard of care for not following up this ominous report at some point in the future, but not necessarily at the time of first viewing". Dr Jaffurs also acknowledged that "[u]nfortunately an important chest x-ray result was lost in an information system trusted by [Dr C]".

95. I acknowledge Dr Jaffurs' advice that other options for dealing with the report could have been exercised by Dr C. She could have called Mrs A or Mrs A's GP, or written a note in the form of an addendum to Mrs A's discharge summary and mailed it to her. Dr C also could have printed a paper copy to use as a reminder. Dr Jaffurs advised that "[t]hese options are the safety net an experienced practitioner creates when dealing with imperfect patient information systems".

96. However, I also note that Dr C was not aware that she was working with an imperfect patient information system. Dr C said: "Had I been aware that there was a chance that this report (or any others) would have been lost, I would have employed back up strategies." I consider that it was reasonable for her to rely on the system in these circumstances.

97. Overall, having considered the circumstances, I am of the view that the failure to follow up on Mrs A's X-ray results was largely caused by systems errors within SDHB.

98. Mrs A's GP, Dr D, did not receive the final chest X-ray report. This was due to a systems error where Mrs A's GP details did not appear on the stickers on the X-ray request form. While Dr D received the ED electronic discharge report relating to Mrs A's initial presentation (which stated that her care had been discharged to him), there was nothing to

indicate a pending X-ray report. As a result, there was a lost opportunity to have someone else follow up on the X-ray report. I am critical that SDHB did not have in place an appropriate system to ensure that Dr D received Mrs A's X-ray report.

99. About 20 months after Mrs A's X-ray, Mrs A returned to the ED having felt unwell for the previous few days, with a constant headache, right-sided weakness, poor coordination, and having recently experienced eight to ten falls. A review of her electronic clinical history resulted in the discovery of the non-actioned X-ray report from 2013. I note that the error was disclosed to Mrs A in a timely manner, once discovered.

100. SDHB told HDC that while predominantly the ED clinicians were using the memo tab to view and acknowledge results, clinicians actually had two options for reviewing results and reports. As well as the memo tab, a second option was to use an "unacknowledged work list". SDHB's investigation into these events found that its IT system allowed results to disappear from the memo tab view 24 hours after the results had been opened/viewed in the memo tab (regardless of whether they had been acknowledged), by dropping to the bottom of the queue. All unattended and unacknowledged reports remained in the "unacknowledged work list", but ED staff were unaware of this distinction in functionality. It was erroneously believed that results remained visible in the memo tab until they had been acknowledged.

101. Of concern, SDHB acknowledged that many clinicians were not aware of the differences between the memo tab and the "unacknowledged work list", and it has since identified that a "significant number" of other radiology results had also not been acknowledged owing to clinicians relying on the memo tab.

102. I note that SDHB has acknowledged that while staff were introduced to, and instructions provided in the use of, the "unacknowledged work list" when the feature was first introduced in 2005, "it is not clear how much emphasis [was] given in the IT training to ensure no such confusion existed [between the use of the memo tab versus the unacknowledged work list]". I note that following its review, SDHB found that "[i]t is not clear what staff IT training is being provided/made compulsory in order to ensure that [the] IT system's capabilities are indeed fully utilised".

103. Furthermore, I note that there was no process to ensure that reports or results were acknowledged within a certain length of time, and there was no warning system to alert clinicians to the existence of unacknowledged reports. Therefore, as Dr C did not see the report in her inbox on her return from leave, Mrs A did not receive the recommended follow-up X-ray or CT scan. Mrs A heard nothing further from the public hospital in relation to the radiologist's report, and the X-ray results were not sent to her.

104. In my view, Dr C was working in an inadequate system, in that SDHB failed to ensure that its staff were adequately and appropriately trained to use its electronic system for managing the results and reports they had ordered.

105. Dr Jaffurs advised: "The reviews from SDHB clearly identify a dangerous flaw in the management of verifying and acknowledging reports which allows the reports to become virtually invisible after first viewing but prior to acknowledgment. … The system appears to be in wide use at their health board and is a 'tool of the trade' for the practitioners there." He

said it is expected that functional and current tools of the trade are provided. I agree and am concerned that this problem appears to have been longstanding at SDHB.

Conclusion

106. SDHB failed to have in place an appropriate system for the management and acknowledgement of test results. Although a system was in place, SDHB's clinicians were not trained to use the system adequately, either initially or on an on-going basis. There was clearly widespread misunderstanding within SDHB's ED regarding the functionality of the IT system, which clinicians should have been able to use easily and rely on. This failure resulted in Dr C not following up on Mrs A's X-ray report. In addition, SDHB did not have in place an appropriate system to ensure that Dr D received Mrs A's X-ray report, and did not have a process to ensure that reports or results did not go unacknowledged by SDHB clinicians for any length of time. Accordingly, I find that SDHB failed to provide Mrs A with an appropriate standard of care and breached Right 4(1) of the Code of Health and Disability Services Consumers' Rights.

Further comment

107. I note Dr Jaffurs' advice that "the IT system needs to be fixed and have warnings installed and a culture of safety net behaviours added to the handling of test results". Following these events, SDHB checked all other radiology results that had not been acknowledged owing to the same issue and, where necessary, contacted any patients where further action was needed. It has also implemented a new process "to minimise the risk of a similar error occurring". Most importantly, clinicians now use the "unacknowledged work list" rather than the memo tab.

108. Dr Jaffurs advised that SDHB's Electronic Acknowledgment Project is an "ambitious and well intentioned project" and, in my view, it is an appropriate step to take in response to the problem of unacknowledged results.

Recommendations

109. I recommend that Southern District Health Board:

a) Provide a report regarding the outcome of the Electronic Acknowledgement Project to HDC and DHB Shared Services within 12 months of this report.
b) Provide an audit of four months' data from the 2016 calendar year regarding the time taken to acknowledge reports. This is to be sent to HDC within six months of the date of this report.
c) Consider having a warning system added to its electronic IT system to alert clinicians to the existence of unacknowledged results, and report to HDC within six months of the date of this report.
d) Arrange for an impartial IT expert with a medical background to examine its electronic management system to determine whether user warnings and updates need to be built in to the software and training sessions, and report back to HDC within six months of the date of this report.

e) Provide a report to HDC regarding the actions taken in respect of the recommendations as outlined in the SDHB Serious Adverse Event Report, within six months of this report.
f) Provide a written apology to Mrs A's family for its breach of the Code, within three weeks of the date of this report. The apology is to be sent to HDC for forwarding.

Follow-up actions

110. A copy of this report with details identifying the parties removed, except the expert who advised on this case and SDHB, will be sent to HealthCERT and DHB Shared Services.

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

Appendix A: Emergency medicine advice to the Commissioner

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

"Thank you for your request to review the above complaint.

In doing so I have reviewed the documents sent to me including:

Your letter
Disc with X-ray images and request forms
ED Notes from [initial visit]
Complaint HDC [date]
SDHB response [2015]
SDHB further response [2015]
Information gathered document undated
SDHB Serious Adverse Event Report [2015]

I am currently a Fellow of the Australasian College of Emergency Medicine since 1998 and work full time 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:
[Mrs A] presented to the Emergency Department of [the public hospital] at 1316 hours [in] 2013 with respiratory symptoms and feeling unwell for four days. She was triaged to code four and seen by [Dr C] at 1432 hours, slightly over the one hour guideline for code four from the Australasian College for Emergency Medicine. The clinical notes are orderly, legible, and appropriate to her presenting complaint, as is her urgent treatment plan. Her GP's name appears to be on the Triage note, but not on her labels. She has a Chest X-ray which shows no evidence of pneumonia. She is treated with antibiotic, bronchodilator nebulisation, and oral steroids. She is directed to follow up with her GP as needed for her presumed exacerbation of Chronic Obstructive Lung Disease (COPD). A specific time frame for follow up is not evident in the clinical note, so I would ask what was either said to [Mrs A], or written in her discharge summary about this. Her previous history and smoking status are not documented. Her departure time is documented as 1537 hours. Attached to these record copies is a printed chest x-ray report 'verified' [dated five days later], and acknowledged by [Dr F] [in 2015]. The report has an unexpected finding with a recommendation for further imaging if no prior images are available for correlation.

[Dr C] recalls that she viewed the report, filed it electronically for further action, proxied her upcoming reports for review by another doctor, and then went on leave for 10 days. Upon her return the report was not apparent in her electronic file. As a result no further action was taken. The DHB letters outline an unrecognized risk discovered subsequently in the electronic filing system that would allow the report to apparently disappear without being acknowledged.

There is no indication that the Chest x-ray report was conveyed to the Patient's GP. This was apparently due to the absence of these details on the Patient's identification label on the x-ray request which is visible on the CD provided.

[Mrs A] attended ED again [in] 2015 with a headache and neurologic findings prompting a workup revealing metastatic cancer with a primary apparently in the right lung where the chest x-ray done in 2013 showed a suspicious density. This connection makes sense clinically but has not been verified by tissue biopsy according to the records supplied.

[Mrs A] received palliative radiotherapy and passed away as a result of her cancer [in] 2015 in [a] Hospice.

In response to your questions pertaining to my opinion on the following issues:

That the GP did not receive any follow-up reports:
There is an assumption here that the GP did not receive either an ED visit note, or an x-ray report. Has this been verified?[20] There is no GP name filled in the space on the labels or requisitions, although it appears there is a GP name on the triage note, so this information was apparently available. I would expect the program used to record the clinical note to either send the note to the GP by email which is the practice described for SDHB, or failing this, have it mailed or faxed at a later time. This action is a routine in the EDs in New Zealand with which I am familiar. It would not be uncommon however to have this action fail if the GP information was either missing or incorrect. If in this case the GP information on the triage note was correct, I would expect a copy of the clinical note to be sent to the GP to facilitate the follow up visit requested from ED. It would be unfair to say the situation here was a departure from the standard of care as the standard is more of a goal that can be attained in most cases. As a backup the patient is commonly given a discharge summary with follow up instructions which can be carried to the GP, or the GP can call for a summary when the patient presents to their rooms for follow up care. Did [Mrs A] receive a discharge summary with follow up instructions, and were these instructions followed in some manner? If the instructions were those in the clinical note which indicates she was referred to her GP, and she followed this advice, I do not think this would have been an issue.

The x-ray report would not necessarily go to the GP unless the information was specifically included on the request. The report was sent to the requesting doctor meeting the current standard in my opinion.

That [Dr C] did not take any further action after diagnosing COPD.
The ED is for episodic and urgent care. Patient history and background is not as complete as the information held by a patient's GP. To suspect that [Mrs A], a 66 year old tobacco smoker has, and had had, Chronic Obstructive Lung Disease (COPD) was an entirely reasonable assumption. She improved with nebulised medicine and prednisone. She was discharged to the care of her GP and I interpret the instruction is to follow up with either ED or the GP as needed. No time course is specified. I understand there was not an existing pathway to enrol new COPD patients in available at that time. Her history does

[20] This was verified and Dr Jaffurs was advised accordingly. Please note Dr Jaffurs' further advice below in relation to this issue.

not suggest severe COPD or frequent use of the medical system for her condition, therefore GP referral in this instance was appropriate, as was the assumption that she had an ongoing relationship with a GP as named on the triage note.

That [Dr C] did not recognize any mass on the Chest x-ray:
I was unable to open the image files on the CD sent to me despite trying the disc in several machines.[21] The report suggests a subtle lung density that I would not expect an Emergency Physician to see immediately. It is not what [Dr C] was looking for. She specifies there was no consolidation to suggest pneumonia and she was correct.

The density described in the report is commonly noted by ED physicians only after being pointed out by a Radiologist, so the standard for reading a Chest x-ray in this situation is met.

That [Dr C] did not carry out any immediate action on viewing the formal x-ray report before going on leave:
She indicates that she recognized the importance of the report and handled it in a manner that would allow for considered follow up. The x-ray report specifies a time frame of 6 weeks for follow up examination. Unfortunately [Mrs A's] details were lost to her in the [IT] system before her intended plan could be actioned. Certainly other options could have been exercised for handling this report such as calling the patient or her GP, or writing her a short note in the form of an addendum to her discharge summary and mailing it to her. She could have printed a paper copy to use as a reminder later on. These options are the safety net an experienced practitioner creates when dealing with imperfect patient information systems, and they are all imperfect.

Having experience with several major suppliers of such systems, they are marketed in an imperfect state with the expectation that users will flush out the bugs and adapt the systems to their specific patterns of use. Unfortunately this situation reflects an ongoing problem in New Zealand hospitals of siloed software tools, an inability to efficiently spec and purchase modern software for patient management, and virtually no standard of provision or maintenance of good working systems.

I was not provided with [Dr C's] background, age or experience, or training with [the IT system]. She bravely accepts that it was her duty to act on the information as only a mature practitioner would, and is consistent with the stated policy of SDHB and the New Zealand Medical Council guidelines cited in [the CEO's] letter of [2015]. [Dr C] appears to have fallen into a [IT system] trap of losing the information for which she is individually responsible, and perhaps assuming her proxy covering for her while on holiday dealt with the report. She does not indicate in her letter that this last was her assumption in this case. Considering the situation as presented, I consider [Dr C] to be caught in a moderate, if unintentional departure from the standard of care for not following up this ominous report at some point in the future, but not necessarily at the time of first viewing.

[21] Another version of the CD was provided to Dr Jaffurs, and subsequently he managed to review the images. This is discussed below.

In our hospital x-ray reports are viewed in printed out form by senior clinicians, usually the day duty consultant, because of unresolvable problems setting up electronic sign off of test reports. We read and sign off reports as a department in order to prevent cases such as this slipping through if a doctor is away, on leave, or no longer employed. Individual doctors do not necessarily sign off their own test results in the interest of timely review of a large number of test results. GPs are copied on results they often do not want to see, as they often have their own burden of requested results to review. This system is our best effort to deal with a large and constant deluge of test results emanating from a busy ED. I recognize this system is not perfect either. Each institution must choose its best and safest option.

A survey of several of our Emergency medicine consultants who have recently worked at other hospitals reveals a variety of systems for checking results. Only one other hospital mentioned has results signed off by the ordering doctor on an electronic system. Most larger hospitals have daily batches of reports ordered by all the emergency doctors in the few preceding days reviewed by either the duty consultant or registrar with supervision. Some use paper, some use electronic sign off. One system mentioned does not have a two step system like SDHB using 'verified' and 'acknowledged', but rather if you view the result, whether you ordered the test or not, you are acknowledging that you have viewed and will act on it.

That [Dr C] relied only on SDHB's [IT system] to ensure she followed up on results after she had been away on leave:
Answer as to the previous question.

The adequacy of SDHB's [IT system]:
The reviews from SDHB clearly identify a dangerous flaw in the management of verifying and acknowledging reports which allows the reports to become virtually invisible after first viewing but prior to acknowledgment. There is clear intention to correct this flaw. The system appears to be in wide use at their health board and is a 'tool of the trade' for the practitioners there. The Association of Salaried Medical Specialists (ASMS) Multi Employer Collective Agreement specifies that hospitals will recognize the importance of providing good quality, suitable and safe workplace conditions, resources, and accommodation. Section 53.1. In general this is interpreted to mean safe tools of the trade are provided that are both functional and current. It is unfortunate that this paperless, reasonably modern system for managing huge amounts of patient data has failed in just a few instances with tragic results. The system seems to work perfectly the rest of the time.

The Serious Adverse Event Report (SAER) indicates the system will be modified to remind practitioners and emphasize unacknowledged results. This problem appears to have been longstanding at the SDHB. In addition, a culture of safety net behaviors and warnings needs to be attached to the system as described above. Therefore, in regard to this item, I think there is again a moderate departure from the expected standard of care.

The adequacy of SDHB training in relation to its [IT system]

and

The adequacy of SDHB's recommendations relating to improving the [IT system], and whether you have any recommendations relating to it.

The basic training package appears to be intended to get one started. Initial training does not replace working knowledge of an electronic system. I would suggest that an impartial IT expert with a medical background examine the system for other traps such as the one that got [Dr C], and build user warnings and updates into the software and training sessions, and provide subsequent alerts to users.

It would be helpful if as mentioned the [IT system] was more readily accessible without separate login so that results could be acknowledged in the course of daily clinical practice.

The replacement of their current [IT] system […] may address this problem. […]

I support the SAER's recommendation to give patients access to their imaging reports. This is not common practice in New Zealand yet, although in other countries, such as the Kaiser Hospitals system in the USA, this has been part of a successful strategy for getting patients actively involved in managing their medical care.

Are there any aspects of the care which warrant additional comment?
No one has commented on the apparent situation that [Mrs A] did not appear to seek regular medical care, either for acute illness or in a health maintenance mode. She was a smoker with lung disease. Her appearance in a General Practice would have prompted a review that would have likely picked up her disease earlier. The Emergency Department is not a good source for comprehensive medical care as this case demonstrates. There are some indications that [Mrs A] had mental health issues which would make pursuit of health maintenance even more important for her. Emergency Departments in New Zealand are increasingly utilized for episodic medical care. I do not think it is fair to expect EDs to shoulder the responsibility of health maintenance which ultimately rests with the patient and their family, though I recognize that there are barriers, individual, financial, and cultural, to achieving this.

[Mrs A's] case demonstrates that the Emergency Department staff were there to handle an acute episode. The information and test results were requested to handle the illness that night. The materials provided indicate information was available for any follow up visit although this apparently did not happen. Unfortunately an important chest x-ray result was lost in an information system trusted by [Dr C]. The IT system needs to be fixed and have warnings installed and a culture of safety net behaviours added to the handling of test results. I would like to think in honour of [Mrs A's] memory that this situation will not occur again but no system at this health board or any other, either mechanical or human, is without error. We can only try.

Sincerely yours

William Jaffurs, MD FACEM FACEP
Emergency Physician, Whangarei."

Dr Jaffurs provided the following further expert advice on 11 August 2016:

> "I am responding to your letter of 5 August 2016 enclosing further information relating to this case and requesting further expert advice regarding the care given to [Mrs A] in the Emergency Department of [the public hospital].
>
> In doing so I have reviewed the additional documents sent to me with my comments following each item as necessary:
>
> **Your letter**
>
> **Response letter from [the] CEO 17 August 2015**
>
> This letter clarifies the identified problem, and misunderstandings leading to, 'a large number of unacknowledged reports'. An initial effort to identify and acknowledge overlooked results has been implemented in the Emergency Department, although the Project Brief below suggests this is more than just an Emergency Department problem. Overall this letter adds to the 'root cause analysis' and shows a constructive response to a difficult and unforeseen problem with an information system that for the most part has served a large number of patients and health care practitioners well.
>
> **Project brief SDHB Electronic Acknowledgment**
>
> This ambitious and well intentioned project is an appropriate response to the identified problem of unacknowledged results. I am sure other health boards, including ours, will be interested in the final form of this project.
>
> **Response letter [Dr C] 14 August 2015**
>
> [Dr C] is and was an experienced, interested, and motivated Emergency Medicine practitioner who is actively pursuing a specialist qualification in an advanced training program. She clearly indicates that she understood the significance of the chest x-ray report on initial reading and intended to personally follow up on necessary action and did not assign this responsibility to anyone else. I think it would have been acceptable to do this after returning from her period of leave. She indicates she relied on the [IT] system she had been using to manage large amounts of patient information without incident for [several] years to remind her to do this. She had no reason to expect that she would either lose [Mrs A's] details or not find the information in her filing system when she returned.
>
> **Emergency Department and hospital clinical notes and [external service] chest x-ray report**
>
> These documents were reviewed previously.
>
> **GP letter [Dr D] [2015]**
>
> [Dr D] did not receive the final chest x-ray report. He has attached the discharge summary he received suggesting follow up as needed. [Mrs A] was 'a very infrequent visitor' to the practice and in this case did not present for follow up care, therefore I think [Dr D] met his responsibility to be available to her as needed.
>
> **CD with x-ray/CT images**

The opacity described on this chest x-ray of [date] is subtle as viewed on my computer screen. It took me a while to even imagine seeing it with the radiologist's report in front of me therefore I would not expect a non Radiologist to appreciate this on first viewing on a less than high definition screen.

In conclusion, the additional information provided clarifies the situation and subsequent corrective actions, but does not change my advice as previously provided.

Sincerely yours,

William Jaffurs, MD FACEM FACEP
Emergency Physician
Whangarei"