**Follow-up of X-ray results**
**(15HDC00268, 2 March 2017)**

*District health board ~ Follow-up of results ~ X-ray ~ Delayed diagnosis ~ Lung mass ~ IT System ~ Right 4(1)*

A woman went to an emergency department (ED) because she had been experiencing a cough and chest tightness for about four days. She was examined by a doctor who gave the woman nebulisers, after which she was noted as being much improved.

The doctor ordered an X-ray of the woman's chest and did not note anything of concern. She diagnosed chronic obstructive pulmonary disease with acute asthma. The woman was discharged home with her care discharged to her GP. Her discharge report did not mention a pending X-ray report.

Later that month, the formal radiologist's report was sent electronically to the doctor's inbox. In the report, the radiologist identified a mass and recommended a chest X-ray or a CT scan in six weeks' time.

Two days later the doctor reviewed the X-ray report. The doctor was going away on leave the following day for ten days, and she did not acknowledge the X-ray report. She said the results were not immediately urgent, and she considered it appropriate to action them on her return. She assumed the X-ray report would still be visible in the memo tab of her inbox on her return, and was not aware the memo would drop off from the view of the memo tab after 24 hours.

When the doctor returned from leave, the X-ray report was no longer visible in the memo tab of the doctor's inbox and the doctor did not recall the report. The woman did not receive the recommended follow-up X-ray or CT scan, and the X-ray results were not sent to her.

About 20 months after the woman's X-ray, she returned to hospital having felt unwell for the last few days. A review of her electronic clinical history resulted in the discovery of the non-actioned X-ray report which showed a mass on the woman's lung. Sadly, two months later, the woman died.

The district health board's (DHB) IT system allowed results to disappear from the view of the clinician's memo tab. Once results were opened/viewed in the memo tab, after 24 hours (regardless of whether they were acknowledged) they dropped to the bottom of the queue. All unattended and unacknowledged reports remained in the clinician's 'unacknowledged work list', however, the ED staff were using only the memo tab.

It was found the DHB failed to have in place an appropriate system for the management and acknowledgement of test results. While a system was in place, clinicians were not trained adequately to use the system. There was clearly widespread misunderstanding within the DHB's ED regarding the functionality of the IT system, which clinicians should have been able to rely on and use adequately. This failure resulted in the doctor not following up on the woman's report.

In addition, the DHB did not have in place an appropriate system to ensure the woman's GP received the X-ray report, and did not have a process to ensure reports or results did not go unacknowledged by the clinicians. Accordingly, it was found the DHB failed to provide the woman with an appropriate standard of care and breached Right 4(1).

Adverse comment was made about the doctor 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**
It was recommended that the DHB:

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 Electronic 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 DHB's Serious Adverse Event review.

f) Provide a written apology to the woman's family.