Open Book
Learning from close calls and adverse events

Acting on X-ray reports

This Open Book describes changes made as a result of X-ray results not being responded to appropriately. The unifying theme for both incidents described is that there was no fail-safe step in the sign-off of results.

Providers should check their existing systems to ensure all possible safety nets are present and if similar changes need to be made.

This report is relevant to:

- chief medical officers
- lead clinicians in radiology departments
- ward and emergency department-based clinicians.

Incident 1

A CXR report noted a mass and recommended a CT scan, which did not occur.

Chronology

- A patient attended the emergency department (ED) with chest pain. The ED physician noted no abnormalities on the CXR, but the subsequent report identified a mediastinal mass and recommended a CT scan. The final report was not reviewed.
- Four months later, the patient represented with similar symptoms. The previous CXR report was noted, and a CT scan requested.

Review

The incident review found the following:

- The electronic on-screen X-ray report checking system did not differentiate between reports that had been signed off and reports still awaiting review.

Actions subsequently taken

- The electronic system was altered. Reviewed reports are now deleted from the screen, thus only reports requiring review are visible.
- Reports that are not reviewed within two weeks are redirected to another clinician.

Incident 2

A patient admitted to hospital had a CXR taken in ED. The report recommended further investigation, which did not occur.

Chronology

- The patient was admitted to hospital with breathlessness. A CXR taken in ED was initially assessed as normal, but the subsequent radiology report identified a 3.5cm nodule and recommended further investigation. The report was not reviewed by the clinical team.
- After treatment for underlying comorbidities that could have caused breathlessness, the patient was discharged home.
- Five months later, the patient was admitted after collapsing at home. The CXR taken on this admission identified a mass associated with the abnormality reported five months earlier.

Review

The incident review found the following:

- As the CXR was performed in ED, the report was sent to ED and not forwarded to the medical team. The medical team was unaware of the radiology report.

Action subsequently taken

A function was implemented in the electronic reporting system, whereby patients admitted from ED have their reports follow them to the admitting team.

Health Quality & Safety Commission comments

- The New Zealand Medical Council advises it is the ordering clinician's responsibility to keep the patient informed and ensure results are appropriately communicated to those in charge of following up.[1]
- While patients can also play a part in safety processes, the responsibility for managing imaging requests and results lies with the ordering clinician.
- The Health and Disability Commissioner has found that hospitals have a responsibility to have systems in place to ensure results are available and acted on (03HDC02380, 07HDC08819 and 12HDC00112).
- Electronic systems can help support reconciliation and any image request should be trackable through the various paper or electronic stages to sign off or action on the result.
- Sign off should be escalated progressively to more senior clinicians when the system identifies sign off has not occurred within an agreed time period.
- There should be a process for delegating sign off during absences, handovers and locum cover.
- The system should recognise transfer of care both internally across departments and across organisations.
- There should be systems in place to routinely monitor the reliability of the imaging request process.

[1] https://www.mcnz.org.nz/news-and-publications/cole-s-medical-practice-in-new-zealand