Assessing the response to follow-up recommendations in radiology reports

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Until recently, there has not been a standardised approach to the written radiology report. In 2013, the Royal Australian and New Zealand College of Radiologists published a set of guidelines in attempt to improve the quality of the written report by providing evidence-based recommendations for good practice. These include:

“If further imaging, investigations, referral or treatment is to be suggested, the report should describe:
1. How it is expected that this will contribute to the diagnosis and/or management of the patient's current medical problem;
2. The exact nature of the further investigation/referral/treatment that is recommended;
3. The suggested timing of this further investigation/referral/treatment, if relevant, especially if this is urgent.”

The reported uptake of recommended follow-up radiological assessment by the referring clinical team has generally been low. In a group of patients (n=65) where a pulmonary nodule was identified on chest computed tomography (CT), only 29% were followed-up. A similar rate of follow-up imaging (32%) occurred in a group of 74 patients with adrenal incidentalomas, where all had been recommended further imaging by the reporting radiologist.

We recently audited chest X-ray (CXR) reports at our institution to identify the proportion of cases where recommendations for further imaging made in the radiology report have been acted upon; and to investigate the discrepancy between the suggested timeframe 28 follow-up imaging, and the time it actually occurred.

Follow-up recommendations

In 2014, there were 108 reports containing recommendations for repeat imaging to further clarify an abnormality seen or ensure resolution of disease process. Of these, only 33 recommendations (76%) were enacted. There were 71 recommendations for repeat CXR, 34 of which were done except 4, where CT was instead utilised. Furthermore, there were 10 recommendations for follow-up CT, all of which were performed, except 1 where a 36 CXR was thought to suffice. The final recommendation was for an ultrasound scan to investigation pleural effusion.

The remaining 26 recommendations that were not performed were for repeat CXR (n=23), for 2 CT scans to investigate a possible hollow viscus perforation (n=1) and a lung opacity (n=1), and for cardiac ultrasound scan to further investigate possible pericardial effusion (n=1); see Figure 1.

Follow-up timeframe

Of the 108 reports with recommendations for further imaging, 29 reports (27%) included a specific timeframe within which the repeat imaging study (all were CXR) was to be performed. Twenty-six reports recommended repeat CXR in 4–8 weeks to check the resolution of consolidation. One recommendation was to repeat a CXR in 24 hours to ensure the resolution of a small pneumothorax, while 2 recommendations suggested repeat CXR in one week to clarify the progression or resolution of an opacity.

Discussion

Our results indicate that a sizeable proportion of the reports (24%) contain
recommendations which have not been carried out. While lower than other reported studies, not following-up on patients who may require further medical assessment is far from ideal. It is unclear as to what the underlying reason(s) are, some of which may not have even been documented by the referring team.

Our speculation is that it is likely to be multifactorial. The referring clinical team may have purposefully chosen to forego recommendations for follow-up CXR due to perceived futility. The traditional wisdom has been to repeat the CXR 4–8 weeks after community-acquired pneumonia to screen for underlying malignancy. However, newer studies and guidelines have cast doubt on the utility of such approach, except perhaps in patients 50 years and over. Moreover, patients may have undergone the follow-up radiological studies at a different facility, which could have been missed.

Further research is warranted in order to identify the proportion of clinical response to recommendations made in radiological reports of other modalities and the impact on patient outcomes. This, in turn, could be fed back to the reporting radiologists. It is also hoped that a repeat study in the future (ie, once the recommendations discussed have been implemented) is conducted, to see if there has been an improvement and if hurdles have been overcome.
LETTER

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