Radiographer Advanced Practice in Clinical Reporting
Quality assurance by continuous audit : a five year review

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Background

There is an extensive body of research which confirms that selectively trained radiographers can provide clinical reports on plain radiographs at a level equivalent to consultant radiologists[1,2].

Reporting radiographers contribute to the reporting workload thus helping to reduce report turn-around times and outsourcing costs. Reporting by radiographers also reduces demand on radiologist's time, freeing them to concentrate on more complex imaging examinations and procedures.

Peer review audit

Reporting radiographers practice must be substantiated by appropriate audit[3]. Peer-review can provide evidence of continued competence and provide important learning opportunities.

The RCR has set a goal of 5% peer review[4].
This poster presents the findings from five years of continuous peer review.

Methodology

The audit methodology is modelled on the work of Stephenson et al.[5] and the RCR[6] (Table 1).

Criterion	Audit Guideline
Frequency	Reports audited on a monthly basis
Number of reports reviewed	5% sample
Report selection	A random 5% sample of each reporting radiographer's caseload is generated using the Insignia PACS Patient explorer
Reviewer	Reporting radiographer/s on rotation with a consultant musculoskeletal radiologist as arbiter
Performance measure / standard	95% accuracy standard (accuracy = agreed reports / total number reviewed reports)
Results	Results are available on the reporting radiographer shared drive. Significant reporting discrepancies will be reviewed
Learning needs	Failure to achieve 90% or three consecutive months in which 95% is not achieved will require a review period of double reporting with a named radiologist until the required standard is consistently met. Furthermore, areas for improvement / additional training needs must be identified

Table 1. Peer review methodology

Measuring agreement

The evaluating radiographer reviews the images comparing their interpretation with the original verified report. Each case is assessed for agreement using criteria adapted from Robinson et al.[7] and the RCR[6] (Table 2).

Accordance	Description
No disagreement	This includes normal anatomical variants
Minor disagreement	Unreported insignificant / clearly irrelevant abnormality
Disagreement – "no clinical impact"	Unreported traumatic and non-traumatic pathology is marked as a disagreement with "no clinical impact" if it is unlikely to influence patient management
Disagreement – "clinical impact"	Unreported traumatic and non-traumatic pathology is marked as a disagreement with "clinical impact" if it is likely to influence / impact on patient management

**N.B. cases with no disagreement or minor disagreement were recorded as "agreed".*

Table 2. Agreement criteria

Results

Over the 5 year review period a total of 282,489 reports were produced by the Reporting Radiographer team. Of these 13,060 were peer reviewed (4.6%) and there was a mean sample accuracy of 99.7% (Figure 1). This meets the recommended benchmark standard for reporting accuracy of 95%[8]. Moreover, the standard was attained by all the reporting practitioners individually.

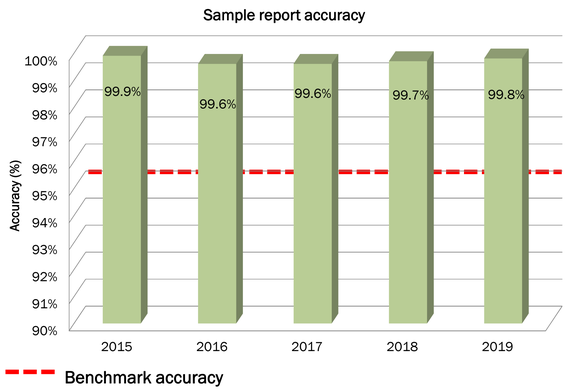

Figure 1. Sample Accuracy

Over the review period there were a total of 36 disagreements, 29 classified as "no clinical impact" and 7 classified as "clinical impact" with the potential to impact on patient management (Figure 2). On review none of these were found to have had a significant impact on patient management.

The overall volume of reporting by the radiographer team continues to increase year on year, thus reducing outsourcing (Figure 3).

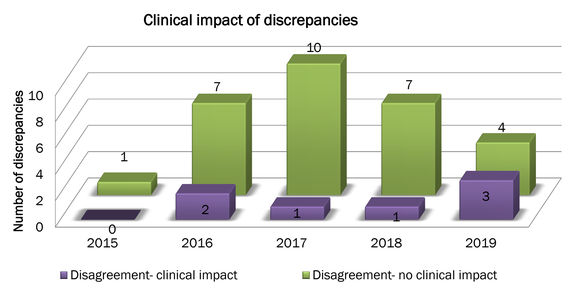

Figure 2. Discrepancy analysis

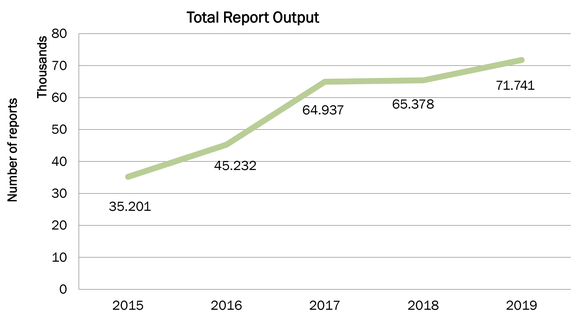

Figure 3. Report output

Follow up action

Any significant discrepancies identified are acted upon immediately according to local discrepancy procedures. Subsequently, the radiographer completes a 'personal reflection on discrepancy form'[9] and shares this with the team to allow personal and collective learning.

The team

The reporting team comprises of 9 Advanced Practitioner Radiographers (3.7 whole time equivalent) employed to provide clinical reports on musculoskeletal radiographs. The radiographers provide 7 day cover providing clinical reports for all referral sources and a 9-5 hot reporting service for A&E / minor injury referrals.

Conclusion and recommendations

The Reporting Radiographers make a significant contribution to unreported workload, thus improving report turn-around times and reducing outsourcing.

In the past 5 years, the team have demonstrated continued competency well above the threshold level and continue to develop and improve the service they provide.

Looking forward, the shared objectives are to continue to peer-review 5% of the reporting caseload, to initiate a system whereby a small proportion of peer-reviewed studies are reviewed by a consultant radiologist, and to participate in radiology discrepancy meetings.

References

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