Training reporting radiographers by continuous audit

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Introduction
- The demand for radiological investigations continues to rise³.
- Clinical radiology UK workforce census 2014 revealed 421 unfilled consultant posts and reported that 88% of UK radiology departments are unable to meet their current reporting requirements⁴.
- Radiologists are increasingly required for complex imaging and clinical multidisciplinary team (MDT) meetings.
- There continues to be a rising backlog of unreported radiological examinations.

Methodology
- Two potential reporting radiographers appointed (Radiographer 1, Radiographer 2).
- Reporting radiographers attend formal reporting training courses.
- Training radiographers issue reports (Radiographer 1 – musculoskeletal radiographs; Radiographer 2 – chest radiographs).
- All reports checked by a consultant radiologist and report content coded 1, 2, 3, 4, or 5 as above before amending (as required) and validating.
- Discrepancies reviewed monthly.
- Radiographers given the option to code uncertain cases '0' for automatic review by a consultant radiologist.

Standard
- Reporting radiographers discrepancy rate equivalent to that of radiologists.

Indicator
- Code 5: Complete agreement.
- Code 4: Disagreement over style and/or presentation of report, or failure to describe clinically insignificant feature(s).
- Code 3: Clinical significance of disagreement is debatable or likelihood of harm is low.
- Code 2: Definite omission/misinterpretation with strong likelihood of moderate morbidity but not threat to life.
- Code 1: Definite omission/misinterpretation with unequivocal potential for serious morbidity or threat to life.

Target
- > 85% code 4 & 5.
- < 3% code 3.
- < 1% code 1 & 2.

Aims and objectives
- To train radiographers to report plain radiographs and to audit their competence.
- Radiographers to be signed off for independent reporting once standard met consistently.

Methodology
- Code 5: 63% to 98% over 8 months. Code 3 fell from 9% to 2% over the same period. No reports coded 1 or 2.
- Radiographer 2: code 5 rose from 51% to 93% over 8 months. Code 3 fell from 10% to 4%. No reports coded 1 or 2.

Results of first audit round:
- Radiographer 1 & radiographer 2 abnormal cases: 2. Radiographer 2: code 5 rose from 37% to 94% over 5 months. No reports coded 1 or 2.
- Radiographer 1 uncertain cases: 1. Radiographer 1: code 5 rose from 0% to 1% over 5 months. No reports coded 1 or 2.

Results of second audit round:
- Radiographer 1 uncertain cases: codes 4 & 5 rose from 57% to 94% over 5 months. No reports coded 1 or 2.
- Radiographer 2: code 5 rose from 12% to 98% over 5 months. No reports coded 1 or 2.

Second action plan:
- Radiographer 1 & radiographer 2 to issue all reports if confident they are correct.
- Other reports to be provisionally reported and coded 0 for checking by a radiologist.
- 3 monthly audit of 50 random cases per radiographer by double-blind reporting.

First action plan:
- Radiographer 1 authorised to issue unchecked musculoskeletal reports unless uncertain (code 0).
- Radiographer 2 authorised to issue unchecked chest radiograph reports if no abnormality identified.

Conclusions and recommendation
- We have successfully improved & assessed the ability of our radiographers to independently report radiographs.
- This will reduce the backlog of unreported radiographs, leading to more timely patient diagnosis & management.
- Though validating training reporting radiographers initially demands a significant amount of a radiologist’s time, the subsequent increase in competent reporting capacity is of clear benefit to all involved.
- We plan to regularly re-audit radiographer reporting.

Limitations
- Small number of radiographers involved from one trust.
- Different radiologists potentially have different opinions regarding the grading of discrepancies.

Key points
- There continues to be large demands on radiology services with limited NHS resources.
- Reporting radiographers are capable of providing reports of equal standard to those of radiologists.
- Continuous audit and review of discrepancies results in increased competence of reporting radiographers.

References

The graphs below demonstrate no codes 1 or 2, falling discrepancies codes 3 and 4 and rising code 5 concordance.