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Outsourced Imaging Solutions - Meeting Increasing Exam Targets in the UK

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2004, the Department of Health (DH) in the UK announced a large increase in the numbers of diagnostic imaging examinations (mainly MRI) to be performed within the National Health Service (NHS). Despite recent increases in the numbers of radiographers and radiologists undergoing training, radiology is still perceived as a 'shortage specialty'. For this reason, the DH introduced twelve additional mobile MR units and their images were outsourced to groups of radiologists outside the NHS for reporting that had the capacity to handle what was originally 120,000 MR examinations per annum but is now rising to over 450,000 per annum. This paper highlights some of the challenges faced and solutions found during the first two-and-a-half years of operation, during which over 200,000 NHS examinations have been performed and reported by an Independent Sector Provider (ISP).

Service Delivery

Challenge

It proved complex to identify appropriate patients for such outsourced imaging. Because mobile MR systems were used, the patients had to be ambulant. Outsourcing often involves high volume simple procedures; this inevitably results in a more complex (and more expensive) case mix at static units. The identification of patients from within an existing waiting list took time and occasionally led to scheduling problems.

Solution

A centralised online booking system, with inbuilt checks/guidelines on the appropriateness of referrals, would be ideal. Such a system should embrace HIS, RIS and PACS and is currently being developed in the UK under the national programme called 'Connecting for Health'. Access to previous images and reports is essential for all those involved in providing imaging services, whether outsourced or not; this will become easier as PACS stores and electronic links develop.

Reporting

Challenge

The referring clinician did not 'know' the radiologist who provided the report and the report was often not in a familiar style. This led to numerous examinations being re-reported locally. Some complicated reports were received by general practitioners who could not determine whether the findings were serious/important or 'normal for age'.

Solution

Through improved communication, quality control and feedback to the outsourced radiologists, the reports became more acceptable to the referring clinicians. This necessitated extensive audit both within the ISP and also through independent audits. It is likely that such processes have been instrumental in developing more robust audits of all imaging examinations throughout the NHS.

Clinical Liaison

Challenge

The reporting radiologist did not meet the referring clinician to discuss urgent/interesting cases and obtain feedback. For practical reasons it was impossible for them to attend the all-important clinico-radiological and multidisciplinary meetings. Again this led to examinations being reviewed and re-reported by local radiologists.

Solution

A robust method was developed whereby the radiographer and the reporting radiologist were instructed to contact the referring clinician or organisation about urgent or clinically unexpected findings. However, geographic constraints prevent the attendance of the reporting radiologist at multidisciplinary meetings.

This may be addressed in the future by teleconferencing. The essential clinical interaction between local radiologists and referring clinicians has been recognised, with some funding being devolved to the local units for additional administration and secondary reporting.

Statutory Requirements

Challenge

Such a new venture raised many questions and issues regarding confidentiality and legislation.

Solution

In many ways these have been simpler to address for teleradiology within the EU than beyond. Some of the solutions can be found within the constructive joint statement prepared by the European Society of Radiology and UEMS (Radiology Section) statement on teleradiology, which contains many of the points raised in a UK Royal College of Radiologists publication. Reporting radiologists should be registered (and be on specialist register for radiology) with the appropriate medical regulatory body of the country of residence of all patients for which he/she provides reports; they must also have a proper knowledge of the language(s) of each member state of residence of all patients for which he/she provides reports (as required by the EU Qualifications Directive 2005). Likewise they should be subject to the same requirements regarding CME, EU Working Time Directive, revalidation, recertification and appraisal as local radiologists.

Results

Of the 250,000 MR examinations that have been performed under the UK NHS ‘First Wave’, relatively few life-threatening errors have come to light. Each has been subject to an intense inquiry and valuable lessons learnt. However there are no grounds for complacency and disagreements still occur. The technical quality of reports is judged on 5-point scale, along with the language/ terminology within the report and the overall clinical opinion offered. The same methodology is used as in the original RCR/DH audits - a 1-5 scale where 5 is perfect. This is in line with methodology used by the GMC for assessing the quality of radiological examinations.

• Technical quality of the examination; including anatomical coverage, the presence or absence of movement artefact, infolding artefacts, coil artefacts, etc.

• Language of the report; common use of terms, grammar, confusing spelling, etc.

• The clinical opinion of the report; 1 - major disagreement,

2 - moderate disagreement, 3 - minor disagreement,

4 - trivial difference of opinion, 5 – complete agreement.

This assessment should not only include the precise “accuracy” of the report but should also consider whether the clinical question has been properly handled/ addressed. It is perfectly possible for an entirely ‘accurate’ report to be misleading for the referring clinician. Examinations receiving clinical scores of 1 - 3, which imply a disagreement that may warrant an addendum to the original report, will need to be referred back to the original reporter.

Conclusions

Outsourcing is likely to increase in the future with more and more simple procedures being reported by large radiology groups capable of providing a timely high-volume service. Although there are perceived threats from such a service, ranging from training issues to potential downgrading of hospital-based radiology, outsourcing may allow highly-specialised radiologists more time to perform cutting-edge complex radiology and consultation with clinicians at multidisciplinary meetings. It can also free up machine time so that seriously ill patients can gain prompt access to MR.

Further Reading

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