Standards for the reporting of imaging investigations by non-radiologist medically qualified practitioners

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Faculty of Clinical Radiology
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RCR Standards

The Royal College of Radiologists (RCR), a registered charity, exists to advance the science and practice of radiology and oncology.

It undertakes to produce standards documents to provide guidance to radiologists and others involved in the delivery of radiological services with the aim of defining good practice, advancing the practice of radiology and improving the service for the benefit of patients.

The standards documents cover a wide range of topics. All have undergone an extensive consultation process to ensure a broad consensus, underpinned by published evidence where applicable. Each is subject to review four years after publication or earlier if appropriate.

The standards are not regulations governing practice but attempt to define the aspects of radiological services and care which promote the provision of a high-quality service to patients.

Current standards documents

Standards for the communication of radiological reports and fail-safe alert notification

Standards for providing a seven-day acute care diagnostic radiology service

Standards of practice and guidance for trauma radiology in severely injured patients, Second Edition

Standards for intravascular contrast administration to adult patients, Third edition

Standards for the provision of an ultrasound service

Standards of practice of computed tomography coronary angiography (CTCA) in adult patients

Cancer multidisciplinary team meetings – standards for clinical radiologists, Second edition

Standards for Learning from Discrepancies meetings

Standards for radiofrequency ablation (RFA), Second edition

Standards for patient confidentiality and PACS and RIS

Standards for patient consent particular to radiology, Second edition

Standards for the NPSA and RCR safety checklist for radiological interventions

Standards for the provision of teleradiology within the United Kingdom

Standards for a results acknowledgement system

Standards for providing a 24-hour diagnostic radiology service

Standards for providing a 24-hour interventional radiology service

Standards for Self-assessment of Performance

Standards for the Reporting and Interpretation of Imaging investigations

Standards for Ultrasound Equipment
Foreword

Previous standards documents relating to the reporting and interpretation of imaging investigations published by The Royal College of Radiologists (RCR) have provided standards for medically qualified doctors who are trained and accredited in radiology and for non-medically qualified role extended practitioners, for example suitably trained radiographers, to who the reporting of specified imaging investigations has been delegated by a radiologist.¹,²

This publication defines standards and best practice for radiologists, regulatory authorities, hospital managers and individual doctors regarding medically qualified non-radiologists who wish to interpret imaging investigations.

The RCR would like to thank its Clinical Radiology Faculty Board for considering these standards, its Professional Support and Standards Board for developing them and Drs Raman Uberoi and Mark Hamilton, for their help in the review of this document.

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The Royal College of Radiologists

Recommended standards

Standard 1
Every imaging investigation needs to be reported within an agreed time by an individual appropriately trained to interpret that particular investigation.

Standard 2
All imaging investigations need to be accompanied by a formal, permanently recorded report that covers the whole of the examination.

Standard 3
Commissioners, providers of healthcare and hospital trusts need to provide sufficient resources, in terms of radiologists, information technology (IT) and infrastructure, to achieve the standards outlined in this document.

Standard 4
Where interpretation of radiological investigations is delegated to non-radiologist medically qualified practitioners, hospitals and healthcare providers are jointly responsible for ensuring the expertise of the practitioners and for obtaining their agreement to provide a record of the result of each investigation.

Standard 5
All practitioners who interpret imaging investigations should include their name, professional status, grade, position and medical registration number when reporting an imaging investigation.³

Standard 6
There should be regular audit (at least once a year) of both unreported imaging investigations and of the time it takes for a report to be issued.⁴

Standard 7
Healthcare organisations should have mechanisms in place to support interim reporting of images by non-radiologist doctors in training and other non-radiologist consultants.
1. Introduction

In 2006, The Royal College of Radiologists (RCR) published *Standards for the reporting and interpretation of imaging investigations*.¹ This provides a useful background to and explanation of the relevant issues. Every imaging investigation needs to be reported within an agreed time by an individual appropriately trained to interpret that particular investigation.

This document deals specifically with medically qualified doctors who have not trained as radiologists and their role in image interpretation. Communications between the RCR, other disciplines, professional organisations, hospital trusts, regulatory authorities and health departments in all four UK countries strongly suggest that there is a lack of clarity that needs to be addressed. The first guidance document to deal with this area, *Standards and recommendations for the reporting and interpretation of imaging investigations by non-radiologist medically qualified practitioners and teleradiologists* was published in 2011 by the RCR and this is the first revision of that document (which has now been withdrawn).

Where imaging investigations require the use of ionising radiation, these standards are informed by *The Ionising Radiation (Medical Exposure) Regulations 2000 (IR(ME)R)*.¹ The principles underpinning these standards also apply to non-ionising radiation-based imaging investigations.

The General Medical Council’s (GMC) position regarding doctors who wish to practise medicine in the UK is clear; these standards are complementary to that stance.⁶

2. Reporting by appropriately trained individuals within agreed timeframes

**Standard 1**

Every imaging investigation needs to be reported within an agreed time by an individual appropriately trained to interpret that particular investigation.

When imaging investigations are requested, they are justified and then performed on the basis that the result will aid diagnosis and influence patient management. It follows that, in all cases, the resulting examination is reviewed by an individual appropriately trained to do so and in a timely manner so that appropriate medical management is undertaken and delayed diagnosis and treatment are avoided.

Radiologists are medically qualified, have completed a minimum two-year period in postgraduate medicine and surgery and have undergone a further minimum period of five years’ postgraduate training in imaging science, theory and interpretation. Therefore, for the majority of imaging investigations, the reporting is best carried out by radiologists or, where appropriate, by delegation to role-extended practitioners working in teams with radiologists.¹

Other professional groups do not share this depth and breadth of experience, training and ongoing support in clinical imaging.

3. Recording of reports

**Standard 2**

All imaging investigations need to be accompanied by a formal, permanently recorded report that covers the whole of the examination.

The report forms the permanent record of the interpretation of that imaging investigation on which management decisions are based. Therefore, it needs to be available as part of the permanent medical record of the patient. It is best practice that this report is displayed alongside the relevant image on a picture archiving and communication system (PACS) rather than being stored or recorded separately elsewhere. The content of this report should adhere to the standards laid out in *Standards for the reporting and interpretation of imaging investigations*.¹

Certain imaging investigations will cover body systems or parts outside the individual reporter’s expertise. Where the reporter is unable to report the whole of the examination it will need to be dual reported with an appropriately trained medical practitioner, who would usually be a radiologist.
4. Provision of resources

UK radiology departments should strive to achieve the standards outlined in this document, however, there is currently an insufficient number of radiologists in the UK to report all the radiological imaging investigations produced. The UK has fewer consultant radiologists per head of population compared to other European nations.

The UK currently has around 4.7 trained radiologists per 100,000 population, a figure that has remained more or less static over the past five years. Figures for comparable European nations include Germany 8.1, France 9.3, Sweden 10.8, Denmark 12.1 and Italy 16.0. As a result of this workforce shortage these standards cannot currently be achieved in many healthcare organisations.

Despite this, the RCR considers that healthcare organisations should provide appropriate resources to ensure timely reporting or reporting supervision of all imaging investigations by radiologists.

5. Interpretation of investigations by non-radiologist medically qualified practitioners

IR(ME)R 2000 provides for medically qualified non-radiologists to interpret imaging investigations relating to their field of expertise, as long as their employer has determined that the training of these individuals has included relevant image interpretation, and as long as such individuals also agree to make a written record of each investigation as outlined in standard 5. Such practitioners need to work in an environment where they have access to high-quality image display monitors that allow accurate reporting as per the radiology department reporting environment.

The responsibility for ensuring such individuals are sufficiently expert to interpret imaging investigations and agree to record the results of their interpretation rests with the hospital’s management and radiology leadership. However, ultimately the medical director remains responsible for the delegation of radiology services.

6. Identifying the reporter

In many UK healthcare organisations, the PACS is not linked to radiology information systems (RIS) outside radiology departments. Therefore, standard 2 may not be complied with where medically qualified non-radiologists have agreed to undertake the task of image interpretation. In these circumstances, the recording of results in clinical notes or letters is acceptable. There is increasing use of the electronic patient record (EPR) under IR(ME)R 2000 and this is an alternative to RIS–PACS reporting. Compliance with the standards outlined in this document should be audited as experience shows that if there is no record of the imaging interpretation, it may appear that the imaging investigation has not been viewed. When such imaging investigations contain significant findings, there may be very expensive and damaging medico-legal and patient care consequences.
7. Auditing unreported investigations and time taken for reports to be issued

**Standard 6**

There should be regular audit (at least once a year) of both unreported imaging investigations and of the time it takes for a report to be issued.4

This needs to form part of best practice within all radiology departments as an element of a patient safety program. Such audit will determine whose responsibility it was to record a report for each unreported imaging investigation and institute appropriate action to minimise the number of unreported examinations. Similarly, delays in reporting need to be remedied.

8. Mechanisms to support interim reporting by non-radiologists

**Standard 7**

Healthcare organisations should have mechanisms in place to support interim reporting of images by non-radiologist doctors in training and other non-radiologist consultants.

Imaging investigations are often initially interpreted by non-radiologist doctors in training or non-radiologist consultants whose interpretive expertise does not lie specifically in the imaging they have requested. Although radiologists need always to be available to give an urgent opinion when clinically required, there will be occasions when others will provide interim reports and a definitive radiologist report may be issued after an interval.

Specialist trainee doctors undergo examination and assessment of skills at regular intervals in their training. This will include elementary but escalating training in relevant image interpretation. It is for the relevant medical Royal Colleges to accredit their trainees and non-radiology consultants. The employing healthcare organisations should agree whether and to what level they can make diagnoses in emergency situations based on imaging.

Such considerations do not constitute the final or authorised report but are a ‘working impression’ of the examination, which will subsequently be reviewed by a suitably qualified individual (usually a suitably qualified radiologist or appropriately qualified and trained non-radiologist) who will provide a formal report.

It is for healthcare organisations to make sure there are enough consultant radiologists to provide a timely expert report and for radiology departments to make sure that this can be delivered at all appropriate times.

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References


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