

The Diagnostic Radiographer as the Entitled IR(ME)R Practitioner

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207 Providence Square
Mill Street, London
SE1 2EW, UK

020 7740 7200
info@sor.org

www.sor.org



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Background

This update considers the impact of The Ionising Radiation (Medical Exposure) (Amendment) Regulations 2024¹ which came into effect on 1 October 2024 for England, Wales and Scotland, and reflects practice changes since 2019.

The Ionising Radiation (Medical Exposure) Regulations 2017² and The Ionising Radiation (Medical Exposure) (Northern Ireland) Regulations 2018³ came into force on 6 February 2018 in accordance with the European Council Directive 2013/59/Euratom⁴. The Society of Radiographers (SoR) and the College of Radiographers (CoR) consider this a timely opportunity for employers (and radiography departments) to re-evaluate governance processes around the regulatory framework.

Both the Great Britain and Northern Ireland regulations¹⁻³ have the same requirement relating to duty holder responsibilities, therefore throughout this document these regulations will be jointly referred to as IR(ME)R.

IR(ME)R identifies four duty holders, each of whom has clearly identified responsibilities under the regulations: the Employer, Referrer, Practitioner and Operator. For the purpose of clarity in this document, these duty holders are represented by capitalised words in order to distinguish this role from an individual's job title. The Employer has a number of legal obligations including establishing a framework of **written procedures** (Regulation 6(1) / Schedule 2) and protocols under which the duty holders work, as well as entitling the duty holders for the tasks they may perform under IR(ME)R. The Employer is normally considered to be the Chief Executive Officer; however, the task of leading on IR(ME)R matters may be delegated to an alternative individual of sufficient seniority (e.g. at Board level). It is imperative that all duty holders know who the IR(ME)R Employer is for their area of practice.

The sole role of the **IR(ME)R Practitioner** is to justify a medical exposure (before it takes place) using the clinical information received by the Referrer (Regulation 11(b)). The SoR recognises that radiographers may already possess the skills to be entitled as a Practitioner within their individual scope of practice but also believes that many radiographers who think they are entitled IR(ME)R Practitioners for their practice are, in fact, probably acting as the IR(ME)R Operator using Authorisation Guidelines issued by an IR(ME)R Practitioner (Regulation 11(c)). The latter practice is relevant and supports a seamless patient journey but it is important that each radiographer recognises which duty holder role they undertake at each part of that journey, are fully aware of the tasks and responsibilities for each part, and can provide evidence of adequate training for each role.

Purpose of guidance

This SoR guidance illustrates the importance of proving “adequate training” according to Schedule 3 of IR(ME)R before a radiographer is entitled as an **IR(ME)R Practitioner**. It is not meant to be prescriptive as the responsibility for IR(ME)R compliance still rests firmly with the Employer. SoR is grateful to the IR(ME)R inspectorate team at the Care Quality Commission for bringing this issue to our attention. Although this guidance focuses on the radiographer role, the subject matter may also be useful for Employers before entitling any other healthcare professional (e.g. a radiology registrar). The guidance suggests standard minimum requirements for Employers to consider (and assess) before entitling an individual as a Practitioner under IR(ME)R. Having a standard enables service leaders to benchmark training and competencies for the purpose of IR(ME)R governance, compliance and assurance. The guidance establishes a baseline for development into a training framework which should also include more specific detail in relation to the area of practice and patient pathway concerned. It provides assurance to patients and referrers that the individual undertaking justification of the request for an investigation involving ionising radiation is adequately trained and competent to do so. Please note, the SoR and CoR understand that there is a wide variety of practice across the UK in the entitlement of radiographers and other individuals as IR(ME)R Practitioners. This guidance is meant to support practice for the benefit of the patient and not to hinder already effective and safe practice.

Guidance

The Employer must establish recommendations concerning referral guidelines and ensure these are available to the Referrer (Regulation 6(5)(a)). The Referrer must comply with the Employer’s procedures (Regulation 10(1)) and the Practitioner should recognise when a referral does not meet the referral guidelines or is not appropriate. For the purpose of IR(ME)R, the Practitioner is defined as a registered healthcare professional, within the meaning of section 25 (3) of the National Health Service Reform and Health Care Professions Act 2002(a)⁵.

It is important to clarify at this stage that the term IR(ME)R Practitioner is not to be confused with radiographer practitioner used to describe a job title or CoR Education and Career Framework level⁶. It is equally applicable to those working with ionising radiation in diagnostic and therapeutic radiography within the NHS and the independent sector.

Regulation 11 of IR(ME)R details the legal requirements around justification of individual exposures including the need for a Practitioner Licence when delivering nuclear medicine exposures. The IR(ME)R Practitioner should be able to show a net benefit referring to the following matters:

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- the specific objectives of the exposure and the characteristics of the individual involved
 - the total potential diagnostic or therapeutic benefits of the exposure, including the direct health benefits to the individual and the benefits to society
 - the individual detriment that the exposure may cause
 - the urgency of the exposure
 - the efficacy, benefits and risks of available alternative techniques having the same objective but involving no or less exposure to ionising radiation.

To perform the action of justification, the request for the exposure is assessed against the clinical data supplied by the IR(ME)R Referrer (Regulation 10(5)). The IR(ME)R Practitioner must have had adequate training and be competent to consider the potential detriment of the exposure against the potential benefits for that individual (Regulation 11 (1)(b)). The Employer must establish recommendations concerning referral guidelines and ensure these are available to the Referrer (Regulation 6(5)(a)). The Referrer must comply with the Employer's procedures (Regulation 10(1)) and the Practitioner should recognise when a referral does not meet the referral guidelines or is not appropriate.

The Employer should specify the scope of practice for which an individual can act as an entitled IR(ME)R Practitioner. The scope of practice should clearly define the range of procedures the individual is entitled to justify. Any exclusions should be clearly documented, for example minimum patient age or investigations involving contrast agents. It is important to note that justification of an exposure requiring the administration of contrast or other medicines does not constitute a prescription. Robust legal frameworks for the supply and administration of medicines must be in place⁷. It is the IR(ME)R Practitioner's responsibility (in conjunction with the IR(ME)R Operator) to ensure that the radiation dose to the patient is as low as reasonably practicable.

Adequate training to be an IR(ME)R Practitioner

Before entitlement is given, the Employer must ensure that IR(ME)R Practitioners have successfully completed training that includes, as a minimum, theoretical knowledge and practical experience relevant to the Practitioner's particular functions and area of practice, as detailed in IR(ME)R Schedule 3. Areas of training need only reflect the tasks that the duty holder will undertake.

The subject areas in Schedule 3, Table 1, as relevant to the IR(ME)R Practitioner role should be covered in adequate breadth and depth so that an individual may function optimally in their role. Schedule 3, Table 2, details areas of knowledge and training relevant to specific areas of practice (diagnostic radiology, radiotherapy and nuclear medicine). Pre-registration radiography education

and training will have provided entry-level professional education and practical training (Regulation 17(2)); however, there will be much scope for further development in many of these areas and there will be a clear need for supplementary training in some of them. Evidence of advancing practice should be considered by the Employer when determining an individual's capability to act as an IR(ME)R Practitioner⁶.

The SoR considers that an individual may be suitable for the role of the IR(ME)R Practitioner if they have the underpinning knowledge and skills to be able to perform an intellectual evaluation of sufficient net benefit, with due regard to risks of the intended exposure (the risk versus benefit analogy).

The SoR believes the skills to be an entitled IR(ME)R Practitioner should include knowledge of the biological and detrimental effects of ionising radiation associated with clinical imaging procedures – these include stochastic effects, such as cancer induction, and deterministic effects (or tissue reactions) such as skin burns and cataract formation. The IR(ME)R Practitioner must consider all suitable forms of imaging, decide on the most appropriate examination, and balance any risks against the benefits of any exposure.

When determining if an individual is adequately trained, the Employer should consider the individual's theoretical knowledge and practical experience, and be assured they are able to:

- Understand the clinical details, including all medical terminology, abbreviations, and anatomical and physiological references.
- Understand the clinical question and assess the most appropriate investigation.
- Understand if the investigation will impact the future management of the patient.
- Understand and consider appropriate alternative investigations that may or may not involve ionising radiation.
- Know when and how to communicate with the IR(ME)R Referrer if further clinical information is required.
- Understand and comply with the procedure for notifying the IR(ME)R Referrer of unjustified examinations.
- Understand how to access previous imaging, including thorough search mechanisms for relevant radiological investigations that may have occurred elsewhere.
- Understand the risks of the exposure to the patient⁸ and the method by which this is

communicated to the patient in line with the Employer's procedures (Schedule 2(i)).

- Ensure that the patient, where relevant, is provided with adequate information relating to the benefits and risks of the exposure before it takes place (Schedule 2(i)).
- Understand the potential risk to the patient of the investigation not being performed.
- Understand the patient's fitness to consent to, tolerate and comply with the procedure/treatment.
- Understand and comply with the Employer's procedures regarding correct identification and recording of the protocol that the IR(ME)R Operator is directed to follow.
- Collaborate with the IR(ME)R Referrer and Operator to ensure optimisation of the individual exposure, in accordance with the principle of 'as low as reasonably practicable' and consistent with the intended purpose.
- Identify, and pay special attention to, medical exposures falling under Regulation 11 (3) which include those involving:
 - » children
 - » health screening programmes
 - » carers and comforters
 - » asymptomatic individuals
 - » those in whom pregnancy cannot be excluded
 - » individuals who are breastfeeding and involve the administration of a radioactive substance

Before IR(ME)R Practitioner entitlement is given, an assessment of the aforementioned skills should be undertaken. Appendix I details a sample assessment that the SoR considers useful. The task of assessment, which should be undertaken by an entitled IR(ME)R Practitioner, may be delegated by the Employer to another but the responsibility for ensuring adequate training still rests with the Employer. It must be stressed that the assessment is not merely a set of listed competencies but recorded evidence of knowledge and understanding. If an individual is already accredited by the CoR for their scope of practice, and that accreditation is still current, then adequate training may already be assumed. This, however, does not mean that an assessment should not take place.

Entitlement by the Employer should be given to each individual in writing and should be clearly annotated in the Employer's procedures (Schedule 2(b)) whether as a group of professionals or as individual names. There is a requirement (Regulation 17(4)) for training records to be documented and available for inspection and this is especially pertinent as and when new technologies are implemented. Appendix II provides a link to a useful 'justification' flow chart, developed by the

International Society of Radiographers and Radiologic Technologists⁹.

The SoR considers that those individuals entitled to act as IR(ME)R Practitioners should undertake regular audit of their practice and ensure they continue to meet the standard required for their own professional development. The Employer should undertake regular audit of justification of exposures as part of a written quality assurance programme. The Royal College of Radiologists (RCR) audit template *Awareness of radiation risks by referrers and practitioners justifying radiological examinations*¹⁰ may be of value to Employers. IR(ME)R Practitioners should record and reflect upon discrepancies in line with Employer's procedures. Of course, scope of practice can and does evolve and should be assessed and updated regularly. There should also be a written procedure to follow if the IR(ME)R Practitioner does not meet the standard. The procedure should detail provision for re-assessment and implementation of a suspension period, if necessary.

Further information is available in the joint professional body guidance documents *IR(ME)R: Implications for clinical practice in diagnostic imaging, interventional radiology and diagnostic nuclear medicine*¹¹ and *Ionising Radiation (Medical Exposure) Regulations: Implications for clinical practice in radiotherapy*¹².

Appendix I

Sample Assessment – *adapted with kind permission from University Hospitals Coventry and Warwickshire NHS Trust*

The assessment could be undertaken in two parts: a discussion and a practical element. Both parts should ensure the development of evidence to include a measurement of relevant and current knowledge. It is further assumed that the individual will undertake continuing professional development relevant to their role and 'registration' status.

Part 1: Discussion

To involve a discussion with the assessor ensuring a deep knowledge of:

- all aspects of all clinical imaging examinations within the individual's scope of practice
- the relevant local referral guidelines with associated evidence base
- where to find previous imaging examinations
- when alternative examinations not using ionising radiation should be stipulated
- the theory of radiation dose and measurement
- the local Employer's procedures relevant to the IR(ME)R Practitioner role

Part 2: Practical

To involve a practical (with a pass mark of 80%) that includes:

- a review and audit of previous IR(ME)R Practitioner scenarios, including a range of ten previous clinical image requests and subsequent examinations to check that justification took place correctly (i.e. the image did answer the clinical question and did inform ongoing patient management). This review should detail the clinical question, the imaging modality and the patient's status. The range of examinations in this review should include aspects relevant to the individual's scope of practice (e.g. patient age, pregnancy status, etc).
- an assessment of 25 random request cards for the individual to justify (or not). These requests should include a range of clinical questions, types of examinations and patient conditions that are within the individual's scope of practice.

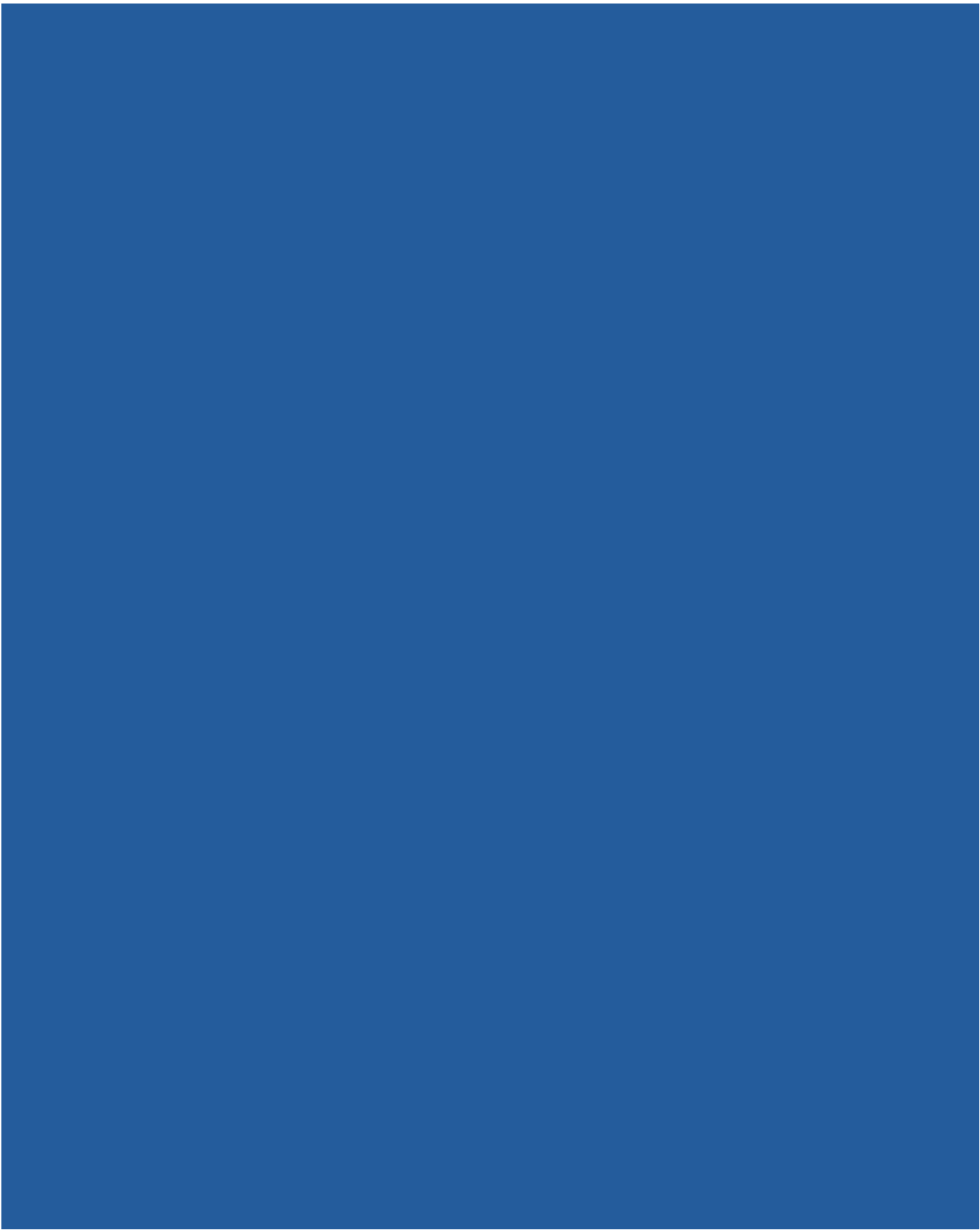
Appendix II

The International Society of Radiographers and Radiological Technologists have developed a [Justification flowchart](#) intended for use as a decision tool for radiographers/radiation technologists when considering the authorisation and justification of imaging procedures using ionising radiation.

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