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IR(ME)R Employers Procedures Dentistry

January 2024



# Introduction

## IR(ME)R

The Ionising Radiation [Medical Exposure] Regulations 2017 IR(ME)R govern the use of ionising radiation, including x-rays, in healthcare. The purpose of IR(ME)R is to minimise the risk to patients undergoing medical exposures. A requirement of IR(ME)R is that the Employer puts in place written Employer’s Procedures [EP] for Referrers, Practitioners and Operators to ensure that radiation is used safely and appropriately.

## Example Employers Procedures

This document contains a set of example Employer’s Procedures to adapt for use. The aim is to standardise practice and ensure that all duty holders are working to the same standards. The example Employer’s Procedures provided here, and their appendices, are intended as a guide only, to demonstrate the variations and areas of practice which need to be considered when writing IR(ME)R Employer’s Procedures and should be regarded as an expression of professional opinion rather than an absolute statement on the legal position. While attempts have been made to ensure they are comprehensive, there will always be local variations, which must be taken into account.

## How to use the example Employer’s Procedures

NHS Dental Practices/Independent Clinics should adapt and complete the example Employer’s Procedures provided in this document and include these in their Radiation Protection File. All of the suggested examples and text must be carefully adapted to ensure they match local ownership and operational practice.

It is intended that each case of *red italics []* should be adapted to reflect practice. In Employer’s Procedures 14 and 15 there are options for practices/independent clinics that do research and/or non-medical imaging respectively. Please complete the section that applies and delete the text that is not relevant.

|  |  |
| --- | --- |
| EP1 Entitlement of Duty Holders | [Name of NHS Dental Practice/Independent Clinic] |

In *[insert* *NHS Dental Practice / Independent Clinic Named person or Employer]* is responsible for entitling people as IR(ME)R duty holders on behalf of the Employer. *[insert named person]* is responsible for deciding whether the evidence presented is sufficient for each individual to be entitled in the role of Practitioner, Operator, and/or Referrer for dental exposures.

The Employer maintains a record of the qualifications, experience and training required for each duty holder role EP1 [Appendix 1](#_Appendix_1). A range of tasks are agreed which is appropriate to the competence of the individual and supported by verifiable training and experience, and this defines the duty holder’s scope of practice. This is captured in an entitlement certificate, which is signed by [insert named person], and the duty holder.

### Entitlement of Dental Advisors ***[please delete this section if not applicable to your Dental Practice/Independent]***

In this NHS Dental Practice *[insert* *named person or Employer*] entitles Practitioner Services Division (PSD) senior dental advisors and orthodontic advisors to refer for further imaging if they identify a clinical need on review of submitted images. The assurance of competence and training of the senior dental advisors is provided by the National Services Scotland (NSS) Dental Director.

### Competence

Competence is assessed for each Practitioner and Operator by an appropriately trained person. An up-to-date record is kept of agreed qualifications, experience and training required for individuals to perform the roles of duty holders for all types of dental exposures [Appendix 2](#_Appendix_2) and [Appendix 3](#_Appendix_3)

**For NHS Dental Practices / independent clinics with multiple sites, it may be appropriate for the Lead Person at each site to assess their staff’s competence and then provide this information to the Employer or named person for entitlement.**

### Medical Physics Expert

The Medical Physics Expert (MPE) is entitled in writing on appointment. They should only be appointed if they are adequately trained and competent for this specific role and are listed on the RPA 2000 register <https://www.rpa2000.org.uk/list-of-certificate-holders/>. Medical Physicists/Technologists may also be entitled as Operators for the purposes of radiation safety surveys or equipment testing and their training records must be provided to the Employer on request.

|  |  |
| --- | --- |
| EP2 Referrals for Dental Exposures | [Name of NHS Dental Practice/Independent Clinic] |

The *[referral]* criteria used at *[NHS Dental Practice/Independent Clinic]* are *[the Faculty of General Dental Practice ‘Selection Criteria for Dental Radiography’]* and copies of this document are made available to the Referrers *[in each room/on the intranet/personal copy]*. A document, which includes information about typical effective dose to the patient, is available *[in the practice/clinic on paper/ on each surgery computer/intranet].*

### When the Referrer is also the Practitioner and Operator

Where the Referrer also acts as the Practitioner and Operator for a dental exposure, they must only refer within their scope of practice as defined in their entitlement documentation. The request for the radiograph must be documented within the patient’s *[dental record/electronic record]*. Within this record the clinical indications for the radiograph should be clear, fit with the referral criteria, and the Referrer must be identifiable.

### Referring to another NHS Dental Practice/Independent Clinic, hospital or the public dental service

If a referral to carry out the dental exposure is made to an external site, then it must be within the Referrer’s defined scope of practice, completed clearly, consistent with the most recent FGDP guidance and in line with the external site’s procedures.

The essential information required is:

* Patient’s full name, date of birth and address
* Dental exposure requested
* Sufficient clinical information relevant to the dental exposure requested, such as previous diagnostic information or dental records
* Signature of Referrer
* Name of Referrer (printed)
* Date of referral
* Patient contact telephone number (if relevant and available)

|  |  |
| --- | --- |
| EP3 Justification and Authorisation | [Name of NHS Dental Practice/Independent Clinic] |

### Justifying an Exposure

Justification should be carried out prior to the exposure. When justifying an exposure, the Practitioner must consider the following:

* The clinical justification for the exposure
* The risks posed by exposure to radiation
* The risk versus benefit of the equipment selected, for example the higher dose of Cone Beam CT (CBCT) or panoramic imaging is not justified when an x-ray would provide adequate diagnostic information, and
* Whether an alternative option, which does not use radiation, would deliver the same diagnostic information.

If the Practitioner is aware, at the time of justification, that a recorded clinical evaluation will not result from the exposure, then the exposure must not be authorised and cannot take place.

### Recording the Justification

If one person is acting as entitled Referrer, IR(ME)R Practitioner and Operator, the Referrer’s *[signature/ electronic personal code/personal login]* in the clinical notes next to the request for a radiograph will demonstrate authorisation of the exposure.

### Special Circumstances

It is recognised that in some specific exceptional circumstances, it may not be feasible for a Practitioner to carry out justification in advance of an exposure, such as an unplanned radiograph due to a complication mid-procedure. Should this situation arise then the Practitioner justifying the exposure should be aware and involved in the examination. Additionally, a record of authorisation and the reason why prior authorisation was not possible should be made as soon as possible within the same episode of care.

# Glossary

**Diagnostic reference level [DRL] -** Radiation dose levels, or administered activity, for typical diagnostic examinations on standard size adults and children for broadly defined types of equipment.

**Employer -** The employer, as a duty holder, is responsible for providing a framework within which professionals undertake their functions. The definition of employer relates to health and safety functions rather than employment matters.

**Entitlement -** This is the process of verifying that the duty holder has the necessary training and competencies to undertake the task as defined in their scope of practice.

**Justification -** An intellectual process of weighing up the potential benefit of an exposure against the detriment from the radiation dose received by that individual.

**Operator -** Any person who is trained and entitled to carry out the practical aspects of an exposure.

**Practitioner -** A registered healthcare professional who is entitled to take responsibility for an individual exposure. The primary role of the practitioner is to justify and authorise exposures.

**Referrer -** A registered healthcare professional who is entitled to refer individuals for exposures involving ionising radiation. In Northern Ireland, this also includes medical practitioners registered with the Medical Council of Ireland

These definitions are from the Royal College of Radiologists. Further definitions can be found at - <https://www.rcr.ac.uk/media/mmab2tga/rcr-publications_ir-me-r-implications-for-clinical-practice-in-diagnostic-imaging-interventional-radiology-and-diagnostic-nuclear-medicine_june-2020.pdf>

# Appendix 1

### EP1: Example of qualifications, experience and training required for each duty holder

|  |  |  |
| --- | --- | --- |
| **Registrant Group** | **IR(ME)R Duty Holder** | **Qualifications/Training/Experience required** |
| Dentist | Referrer | Registration with GDC and undergraduate dental degree with additional training if requesting CBCT |
| Practitioner | Registration with GDC and undergraduate dental degree |
| Operator | Undergraduate dental degree and local equipment training |
| Dental Hygienist or Dental Therapist | Referrer | Registration with GDC and undergraduate degree in oral health science or diploma in dental therapy or dental hygiene, with additional skills development\* |
| Practitioner | Registration with GDC and undergraduate degree in oral health science or diploma in dental therapy or dental hygiene, with additional skills development\* |
| Operator | Undergraduate degree in oral health science or diploma in dental therapy or dental hygiene, with additional skills development\* and local equipment training |
| Dental Nurse | Operator | Diploma or Certificate in Dental Nursing, Certificate in Dental Radiography\*\* and local equipment training |
| Medical Physics Expert | Operator | Science degree or equivalent  Experience in the application of physics, within dental use of ionising radiation  Recognised by an assessing body, such as RPA 2000, deemed suitable to assess competence by the Department of Health and Social Care [www.rpa2000.org.uk/mpe-recognition-scheme/]  Clear appointment to this role |
| Medical Physicist/Technologists | Operator | *Appropriate qualification* |

\* Dental hygienists and dental therapists may carry out Referrer, Practitioner and Operator duties if the duties are within their scope of practice, training and experience. If appropriate training for any duty was not included in their degree or diploma training, additional post-qualification skill development is required [e.g. for the justification, authorisation and clinical evaluation of radiographs]. A dentist may be required to report on the entire radiograph for aspects that would not be within the scope of practice of a dental hygienist or therapist. \*\* A Certificate in Dental Radiography is required if a dental nurse takes radiographs without supervision.

# Appendix 2

### EP1 Example competencies for entitlement as a duty holder under IR(ME)R at [insert name NHS Dental Practice/Independent Clinic]

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Name [NHS Dental Practice/Independent Clinic:]*** | | | |  | | | | | | |
| **Name of Duty Holder:** |  | | | | **Job Title:** |  | | | | |
| **Qualification[s] and date obtained:** | | |  | | | | | | | |
| **Registration Number:** | | | | | **Date last checked:** |  | | | | |
| **Referrer tasks** | | | | | **Assigned as competent [**Date & signature/initials of duty holder] | | | | | |
| Refer for all dental exposures [excluding CBCT] | | | | |  | | | | | |
| Refer for Cone Beam CT dental exposures | | | | |  | | | | | |
| **Practitioner tasks** | | | | | **Assigned as competent [**Date & signature/initials of duty holder] | | | | | |
| Competent to justify requests for all dental exposures | | | | |  | | | | | |
| Competent to justify requests for Cone Beam exposures | | | | |  | | | | | |
| **Operator tasks** | | | | | | | **In training**  Date & signature/initials of duty holder and assessor | | | **Assigned as competent**  Date & signature/initials of duty holder and assessor |
| Competent to carry out patient identification | | | | | | |  | | |  |
| Competent to undertake all intraoral exposures | | | | | | |  | | |  |
| Competent to undertake Pan/Lat Ceph exposures | | | | | | |  | | |  |
| Competent to undertake Cone Beam CT exposures | | | | | | |  | | |  |
| Competent to process digital images | | | | | | |  | | |  |
| Competent to process dental films | | | | | | |  | | |  |
| Competent to change chemicals in a dental processor | | | | | | |  | | |  |
| Competent to clinically evaluate dental exposures [except CBCT] undertaken at practice | | | | | | |  | | |  |
| Competent to clinically evaluate dental exposures [except CBCT] undertaken outwith the practice | | | | | | |  | | |  |
| Competent to clinically evaluate Cone Beam CT dental exposures | | | | | | |  | | |  |
| Competent to carry out quality assurance on equipment | | | | | | |  | | |  |
| **Entitled by:** | | *[Insert name of Entitler]* | | | | | | **Date:** | *[Insert date]* | |
| **Signature of duty holder:** | | *[Insert name of duty holder]* | | | | | | **Date:** | *[Insert date]* | |

# Appendix 3

### EP9 Example Training Records

|  |  |  |
| --- | --- | --- |
| ***Name [NHS Dental Practice/Independent Clinic:]*** | |  |
| **Name of duty holder:** | |  |
| **Job title:** | | *e.g. Dental Nurse* |
| **Entitlement:** | | *e.g. Operator* |
| **Training reviewed by:** |  | |
| **Date:** |  | |
| **Next training review due:** |  | |

**External Training**

|  |  |  |
| --- | --- | --- |
| **Type of training** | **Qualification** | **Date** |
| *e.g. Dental Nurse training including radiography* | *Certificate in Dental Nursing* |  |
| *e.g. CPD training on radiation protection* |  |  |
|  |  |  |
|  |  |  |

**In-house training (if applicable)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Site/Room/Equipment** | *e.g. Glasgow Dental Practice, Exam room 2, Intra oral machine* | | | |
| **Task** | |  | **Trainer initials** | **Date** |
| Switch x-ray equipment on and off | |  |  |  |
| Aware of exposure charts and protocols | |  |  |  |
| Can select appropriate exposure factors | |  |  |  |
| Undertake an intra oral dental exposure | |  |  |  |
| Use rectangular collimation | |  |  |  |
| Emergency procedure for equipment failure | |  |  |  |
| Complete room log including exposure factors/dose when appropriate | |  |  |  |
| **This person has received training on the above tasks** | | | | **Date** |
| Signature of trainer |  | | |  |
| Name of trainer |  | | | |
| Signature of duty holder |  | | |  |
|  |  |  |  |  |
| **Site/Room/Equipment** | *e.g. Glasgow Dental Practice, Exam room 2, Desktop processor* | | | |
| **Task** | |  | **Trainer initials** | **Date** |
| Switch x-ray equipment on and off | |  |  |  |
| Process a film | |  |  |  |
| Clean processor | |  |  |  |
| Change chemicals in processor | |  |  |  |
| Processor QA | |  |  |  |
| **This person has received training on the above tasks** | | | | **Date** |
| Signature of trainer |  | | |  |
| Name of trainer |  | | | |
| Signature of duty holder |  | | |  |
|  |  |  |  |  |
| **Site/Room/Equipment** | *e.g. Glasgow Dental Practice, Exam room 2, Desktop processor* | | | |
| **Task** | |  | **Trainer initials** | **Date** |
| Switch x-ray equipment on and off | |  |  |  |
| Process a film | |  |  |  |
| Clean processor | |  |  |  |
| Change chemicals in processor | |  |  |  |
| Processor QA | |  |  |  |
| **This person has received training on the above tasks** | | | | **Date** |
| Signature of trainer |  | | |  |
| Name of trainer |  | | | |
| Signature of duty holder |  | | |  |
|  |  |  |  |  |
| **Site/Room/Equipment** | *e.g. Glasgow Dental Practice, Exam room 2, Desktop processor* | | | |
| **Task** | |  | **Trainer initials** | **Date** |
| Switch x-ray equipment on and off | |  |  |  |
| Process a film | |  |  |  |
| Clean processor | |  |  |  |
| Change chemicals in processor | |  |  |  |
| Processor QA | |  |  |  |
| **This person has received training on the above tasks** | | | | **Date** |
| Signature of trainer |  | | |  |
| Name of trainer |  | | | |
| Signature of duty holder |  | | |  |
|  |  |  |  |  |
| **Site/Room/Equipment** | *General* | | | |
| **Task** | |  | **Signature of duty holder** | **Date** |
| Familiar with the responsibilities and processes described in the Employer’s Procedures and Local Rules | |  |  |  |
|  |  |  |  |  |