

Radiation Protection

IR(ME)R 2017/2018 Update for DXA

Jill Griffin, Professional Education Lead
Royal Osteoporosis Society

Radiation Protection- regulatory requirements in DXA

- Ionising Radiation Regulations 2017 (IRR 2017)
- Ionising Radiation Regulations (Medical Exposure) Regulations 2017, 2018 NI (IR(ME)R 2017) (IR(ME)R 2018 NI)



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Radiation Protection- regulatory requirements in DXA

IRR 2017

- HSE
- Safety of staff and public

IR(ME)R 2017

- CQC
- Safety of patients and carers

IR(ME)R 2017

- CQC
- Safety of patients and carers

STATUTORY INSTRUMENTS

2017 No. 1322

HEALTH AND SAFETY

The Ionising Radiation (Medical Exposure) Regulations 2017

Made
Laid before Parliament
Coming into force

20th December 2017

The Secretary of State, being the Minister designated⁽¹⁾ for the purposes relation to safety measures in regard to radioactive substances and the emis that section and by section 56 of the Finance Act 1973⁽³⁾, makes the follo Authority) are made with the consent of the Treasury.

Citation and commencement

1. These Regulations may be cited as the Ionising Radiation (Medical Ex 2018.

Interpretation

2.—(1) In these Regulations—

“accidental exposure” means an exposure of an individual as a n “adequate training” means training which satisfies the requireme be construed accordingly;

“assessment” means prior determination of amount, parameter o

“carers and comforters” means individuals knowingly and willing than as part of their occupation, in the support and comfort of inc

“clinical audit” means a systematic examination or review of me and outcome of patient care through structured review, where examined against agreed standards for good medical radiologi and the application of new standards if necessary;

“diagnostic reference levels” means dose levels in medical radi of radio-pharmaceuticals, levels of activity, for typical exami phantoms for broadly defined types of equipment;

Employer's duties: establishment of general procedures, protocols and quality assurance programmes

6.—(1) The employer must ensure that written procedures are in place in respect of—

- (a) those matters described in Schedule 2; and
- (b) any other matter in relation to which these Regulations mandate the establishment of procedures.

(2) The employer must take steps to ensure that any written procedures are complied with by the referrer, practitioner and operator.

(3) The employer must take steps to ensure that every practitioner or operator engaged by the employer to carry out exposures or any practical aspect—

- (a) complies with the provisions of regulation 17(1); and
- (b) undertakes continuing education and training after qualification including, in the case of clinical use of new techniques, training related to those techniques and the relevant radiation protection requirements.

(4) The employer must ensure, where appropriate, that written protocols are in place for every type of standard radiological practice coming within these Regulations, including practices involving non-medical imaging.

(5) The employer must—

- (a) establish recommendations concerning referral guidelines for medical exposures, including radiation doses, and ensure that these are available to the referrer;
- (b) establish quality assurance programmes for written procedures and written protocols;
- (c) regularly review and make available to an operator, diagnostic reference levels in respect of an exposure falling within—
 - (i) regulation 3(a)—
 - (aa) where the exposure involves interventional radiology procedures, in which case, diagnostic references levels are to be provided where appropriate; and
 - (bb) where the exposure does not involve interventional radiology procedures, in which cases regard must be had to European and national diagnostic reference levels where available;
 - (ii) regulation 3(b) or (e) in which cases regard must be had to European and national diagnostic reference levels where available;
 - (iii) regulation 3(f) where practicable;
- (d) establish dose constraints—
 - (i) for biomedical and medical research programmes falling within regulation 3(c) where no direct medical benefit for the individual is expected from the exposure; and
 - (ii) with regard to the protection of carers and comforters falling within regulation 3(d).

(6) A dose constraint must be established by the employer in terms of individual effective or equivalent doses over a defined appropriate time period.

https://www.rcr.ac.uk/system/files/publication/field_publication_files/ir-mer-implications-for-clinical-practice-in-diagnostic-imaging-interventional-radiology-and-nuclear-medicine.pdf

IRMER 2017 – definition of “medical exposure”

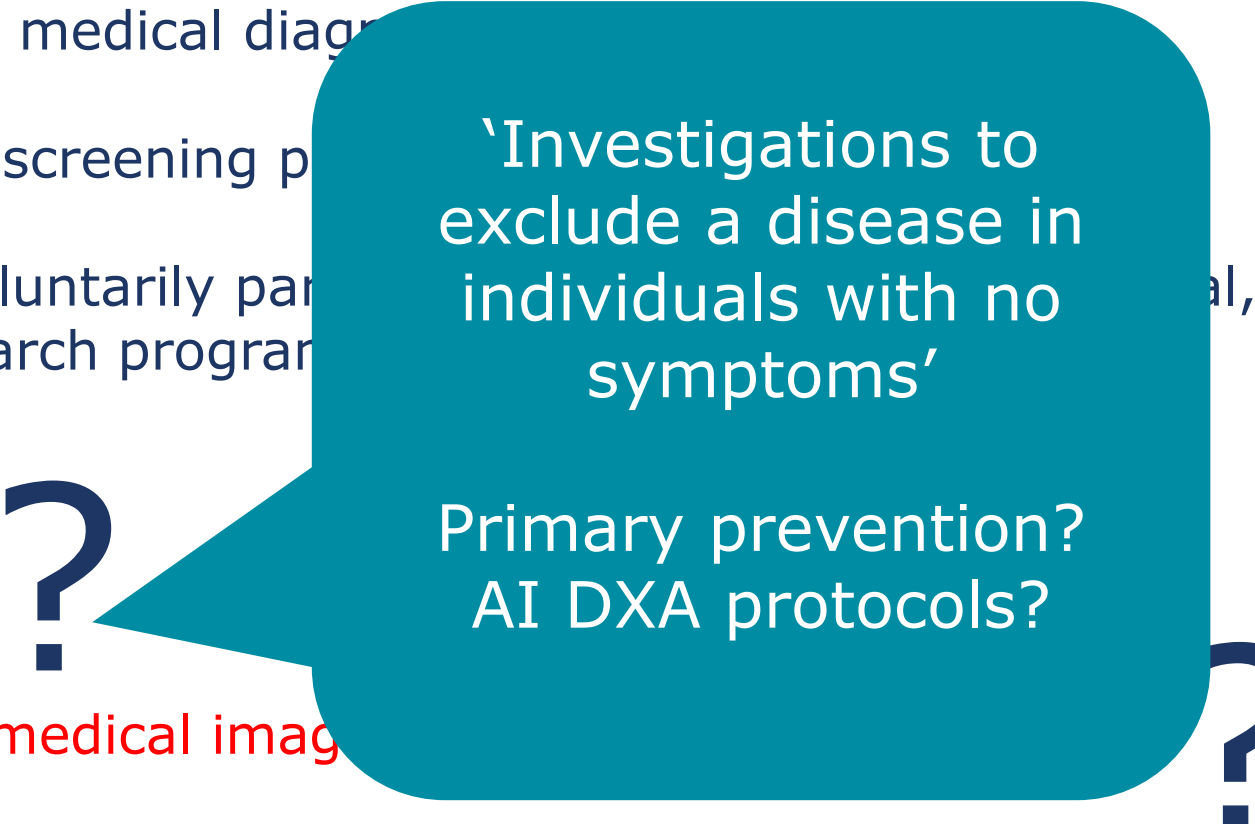
- to patients as part of their own medical diagnosis or treatment;
- to individuals as part of health screening programmes;
- to patients or other persons voluntarily participating in medical or biomedical, diagnostic or therapeutic, research programmes;

IRMER 2017 – definition of “medical exposure”

- to patients as part of their own medical diagnosis or treatment;
- to individuals as part of health care;
- to patients or other persons voluntarily undergoing medical, or biomedical, diagnostic or therapeutic, research or other medical procedures;
- to carers and comforters;
- to asymptomatic individuals;
- to individuals undergoing non-medical imaging using medical radiological equipment.

NEW!!!!

IRMER 2017 – definition of “medical exposure”

- to patients as part of their own medical diagnosis
 - to individuals as part of health screening programme
 - to patients or other persons voluntarily participating in diagnostic or therapeutic, research programme
 - to carers and comforters;
 - to asymptomatic individuals;
 - to individuals undergoing non-medical imaging equipment.
- 
- ‘Investigations to exclude a disease in individuals with no symptoms’
- Primary prevention?
AI DXA protocols?

IRMER 2017 – definition of “medical exposure”

- to -Health assessment for employment, immigration or insurance purposes,
- to -Radiological age assessment
- to -Identification of concealed objects within the body
- to di Body composition DXA for Sports performance monitoring?
- to asymptomatic individuals; ?
- to individuals undergoing non-medical imaging using medical radiological equipment. ?

IRMER 2017 – Requirements in a service

IR(ME)R 2017

- CQC
- Safety of patients and carers

- All medical radiological facilities will be subject to Registration
- Employer must- establish **Employers procedures** (EP) & QA programmes
- Adequate training- theoretical and practical experience relevant to their role and scope of practice.

- CQC
- Safety of patients and carers

- ## Employers procedures

- Identification (pt)
- Entitlement (referrer, practitioner, operator)
- Pregnancy
- QA programme
- Pt dose
- DRL
- Dose constraints
- Research
- Consent
- Recording dose
- Reporting accidental exposure
- Non-medical imaging
- Dose for carers and comforters

IR(ME)R- Duty holder roles-

- Entitlement in Employers Procedures

- Referrer
- Practitioner
- Operator

IR(ME)R- Duty holder roles

- Referrer- requests the test
- Practitioner
- Operator

IR(ME)R- Duty holder roles

- Ref
- Prac
- Ope



IR(ME)R- Duty holder roles

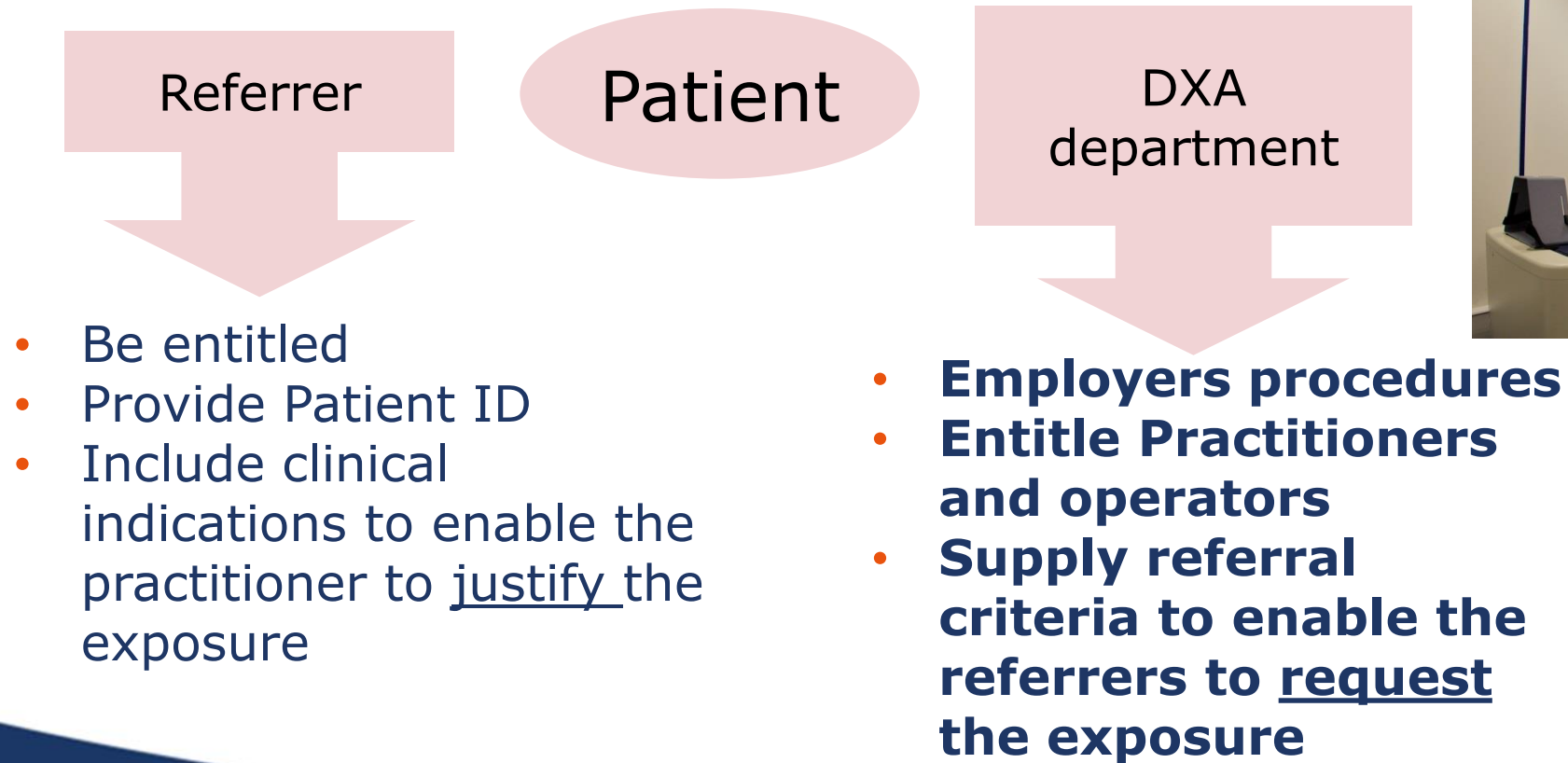
- Referrer- requests the test
- Practitioner- justifies the test
- Operator

IR(ME)R- Duty holder roles

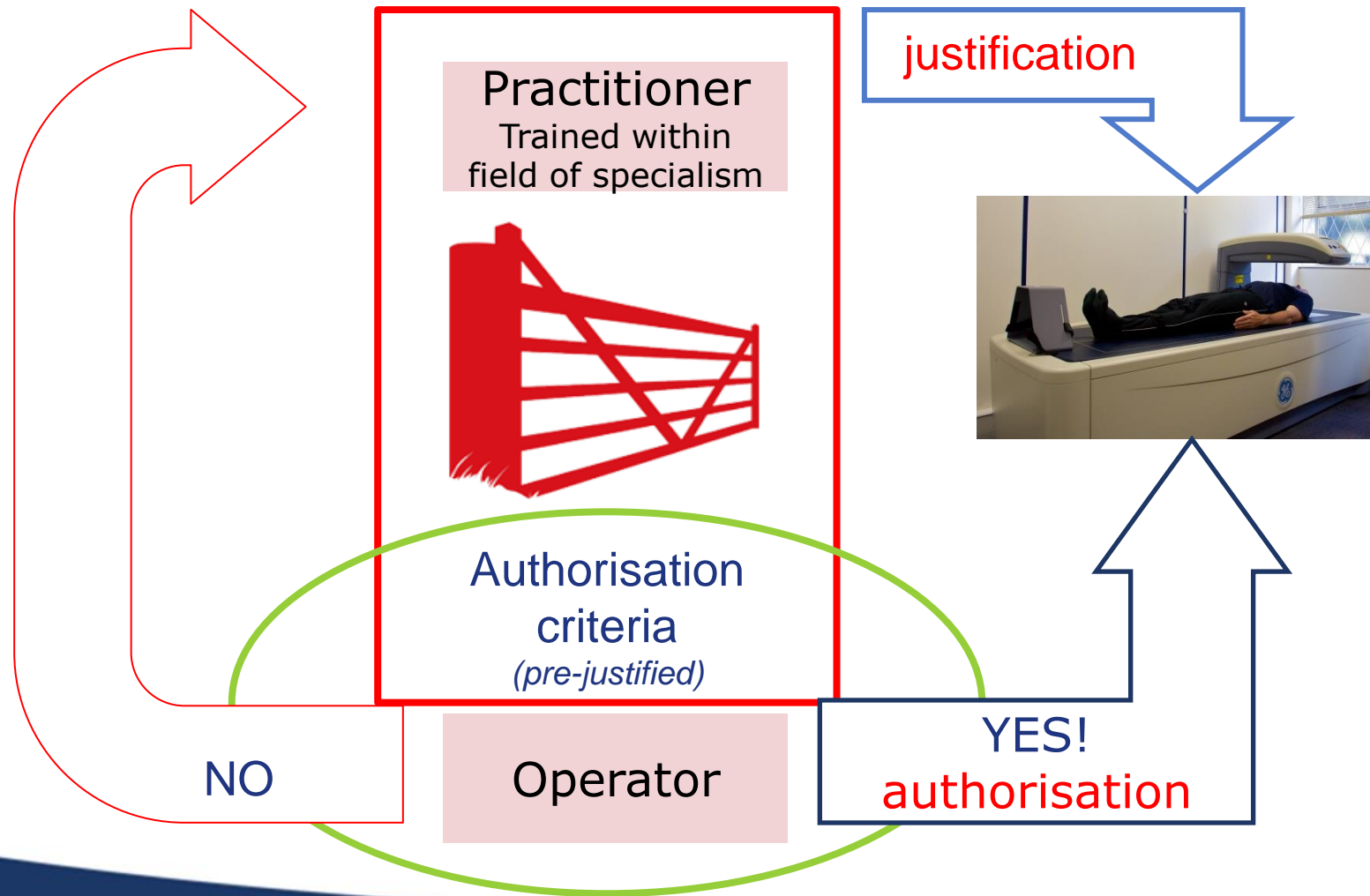
- Referrer- requests the test
- Practitioner- justifies the test
- Operator – performs or reports the test

IR(ME)R roles

Justification/Authorisation



Justification 'v' Authorisation



IRR

Record of staff involved in DXA service and list of roles

Radiation risk assessments

Local rules for bone densitometry

Appointment of a Radiation Protection Supervisor

Personal protective equipment records

Designation of a controlled or supervised area

Training records of DXA operators

Equipment handover procedure

IR(ME)R

Referrer provision of relevant clinical information about the patient

Provision of referral criteria

Reporting the DXA scan

Confirmation of patients identity

Provision of protocols for justification and authorisation

Confirmation of pregnancy status of patients

Obtaining consent from patient

Investigation of incidents of over or unintended exposure

Making the actual exposure

Assessing radiation risk to carers and comforters

IR(ME)R responsibilities

Role	Responsible for	Might do practically
Employer	<ul style="list-style-type: none"> Ensuring the provision of Procedures under IR(EM)R Ensuring the provision of referral criteria Ensuring the provision of protocols for QA Ensuring the provision of protocols for justification and authorisation Investigate incidents of over or unintended exposure 	<ul style="list-style-type: none"> Entitling of referrers, practitioners and operators Sign off of written procedures and policies
Practitioner	<ul style="list-style-type: none"> Justification of exposures 	<ul style="list-style-type: none"> Writing employers procedures Writing referral criteria Writing protocols for justification and authorisation Authorisation of exposures Writing protocols for QA Investigating incidents of over or unintended exposure Making actual exposure
Referrer	<ul style="list-style-type: none"> Providing clinical information about a patient for justification 	
Operator	<ul style="list-style-type: none"> Making actual exposure Confirming patients ID Confirming pregnancy status of patients Reporting the scan 	<ul style="list-style-type: none"> Writing protocols for QA <i>Authorising</i> exposures under protocol

IR(ME)R Compliance Evidence

Auditing:

- Entitlement- referrer
- Clinical information- authorisation criteria
- Authorisation/ justification
- Patient ID
- Patient pregnancy
- Dose

Any hospital DXA referral	
Patient name: DOB: Hosp number: Address:	Referrer name: GMC number: Surgery/dept: SIGNATURE & date:
Clinical indications for DXA:	
Dept. use only	
Authorised by: Initials: Date:	ID by: Patient not pregnant: Initials: Scan dose: Date:

Your ROS team.....

Mayrine Fraser– Service Improvement Lead



Mayrine.fraser@theros.org.uk

Jill Griffin– Professional Education Lead



Jill.Griffin@theros.org.uk

Find us online at: theros.org.uk

Follow us:  **@RoyalOsteoPro**

