Title of Document:	IR(Me)R procedure (E) - The assessment of patient dose and administered activity
Directorate:	RADIOLOGY DIRECTORATE

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Individuals involved in developing / reviewing / amending this document: (titles only)	
Key staff responsibilities	Post:
To record dose information, report incidents	Operators
Incident dose assessment, dose systems calibration	Medical physics expert
Arrange dose monitoring programmes.	QA co-ordinator

In-line with regulation 6 schedule 2 (e) requirements within IRMER 2017, the purpose of this procedure is to enable assessment of patient dose for any medical exposure including accidental or unintended.

This procedure applies to all medical exposures within Radiology, Cardiology and Interventional.

Practice

The Practitioner:

- Justifying an exposure should have knowledge of the radiation risks and associated patient dose for the given examination and should be aware of their responsibility in keeping patient dose to a minimum.

The Operator:

- Will report any exposures resulting in 5 times the LDRL with no obvious explanation (e.g. Patient habitus) to the nominated area lead. The nominated area lead is listed in the weekly Rota.
- Operators must record the dose quantity as described further below for each patient record in RIS.

Dose Recording

Details MUST be recorded on the Radiology Information System (RIS)

Details for ALL Radiology examinations should include:

- Patient Identifiable Details
- Examination room number
- Type of examination (with enough anatomical detail to cross reference exposures to room exposure charts, protocols etc.)

For each modality please also see relevant required information in the appropriate section below:

Plain film/Dentals:

1. Separate doses into projections used. This is to ensure LDRLs are as accurate as possible.

E.g. Knee

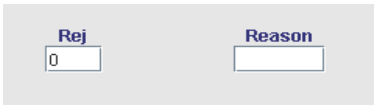
Incorrect:

This total dose could represent total for standard AP/LAT projections or AP/LAT, tunnel & skyline.

Correct:

2. The DAP is recorded for each individual projection

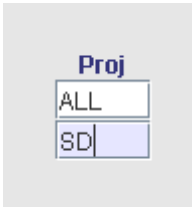
3. Number of images accepted

4. Number of images Rejected (with reason) 

Fluoroscopy/Interventional/Cardiology

1. Fluoroscopy screening time
2. Dose Area Product (DAP)
3. Skin Dose (where available)

Each Dose recording should be reflective under projection with DAP recorded under ALL and Skin Dose under SD.



CT

1. CT Dose index (CTDI), number of slices, changes to standard CT parameters which is stored on PACS.
2. Dose Length Product (DLP) on RIS

Nuclear Medicine

1. Radiopharmaceutical and activity identified on Radiopharmacy label, attached to the NM checklist
2. Administration route (if not defined by protocol)
3. All examinations completed must have dose monitoring recorded (MBq)within RIS.

Ortho/Urology/Pacing Theatres:

1. Each examination dose recording should be recorded as a whole under projection code ALL

2. UNITS AND Screening time

At times operators may be asked to keep a record of additional patient or examination information (such as patient weight) required by the monitoring protocol (in addition to information listed in above).

Dose Monitoring

The MPE performs an annual patient dose audits using the dose data that is sent to the MPE on a monthly basis:

1. It is therefore part of the routine QA programme.
    2. A dose audit is used to highlight the effects of any optimsation, change in protocol or equipment
    3. It provides a set data that forms our local diagnostic reference levels (LDRL)
    4. Used to highlight areas where doses are un optimized or equipment is deteriorating

An Annual Patient Dose report is submitted by the MPEs for review and associated actions/investigations may be created as a result of this report and monitored as specified in procedure D.