

Title of Document:	IR(ME)R Procedure (N) -To Establish Appropriate Dose Constraints for Comforters and Carers
Directorate:	RADIOLOGY DIRECTORATE

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Complete review and insertion into new template	11.10.2023
Removal of staff heading as this falls under IRR. Pregnant individuals acting as a C&C in extenuating circumstances. Dose constraints for pregnant C&C.	08.04.2026
Individuals involved in developing / reviewing / amending this document: (titles only)	
Radiology Clinical Services Manager	
Medical Physics Expert	
Quality Governance Lead	
Key staff responsibilities	Post:
Responsibility for justifying an exposure to a carer or comforter	Practitioner
Adhere to this procedure.	Operator

In-line with regulation 6 schedule 1 requirements within IRMER 2017, the purpose of this procedure is to ensure that there is an appropriate dose constraint and information for comforters and carers when being exposed to non-diagnostic ionising radiation. The procedure is also to provide guidance for radiology staff when employing the need for a Comforter and Carer.

This will ensure the trust remain compliant with the IR(ME)R regulations and that Comforters and Carers dose remains as low as reasonably practicable.

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Introduction:

The Ionising Radiation (Medical Exposure) Regulations (IR(ME)R 2017) were introduced to protect patients against the hazards associated with the use of ionising radiation in medical settings. In 2017 an updated version was published and this provides additional legislation to also cover exposures that involve the use of Comforters or Carers.

It is sometimes necessary for a Comforter or Carer to be present during an examination that requires the use of radiation. These individuals are used to reassure the patient or on occasions to ensure the patient remains still in the correct position as required for the exam. This role may be supported by a relative or friend or even on occasions by a member of staff. Radiology staff should not act as a Comforter or Carer except for exceptionally rare circumstances which should be documented.

It is important to be aware that all Comforters and Carers present during a radiation based examination will receive a small dose of radiation. See dose constraints detailed on page 5 for more information.

Comforters and Carers, according to IR(ME)R 2017, are defined as “individuals knowingly and willingly incurring an exposure to ionising radiation by helping, other than as part of their occupation, in the support and comfort of individuals undergoing or having undergone exposure”.

There are legal implications that need to be considered by Radiology departments and so it is important that protocols and guidelines are followed to ensure continuity of evidence is upheld.

Purpose of this Procedure:

- To clarify the process involved in obtaining authorisation for undertaking examinations with the use of Comforters and Carers.
- Identify the roles and responsibilities of those involved in using Comforters or Carers.
- To ensure that the Comforter or Carer is fully informed prior to exposure of the implications of radiation risk, and or patient benefit, of being a Comforter or Carer.
- To establish an annual dose constraint for Comforters and Carers, and to ensure that no Comforter or Carer exceeds this dose constraint in any one calendar year.

Practice:

Wherever possible the use of Comforters and Carers in controlled areas should be avoided. However, where it is assessed and deemed required; Comforters and Carers must be advised of the associated risks and benefits of being present during the exposure to radiation.

They must be able to agree to supporting an individual during the exposure both knowingly and willingly.

The Comforter or Carer must read and sign the Comforters and Carers consent form following advice provided of associated risk and benefits. (**Appendix A**).

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The Operator must fully answer any additional questions that the Comforter or Carer may have before the exposure. The Comforter or Carer has the right to refuse to be such following full explanation of the risk and benefit of the exposure.

If the Comforter or Carer is a person of child bearing potential, they shall be asked the question “is there any likelihood you could be pregnant?” If the answer is ‘No’ they may proceed to support. If the answer is ‘Yes’, we advise that pregnant individuals do not act as a Comforter or Carer, but this will be considered in extenuating circumstances and in this case the exposure must be individually justified by a practitioner.’ This should be documented on the patients CRIS event comments.

All imaging should be performed in accordance with departmental Standard Operating Procedures and Protocols.

Comforters and Carers must avoid being in the ‘line of the direct beam’, an appropriate position will be advised by the Operator.

Following exposure, the Comforter or Carers individual information should be recorded within the WAHT Comforters and Carers log: This will allow staff members to correlate any reoccurring exam records and ensure that an individual’s annual dose remains below the threshold (1mSv). The log book is located:

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The required information includes:

- Date
- CRIS number of patient
- Name of Comforter and Carer
- Role of Comforter and Carer
- Badge reference number

The Operator should check the name of the Comforter or Carers against Comforter or Carers log. This will allow a check to be made for repeat Comforter or Carers to ensure that the dose constraint is not exceeded.

Parents, Friends/ Relatives acting as a Comforter or Carer:

The Operator, who initiates radiographic exposure, will explain the risks and benefits of being exposed to the exposure of ionising radiation prior to the examination.

It should be emphasised that the risk of cancer induction is extremely low, and an indication of approximate average UK background equivalent radiation time given (**Appendix F**).

No examination should result in a Comforter or Carer receiving a dose in excess of 0.15mSv (approximately 3 weeks UK average background radiation) which is monitored by the comforter and carer wearing the appropriate dosimeter.

If the individual agrees to act as a Comforter and Carer they must sign a consent form (**Appendix A**).

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The consent form will include an explanation of the risks and records patient identifiable data, Comforters & Carers identifiable data and the details of the operator. All other information such as exam type, exposure factors, dose and protection provided are recorded on the Radiology Information System under 'Event Comments'.

Personal Protective Equipment (PPE):

The Comforter and Carer must wear suitable lead/lead equivalent protective apparel.

Lead equivalence of at least 0.25mm must be used for exposures <100kV.
 Lead equivalence of at least 0.35mm must be worn for exposures >100kV.

For high dose procedures such as CT and Interventional the Comforter and Carer must wear lead equivalence of at least 0.35mm as well as a thyroid shield with lead equivalence of 0.5mm.

A person under the age of 18 acting as Comforter and Carer:

Whilst it is always preferable to have a Comforter and Carer who is over the age of 18, if the identified Comforter or Carers e.g. the patients parent, is under 18, then careful consideration should be given to them incurring the exposure "knowingly and willingly".

If the Comforter or Carers is under the age of 18, they must have had adequate essential information provided to them in line with all Comforter or Carers by the Operator. Prior to signing the Comforter or Carers consent form (**Appendix A**), they must demonstrate that they understand the implications of this information before the exposure takes place.

Documentation must be made on CRIS and the consent form that the comforter or carer is under 18 years of age and care taken to record both the exposure factors and resultant dose on the form.

Dose constraint for Comforters and Carers:

All imaging where Comforters and Carers are utilised should be monitored to ensure that doses are not incurred by the same people repeatedly when acting as a Comforter or Carer.

- Single examination = 0.15mSv (approximately 3 weeks UK average background radiation).
- Annual = 1mSv (the average annual exposure from background levels of radiation in the UK (all sources) is around 3 mSv a year).
- The dose constraint for a pregnant c&c during the term of their pregnancy is 0.3mSv.

Nuclear Medicine:

Patients undergoing a nuclear medicine procedure will have a low level of radiation present around the patient for several hours after the injection.

For patients undergoing **any** Nuclear Medicine procedure that involves immediate emotional or physical support, the Comforter or Carer should complete (**Appendix B**).

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For inpatients undergoing Nuclear Medicine examinations with an injection of >400MBq the ward should be provided with a yellow wrist band and advisory sheet. (**Appendix D**).

Nursing Home staff/ Carers

Upon leaving the department, the care home staff should be provided with the appropriate C&C form and Nursing staff and carers info advisory sheet (Appendix B or C and E)

Parents, Friends/ Relatives acting as a Comforter or Carer:

For patients receiving in excess of 400MBq, a written information sheet must be provided in respect to close proximity contact (**Appendix C**).

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APPENDIX A: Comforter AND Carers Form (excluding Nuclear Medicine exams)

<M:\Acute\Radiology\Radiology Team Share Point\CHECKLISTS, EQUIPMENT LISTS & QUESTIONNAIRES\CARERS AND COMFORTERS CONSENT FORM.pdf>

Appendix B: Information for Comforters and Carers accompanying patient for Nuclear Medicine Examinations

<M:\Acute\Radiology\Radiology Team Share Point\CHECKLISTS, EQUIPMENT LISTS & QUESTIONNAIRES\NUCLEAR MEDICINE\Information for C&C accompanying patient for NM.pdf>

APPENDIX C: Patient and C&C information following bone scan

<M:\Acute\Radiology\Radiology Team Share Point\CHECKLISTS, EQUIPMENT LISTS & QUESTIONNAIRES\NUCLEAR MEDICINE\PATIENT AND C&C INFORMATION FOLLOWING BONE SCAN.pdf>

Appendix D: Information for Comforters and Carers of inpatients during and following a Nuclear Medicine injection of >400Mbpq

<M:\Acute\Radiology\Radiology Team Share Point\CHECKLISTS, EQUIPMENT LISTS & QUESTIONNAIRES\NUCLEAR MEDICINE\Information for C&C of INPATIENTS following an injection.pdf>

Appendix E: Nursing Staff and Carers Information

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Appendix F: Radiation Scatter for Comforters & Carers

Examination	Scatter at 0.5m (µGy)	Scatter with lead apron (µGy)	Equivalent period of natural background radiation (days)
Chest	6.4	0.6	0.09
Abdomen (AP)	52.9	5.3	0.72
Pelvis (AP)	46.6	4.7	0.63
Cervical spine	3.2	0.3	0.04
Thoracic spine	52.9	5.3	0.72
Lumbar Spine	84.6	8.5	1.14
Extremities	2.1	0.2	0.03
CT Head	442.4	44.2	5.98
CT Chest	417.6	41.8	5.65
CT Abdomen/Pelvis	763.2	76.3	10.32
Barium swallow	158.7	15.9	2.15

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