

Ionising Radiation Medical Exposure Regulations 2017

Procedure 14: Dose constraints and guidance for the exposure of carers and comforters

Required under IR(ME)R 2017 Regulation 6 & Schedule 2 (n)

CATEGORY:	Procedure
CLASSIFICATION:	Health & Safety, Clinical Governance
PURPOSE:	To establish appropriate dose constraints and guidance for the exposure of carers and comforters.
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<ul style="list-style-type: none"> Essential Reading for: 	<p>Staff who are designated as an IR(ME)R practitioner and/or operator.</p> <p>Staff in training to become an IR(ME)R practitioner and/or operator</p>

<ul style="list-style-type: none"> • Information for: 	<p>Managers of IR(ME)R practitioners and operators</p> <p>General managers of departments and areas that perform procedures involving ionising radiation</p> <p>All staff working in departments that perform procedures involving ionising radiation.</p>
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1 Procedure Statement

- 1.1 To ensure that appropriate dose constraints are established and to ensure individuals who might act as Carers and Comforters are provided with adequate information about the dose and risk to which they could potentially be exposed so that they knowingly and willingly incur the exposure.

2 Scope

- 2.1 All exposures to Carers and Comforters which result from procedures carried out by the Trust.
- 2.2 Carers and Comforters are defined as those who are knowingly and willingly exposed to ionising radiation while supporting an individual undergoing or having undergone an exposure. Typically, Carers and Comforters will be relatives or friends of the individual, they are not healthcare employees. It is noted that not all relatives or friends of the patient are required to be designated as carers and comforters; many can be considered as members of the public.
- 2.3 For clarity within this procedure, "patient" means any individual being exposed to radiation:
 - 2.3.1 As part of their own medical diagnosis or treatment;
 - 2.3.2 As part of a health screening programme;
 - 2.3.3 While participating in a research study;
 - 2.3.4 Undergoing non-medical imaging using medical radiological equipment.
- 2.4 Carers and Comforters will be defined as those individuals who:
 - 2.4.1 Offer support to a patient during a diagnostic X-ray examination. Gamma camera room or PET-CT scanner room
 - 2.4.2 Being present in an injection room during the administration of radioactive substances for the purposes of providing care of support.
 - 2.4.3 Staying with the patient during the uptake phase of a scan for the purposes of providing care or support to the patient.
 - 2.4.4 For accompanying persons who attend the department who subsequently offer support for those patients at home after they have been discharged from hospital. This includes, but is not limited to, help with dressing, bathing and toileting. Parents who care for a child after returning from hospital. Only those that are knowingly and willingly exposed are acting as a carer and comforter.
- 2.5 Those acting in the following roles are not defined as Carers and Comforters:
 - 2.5.1 Friend driving a nuclear medicine patient home from hospital.

3 Responsibility

- 3.1 The Trust is responsible for the level at which generic dose constraints are set. The task of ratifying dose constraints and reviewing these has been delegated to the Relevant General Managers in conjunction with a relevant Medical Physics Expert (MPE).
- 3.2 The IR(ME)R practitioner justifies the exposure to the Carer and Comforter – seeking advice from the MPE.
- 3.3 The MPE is responsible for evaluating the potential doses the Carer and Comforter is likely to receive and preparing suitable advice. The MPE will assist the IR(ME)R practitioner in setting a dose constraint for the Carer and Comforter.
- 3.4 The MPE should identify the risks and, in conjunction with the practitioner the benefits to the patient.
- 3.5 In Nuclear Medicine the MPE should provide advice to the patient and Carer and Comforter regarding how dose to the individual may be kept as low as reasonably practicable.
- 3.6 The referrer is responsible for detailing any information about radiation protection concerns to the practitioner, operator or medical physics expert when referring the patient.
- 3.7 The operator who will initiate the exposure on the “patient” is responsible for ensuring that:
 - 3.7.1 Local protocols are followed to assess whether there are any radiation protection concerns
 - 3.7.2 Ensuring that appropriate justification takes place prior to the exposure commencing
 - 3.7.3 The person who is identified as acting as a Carer and Comforter and is present when the dose is being delivered is given adequate information regarding the doses that they might receive and the associated risk
 - 3.7.4 Appropriate action is taken as far as practicable to minimise the dose to the Carer and Comforter whilst the patient and Carer and Comforter are being exposed
 - 3.7.5 A record is made that this information has been provided on the electronic patient record as a patient note.
- 3.8 Operators in nuclear medicine will provide information on doses, risks and precautions for carers and comforters to the patient where standard restrictions (derived from risk assessments) cannot be adhered to.

4 Generic dose constraints

- 4.1 For all X-ray exposures the Trust has defined the generic dose constraint to be an effective dose of 1 milliSievert for a Carer and Comforter from their involvement in one series or course of treatment in conjunction with the MPE.
- 4.2 For all radionuclide administrations (therapy) the Trust has defined the generic dose constraint to be an effective dose of 5 milliSievert for a Carer and Comforter from their involvement in one series or course of treatment in conjunction with the MPE.
- 4.3 Children are not normally classed as Carers and Comforters and the annual 1 mSv dose limit must be applied. Special attention must be paid to these circumstances and the exposure individually justified.
- 4.4 Pregnant persons would not normally act as Carers and Comforters but can be considered in extenuating circumstances. Special attention must be paid to these circumstances and the exposure individually justified. The dose for a pregnant person acting as a Carer and Comforter must not be greater than 0.3 mSv for the duration of the pregnancy.

5 Practice

- 5.1 The operator must ensure that the exposure of the Carers and Comforters has been authorised in accordance with the authorisation protocol provided by an IR(ME)R practitioner.

6 Contingencies

- 6.1 Any failure in compliance with this procedure must be reported to the relevant Divisional General Managers or Medical Physics Expert in their absence. Failure to comply with the above procedure may result in the Trust's Disciplinary Policy being invoked.

Appendix 1

Guidance & Information for those defined as “Carers and Comforters” of Patients Exposed to Ionising Radiation In Diagnostic Nuclear Medicine Studies

It is sometimes necessary for a family member or friend to be present during or after an examination where ionising radiation is involved, either to support, provide care to or reassure the patient. This person is legally called a “Carer and Comforter” and will receive a small amount of radiation.

You have been given this leaflet because a healthcare professional has identified you as a possible Carer and Comforter. It contains important information to allow you to agree to continue in this role.

We all receive radiation, known as ‘background radiation’ every day, from cosmic rays reaching the earth from space, radioactive minerals, certain foods and naturally occurring radon gas. We receive higher amounts of radiation if we live in areas with higher radon levels, or if we take international flights.

How much radiation will I get by acting as a carer/comforter?

Nuclear Medicine tests involve the administration of a small quantity of a radioactive drug usually as an injection into a vein. This can be detected by a special camera to create images of the inside of the body and its function. If you are required to support or assist a patient (including your child) during or after the test this may mean that you are a “Carer or Comforter”.

Your dose will be very small, and depends upon a number of different factors including the type of procedure, how close you are to the patient and the length of time spent near to them. You can reduce your dose by maintaining your distance from the patient and limiting the time you are near to the patient.

You can also reduce your dose by delaying contact for as long as possible after the radioactive administration. In some circumstances you may be asked to wear gloves or disposable aprons particularly if you are handling bodily fluids (including urine). Staff will advise about you about this matter and answer any questions you may have.

Provided that you follow the instructions from the healthcare professional the amount of radiation you will receive whilst caring and/or comforting the patient will be between a few days or weeks of natural background radiation.

Please tell us if you are, or might be, pregnant so we can decide whether it is appropriate for you to act as a Comforter and Carer. It will also allow the healthcare professional to make adjustments to make sure the dose to you and your unborn baby is as low as possible.

Children (those under the age of 18) would not normally be considered for the role of a carer and/or comforter but exceptional circumstances can be considered. The healthcare professionals will be able to advise you about this should this apply to you. Please ask the health care professional if you have any further questions or concerns prior to the start of the examination.

If you are to act as a comforter or carer we need you to sign this form before the examination, to state that you understand that you are agreeing to act in this role and to confirm that the small risks associated with the above exposure have been explained to you, and you knowingly and willingly accept the risks and wish to continue.

By signing below you are also agreeing that this form can be kept securely on file within the imaging information system.

To be signed by the carer and comforter before administration.

Printed Name		Date of Birth	
Signature		Relationship to Patient	
Date			

To be completed by Healthcare professional

Patient Hospital Number		Date of Birth	
Patient Name		Date of Examination	
Healthcare Professional Signature		Healthcare Professional Printed Name	

Exposure Parameters

Examination/Radiopharmaceutical:		
Activity (MBq)		
Details of C&C Duties/PPE Issued.		

Appendix 2

Guidance & Information for those defined as “Carers and Comforters” of Patients Exposed to Ionising Radiation in X-ray Studies

It is sometimes necessary for a family member or friend to be present during an examination where ionising radiation is involved, either to support, provide care to or reassure the patient. This person is legally called a “Carer and Comforter” and will receive a small amount of radiation.

You have been given this leaflet because a healthcare professional has identified you as a possible Carer and Comforter. It contains important information to allow you to agree to continue in this role.

We all receive radiation, known as ‘background radiation’ every day, from cosmic rays reaching the earth from space, radioactive minerals, certain foods and naturally occurring radon gas. We receive higher amounts of radiation if we live in areas with higher radon levels, or if we take international flights.

How much radiation will I get by acting as a carer/comforter?

X-rays are used to create images of the inside of the body. The X-rays are only present for a defined period of time known as the exposure. If you are required to support or assist a patient (including your child) during the X-ray exposure this makes you a “Carer or Comforter”

The dose to you will be very small and depends on a number of different factors including the type of procedure, how close you are to the patient during the exposure and the images required. Staff will work to ensure that your dose is kept as low as is practically possible. You will be instructed by the radiographer where to stand during the exposure and may be given a lead apron or shield to go around your neck when required.

Provided that you follow the instructions from the healthcare professional the amount of radiation you will receive whilst caring and/or comforting the patient will be between a few days or weeks of natural background radiation.

Please tell us if you are, or might be, pregnant so we can decide whether it is appropriate for you to act as a Comforter and Carer. It will also allow the healthcare professional to make adjustments to make sure the dose to you and your unborn baby is as low as possible.

Children (those under the age of 18) would not normally be considered for the role of a carer and/or comforter but exceptional circumstances can be considered. The healthcare professionals will be able to advise you about this should this apply to you. Please ask the health care professional if you have any further questions or concerns prior to the start of the examination.

If you are to act as a comforter or carer we need you to sign this form before the examination, to state that you understand that you are agreeing to act in this role and to

confirm that the small risks associated with the above exposure have been explained to you, and you knowingly and willingly accept the risks and wish to continue.
 By signing below you are also agreeing that this form can be kept securely on file within the imaging information system.

To be signed by the carer and comforter before exposure.

Printed Name		Date of Birth	
Signature		Relationship to Patient	
Date			

To be completed by Healthcare professional

Patient Hospital Number		Date of Birth	
Patient Name		Date of Examination	
Healthcare Professional Signature		Healthcare Professional Printed Name	

Exposure Parameters

Examination:			
Exposure Factors:	kV	mA(s)	DLP
Location of C&C during Exposure			

Protective equipment used (please tick which have been provided): Lead Apron Thyroid Shield Gloves