

## HS05

# Ionising Radiation Safety Policy

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### Attachments:

- Attachment 1: [Procedure for assessment, reporting and investigation of staff radiation doses](#)
- Attachment 2: [Procedure for reporting and investigation or radiation incidents involving patients](#)
- Attachment 3: [Terms of Reference, Radiation Safety Group](#)

## HS05 Ionising Radiation Safety Policy

### 1.0 Policy Statement

The purpose of this policy is to ensure the safe use of ionising radiation throughout the Royal Wolverhampton NHS Trust by the implementation of best practice in the management of ionising radiation and compliance with health and safety legislation.

The implementation of this policy should ensure, so far as is reasonably practicable, two things. Firstly, the health and safety of Trust employees and patients, contractors working on the premises, voluntary workers, and members of the public who may be exposed to the hazards arising from the use of ionising radiation. Secondly, it should establish a radiation safety culture which includes good communication and co-operation at all levels.

In adhering to this Policy, all applicable aspects of OP109 Conflicts of Interest Policy must be considered and addressed. In the case of any inconsistency, OP109 Conflicts of Interest Policy is to be considered the primary and overriding Policy.

### 2.0 Definitions

**Classified worker** Under Ionising Radiations Regulations (IRR), the employer must designate a staff member as classified if they are likely to exceed certain dose levels specified in the regulations (IRR17).

**Clinical radiation expert** A registered health professional with clinical expertise in the modality (imaging and, or treatment method) involved in a research trial. Typically, this will be a radiologist, clinical oncologist or a nuclear medicine specialist.

**Directorate Managers of directorates operating sources of ionising radiation** These are the Group Manager for Radiology; Head of Radiotherapy; Head of Medical Physics and Clinical Engineering; Clinical Lead Special Care Dental Service; Group Manager of Critical Care (for the Mini C-arm).

**Employer** The Chief Executive of the Trust holds the responsibilities of the employer under ionising radiations legislation.

**Ionising radiation source** Any radiation emitted from any medical device producing x-rays, including x-ray sets and linear accelerators, or radiation emitted from any radioactive source or patient including, alpha, beta and gamma radiation. (For all aspects of non-ionising radiation please refer to Laser Safety Policy HS06.)

#### Ionising radiation legislation

The Ionising Radiations Regulations 2017 (IRR).

The Ionising Radiation (Medical Exposures) Regulations 2017 (IR(ME)R).

The Environmental Permitting Regulations 2016 (EPR).

**Image Optimisation Team** A multidisciplinary group including a radiologist, radiographer and physicist with the purpose of advancing optimisation of medical exposures within an imaging modality.

**Local rules** Safety procedures for each specific radiation area including the key working instructions to restrict exposure. The rules cover work in normal circumstances and also the steps to be taken to control exposure in the event of a radiation accident.

**Medical physics expert (MPE)** An individual who meets the criteria of competence specified by the Department of Health and Social Care, holds a certificate of competency, and is appointed in writing by the employer for the purpose of acting and advising the Trust on the observance of IR(ME)R.

**Operator** As defined in IR(ME)R, any person entitled according to employer's procedures to carry out practical aspects of a medical exposure.

**Practitioner** As defined in IR(ME)R, a registered healthcare professional entitled according to employer's procedures to take responsibility for an individual exposure.

**Radiation protection adviser (RPA)** An individual who meets the criteria of competence specified by the Health and Safety Executive (HSE), holds a valid certificate of competency, and is appointed in writing by the employer for the purpose of advising the Trust on the observance of IRR.

**Relevant doctor** A doctor appointed by the Trust to advise on the medical effects of radiation on workers, and who has responsibility for the medical surveillance of staff designated as classified workers.

**Radiation protection supervisor (RPS)** A trained member of staff named in the local rules who is responsible for supervising the work with radiation in the areas to which the rules apply.

**Referrer** As defined in IR(ME)R, a registered healthcare professional who is entitled in accordance with the employer's procedures to refer individuals for exposure to a practitioner.

**Radioactive waste adviser (RWA)** An individual who meets the criteria of competence, holds a valid certificate of competency, and who is appointed by the employer to advise on a range of issues relating to radioactive waste management.

### 3.0 Accountabilities

#### 3.1 Chief Executive

The Chief Executive is responsible for Trust-wide compliance with all relevant ionising radiation regulations, for the entitlement of non-medical referrer duty holders under IR(ME)R and for the formal appointment, in writing of:

- Radiation Protection Adviser(s);
- Medical Physics Experts(s);
- Radioactive Waste Adviser(s).

#### 3.2 Chief Medical Officer

The Chief Medical Officer is responsible for:

- implementation and review of radiation safety arrangements;

- the implementation of IR(ME)R, ensuring all Clinical Directors are aware of their responsibilities;
- ensuring that arrangements for compliance with IR(ME)R procedures are in place;
- the review of this policy supported by the Trust Radiation Safety Group and the Radiation Protection Adviser.

### 3.3 Divisional Managers

To ensure that Clinical Directors (CD's) and Directorate Managers in their division are discharging their responsibilities and duties in line with regulations and this policy.

### 3.4 Clinical Directors

CD's are entitled and required by the Chief Executive to take responsibility for:

- ensuring all relevant medical staff receive appropriate radiation safety training;
- ensuring all staff follow local rules including arrangements for personal dose monitoring;
- ensuring staff follow relevant IR(ME)R procedures;
- ensuring that referrers are aware of and discharge their duties under IR(ME)R.

**In addition**, CD's of directorates operating ionising radiation equipment or sources whether they are owned, rented, leased or loaned must:

- ensure that IR(ME)R procedures and examination protocols are written and implemented;
- authorise IR(ME)R procedures on behalf of the employer; the authorisation guidelines must be signed by an entitled practitioner;
- entitlement of medical referrers, practitioners and operators under IR(ME)R.

### 3.5 Directorate Managers

All Directorate Managers of locations where work with ionising radiation is undertaken (whether or not the work is managed by them or another department) are entitled and required by the Chief Executive to take responsibility for the following.

- Ensuring that a radiation risk assessment has been undertaken prior to any work involving ionising radiation being undertaken within the directorate. The risk assessment must be available to staff and for audit or inspection, whether it is made and reviewed by the directorate or not.

- Ensuring all employees are aware of their responsibilities as defined in this policy and in relevant documentation including IR(ME)R procedures and local rules and that they are followed.
- Ensuring staff attend radiation training.
- Where staff radiation monitoring is undertaken, ensuring effective management of the program (see [Attachment 1](#)).
- Reviewing any incident where a person (patient, visitor or member of staff) may have received an accidental or unintended exposure (see Attachments [1](#) and [2](#)).

**In addition**, Directorate Managers of directorates operating ionising radiation sources whether they are owned, rented, leased, or loaned by them or another directorate within the Trust are required to take responsibility for the following.

- Ensuring that arrangements, including local rules, IR(ME)R procedures and protocols for compliance with IRR, IR(ME)R, and EPR are in place and kept under regular review and providing assurance to the Radiation Safety Group of such compliance.
- Providing assurance to the Radiation Safety Group in the form of a compliance report in the format and at intervals requested by the chair of the group.
- Ensuring that local rules are written and kept under regular review.
- Authorising local rules.
- Recommending appropriately qualified and experienced members of staff for appointment as Radiation Protection Supervisors to the chair of the RSG.
- Arranging radiation safety training and regular opportunities for continuing professional development, and ensuring all staff attend as appropriate.
- Maintaining records ready for inspection of training and CPD in all relevant aspects of radiation safety and in the operation of equipment used for medical exposures.
- Ensuring a medical physics expert and, or radiation protection adviser is consulted where required by legislation.
- Ensuring an inventory of radiation equipment is maintained, including records of maintenance, service, repair or modification.
- Giving advance notification to a radiation protection adviser and, or medical physics expert of:
  - any proposed new work or changes to structural changes where ionising radiation is used on Trust premises;
  - intent to acquire a new or replacement ionising radiation emitting device (including short-term loans and demonstrations).
- Ensuring a medical physics expert is consulted when new equipment or software is being procured, and included on relevant project teams.

- Ensuring that Image Optimisation Teams operate for all imaging modalities, as appropriate.
- Undertaking regular audits of radiation safety compliance within their area.

The responsibilities of managers laid out in this section necessitate cooperation between directorates where equipment is operated by one directorate and used in an area managed by a different directorate.

Where sources are operated across more than a single directorate, the recording of the radiation risk assessment and the compiling and maintenance of safety procedures (to include local rules and IRMER procedures) will normally be the responsibility of the directorate in which the operator who delivers the medical exposure is based. This ensures that the radiation safety procedures are set up and maintained by the directorate with the greatest knowledge of the hazard.

An exception to this is the mini-C arms in theatres where the responsibility for radiation safety document control lies with the Group Manager of Critical Care Services.

Advice must in all cases be sought from the appropriate specialist adviser (RPA or MPE) in Medical Physics.

### 3.6 Radiation Protection Supervisors (RPS)

- Supervise the local rules.
- Ongoing supervision of radiation practice in their areas of responsibility.
- Act as a first point of contact for staff at all levels, patients, and the general public on radiation related matters within their area of responsibility.

### 3.7 Radiation safety group (RSG)

- As outlined in the terms of reference ([Attachment 3](#)).

### 3.8 Radiation Protection Adviser (RPA)

The RPA must provide advice:

- to the employer and management on all aspects of radiation safety;
- on the levels of radiation safety training required;
- to staff at all levels, patients, and the general public on radiation related matters;
- on matters listed in Schedule 4 of IRR.

### 3.9 Relevant Doctor

- Responsible for the initial and annual medical surveillance of any designated classified worker employed by the Trust.
- Medical surveillance of an employee where a dose limit has been exceeded.

- Provision of advice on the medical effects of ionising radiation.

### **3.10 Radioactive waste adviser (RWA)**

- Provision of advice to enable compliance with the EPR and amendment.
- Establish and maintain good practice in relation to radioactive waste management and environmental radiation protection on achieving and maintaining optimal levels of protection of the environment and population.

### **3.11 IR(ME)R Practitioners**

Duties are as defined in IR(ME)R and entitlement is specified in the employers IR(ME)R procedures. Practitioners must:

- follow the relevant IR(ME)R procedures;
- only act as practitioner for the administration of radioactive substances for which there is a valid employer's licence and for which they hold a valid practitioner licence under IR(ME)R.

### **3.12 Operators**

Duties are as defined in IR(ME)R and entitlement is specified in the employers IR(ME)R procedures. Operators must follow the relevant IR(ME)R procedures.

### **3.13 Referrers**

It is the responsibility of all medical and non-medical referrers to:

- refer only as entitled by the employer;
- provide sufficient clinical information to enable the practitioner to justify the medical exposure; if the practitioner deems that the medical exposure is not justified, the examination will not proceed;
- provide clinical information without the use of abbreviations, except those listed on the approved abbreviations list published by Radiology;
- ensure that a written clinical evaluation is made when notified that a written report is not being issued.

### **3.14 Trust Education and Training Manager**

The Trust Education and Training Manager is responsible for ensuring a programme is in place to provide for:

- all new staff to undertake corporate induction, which includes radiation protection training;
- IRMER training to be undertaken and completed by all new doctors.

### **3.15 Medical Physics and Clinical Engineering Department**

The Medical Physics and Clinical Engineering Department is responsible for:

- acceptance testing and ensuring critical examinations are performed;
- establishment of systems of the keeping, use, accumulation and disposal of radioactive materials, including registration and authorisations;
- provision of Medical Physics Experts qualified to advise on all aspects of radiation use;
- provision of a site security plan for the safe and secure management of radioactive sources;
- ensuring employer and practitioner licences are in place for the administration of radioactive substances as required under IR(ME)R.

### **3.16 Medical Physics Expert (MPE)**

It is the responsibility of the Medical Physics Expert (MPE) to:

- be closely involved in every radiotherapeutic practice other than standardised therapeutic nuclear medicine procedures;
- be involved in practices including standardised therapeutic nuclear medicine practices, diagnostic nuclear medicine practices and high dose interventional radiology and computed tomography;
- be involved as appropriate for consultation on optimisation, including patient dosimetry and quality assurance, and to give advice on matters relating to radiation protection concerning medical exposure, as required, in all other radiological practices;
- contribute to the matters listed in IR(ME)R including optimisation of medical exposures, analysis of accidental and unintended exposures, equipment specification and selection, training and advice on compliance with IR(ME)R.

### **3.17 Clinical Radiation Expert (CRE)**

To give advice on:

- clinical exposures to radiation in research submissions within their modality of expertise;
- issues identified in the NRES Guidance on approval for research involving ionising radiation (see references).

### **3.18 Research and Development Department**

To give advance notice to the Medical Physics and Clinical Engineering Department of any proposed medical trial involving the exposure of patients to ionising radiation to ensure that the requirements of radiation legislation are met.

### **3.19 Head of Estates**



To give advance notification to the Radiation Protection Adviser and ensure they are involved in any project where there is:

- any proposed new work or structural changes to areas where ionising radiation is used on Trust premises;
- intent to acquire a new or replacement radiation emitting device.
- The assessment of risk from radon gas at all sites

### 3.20 Employees

All Trust employees are required (in addition to relevant responsibilities outlined in this section) to:

- work with radiation in such a way that they exercise reasonable care and follow all relevant local rules and procedures for radiation safety;
- read and sign to indicate that they understand and will follow the local rules annually;
- use any radiation emitting equipment, accessories and protective equipment that are provided safely and properly and report any defect in such equipment;
- wear as directed and use appropriately any personal dosimeters provided by the employer;
- undertake and maintain any training deemed necessary;
- report immediately to their directorate manager and radiation protection supervisor any incident in which any person (patient or member of staff) may have received an accidental or unintended exposure, see attached procedures (Attachments [1](#) and [2](#));
- to report to their manager if they work with radiation and if they are or may be pregnant in order that a [maternity risk assessment](#) can be conducted.

### 4.0 Policy Detail

- 4.1** The Trust must appoint one or more radiation protection advisers as required by the Ionising Radiations Regulations 2017.
- 4.2** The Trust must appoint one or more medical physics experts as required by the IR(ME)R.
- 4.3** The Trust must appoint one or more radioactive waste advisers as required by the Environment Agency.
- 4.4** The Trust must ensure that all medical exposures to ionising radiation of patients are performed using a radiation dose which is as low as reasonably practicable to achieve the required clinical or radiotherapeutic purpose.
- 4.5** The Trust must restrict the exposure of staff, visitors and the general public to ionising radiation to a level which is as low as reasonably practicable.

- 4.6** The Trust must comply with the requirements of IRR and will effect this through the organisational accountabilities and arrangement detailed in Section 3 above.
- 4.7** All staff are required to discharge their duties as outlined in this policy and in attachments 1-3. Non-compliance to responsibilities laid out in this policy may result in disciplinary action or action taken against the Trust or individual by relevant enforcing authorities.

## 5.0 Financial Risk Assessment

1	Does the implementation of this policy require any additional Capital resources	No
2	Does the implementation of this policy require additional revenue resources	No
3	Does the implementation of this policy require additional manpower	No
4	Does the implementation of this policy release any manpower costs through a change in practice	No
5	Are there additional staff training costs associated with implementing this policy which cannot be delivered through current training programmes or allocated training times for staff	No
	Other comments	

## 6.0 Equality and Diversity Risk Assessment

This policy has been assessed as not affecting the equality and diversity of any one group of stakeholders

## 7.0 Maintenance

The Chief Medical Officer is responsible for ensuring the review of this policy supported by the Trust Radiation Safety Group and the Radiation Protection Adviser.

## 8.0 Communication and Training

- 8.1** This policy is located under the policies listing on the Trust intranet.
- 8.2** Divisional and Directorate Managers must ensure that all appropriate staff have been appraised of their responsibilities as described in this policy.
- 8.3** Appropriate training is to be provided for all staff who work with ionising radiation or who enter areas where ionising radiation is used.
- 8.4** The Radiation Protection Adviser will advise on the level of safety training required for specific roles.

- 8.5 Implementation of specialty specific training is the responsibility of the CD and directorate or service manager.
- 8.6 The training of staff must be recorded and reviewed on an annual basis by directorate and service managers.

## 9.0 Audit Process

Criterion	Lead	Monitoring Method	Frequency	Group
Both the employer and relevant practitioners hold licences under IR(ME)R that are current and appropriate	Lead MPE (Nuclear Medicine)	Review of list of IR(ME)R licences at RSG	6 monthly	RSG
Ensure that permits and authorisations for holding radioactive materials and accumulating radioactive waste are current and appropriate	RWA	Review of list of permits and authorisations.  Review of compliance of limits with criteria in permits and authorisations	Annually	RSG
Ensure staff radiation exposure levels are as low as reasonably practicable	Managers of areas using ionising radiation	Review of bi-monthly reports of staff exposures from external supplier of monitors.	Bi-monthly	Directorate Governance Meetings
		Review of incidents	Monthly	
	Chair of RSG, RPA	Review of cumulative exposures for staff.	6 monthly	RSG
Ensure that patients are not exposed unnecessarily to ionising radiation	Managers of areas using ionising radiation	Review of incidents	Monthly	Directorate Governance Meetings
	Chair of RSG, RPA	Review of type and nature of radiation incidents	Reported 6 monthly	RSG and Quality and Safety Advisory Group (QSAG)

## 10.0 References

Health and Safety at Work Act, 1974

The Management of Health and Safety at Work Regulations 1999

The Ionising Radiations Regulations, 2017, (SI 2017 No1075),

The Ionising Radiation (Medical Exposure) Regulations 2017, (SI 2017 No 1322),

NRES Guidance on approval for research involving ionising radiation, version 2, NPSA, Sep 2008

The Environmental Permitting (England and Wales) Regulations 2016

## Document Control

<b>Policy number and Policy version:</b>  HS05 version 8.0	<b>Policy Title</b>  Ionising Radiation Safety Policy	<b>Status:</b>  Final		<b>Author:</b> RPA  <b>Director Sponsor:</b> Chief Medical Officer - BM
<b>Version / Amendment History</b>	<b>Version</b>	<b>Date</b>	<b>Author</b>	<b>Reason</b>
	3 (HS29)			Legal requirement – original policy
	4.1	Dec 2008	Radiation Protection Adviser	Update
	5.0	July 2012	Radiation Protection Adviser	Update
	5.1	Nov 2012	Radiation Protection Adviser	Amendment to table in attachment 2 to reflect change in national guidance from DoH
	6.0	July 2016	Radiation Protection Adviser	Update to include need for classified worker and appointed doctor. Also to clarify responsibilities of officers.
	7.0	June 2019	RPAs	Review following the introduction of new ionising radiations legislation
	7.1	September 2019	RPA	Minor amendment made to section 3.13
	7.2	May 2022	RPA	Extension
	8.0	Dec. 2022	RPA	Full review

<b>Intended Recipients:</b>	
All staff working in areas where ionising radiation is in use. All managers responsible for areas where ionising radiation practices are undertaken. Project managers involved in areas developing radiation	
<b>Consultation Group / Role Titles and Date:</b> Trust Radiation Safety Group (inc Chief Medical Officer, Chair of Radiation Safety Group (RSG), Radiation Protection Supervisors, and managers of areas using radiation), consultation during October 2022	
<b>Name and date of Trust level group where reviewed</b>	Trust Policy Group – December 2022
<b>Name and date of final approval committee</b>	Trust Management Committee – <b>January 2023</b>
<b>Date of Policy issue</b>	February 2023
<b>Review Date and Frequency</b> (standard review frequency is 3 yearly unless otherwise indicated)	December 2025, every 3 years
<b>Training and Dissemination:</b> Communication via Radiation safety Group to Divisional Managers and Clinical Directors Communication to Consultant Medical Staff via Clinical Directors	
<b>To be read in conjunction with:</b> Local Rules and IR(ME)R procedures HS06 Laser Safety Policy	
<b>Initial Equality Impact Assessment (all policies):</b> Yes <b>Full Equality Impact assessment (as required):</b> NA	
<b>Monitoring arrangements and Committee</b>	Monitored by Trust Radiation Safety Group
<b>Document summary/key issues covered.</b> The purpose of this policy is to ensure the safe use of ionising radiation throughout The Royal Wolverhampton NHS Trust by the implementation of best practice in the management of ionising radiation and compliance with health and safety legislation. The aim is to ensure, so far as is reasonably practicable, the health and safety of Trust employees and patients, of contractors working on the premises, voluntary workers and of members of the public who may be exposed to the hazards arising from the use of ionising radiation, and to establish good communication and co-operation at all levels.	
<b>Key words for intranet searching purposes</b>	Ionising radiation Radiation safety

## IMPLEMENTATION PLAN

To be completed when submitted to the appropriate committee for consideration/approval

<b>Policy number and policy version</b> HS05 v 7.1	<b>Policy Title</b> Ionising Radiation Safety Policy	
<b>Reviewing Group</b>	Radiation Safety Group	<b>Date reviewed:</b> <b>November 2022</b>
<b>Implementation lead:</b> Chair RSG, New Cross Hospital		
<b>Implementation Issue to be considered (add additional issues where necessary)</b>	<b>Action Summary</b>	<b>Action lead/s (Timescale for completion)</b>
Strategy; <b>Consider</b> (if appropriate) 1. Development of a pocket guide of strategy aims for staff 2. Include responsibilities of staff in relation to strategy in pocket guide.	NA	
Training; Consider 1. Mandatory training approval process 2. Completion of mandatory training form	NA	
Development of Forms, leaflets etc; Consider 1. Any forms developed for use and retention within the clinical record <b>MUST</b> be approved by Health Records Group prior to roll out. 2. Type, quantity required, where they will be kept / accessed/stored when completed	NA	
Strategy / Policy / Procedure communication; Consider 1. Key communication messages from the policy / procedure, who to and how?	RSG to notify Divisional Managers and Clinical Directors of HS05 revision	Chair RSG following publication of HS05 on the intranet
Financial cost implementation Consider Business case development	NA	
<b>Other specific Policy issues / actions as required e.g. Risks of failure to implement, gaps or barriers to implementation</b>		

## Procedure for the assessment, reporting and investigation of staff radiation doses

### Detail

#### 1.0 Objective

To ensure that the exposure of staff to ionising radiation is managed and, where appropriate, is investigated, and, if required, reported to the appropriate authority.

#### 2.0 Steps to be followed

##### 2.1 Staff dose monitoring and review

Managers of departments and wards where staff monitoring is required are responsible for ensuring that the staff dose monitoring program is effective. The Manager must ensure the following.

- Radiation risk assessment identifies staff groups requiring monitoring and the monitoring location (whole body, eye or extremity) required, in line with recommendations of the Radiation Protection Advisor (RPA).
- The radiation risk assessment is kept under regular review and reviewed prior to any relevant change in equipment or activity.
- A system is operating within the department for the effective management of dosimeters including the maintenance of records of dates of dosimeter issue and return for each monitoring period.
- Radiation monitors are issued to staff on or before the start date in the relevant areas.
- Staff always wear their dosimeters as required.
- The control badge is always kept in an area where radiation is not used (such as in an office).
- Regular audits are undertaken to demonstrate that monitors are being worn correctly.
- Radiation monitors are returned by staff at the end date and, together with the control badge, returned to the approved dosimetry service in a package marked "DO NOT X RAY" as soon as possible and no later than 2 weeks following the end date.
- Results of staff dosimetry are compared against action and investigation levels set in the local rules and any recorded dose exceeding these levels is investigated;



- The outcome of the review is reported to the radiation safety group (RSG) (via [rwh-tr.RadiationProtection@nhs.net](mailto:rwh-tr.RadiationProtection@nhs.net)).
- Where an investigation level defined within the relevant local rules has been exceeded, this must be recorded on DATIX.
- Results of staff dosimetry are made available to participants.
- The dosimetry service is informed when a 'spare' badge has been used in order that the recorded dose can be assigned to the correct staff member.

The CD is responsible for ensuring that staff comply with the requirements relating to staff dosimetry outlined in this policy.

## **2.2 Incidents involving potential accidental exposure of staff**

Where a member of staff has or may have received an accidental exposure as a result of an event or incident, the Department Manager must seek advice from an RPA. The dosimeter may be returned early to the dosimetry service for reading.

The Radiation Protection Supervisor (RPS) must be informed and may assist with investigation, but the Department Manager is responsible for the investigation in consultation with the RPA who will advise including any requirement for external notification.

If the incident is to be reported outside of the organisation, then the Chair of the RSG, Chief Executive, Chief Operating Officer, Chief Medical Officer, Chief Nursing Officer and Director of Assurance must be informed.

## Procedure for reporting and investigation of radiation incidents involving patients and visitors

### Detail

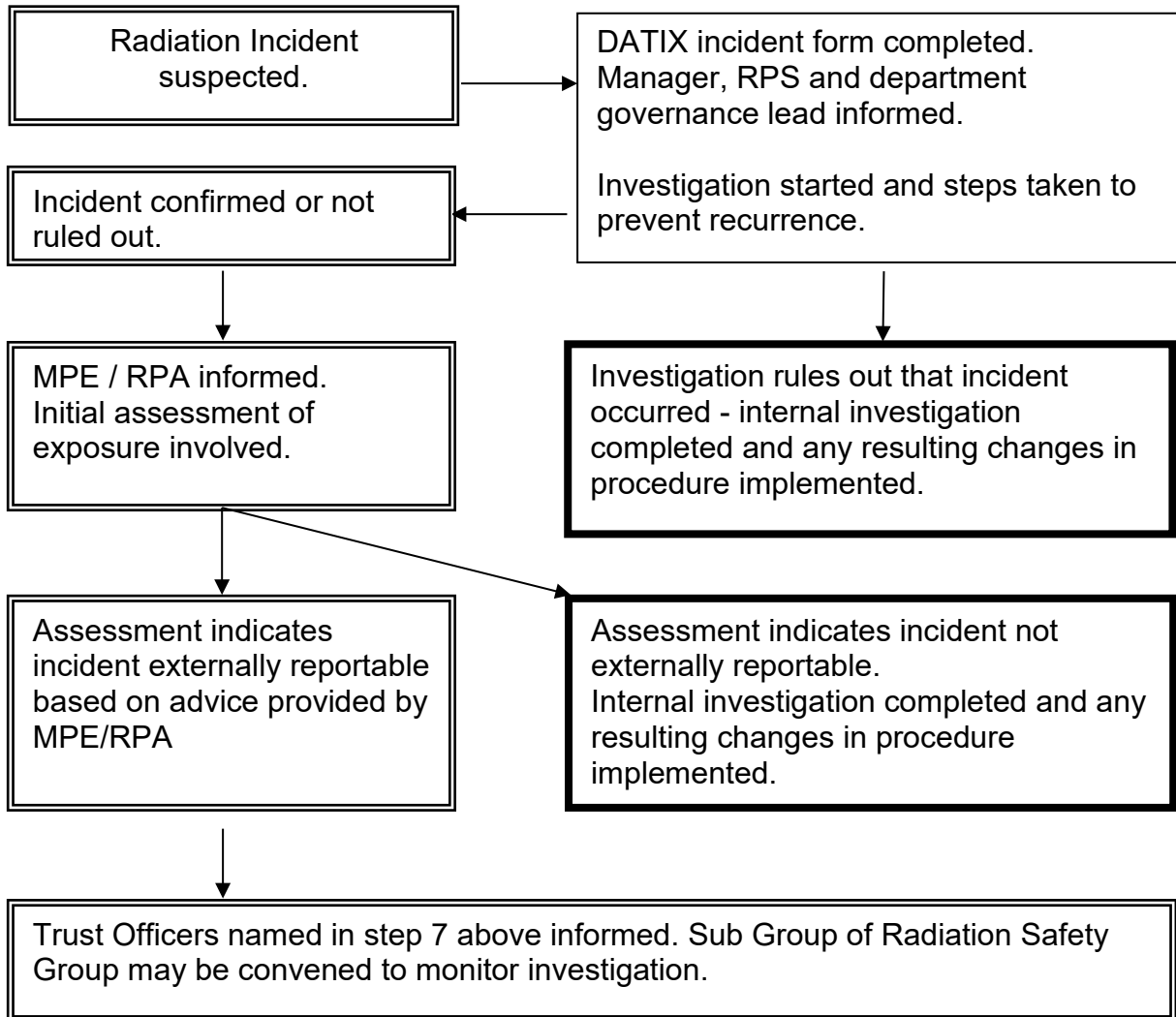
#### 1.0 Objective

To ensure that incidents involving accidental or unintended exposure to ionising radiation of patients or visitors are managed and investigated, and, where appropriate, reported to the appropriate authority.

#### 2.0 Steps to be followed

- Step 1** The incident must be recorded on DATIX by the relevant employee as soon as a radiation incident is identified.
- Step 2** All radiation incidents must be investigated by the Department Manager and, or Governance Lead of the area or department where the incident occurred.
- Step 3** A relevant MPE and, or RPA must be notified of all radiation incidents. All suspected incidents must be treated as actual incidents if not ruled out by the initial investigation. The investigation must not delay (where applicable) notification to the appropriate authority.
- Step 4** Incidents reportable outside the organisation must follow the guidance included in Trust Policy OP10 Risk Management and Patient Safety Reporting Policy. Advice on whether an incident is reportable externally and to which agency must be obtained from a relevant Medical Physics expert (MPE) or Radiation Protection Adviser (RPA).
- Step 5** Should the incident be externally reportable it must be reported by the governance lead or manager of the area where the incident occurred. The Medical Physics and Clinical Engineering Department can provide advice on this process. The Trust DATIX record must be amended to note that it has been reported externally.
- Step 6:** Should the incident be of the type identified above as reportable externally and be of a serious nature, then the incident investigation may (dependent on complexity) be monitored by a sub-group of the Radiation Safety Group (RSG). An investigation must identify the cause of the incident, and action plan to minimise the possibility of recurrence.
- Step 7:** If the incident is to be reported outside of the organisation, then the Chair of the RSG, Chief Executive, Chief Operating Officer, Chief Medical Officer, Chief Nursing Officer and Director of Assurance must be informed.

Flowchart: management of radiation incidents



## **Terms of Reference, Radiation Safety Group (RSG)**

### **1. Introduction**

It is the responsibility of The Royal Wolverhampton NHS Trust to provide adequate radiation safety arrangements for patients, staff and members of the general public. This responsibility extends to all sites.

### **2. Radiation Safety Group**

As part of the organisational arrangements and general measures for radiation protection, a Radiation Safety Group shall be established.

### **3. Membership of the Group**

The following roles are members, but some individuals may fulfil multiple roles. The Chair and Vice-Chairpersons may alternate between these roles during their term of office.

- a) An appropriate Chairperson will be appointed by the Chief Medical Officer for a period of 3 years.
- b) An appropriate Vice-Chairperson will be appointed by the Chief Medical Officer for a period of 3 years.
- c) An appropriate secretary will be appointed by the Chief Medical Officer for a period of 3 years.
- d) The appointed Radiation Protection Adviser(s) or, if external to the Trust, the local lead.
- e) The appointed Laser Safety Officer(s) or, if external to the Trust, the local lead.
- f) The appointed Radioactive Waste Adviser(s) or, if external to the Trust, the local lead.
- g) The appointed Magnetic Resonance Safety Expert(s) or, if external to the Trust, the local lead.
- h) The lead Medical Physics Expert (MPE) for each of Diagnostic Radiology; Radiotherapy and Nuclear Medicine.
- i) The responsible manager of every department using forms of radiation covered by the committee: Radiology; Radiotherapy; Medical Physics and Clinical Engineering; Special Care Dental Services; Cardiology; Theatres; Critical Care; and any others subsequently identified.
- j) The departmental governance leads for the departments listed in (i).
- k) The Chief Medical Officer.
- l) The Trust Health and Safety Manager.
- m) Other members by invitation of the Group.

#### **4. Quorum**

The quorum for the Group shall be:  
the Chairperson or Vice Chairperson,  
at least one Radiation Protection Adviser or nominated deputy,  
the Laser Safety Officer or nominated deputy,  
the lead Medical Physics Expert (MPE) for each of Diagnostic Radiology, Radiotherapy and Nuclear Medicine or their nominated deputies,  
the Chief Medical Officer or nominated deputy,  
the Health and Safety Manager or nominated deputy, and  
at least 2 further Group Members not included in above.  
(The roles are required to be covered but some individuals may fulfil multiple roles.)

#### **5. Frequency of Meetings**

The Group will meet at 6 monthly intervals, or under special circumstances required by the Chair of the Group.

#### **6. Reporting Arrangements**

Reports from the RSG will be submitted to the Health and Safety Steering group and Quality and Safety Advisory Group (QSAG).

Copies of the minutes and action points will be sent for action and information to all members of the Group as identified in section 3 above

The managers of departments who are members should cascade minutes to all Radiation Protection Supervisors and all Laser/UV Protection Supervisors in their area.

#### **7. Detailed Terms of Reference**

The Terms of Reference of the Group will include the following.

- a) To monitor compliance with current legislation, national guidance and this policy, making recommendations where appropriate. This will include ionising radiation (X-ray, and radioactive substances); optical radiation (laser and UV) and magnetic radiation (MRI).
- b) To monitor compliance by receiving reports from the advisors, managers and other members of the group relating to radiation assurance and where appropriate determine actions to improve compliance. The content of requested reports will be specified at the time and will include assurances in relation to radiation safety documentation, optimisation and diagnostic reference levels, equipment management and quality assurance and training.
- c) To ensure that a robust system of radiation incident reporting is in place.
- d) To review staff personal radiation dose records and compliance with statutory dose limits and constraints.

- e) To report or recommend directly to the employer any concerns related to the management of radiation safety within the Trust.
- f) To monitor the appointment of suitably qualified advisors and officers for compliance with necessary radiation safety measures within areas utilising ionising and non-ionising radiations. (The chair of the Radiation Safety Group will approve these on behalf of the RSG in between Group meetings, subject to ratification at the next available Group meeting.)
- g) The agenda of the 6-monthly meetings will include as a minimum the items identified below.
- h) To discuss and report on any other matters relevant to the uses of radiation within the Trust which the Group may deem appropriate.
- i) To Audit policy HS05 Ionising Radiation Safety Policy as outlined in section 9 of that policy.

# Agenda Template for RSG; Minimum Agenda Items

Radiation Safety Group

Agenda

Date of Meeting ...../...../.....

1. Attendees
2. Apologies
3. Minutes of the previous meeting
4. Matters arising
5. RPA & MPE report(s) on IRR & IR(ME)R compliance
6. ARSAC Licensing review
7. Incidents summary and trends (Ionising Radiation)
8. Laser Safety Officer Report
9. Magnetic Resonance Safety Expert Report
10. Reports from Managers of each area using radiation:  
(Reports to be provided on templates, as required by RSG secretary)
  - 10.1 Radiology
  - 10.2 Radiotherapy
  - 10.3 Medical Physics
  - 10.4 Special Care Dental Services
  - 10.5 Cardiology
  - 10.6 Theatres
11. Any other business
12. Date of next meeting