Ionising Radiations Safety Policy

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Summary of document:
Outlines the processes employed by the Health Board to manage the safety of its patients, employees, visitors and public from the use of ionising radiations on its premises. The safety of such individuals from use of ionising radiation is covered by a series of statutory instruments

Scope:
All *employees* who use or are involved in the use of ionising radiation on Health Board premises (including exposure to radon gas)

All *employees* who work in departments which use ionising radiation sources, even if the employees are not directly using sources themselves

To be read in conjunction with:
Employer's procedures for medical exposures

Patient information:

Owning group:
Radiation Protection Group

Executive Director job title:
Executive Director of Allied Health Professions and Health Science

Reviews and updates		
Version no:	**Summary of Amendments:**	**Date Approved:**
1.0-2.0	Earlier versions of this policy are available prior to records of amendments being recorded	
3.0	• Requirements of new regulations governing ionising radiation included (IRR17, IR(ME)R17, EPR16) • Responsibility for management of radiation safety policy updated. • Staff radiation protection training requirements added. • Corporate employer's procedures removed (to be included in procedures of departments operating a radiation facility) • Health Boards-wide procedure for entitlement of duty holders for medical exposures revised. • New procedure for management of radioactive materials added. • Medical Director responsibilities revised to include entitlement of lead surgeon as IR(ME)R duty holder for mini C-arm fluoroscopy exposures of extremities in Theatres • Radiation Protection Committee renamed as Radiation Protection Group • Group reporting structures updated • Link to imaging referral guidelines updated • Link to latest clinical guidance related to IR(ME)R • Summary of radiation incident reporting included • Reference to availability of IR(ME)R employer's procedures in departments with a radiological facility included	23.3.2022
4.0	• Title change of Executive Director title to Executive Director of Allied Health Professions and Health Science (DAHPHS) • Updated to include requirements of IR(ME)(Amendment) Regulations 2024 • Reference to Radiopharmacy removed • Responsibilities for radiation classified persons added • Terms of reference for Radiation Protection Group and Medical Exposure Group revised • References updated within procedure for management of radioactive materials • Amendment of corporate procedure for entitlement of duty holders (Annex 1) including removal of training requirements to avoid potential duplication of information held within departmental employer's procedures. • Health and Safety Sub-Committee replaced with Health and Safety Compliance Group	13.04.2026

Glossary of terms

Term	*Definition*
Ionising Radiations	include X-rays generated by electrical means (i.e. diagnostic X-ray machines) and emissions from radioactive materials (gamma rays, alpha and beta particles). The term 'radiation' will be used within this policy to refer to ionising radiation.
The **Employer**	is any natural or legal person who carries out (other than the employee), or engages others to carry out, medical exposures or practical aspects at a given radiological installation.
A **referrer**	is a registered healthcare professional who is entitled by the Employer to refer individuals for medical exposure to a *practitioner*. A referral for a medical exposure is a request to a *practitioner* to consider the most appropriate technique (including non-radiation techniques) to meet the *referrer's* objective. A *referrer* must be competent to understand the reported findings and to ensure that appropriate action is taken on the findings.
A **practitioner**	is a registered healthcare professional who is entitled by the Employer to take responsibility for an individual exposure. The primary function of a *practitioner* is to justify medical exposures taking into account the risks and benefits while considering alternative investigations and procedures.
An **operator**	is any person who is entitled by the Employer to carry out or supervise the practical aspects of a medical exposure except where they do so under the direct supervision of a person who is adequately trained. There may be several *operators* involved in a single exposure.
A **Medical Physics Expert (MPE)**	is a person having knowledge, training and experience to act or give advice on matters relating to radiation physics applied to medical exposure in diagnostic radiology, nuclear medicine and radiotherapy, whose competence in this respect is recognised by a competent authority. All employers who carry out medical exposures are required in regulation 14 of IR(ME)R to appoint a suitable medical physics expert. They will be appointed in writing by the Health Board
A **Clinical Radiation Expert (CRE)**	is a registered health professional with expertise in the modality used in the research study and assesses whether the research protocol could involve additional radiation exposure at any site in the study and advises on the suitability and ethical acceptability of additional exposures
Equipment	means equipment that delivers ionising radiation to a person undergoing a medical exposure and equipment that directly controls or influences the extent to the exposure.
A **Radiation Protection Advisor (RPA)**	is a qualified expert in ionising radiation protection and acts as an independent adviser to the Health Board on the requirements of IRR17. They must hold and maintain a recognised certificate and have the appropriate knowledge and experience relevant to the scope of advice required. They will be appointed in writing by the Health Board.
A **Radiation Protection Supervisor (RPS)**	is ideally an employee, usually in a line management position, who is closely involved with the work being done to assist in ensuring compliance with arrangements made by the Health Board under IRR17. They will be appointed in writing by the Health Board.
A **Radiation Waste Adviser (RWA)**	is a qualified expert in radioactive waste disposal and environmental radiation protection and acts as an independent adviser to the Health Board on the requirements of EPR16. They must hold and maintain a recognised certificate and have the appropriate knowledge and experience relevant to the scope of advice required. They will be appointed in writing by the Health Board.

Keywords	Ionising, radiation, radiology, radiography, radioactive substances, IRR, EPR, IR(ME)R

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1. INTRODUCTION

1.1 Hywel Dda University Health Board (The Health Board) commonly uses ionising radiation from the use of X-ray generators and radioactive materials. It does so in order to benefit patients through diagnostic tests, and indirectly in the maintenance and quality assurance of associated equipment.

1.2 This policy outlines the processes employed by the Health Board to manage the safety of its patients, employees, visitors and public from the use of ionising radiations on its premises. The safety of such individuals from use of ionising radiation is covered by a series of statutory instruments including the following key legislation:

- ***The Ionising Radiations Regulations 2017***[1] *(hereafter IRR17), enforced by The Health and Safety Executive, govern the safe use of ionising radiation in the workplace for the protection of employees and members of the public.*
- ***The Ionising Radiation (Medical Exposure) Regulations 2017***[2] *and* ***The Ionising Radiation (Medical Exposure) Amendment Regulations 2024***[3] *(hereafter IR(ME)R), enforced by Healthcare Inspectorate Wales, govern medical exposures of ionising radiation. These regulations are principally concerned with minimising radiation doses and reducing risks to patients. Regulations stipulate responsibilities with respect to operation of medical radiation equipment.*
- ***The Environmental Permitting (England and Wales) Regulations 2016***[4] *(hereafter EPR16), enforced by Natural Resources Wales, govern keeping, use, accumulation, transfer, and disposal of radioactive materials. The Health Board is required to hold a Permit issued by NRW before such materials can be obtained, used, accumulated, transferred or disposed of.*

1.3 This policy sets out the means by which the Health Board implements and oversees compliance with the above regulations as it applies to activities undertaken on Health Board premises.

1.4 The policy is supported by employer's procedures (as required under Schedule 2 of IR(ME)R) which are applied to maintain the health and safety of patients from medical use of ionising radiation.

Due to the variation in nature and scope of radiological work performed throughout the Health Board, employer's procedures are provided separately in each of the following departments with radiological facilities:

- Radiology (including nuclear medicine)
- Theatres (performing Mini C-arm X-ray exposures)
- Community dental services

These departments maintain their own examination protocols, duty holder entitlement register, and radiological equipment inventory.

The Health Board procedure for entitlement of duty holders for medical exposures is provided in **Annex 1**.

1.5 The Health Board procedure for management of radioactive substances is provided in **Annex 2**.

1.6 The Health Board is committed to a policy of restricting exposures to ionising radiation in accordance with the ALARP principle (as low as is reasonably practicable) and will effect this through the organisational arrangements and responsibilities described in this policy.

2. POLICY STATEMENT

2.1 The Health Board will:

- Identify situations where ionising radiation is used and designate radiation areas appropriately;
- Determine who may be affected by the use of ionising radiation and the adequacy of protective measures;
- Where staff may be exposed to ionising radiation, prevent exposure or reduce it to as low as reasonably practicable (ALARP);
- Where ionising radiation is used for diagnosis or treatment, reduce the dose to the patient as far as reasonably practicable, consistent with the required clinical purpose;
- Ensure that there are adequate management arrangements to ensure safe use of ionising radiation (these include the appointment of competent persons to act as Radiation Protection Advisors and Supervisors, Radioactive Waste Advisers and the development of local radiation protection rules, contingency plans, written procedures and protocols);
- Monitor exposure of staff to ionising radiation using an approved dosimetry service;
- Ensure that plant, equipment and premises are safe and maintained with systems using ionising radiation subject to quality assurance programmes;
- Inform the appropriate authority of any incident resulting in an overexposure or clinically significant medical exposure;
- Provide staff with adequate information, instruction, training and supervision;
- Identify and entitle staff to act as *referrer*, *practitioner* and *operator* under IR(ME)R and communicate this entitlement and associated scope of practice to them;
- Where necessary, and as a last resort, provide appropriate personal protective equipment where adequate control is not achieved by other means.

3. SCOPE

3.1 This policy applies to:

- all *staff* who use or are involved in the use of ionising radiation on Health Board premises (including exposure to radon gas)
- all *staff* who work in departments which use ionising radiation sources, even if staff are not directly using sources themselves.
- medical exposure of ionising radiation within the Health Board to:
  a) patients as part of their own medical diagnosis or treatment;
  b) individuals as part of health screening programmes;
  c) patients or other persons voluntarily participating in medical or biomedical, diagnostic or therapeutic, research programmes;
  d) carers and comforters;
  e) asymptomatic individuals;
  f) individuals undergoing non-medical imaging using medical radiological equipment.

NOTE: This policy **DOES NOT APPLY** to **non-ionising radiations** which include:

- Optical radiation (lasers, ultraviolet and intense pulsed light sources);
- Ultrasound;
- Electromagnetic fields including fields associated with magnetic resonance imaging

4. AIM

4.1 The aim of the policy is to outline the processes employed by the Health Board to ensure that systems are in place, and regularly reviewed, in order that:

- Only justified practices involving ionising radiation are undertaken.
- Ionising radiation sources are used appropriately and safely and that the Health Board complies with current relevant legislation and best practice.
- Radiation doses to staff, contractors working on the premises, and the public arising from work activities are kept as low as reasonably practicable and, where applicable, within dose limits.
- All medical exposures are justified and optimised in accordance with IR(ME)R.

5. OBJECTIVES

5.1 The aim of the policy will be achieved by ensuring that:

- Statutory responsibilities that rest with the Health Board, as employer, and individual duty holders according to the roles identified within ionising radiations legislation are effectively implemented.
- Licensing arrangements for the *employer* and individuals involved in the administration of radioactive substances by a Licencing Authority are in place (as detailed in IR(ME)R Schedule 1);
- Employer's procedures covering medical exposures are established (as detailed in IR(ME)R schedule 2) in all departments operating a radiological facility.
- Staff are suitably trained in the use of employer's procedures and their competence to act in the capacity (as detailed in IR(ME)R Schedule 3).
- Best Available Technique (BAT) is employed to reduce the impact of radioactive materials on the environment and the public to as low as reasonably practicable.

6. BASIC PRINCIPLES OF RADIATION SAFETY

6.1 Ionising radiation has the potential to cause tissue reactions (e.g. cataracts and damage to skin) and stochastic effects (i.e. cancer induction and genetic damage).

6.2 Tissue reactions have a threshold dose, below which the effects do not appear. Stochastic effects do not have a threshold and therefore the risks increase with increasing dose.

6.3 The risks are controlled by a set of procedures, protocols and local rules which implement three key principles:

Justification: the process of showing that the work involving exposure to radiation produces sufficient benefit to the exposed individuals or society to offset the potential radiation detriment;

Optimisation: the process of keeping all exposures as low as reasonably practicable, economic and social factors being taken into account; and

Dose limitation: the process of keeping the sum total of all relevant doses received within laid down limits. Dose limits do not apply to medical exposures.

6.4 Medical exposures to radiation will be carried out only where justified and with the level of exposure being restricted so far as is reasonably practicable for achievement of the clinical purpose.

7. RESPONSIBILITY FOR MANAGEMENT OF RADIATION SAFETY

7.1 Hywel Dda University Health Board

7.1.1 The Health Board, as the radiation employer, has ultimate responsibility for ensuring that it complies with the requirements of radiation safety legislation including the provision of appropriate resources.

7.1.2 As part of its risk management strategy the Health Board has convened a group of relevant specialist advisers and representatives of radiation users as a Radiation Protection Group to oversee the implementation of radiation protection arrangements and to approve and ensure compliance with this Policy. This Group is supported by a Medical Exposure Group to oversee the radiation protection arrangements for medical exposures only. The terms of reference of the Radiation Protection and Medical Exposure Group are attached at ***Annex 3*** and ***Annex 4*** respectively.

7.2 The Chief Executive

7.2.1 The Chief Executive is designated by the Health Board as the officer with overall responsibility for compliance with the duties of the *employer* required by all legislation concerning radiation safety.

7.2.2 The Chief Executive will delegate tasks, but not responsibility, for ionising radiation safety appropriately through the following organisational arrangements in order to effectively manage and control the risks from ionising radiation.

7.2.3 Within this framework an Executive Director, the Responsible Manager, has been tasked with the preparation and implementation of this Policy. The Responsible Manager is the Executive Director of Allied Health Professions and Health Science.

7.3 The Director of Allied Health Professions and Health Science (DAHPHS) will:

7.3.1 Ensure that the following qualified experts are appointed by the Health Board in writing:

- Radiation Protection Advisers (RPAs) to advise the employer on all aspects of occupational radiation safety and advise on compliance with IRR17;
- Radioactive Waste Advisers (RWAs) to support employer compliance with environmental permits granted by Natural Resources Wales to support safe storage, use and disposal of radioactive materials, and to advise on compliance with EPR16.
- Medical Physics Experts (MPEs) in diagnostic radiology and in nuclear medicine to advise the employer on patient dosimetry and quality assurance matters,

optimisation of medical exposures and to provide advice relating to compliance with IR(ME)R.

7.3.2 Chair the Radiation Protection Group and Medical Exposure Group meetings, or appoint an appropriate deputy, and ensure that these Groups fulfil their terms of reference.

7.3.3 The Ensure arrangements are in place for the implementation of this policy.

7.3.4 Ensure Clinical Leads/ Service Managers have approved employer's procedures within their area of responsibility;

7.3.5 Ensure structures described in this policy for entitlement of IR(ME)R duty holders are in place;

7.3.6 Ensure, with advice from the MPE (nuclear medicine), that the Health Board holds a valid licence issued by a Licensing Authority in respect of each site at which radioactive substances are to be administered;

7.3.7 Ensure, with advice from the MPE (nuclear medicine), that *practitioners* responsible of the administering of radioactive substances hold a valid licence issued by a Licensing Authority;

7.3.8 Ensure radiation incidents are investigated and reported to the appropriate enforcing authority where appropriate.

7.4 The Executive Medical Director will:

7.4.2 Ensure all medical staff receive appropriate training in radiation safety where necessary;

7.4.3 Ensure training requirements are regularly reviewed in the light of national guidance;

7.4.4 Ensure entitlement of duty holders is granted in accordance with employer's procedures.

7.4.5 Ensure appropriate training for *practitioners* and *operators* is identified;

7.4.6 Ensure that referral guidelines are made available to *referrers* both within and outwith the Health Board and that *referrers* are made aware of their statutory responsibilities (section 7.15).

7.5 The Radiation Protection Group is responsible for:

7.5.1 Advising the Health & Safety Compliance Group on matters relating to radiation safety;

7.5.2 Ensuring processes exist to permit the Health Board to comply with relevant legislation and safety standards for the safe use of ionising radiation;

7.5.3 Developing and reviewing the Health Board's Ionising Radiation Safety Policy (i.e. this document).

7.5.4 Reviewing reported of statutory inspections of IRR17 and EPR16 compliance and monitoring identified actions.

7.5.5 Reviewing reports of occupational overexposures.

7.6 The Medical Exposure Group is responsible for**:**

7.6.1 Advising the Quality, Safety and Experience Sub-committee on matters relating to medical (ionising radiation) exposures

7.6.2 reviewing and approving employer's procedure for entitlement of duty holders for medical exposure

7.6.3 monitoring and reviewing IR(ME)R compliance within each department with a radiation facility;

7.6.4 monitoring and reviewing the process of entitlement of individuals to act as *referrers*, *operators* and *practitioners*;

7.6.5 authorising individual managers to assign a scope of referral for *referrers* within their area of responsibility;

7.6.6 authorising individual managers to entitle staff within their area of responsibility to be *practitioners* and *operators* for specified scopes of practice;

7.6.7 providing advice on training requirements for *referrers, operators and practitioners;*

7.6.8 receiving reports on patient dose audits including any corrective actions recommended by the *medical physics experts* in order to establish optimisation priorities;

7.6.9 receiving reports of cases where diagnostic reference levels have been consistently exceeded and to recommend corrective action;

7.6.10 reviewing and considering reports of accidental or unintended radiation exposures;

7.6.11 receiving and considering reports of clinical audits relating to IR(ME)R compliance and to identify audit topics;

7.7 Service Managers of Departments where ionising radiation is used are responsible for ensuring radiation safety measures are implemented.

7.7.1 For *IRR17* compliance, the Service Manager will ensure:

- The RPA is consulted on all matters affecting radiation safety which includes the use of X-rays, design of radiation facilities, and the purchase, transport, use and disposal of radioactive materials;
- A radiation risk assessment is carried out in collaboration with the RPA before any new activity or new facility involving ionising radiation is introduced;
- All staff working with ionising radiation read, understand and agree to comply with the radiation safety policy (this document),
- Effective arrangements are in place for the issue and return of personal dosemeters where risk assessment has identified a need for personal monitoring;
- Sufficient Radiation Protection Supervisors (RPSs) are appointed to supervise working practices;
- Local rules for radiation safety are available and followed by relevant staff and any contingency plans are rehearsed as appropriate;
- All staff receive appropriate training in radiation safety.
- All radiation equipment is installed, critically examined and maintained
- Occupational exposure incidents are investigated and reported in accordance with Local Rules.

7.7.2 For *IR(ME)R* compliance, the Service Manager will ensure:

- Employer's procedures and protocols cover all medical exposures carried out within their service and are regularly reviewed;
- *Practitioner*s and *operators* are aware of their duties and scope of practice;
- An MPE is consulted on all matters concerning the radiation safety relating to medical exposures including the performance and procurement of radiological equipment;

- All radiation equipment is commissioned and subject to a quality assurance programme;
- All radiation equipment is assessed annually and prioritised for replacement on the Health Board's capital programme;
- Medical exposure incidents are investigated and reported in accordance with employer's procedures;
- Clinical audit involving ionising radiation is carried out in accordance with Health Board policy;
- Training records for *practitioner*s and *operators* in their area of responsibility, relevant to their scope of practice, are kept and are available.

7.7.3 Where radioactive materials are used, for EPR16 compliance, the Service Manager will ensure:

- The conditions of permits issued by Natural Resources Wales are met;
- Written procedures are in place for the safe storage and use of radioactive materials and the accumulation and disposal of radioactive waste;
- A best available techniques (BAT) assessment is carried out and documented for the disposal of radioactive waste.

7.8 Service Managers of Departments without a radiation facility must:

7.8.1 Cooperate with the managers of radiation facilities in implementing this policy and associated procedures; this will apply particularly in respect of medical exposures and to staff working away from their main area of employment in the vicinity of radiation facilities.

7.9 The Radiation Protection Advisor will ensure that:

7.9.1 All X-ray equipment is subject to critical examination, commissioning tests and regular equipment radiation safety and performance tests;

7.9.2 Surveys of patient doses in diagnostic radiology are carried out regularly;

7.9.3 Environmental radiation surveys are carried out regularly for all radiation Controlled Areas;

7.9.4 Results of personal dose monitoring are reviewed for all staff and any results in excess of investigation levels are investigated;

7.9.5 Ensure regular leak tests of sealed radioactive sources are performed to confirm the integrity of their containment;

7.9.6 Compliance audit of IRR17 is regularly undertaken in departments with a radiation facility.

7.10 The Radioactive Waste Advisor will ensure that:

7.10.1 An inventory of Health Board sealed radioactive sources is maintained;

7.10.2 Regular leak tests of sealed radioactive sources are performed to confirm the integrity of their containment;

7.10.3 Advice is provided on issues relating to the storage and disposal of radioactive waste;

7.10.4 Compliance audit of EPR16 is regularly undertaken in departments using radioactive materials.

7.11 **Radiation Protection Supervisors** will ensure that, in the area for which they have responsibility:

7.11.1 Local Rules for radiation safety have been prepared in collaboration with the RPA;

7.11.2 Arrangements for controlling radiation safety as detailed in the Local Rules are implemented, monitored and reviewed;

7.11.3 All employees working with ionising radiation have read the Local Rules and signed a declaration stating that they understand them.

7.11.4 Arrangements for controlling radiation safety as detailed in the Local Rules are implemented, monitored and reviewed in collaboration with the RPA.

7.11.5 Regular liaison takes place with the RPA and advice is sought as soon as possible in the event of an incident.

7.11.6 Inform the Service Manager of any situations where there has been non-compliance with the Local Rules or where changes to the Local Rules are required to optimise radiation safety.

7.11.7 Compliance with Local Rules is audited at regular intervals.

7.11.8 Contingency plans are rehearsed.

7.11.9 Radiation equipment is checked following service and/or repair where radiation output may be affected;

7.11.10 Radiation risk assessments are undertaken on pregnant staff working with ionising radiation.

7.11.11 RPSs who also supervise use of radioactive materials in their department will ensure that:

- Receipt, transfer and disposal of radioactive materials are recorded in a timely manner, and such records are made available to Natural Resources Wales on request.
- Radioactive waste is stored and disposed of in accordance with the systems of work identified in the Local Rules and appropriate records are kept.
- Records of radioactive waste are collated in respect of patients returning from other hospitals where they have undergone nuclear medicine tests.
- The Radioactive Waste Adviser (RWA) is consulted when changes to site Permits issued under EPR16 by Natural Resources Wales are required;
- The RWA is informed immediately of any unauthorised accumulation or disposal of any radioactive material;
- The RWA is immediately informed following a suspected loss or theft of any radioactive material;
- Annual reporting to the RWA on the disposal of radioactive waste from site premises to enable reporting to the Natural Resources Wales;
- Radiation areas and relevant personnel undergo contamination monitoring and decontamination measures implemented when results exceed action levels.

7.12 Radiation Classified Persons

7.12.1 All staff designated as classified persons must:

- Present themselves during working hours, at the cost of their employer, to an initial medical check and provide the Appointed Doctor with all information concerning their health as to which the Appointed Doctor may reasonably require.
- Attend an annual review going forwards every year for which they continue to be classified.
- Comply with all reasonable requirements imposed by the Health Board for monitoring personal doses. Therefore, failure to return a personal dosemeter, to take due care of a dosemeter or to wear one as required will result in a warning letter. Persistent non-compliance will result in disciplinary action.

7.12.2 Classified workers must notify their Line Manager of any of the following circumstances:

- Leaving the Health Board to allow a Termination Record to be produced.
- Intention to work for another employer to allow co-operation between employers.
- Intention to carry out services in a controlled area of any employer other than their own to allow a radiation passbook to be issued.
- Pregnancy/breastfeeding as soon as possible.
- Any incident which could lead to an increase in dose from that which is normally expected.

7.13 **The Head of Estates Risk & Compliance** will ensure that:

7.13.1 Arrangements are made in liaison with the RPA for periodic monitoring of radon levels in the workplace in accordance with HSE guidance[4] and appropriate action is taken when/if test results reach/exceed action level for workplaces. All results will be provided to and discussed with the RPA. Results and progress updates will be reported to the Radiation Protection Group via a representative of the Health and Safety Team.

7.14 **The Director of Estates, Facilities and Capital** will ensure that:

7.14.1 Advice is sought from the RPA in relation to plans for new/ modified radiation facilities (e.g. new X-ray room);

7.14.2 Radiation risk assessment is carried out in consultation with the RPA in respect of any proposed building/engineering works in or around any existing radiation area.

7.14.3 Procurement of radiation equipment is in accordance with all-Wales procurement guidelines[5].

7.14.4 For sites using radioactive materials, any proposed changes to radioactive waste disposal arrangements are discussed beforehand with the RPA and the relevant RPS;

7.15 Referrers for medical exposures

7.15.1 In carrying out their defined role the *referrer* will ensure that:

a) the clinical information required from the medical exposure examination has not already been provided by previous diagnostic tests;

b) they refer for medical exposures as appropriate to their grade and area of clinical responsibility;

c) the referral is made in accordance with the referral guidelines identified in the Departmental Employer's Procedures.

d) sufficient clinical details are provided on the referral form relevant to the medical exposure requested to enable the *practitioner* to decide whether the exposure is justified;

e) sufficient non-medical data (such as name, address, date of birth) is provided on the referral form to enable accurate identification of the patient and processing of the referral;

f) where doubt exists as to the appropriateness of an investigation advice is sought from the IR(ME)R *practitioner*;

g) the referral form contains adequate and accurate information in a legible form;

h) referrals that are part of a research protocol approved by an NHS Research Ethics Committee are identified as such in referral forms;

i) reports are read in a timely fashion and acted upon appropriately[6];

j) they identify themselves on the referral form

7.16 Practitioners

7.16.1 In carrying out the defined role, the *practitioner* will

(a) ensure exposures are justified as showing a sufficient net benefit, giving appropriate weight to:

- the specific objectives of the exposure and characteristics of the individual involved;
- potential diagnostic or therapeutic benefits, including the direct health benefits to the individual and the benefits to society, of the exposure;
- the individual detriment that the exposure may cause;
- the efficacy, benefits and risk of available alternative techniques having the same objective but involving no or less exposure to ionising radiation;

(b) authorise the exposure, if justified, by signing the referral form or other document specified in the employer's procedure.

NOTE:
Where it is not practicable for the *practitioner* to authorise an exposure as required the *operator* must do so in accordance with a written delegated authorisation guideline approved by the *practitioner*.

(c) in the case of the administration of radioactive substances, ensure that they are licensed to undertake the intended exposure;

(d) take into account any data supplied by the *referrer* in order to avoid unnecessary exposure;

(e) cooperate regarding practical aspects of medical exposures with other specialists and staff involved in an exposure as appropriate;

(f) in relation to all radiotherapeutic exposures, ensure that exposures of target volumes are individually planned and their delivery appropriately verified taking into account that doses to non-target volumes and tissues must be as low as reasonably practicable and consistent with the intended radiotherapeutic purpose of the exposure;

(g) in the case of an exposure taking place in the course of a research study, ensure that the study has been approved by an ethics committee and, in the case of the administration of radioactive substances, approved by an expert committee who can advise on administration of radioactive substances to humans;

(h) in the case of a non-medical imaging exposure, it complies with the procedure for such exposures;

(i) maintaining training records

(j) comply with employer's procedures.

7.16.2 The practitioner will pay special attention to

(a) medical exposures of children;

(b) recommendations from relevant bodies where an exposure is to be performed as part of any health screening programme;

(c) medical exposures involving high doses to individuals being exposed;

(d) whether in circumstances where there is to be an exposure to a carer or comforter such an exposure would show a sufficient net benefit;

(e) guidelines issued by relevant bodies in the case of medical exposure of asymptomatic individuals;

(f) where appropriate, individuals in whom pregnancy cannot be excluded and who are undergoing a medical exposure, in particular, if abdominal and pelvic regions are involved, taking into account the exposure of both the individual and any unborn child; and

(g) where appropriate, individuals who are breastfeeding and who are undergoing a medical exposure involving administration of radioactive substances, taking into account the exposure of both the individual and the child.

7.17 Operators

7.17.1 Within the limitations of their entitled scope of practice, the *operator* will:

(a) select equipment and methods to ensure that for each medical exposure the individual dose is as low as reasonably practicable and consistent with the intended diagnostic or therapeutic purpose, having particular regard to:

- quality assurance;
- assessment and evaluation of patient dose or administered activity; and
- adherence to diagnostic reference levels for radiodiagnostic examinations as set out in employer's procedures.

(b) cooperate regarding practical aspects of medical exposures with other specialists and staff as appropriate;

(c) carry out and record a clinical evaluation of the outcome of each medical exposure;

(d) keep records of their training.

(e) comply with employer's procedures

7.17.2 Within limitations of their scope of practice operators will pay particular attention to:

(a) medical exposures of children;

(b) medical exposures as part of a health screening programme;

(c) medical exposures involving high doses to the individual being exposed;

(d) where appropriate, medical exposures of individuals of childbearing age in whom pregnancy cannot be excluded, in particular if abdominal and pelvic regions are involved, taking into account the exposure of both the individual and any unborn child;

(e) where appropriate, medical exposures of females who are breastfeeding and who are undergoing nuclear medicine exposures, taking into account the exposure of both the individual and the child.

7.18 Medical Physics Expert

7.18.1 The *medical physics expert* (appointed in the areas of diagnostic radiology and nuclear medicine) will:

(a) give advice on:

- dosimetry and quality assurance matters relating to radiation protection concerning exposures;
- physical measurements for the evaluation of dose delivered;
- medical radiological equipment.

(b) contribute to:

- optimisation of the radiation protection of patients and other individuals subject to exposures, including the application and use of diagnostic reference levels;
- the definition and performance of quality assurance of the equipment;
- acceptance testing of the equipment;
- the preparation of specifications for equipment and installation design;
- the surveillance of the medical radiological installations;
- the analysis of events involving, or potentially involving, accidental or unintended exposures;
- the selection of equipment required to perform radiation protection measurements;
- the training of practitioners and other staff in relevant aspects of radiation protection;
- the provision of advice to an *employer* relating to compliance with IR(ME)R.

(c) where appropriate, liaise with a radiation protection adviser or radioactive waste adviser.

NOTE: A list of *medical physics expert*s, *radiation protection advisers* and *radioactive waste advisers* is available from the Director of The Department of Medical Physics and Clinical Engineering based in Swansea Bay UHB.

7.19 All Staff Required to Work in Radiation Areas

7.19.1 All members involved in the medical use of ionising radiation will ensure that:

(a) they protect themselves and others from any hazard arising from their work;

(b) they have read, understood and will comply with the Local Rules for radiation safety to their work and area in which they work;

(c) they report any actual or perceived hazards to their RPS;

(d) they use, as instructed, any protective equipment provided, and report any defect in PPE provided to their RPS;

(e) they wear, as instructed, any personal dosemeters provided, and report any defect/ loss of a dosemeter to their RPS;

(f) they follow employer's procedures if acting as *referrer, practitioner* or *operator*.

(g) they immediately report to their Head of Service any incident in which a patient may have received an accidental or unintended exposure (See **Section 8**)

(h) they immediately report to the RPS any suspected high personal exposure incident or where it is suspected that a radioactive source may have been lost or stolen (see **Section 8**);

(i) they do not recklessly endanger the safety of themselves and others.

8. RADIATION INCIDENT REPORTING

8.1 All incidents must be reported according to the Health Board Incident Policy.

8.2 An accidental or unintended medical exposure may require prompt notification to Healthcare Inspectorate Wales under IR(ME)R. The reporting mechanism is provided in employer's procedures.

8.3 Any suspected overexposure of staff, visitors and/or public may require prompt reporting to the Health and Safety Executive under IRR17. The reporting mechanism is provided in departmental local rules for radiation safety.

8.2 The loss or uncontrolled release of radioactive materials may require prompt reporting to the Police and Natural Resources Wales under EPR16. Users of radioactive materials must ensure that they are aware of and follow the contingency plans in their Local Rules for these circumstances.

9. EXTERNAL AUDIT AND INSPECTION OF REGULATORY COMPLIANCE

9.1 Service Managers of departments subject to external audits and inspections by the Health and Safety Executive, Natural Resources Wales and Healthcare Inspectorate Wales are strongly encouraged to ensure a relevant radiation adviser is able to accompany them during the visit.

10. TRAINING REQUIREMENTS

10.1 The RPA must hold a valid certificate of competence to be a Radiation Protection Adviser from an assessing body recognised by the HSE. The RPA must also attend suitable update courses.

10.2 The RWA must hold a valid certificate of recognition to act as a Radioactive Waste Adviser from an assessing body recognised by the HSE. The RWA must also attend suitable update courses.

10.3 The RPS must attend a suitable RPS course, approved by the RPA, before appointment as an RPS. The RPS is expected to attend update sessions run by the Radiation protection Service. It is the responsibility of the RPS's Service Manager to ensure training is received.

10.4 All new members of staff must receive appropriate instruction on radiation protection and safety procedures as part of their induction training.

10.5 Service Managers will ensure that all staff required to use radiation equipment (e.g. X-ray units) or radioactive substances receive appropriate training prior to undertaking such work including the correct use of new equipment where required.

10.6 All staff working in a Radiation Controlled Area must read the Local Rules and sign a statement that they have read and understood them and that they are willing to comply with them.

10.7 Records of training must be kept at departmental level and available for external inspection.

10.8 Review of training is an implicit requirement of PADR. Training and development plans must include specialist radiation training according to the clinical discipline.

10.9 It is the responsibility of Service Managers together with the RPS to monitor the work with radiation to ensure that training is reinforced by safe practice.

11. METHODS OF CONTROL AND REVIEW OF THE POLICY

11.1 This policy and the supporting employer's procedures will be reviewed every two years by the Head of Radiology in liaison with the Lead radiographers.

11.2 This policy will be reviewed biennially or sooner in the event of a significant change of practice or legislation by the Health Board's Radiation Protection Group.

11.3 Local rules for radiation safety are in place in all areas using ionising radiation as required by IRR17. These rules are reviewed annually by the RPS in collaboration with the RPA.

11.4 Employer's procedures required under Schedule 2 of IR(ME)R will be implemented, where relevant, by departments and will be subject to clinical audit and quality assurance. These procedures will be reviewed biennially or sooner in the event of a significant change of practice or legislation by the Service Manager.

12. MONITORING AND COMPLIANCE WITH THE POLICY

12.1 Compliance with the policy will be assessed and enforced through a combination of internal audits and external inspection by regulatory and standards agencies.

ANNEX 1

Ionising Radiation Safety Policy

PROCEDURE FOR ENTITLEMENT OF DUTY HOLDERS FOR MEDICAL EXPOSURES

1. Purpose

This procedure describes the pathway for entitlement of duty holders (*referrers*, *practitioners, operators, and medical physics experts)* for medical exposures performed throughout the Health Board in accordance with Regulation 17(1) and Schedule 3 of IR(ME)R.

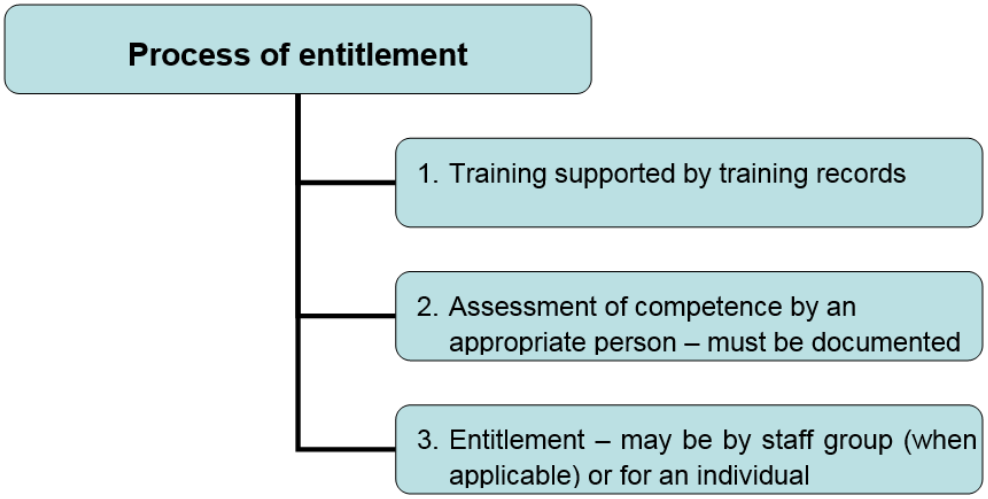
NOTE

Detailed requirements for training, competency assessment, record keeping, and scope of practice for duty holders in Radiology, Theatres, and Community Dental Services are set out in separate **departmental procedures**.

E.g. Radiology Department procedure EP-1

The scope of entitlement of these duty holders will be limited in accordance with qualifications, experience and training.

No member of staff may take on the role of *referrer*, *practitioner* or *operator* unless entitled to do so in accordance with this procedure.



2. Responsibility

The ***Chief Executive*** has overall responsibility for compliance with the duties of the *employer* under IR(ME)R and will delegate tasks, but not responsibility, appropriately through the organisational arrangements described within this procedure.

3. Procedure for entitlement of duty holders

3.1 The Executive Medical Director is tasked with

(a) Entitlement of all staff on the General Medical or Dental Council register, with a license to practice, to refer for medical exposures to be carried out in another department within the Health Board. This includes General Practitioners.

(b) Entitlement of a suitably trained Lead Surgeon to be *referrer*, *practitioner* and *operator* for Mini C-arm X-ray exposures in Theatres

(c) Authorising the Lead Surgeon for Mini C-arm X-ray exposures in Theatres to entitle other surgeons as duty holders for these medical exposures

(d) Authorising Clinical Directors (or nominated Clinical Leads) to entitle medically qualified staff to act as *referrer*, *practitioner* and *operator* duty holders within their area of responsibility.

(e) Authorising Clinical Directors (or nominated Clinical Leads) to entitle *non-medical referrers* within their area of responsibility.

(f) Authorising Service Managers to entitle non-medically qualified staff to be *practitioners* and *operators* (except clinical evaluation) within their area of responsibility.

(g) Authorising Service Managers to entitle medically qualified staff to be *operators* (except clinical evaluation) within their area of responsibility.

(h) Authorising Clinical Directors (or nominated Clinical Leads) to entitle *operators* for **clinical evaluation** within their area of responsibility.

About clinical evaluation

IR(ME)R requires that following each medical exposure a 'clinical evaluation' must be made and recorded. This applies for any evaluation that leads to a decision on clinical management irrespective of whether the image is subsequently evaluated by a trained radiologist or reporting radiographer.

Each *operator* for clinical evaluation shall recognise the limits of their own professional competence within the criteria set by their registration body and their post-registration training. In this context, entitled *operators* must be aware that where there is any uncertainty in interpretation of an image they should seek advice from an appropriately qualified colleague.

Operators must act within their scope of entitlement and not perform clinical evaluation for which they have not received training.

3.2 The **Executive Director of Allied Health Professions and Health Science (DAHPHS)** is tasked with

(a) Entitlement of Medical Physics Experts (MPE) in diagnostic radiology and nuclear medicine where the individuals appear on the national MPE register.

Relevant Medical Physics Service Managers (within Swansea Bay University Health Board) are responsible for assigning a scope of practice to medical physics experts entitled within their area.

3.3 The **Radiology Clinical Lead** is tasked with entitlement of:

(a) Non-medically qualified staff to refer for radiological imaging exposures performed within the Radiology Department

(b) Consultant Radiologists and Specialist Registrars (Radiology) as *practitioners*

(c) Consultant Radiologists holding a license from the Administration of Radioactive Substances Advisory Committee (ARSAC) as *practitioner* and *operator* for clinical administration of radiopharmaceuticals for diagnostic nuclear medicine.

(d) Medical and non-medical radiology staff as *operators* for clinical evaluation. This includes third-party (e.g. Everlight) Radiologists as a group.

(e) Third-party (e.g. Everlight) Radiologists as *practitioners* as appropriate.

3.4 The **Clinical Director for Community Dental Services** is tasked with entitlement of community dental *referrers*, *practitioners* and *operators*

3.5 The **Lead Surgeon for Mini C-arm X-ray exposures in Theatres** is tasked with entitlement of surgeons to be *referrer*, *practitioner* and *operator* for these medical exposures.

3.6 The **Head of Radiology** is tasked with:

(a) Entitlement of Site Lead Radiographers as *practitioners* and *operators*.

(b) Authorisation of Site Lead Radiographers to entitle non-medical radiology *practitioners* and *operators (other than clinical evaluation)*

3.6 **Site Lead Radiographers** are tasked with:

(a) Entitlement of diagnostic radiographers as *practitioners* and *operators* (except clinical evaluation) at their site

(b) Entitlement of Radiologists, Clinical Technologists, Support workers in nuclear medicine, Radiography Assistants as *operators* (except clinical evaluation) at their site

3.7 The **Clinical Lead for Cardiac** is tasked with entitlement of cardiologists as *referrers, practitioners* and *operators*.

3.8 The **Chair of the Medical Exposure Group** will ensure that a list of named individuals authorised to entitle duty holders is maintained.

4. Procedure for maintenance of training records and entitlement register

4.1 The **Clinical Lead** for medically qualified staff, and **Service Managers** for other staff, shall ensure that arrangements are in place to maintain an up-to-date central record of qualifications for each *practitioner* and *operator*.

A degree or diploma issued by an institution may provide evidence of the knowledge required to undertake some duties but specific practical training will be required on the use of specialised local radiological equipment.

4.2 **Duty holders** are responsible for maintaining their own training record and ensuring they do not act outwith their scope of entitlement. The training record should be compliant with any recommendations or mandatory requirements for Continuing Medical Education (CME) or for Continuous Professional Development (CPD). Each

duty holder will make records available to their competency assessor (typically the Line Manager) and statutory inspectors as required.

4.3 Staff seeking to be entitled as **Non-medical *referrers*** will require specific training relevant to their scope of practice, including IR(ME)R awareness.

4.4 The **Clinical Lead for the Emergency Departments** will ensure training is arranged for Nurse Practitioners required to perform clinical evaluation of radiological images in Emergency Departments, and that training records are maintained in these Departments.

4.4 **Service Managers** will maintain a register of their *practitioners* and *operators*, including scope of practice and entitlement dates.

ANNEX 2

PROCEDURE FOR THE MANAGEMENT OF RADIOACTIVE MATERIALS

1. Aims

To ensure that the Health Board has documented management structures and processes for the control of radioactive materials which meet the requirements of:

- the Environmental Permitting Regulations 2016 (EPR16) and any Environmental Permits granted in accordance with that Act by Natural Resources Wales; and,
- the High-activity Sealed Radioactive Sources and Orphan Sources Regulations 2005 (HASS).

To support the provisions of the Ionising Radiation Safety Policy in relation to the control of radioactive materials.

To ensure that a procedural framework exists for the application of *Best Available Techniques* to all accumulation and disposal of radioactive waste by the Health Board.

This procedure addresses issues within the remit of EPR16 and HASS only. Other issues are dealt with as follows.

- The health and safety of individuals involved in the handling of radioactive materials is subject to the Ionising Radiations Regulations 2017, IRR17 (refer to The Ionising Radiation Safety Policy and departmental Local Rules).
- The administration of radioactive materials to humans is controlled by the Ionising Radiation (Medical Exposure) Regulations 2017, IR(ME)R.
- The transport of radioactive materials by any means is subject to the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009. Transport includes all related processes: design, manufacture, maintenance and repair of packaging; preparation, consigning, loading, carriage, unloading and receipt of material; including storage in transit. No employee may undertake any transport of radioactive material i.e. the sending of radioactive materials (including waste) off site by any means, except in compliance with the legislation and after consultation with Health Board Dangerous Goods Safety Adviser and Radioactive Waste Adviser.

2. Introduction

The Health Board uses radioactive materials for medical diagnosis, treatments and research, both directly on patients and also indirectly (e.g. testing-instruments).

The possession of radioactive sources and the accumulation and disposal of radioactive waste are controlled by the EPR16, through Permits issued to users (e.g. the Health Board) by Natural Resources Wales. The Permits impose certain conditions and limitations, included amongst these are:

- The requirement to have “a management system, organisational structure and resources sufficient to achieve compliance with the limitations and conditions” of the Permits.
- The provision for consultation with a suitable Radioactive Waste Adviser;
- The requirement for written operating procedures.
- The requirement for adequate supervision by suitably qualified and experienced persons whose names are published in the locations for which they have responsibility.

- Numerical limits on the maximum activities of material which may be held or disposed of.

The HASS regulations extend the requirements which may be associated with the above for sealed sources of high activity (as defined by the regulations).

The following guidance on how to comply with the requirements of permits issued under EPR is available:

- Environmental Permitting Regulations (England and Wales) 2010: How to Comply with your Standard Rules Environmental Permit for the Keeping and Use of Category 5 Sealed Radioactive Sources
  http://howis.wales.nhs.uk/sites3/Documents/743/EPR%20compliance%20guide%20%28Cat%205%20sealed%20sources%29.pdf
- How to comply with your EPR RSR environmental permit – open sources and receipt, accumulation and disposal of radioactive waste on non-nuclear sites
  https://assets.publishing.service.gov.uk/media/5a7c598aed915d338141e3a3/LIT_5172_aa8cfc.pdf

Best Available Techniques

In using and disposing of radioactive materials the Health Board is obliged to ensure that it applies *Best Available Techniques* (BAT) to minimise the impact on the environment and the public. In order to do so the Health Board must justify:

- its decision to use a technique involving radioactivity;
- its choice of radionuclide and amount of radioactivity;
- the way it is used and disposed of.

All reasonably available alternatives must be considered.

3. Definitions

For the purposes of this procedure:

3.1 Radioactive materials are those subject to control under EPR2016 or HASS and including those which are controlled by Exemption Orders.

3.2 The “use” of radioactive materials includes their involvement as part of any activity, the possession of radioactive sources and their storage, and the accumulation and disposal of radioactive waste.

4. Strategy for control

The Health Board will control the use of radioactive materials by ensuring that there is in place:

4.1 A procedure (this document) which has been authorised by the Health Board management and which details a transparent and robust framework for the control of radioactive materials within the Health Board.

4.2 A certificated Radioactive Waste Adviser appointed in writing to advise the Health Board on the requirements of EPR16 including the establishment and review of *best available techniques* statements for all practices involving radioactive sources together with the management of control of sealed radioactive sources.

4.3 A written statement justifying any new practice of holding or use of radioactive sources, or accumulation or disposal of radioactive waste at each site.

4.4 The appointment of one or more individuals in each department using radioactive materials (typically the Radiation Protection Supervisor) who will have a defined scope of responsibility for the supervision of activities subject to a permit under EPR16.

4.5 The requirement to report and investigate incidents involving radioactive materials including accidental release, loss or theft.

4.6 The requirement to establish a mechanism for maintaining accurate records of holding and disposals of radioactive materials and for those records to be audited.

4.7 Regular audit of department's procedures and practice by a Radioactive Waste Adviser.

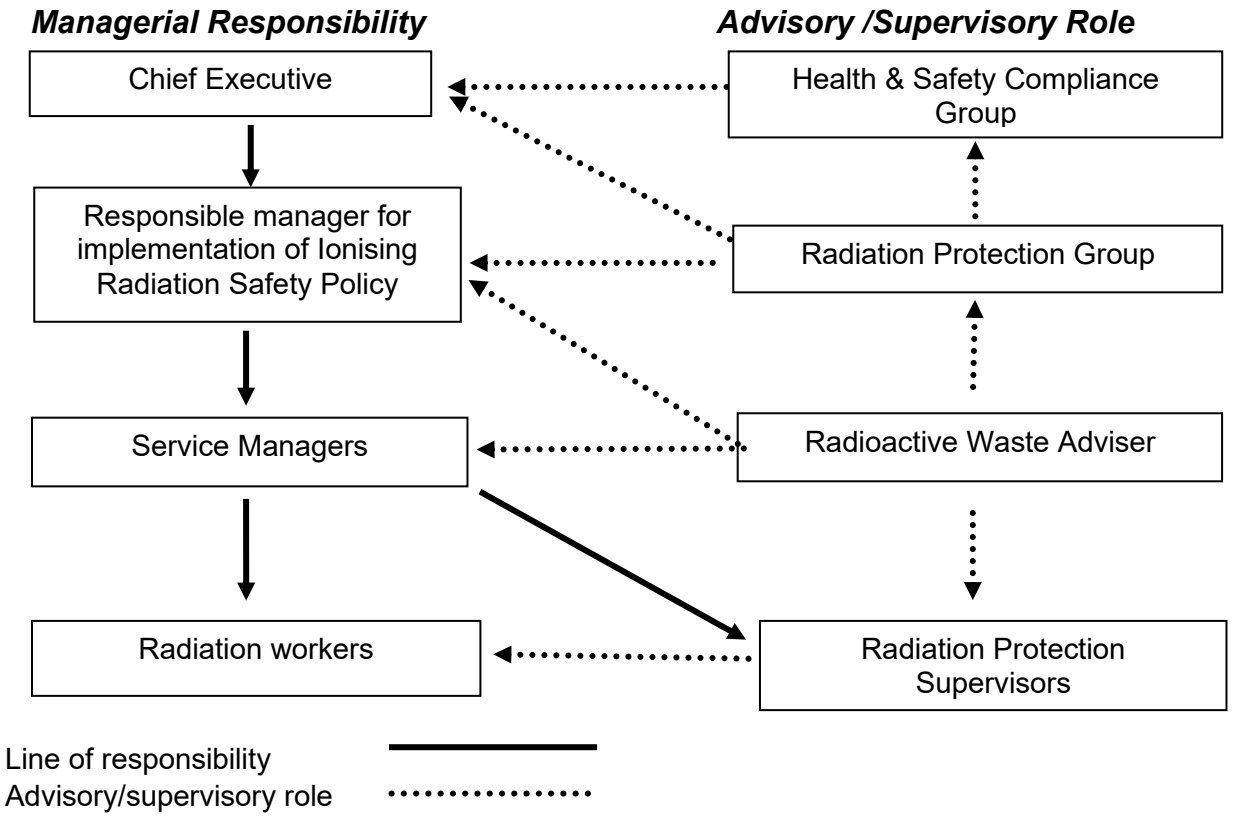
4.8 The monitoring of compliance with the *Control of Radioactive Materials Procedure* (this document) by the Radiation Protection Group.

5. Procedures and responsibilities

5.1 Hywel Dda University Health Board

5.1.1 The general control of ionising radiation takes place within the Health Board's organisational structure for quality and safety. The relevant parts of this structure and associated management responsibilities may be found in the Health Board Ionising Radiations Safety Policy.

5.1.2 The following chart defines the organisational responsibilities and advisory/supervisory roles for the associated with the control of radioactive materials.



5.1.3 The following paragraphs define additional specific requirements associated with the control of radioactive materials.

5.2 Radioactive Waste Adviser (RWA)

5.2.2 The RWA appointed by the Health Board will collate and maintain the Health Board *best available techniques* (BAT) statements and ensure such statements are available for inspection by the Natural Resource Wales, on request.

5.2.3 The RWA will present an annual report on compliance with this procedure to the Radiation Protection Group.

5.2.4 The RWA will be responsible for ensuring that the annual statutory return on radioactive waste disposal from all permitted Health Board sites is prepared and presented to the Natural Resources Wales as they require.

5.2.5 The RWA will approve BAT justifications submitted by departments for new or varied practices using radioactive materials.

5.3 Radiation Protection Adviser

5.3.1 The RPA appointed by the Health Board will carry out reviews of new BAT cases and radiation risk assessments as required.

5.3.2 The RPA will audit departmental use of radioactive materials as part of their routine audit programme.

5.4 Clinical Lead/ Service Manager of department using or intending to use radioactive materials

5.4.1 The Clinical Lead/ Service Manager of each department which wishes to use radioactive materials must submit a statement justifying his/her proposal as the *best available technique*. Submissions must be reviewed and approved by the RWA, prior to commencing the proposed practice.

5.4.2 A department proposing a change to its working practices which would lead to any of its limits for radioactive materials use being exceeded, must prepare a new BAT justification for approval as in 5.4.1.

Note: Significant changes to holdings or disposals of radioactive materials may necessitate variations to permits.

The need to prepare documentation and obtain revised permits from the Natural Resources Wales can be a lengthy process, partially outside Health Board control. Users are advised to make a draft proposal at the earliest opportunity, in anticipation that obtaining the necessary variations, if required, may take several months.

A charge may be made by the Natural Resources Wales [currently around £7k] which must be met by the user department.

5.4.3 A copy of approved proposals will be held as part of the overall Health Board BAT case.

5.4.4 Prior to commencing any work with ionising radiation, or any change in practice, the Clinical Lead/ Service Manager must ensure that a radiation risk assessment has been carried out and submitted for review to the RPA along with the BAT case. The radiation risk assessment is a requirement of IRR17.

5.4.5 The Clinical Lead/ Service Manager will ensure that one or more individuals, closely involved with the prosed work, are appointed as Radioactive Protection Supervisors (RPS) with responsibility for the safe use of radioactive materials within the service/ department. The RPS will ensure compliance with the requirements of the EPR16 permits and staff compliance with Local Rules.

5.4.6 The Clinical Lead/ Service Manager of a department using radioactive materials will ensure that:

- Copies of the relevant Permit issued under EPR16 are available along with the name of the Radiation Protection Supervisor.
- Written procedures have been prepared for the procurement, secure holding and use of radioactive materials, and the accumulation and disposal of radioactive waste, including record keeping, which will ensure compliance with the EPR16 permits.
- Written procedures have been prepared the reporting of incidents in accordance with the requirements of the permits.
- The Department complies with their Permit limits for activity of radioactive materials which they use.
- Relevant staff have appropriate training and that up-to-date training records are maintained.

ANNEX 3

Ionising Radiations Safety Policy
RADIATION PROTECTION GROUP
TERMS OF REFERENCE

1. Purpose and Objectives

1.1 The Radiation Protection Group forms a part of the corporate framework for the management of radiation protection in ensuring compliance with relevant radiation protection legislation and implementation of best practice. The Group will consider radiation protection issues relating to ionising radiations (e.g. X-rays and radioactive materials including radon) and non-ionising radiations (e.g. MRI, lasers and ultraviolet sources) within Hywel Dda University Health Board (HDdUHB).

1.2 The Radiation Protection Group's objectives are:

1.2.1 To review implementation of the Health Board's radiation protection arrangements for health and safety, environmental protection.
The implementation of radiation protection arrangements for medical exposures will be reviewed by the Medical Exposure Group.

1.2.2 To identify and monitor current activities and developments relating to the use of radiations.

1.2.3 To review radiation risks and inform the Health & Safety Compliance Group of measures to be taken to secure compliance with relevant legislation and to manage risks

1.3 To fulfil its role, the Radiation Protection Group will:

- Review compliance with relevant legislation
- Review reports of statutory inspections and monitor identified actions
- Review radon monitoring programme
- Review personal radiation dosimetry results
- Receive and consider reports from Departmental Radiation Protection Supervisors regarding radiation protection arrangements within their area
- Receive and consider report from Radiation Protection Adviser (RPA)
- Receive and consider report from Radioactive Waste Adviser (RWA)
- Review radiation incidents (including breaches of regulatory requirements) and ensure appropriate action is taken within a corporate framework.
- Receive and consider report from the MR Safety Expert (MRSE)
- Revise and approve policies on the safe use of radiation with respect to health and safety and environmental protection;

2. Key Responsibilities

2.1 To oversee and monitor levels of compliance across HDdUHB with national guidance and subsequent legislation and standards.

2.2 To inform and monitor progress against agreed performance indicators related to radiation protection in the Health & Safety Dashboard to be developed.

2.3 To consider and agree written control documentation (policies, operational procedures and other documents), which fall within the remit of the Group (in regard to the safe use of radiation

with respect to health and safety and environmental protection), ensuring these have been adopted, developed, and/or reviewed in line with HDdUHB Policy 190 – Written Control Documentation.

2.4 To ensure the development, maintenance and review of a comprehensive Ionising Radiation Safety Policy for HDdUHB together with policies governing the safe use of non-ionising radiation sources (MRI and lasers)

2.5 To ensure the level, content and frequency of training on Radiation Protection to specific stakeholders and designated staff groups is specified and referenced in the Radiation Protection Policy.

2.6 To ensure that robust systems are in place and are operating effectively for the identification, assessment and prioritisation of risks, and subsequent actions related to radiation protection.

2.7 To seek clarification and assurance on the management of operational risks that have been aligned to the Radiation Protection Group where the risk tolerance is exceeded or where there is a lack of timely action.

2.8 To action/contingency plan and address incidents and alerts that HDdUHB receives in relation to radiation protection.

2.9 To consider requirements for capital expenditure for radiation protection and risk reduction measures.

2.10 To ensure that the radiation protection infrastructure is safe, resilient and fully fit for purpose, agreeing mitigating actions where required.

2.11 To ensure that the importance of radiation protection is communicated throughout HDdUHB, including all decisions made by the Group, in a timely and transparent manner.

2.12 To develop an annual work plan, responding to operational service priorities, consistent with the strategic direction for the organisation, for approval by the Health & Safety Compliance Group.

2.13 To address any other requirements stipulated by the Health & Safety Compliance Group..

3. Membership

3.1 The membership of the Radiation Protection Group shall comprise:

Deputy Director of Allied Health Professions and Health Science (Chair)
Deputy Medical Director (Vice Chair)
Clinical Director Radiology
Head of Radiology
Site Lead Radiographers (from all four sites) (BGH, PPH, WGH & GGH)
Lead Radiographer (Nuclear Medicine)
Clinical Dental Service Manager (Community Dental)
Theatre Manager/Deputy Theatre Manager for use of Mini C-arm in Theatre (PPH only)
Head of Health & Safety
Radiation Protection Adviser
Radioactive Waste Adviser
Magnetic Resonance Safety Expert
Laser Protection Adviser

In Attendance

Other officers may be co-opted for individual meetings as required

3.2 The membership of the Group will be reviewed on an annual basis and also reviewed at each meeting to ensure that it remains as diverse and representative as feasibly possible.

4. Quorum and Attendance

4.1 A quorum shall consist of either the Chair or Vice-Chair, a Radiation Protection Advisor, and no less than a third of the membership of the Radiation Protection Group.

- Any senior officer of HDdUHB or partner organisation may, where appropriate, be invited to attend, for either all or part of a meeting, to assist with discussions on a particular matter.
- The Group may also co-opt additional independent external 'experts' from outside the organisation to provide specialist skills.
- Should any member be unavailable to attend, they may nominate a fully briefed deputy to attend in their place, subject to the agreement of the Chair.

5. Agenda and Papers

5.1 The Radiation Protection Group Secretary is to hold an agenda setting meeting with the Chair and/or the Vice Chair, at least six weeks before the meeting date.

5.2 The agenda will be based around the Group work plan, identified risks, matters arising from previous meetings, issues emerging throughout the year and requests from Group members. Following approval, the agenda and timetable for request for papers will be circulated to all Group members.

5.3 The agenda and papers for meetings will be distributed seven days in advance of the meeting.

5.4 The minutes and Table of Actions will be circulated to the Chair within seven days to check the accuracy, prior to sending to Members to review within the next seven days.

5.5 Members must forward amendments to the Group Secretary within the next seven days. The Group Secretary will then forward the final version to the Group Chair for approval.

6. Frequency of Meetings

6.1 The Radiation Protection Group will meet quarterly and shall agree an annual schedule of meetings. Any additional meetings will be arranged as determined by the Chair of the Group.

6.2 The Chair of the Group, in discussion with the Group Secretary, shall determine the time and the place of meetings of the Group and procedures of such meetings.

7. Accountability, Responsibility and Authority

7.1 The Radiation Protection Group will be accountable to the Health & Safety Compliance Group. for its performance in exercising the functions set out in these terms of reference.

8. Reporting

8.1 The Radiation Protection Group may, subject to the approval of the Health & Safety Compliance Group, establish sub-groups or task and finish groups to carry out on its behalf

specific aspects of Group business. The Group will receive an update following each sub-group's meeting, detailing the business undertaken on its behalf.

8.2 The Radiation Protection Group, supported by the Group Secretary, shall:

8.2.1 Report formally, regularly and on a timely basis to the Health & Safety Compliance Group on the Radiation Protection Group's activities. This includes the submission of a Group update report, as well as the presentation of an annual report within 6 weeks of the end of the financial year.

8.2.2 Bring to the Health & Safety Compliance Group's specific attention any significant matters under consideration by the Group.

9. Secretariat Support

9.1 The Radiation Protection Group Secretary shall be determined by the Chair of the Radiation Protection Group.

10. Review Date

10.1 These terms of reference shall be reviewed on at least an annual basis by the Radiation Protection Group for approval by the Health and Safety Compliance Group.

ANNEX 4

Ionising Radiations Safety Policy
MEDICAL EXPOSURE GROUP
TERMS OF REFERENCE

1. Purpose and Objectives

1.1 The aim of the Medical Exposure Group is to consider patient safety matters arising from medical exposures to ionising radiations within the Health Board and oversee the implementation of the *Ionising Radiation (Medical Exposure) Regulations 2017*, and *The Ionising Radiation (Medical Exposure) (Amendment) Regulations 2024*, further referred to as IR(ME)R.

To review radiation risks and inform the Chief Executive of measures to be taken to secure compliance with relevant legislation and to manage risks.

2. Membership

2.1 The Medical Exposure Group membership will comprise of:

Deputy Director of Allied Health Professions and Health Science (Chair)
Deputy Medical Director (Vice Chair)
Clinical Director Radiology
Head of Radiology
Site Lead Radiographers
Lead Radiographer (Nuclear Medicine)
Clinical Dental Service Manager (Community Dental)
Theatre Manager for use of mini C-arm in Theatre (PPH)
Medical Physics Expert (diagnostic radiology)
Medical Physics Expert (nuclear medicine)
Member of Patient Safety team
Others co-opted for individual meetings as required.

2.2 Membership of this meeting will be reviewed at each meeting to ensure that it remains as diverse and representative as feasibly possible.

3. Quorum and Attendance

3.1 The Group will meet quarterly. Additional special meetings may be convened at the discretion of the Chair.

3.2 At least five members must be present to ensure the quorum of the Group, including the Chair, Head of Radiology (or deputy) and a *medical physics expert*.

3. Accountability, Responsibility and Authority

4.1 The Medical Exposure Group is set up as a sub-group of Quality, Safety and Experience Sub-committee. To fulfil its role, the Medical Exposure Group will:

- review and approve the employer's procedure for entitlement of duty holders for medical exposure

8 monitor and review the level of IR(ME)R compliance within each department with a radiation facility;

- monitor and review the process of entitlement of individuals to act as *referrers*, *operators* and *practitioners*;
- authorise individual managers to assign a scope of referral for *referrers* within their area of responsibility;
- authorise individual managers to entitle staff within their area of responsibility to be *practitioners* and *operators* for specified scopes of practice;

9 provide advice on training requirements for *referrers, operators and practitioners;*

10 receive reports on patient dose audits including any corrective actions recommended by the *medical physics experts* in order to establish optimisation priorities;

- receive reports of cases where diagnostic reference levels have been consistently exceeded and to recommend corrective action;
- review and consider reports of accidental or unintended radiation exposures;
- receive and consider reports of clinical audits relating to IR(ME)R compliance and to identify audit topics;
- review reports of statutory inspections and monitor identified action points.

4.2 The Medical Exposure Group will report through Quality, Safety and Experience Sub Committee following each meeting.

4. Secretariat Support

5.1 The Medical Exposure Group Secretary shall be determined by the Chair of the Radiation Protection Group.

6. Review Date

6.1 These Terms of Reference will be reviewed annually or amended as necessary with the agreement of the Group

REFERENCES

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5. The Environmental Permitting (England and Wales) Regulations 2016.
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