

 <p> GIG CYMRU NHS WALES </p> <p> Iechyd Cyhoeddus Cymru Public Health Wales </p>	<p> Name of Meeting Quality, Safety and Improvement Committee Date of Meeting 24 February 2026 Agenda item: 3.2 </p>
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Policy / Procedure Approval Report

Section 1 - Policy / Procedure Information

Policy / Procedure Title	Radiation Safety Policy
Policy Lead	BTW Head of Programme
Lead Executive	Professor Fu-Meng Khaw, National Director Health Protection and Screening Services Executive Medical Director
PHW / All Wales?	PHW
Date of last Review	October 22
Is the current policy / procedure within review date?	no
Approving Body /Group	Quality, Safety and Improvement Committee
Version Number	6.0

Section 2: Recommendation

That Leadership Team:

- **Consider** the revised policy, and the Equalities Impact Assessment
- **Note** that the Leadership Team considered the policy at its meeting on 22nd January 2026 and endorsed the policy on the 17 February 2026.
- **Approve** the revised Radiation policy



Section 3 – Details of the Review:	
Background:	
Reason for review	Review deadline due / passed
Description/Assessment	<p>Scope</p> <p>This policy applies to ionising radiation. This means high energy radiation including:</p> <ul style="list-style-type: none"> • Radiation produced by medical x-ray equipment • Radiation emitted by radon gas that may be present in the workplace <p>This policy applies to risks arising from work with ionising radiation in Public Health Wales, including:</p> <ul style="list-style-type: none"> • Exposure of patients as part of their medical diagnosis • Exposure of staff and others <p>This policy applies to all staff employed or contracted by Public Health Wales.</p>
Consultation	
Has this Policy / Procedure been through the appropriate 28 day consultation process?	Yes
Date range of consultation:	11/01/26 - 11/02/26
Please provide details of any feedback received and outline what changes if any were made to the document as a result:	n/a
Had this policy / procedure been considered by any other groups?	BTW Radiation Safety group Leadership Team
If so, please provide detail of any comments / feedback or	Updated to include employer obligations in relation IRR 17 on page 6 and 7. Minor wording changes. Approved Employer Procedures have replaced previous



<p>amendments made to the documents as a result of this</p>	<p>Radiation Procedure for staff and Radiation Procedure for Patients.</p> <p>Leadership Team queried whether an All Wales Radiation Policy would be beneficial due to the impact on health boards. It was noted that this had been raised by the policy group reviewing the policy, particularly as part of the Breast Test Wales review and would be considered in due course.</p>
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<p>Section 4: Impact Assessments</p>	
<p>Equality and Health Impact Assessment</p>	<p>A radiation safety policy supports equality by ensuring that exposure to ionising radiation is justified, optimised, and minimised for all patients, regardless of protected characteristics. The policy:</p> <ul style="list-style-type: none"> • applies consistent clinical justification standards • prevents disproportionate exposure to vulnerable groups (e.g., pregnant patients, children, people with disabilities) • includes reasonable adjustments in communication and consent processes • protects staff equally through occupational dose monitoring and workplace safety controls <p>From a health impact perspective, the policy directly reduces the risk of radiation-induced harm while enabling early diagnosis and treatment benefits. It balances benefit vs risk in a structured, evidence-based way aligned with IR(ME)R and national guidance.</p>
<p>Welsh Language Impact</p>	<p>The policy supports Welsh language standards by ensuring:</p>



	<ul style="list-style-type: none"> • radiation risk information is available in Welsh and English • consent and safety information can be provided in the patient’s preferred language • incident communication and patient engagement respect Welsh language rights • staff training materials incorporate bilingual accessibility where required <p>This ensures equitable access to safety information and informed decision-making.</p>
Risk and Assurance	<p>A radiation safety policy is fundamentally a risk control document. It:</p> <ul style="list-style-type: none"> • defines governance structures and lines of accountability • sets out incident reporting and investigation processes • ensures compliance with IR(ME)R and radiation regulations • requires audit, monitoring, and quality assurance of equipment and practice • provides assurance to boards and regulators that radiation risks are actively managed <p>It reduces clinical, legal, reputational, and regulatory risk.</p>
Health and Social Care (Quality and Engagement) (Wales) Act	<p>The policy supports the Act by embedding:</p> <ul style="list-style-type: none"> • a duty of quality through evidence-based radiation practice • continuous improvement via audit and review • patient safety and harm reduction • transparency in incident learning



	<ul style="list-style-type: none">engagement with patients through informed consent and communication <p>Radiation safety is directly aligned with the Act's focus on safe, effective, and person-centred care.</p>
Financial implications	<p>While primarily a safety framework, the policy has financial relevance by:</p> <ul style="list-style-type: none">preventing costly adverse incidents and litigationprotecting against regulatory penaltiesensuring appropriate equipment maintenance and lifecycle planningsupporting efficient use of imaging resource.
People implications	<p>The policy affects workforce safety and professional practice:</p> <ul style="list-style-type: none">protects staff from occupational radiation exposureclarifies roles (RPA, MPE, operators, practitioners)requires training and competency assurancesupports a culture of safety and reportingreduces stress associated with unsafe working environments <p>It is both a staff safety document and a professional standards framework.</p>
Socio Economic Duty	<p>By maintaining consistent safety standards:</p> <ul style="list-style-type: none">it supports equitable healthcare deliveryprevents avoidable harm that could disproportionately impact disadvantaged groupssustains trust in public health services



	Safe imaging access is a component of reducing long-term health inequality.
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Section 5 - Implementation

Implementation plan (with timescales)		
Next steps	Timescale	Responsible officer(s)
Approved updated policy will be shared with IR(ME)R duty holders and relevant committees	Within 2 week of approval	HoP BTW

Section 6 – Dissemination

Via trust intranet, Policies page.



GIG
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Cymru
Public Health
Wales

Reference Number:
PHW74
Version Number: 6.0
Date of next review:
October 2028

RADIATION SAFETY POLICY

Policy Statement

Public Health Wales will use ionising radiation safely in order to protect the health and wellbeing of patients, service users, staff and others.

Policy Commitment

Public Health Wales will:

- Provide a robust framework for the management and safe use of ionising radiation
- Ensure that the use of ionising radiation is compliant with current legislation, standards and guidance
- Ensure that managers and staff are aware of their roles in the safe use of ionising radiation
- Keep radiation doses and dose rates as low as reasonably practicable
- Restrict the use of ionising radiation to practices that are justified and ensure that each intentional exposure of a patient is individually justified
- Optimise exposure to ionising radiation in order to reduce radiation dose, provided that this is consistent with the desired outcome
- Keep radiation doses to staff and members of the public within statutory dose limits
- Identify radiation hazards and control risks
- Inform staff of radiation risks and provide instruction, training, supervision and protective equipment
- Record, analyse and review radiation incidents to minimise future risks
- Manage radiation equipment in accordance with accepted best practice
- Demonstrate compliance through record keeping and audit
- Entitle duty holders associated with the exposure of patients to ionising radiation
- Appoint Radiation Protection Advisers, Medical Physics Experts and Radiation Protection Supervisors
- Cooperate with other employers where the activities of one employer could affect the safety of individuals associated with the other
- Make records available at the request of authorised external agencies

Public Health Wales recognises its obligations under the following legislation :

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- The Ionising Radiations Regulations 2017 (and its subsequent amendments (2018/19/24))
- The Ionising Radiation (Medical Exposure) Regulations 2017

Supporting Procedures and Written Control Documents

This policy is supported by Employer Procedures in services/departments that use radiation.

Breast Test Wales Employer Procedure Number	IRMER Regulations Schedule 2	Breast Test Wales Employer Procedure
EP1	Schedule 2(d)	The employer should have a procedure to ensure that robust quality assurance programmes are in place for written procedures, protocols and equipment and to ensure that procedures are followed.
EP2	Schedule 2(b)	The employer should have a procedure to check the identification of individuals entitled to act as referrer practitioner or operator within a defined scope of practise.
EP3	Schedule 2(a)	The employer should have a procedure in place to check the identification of the woman to be exposed to ionising radiation.
EP4	Schedule 2(c)	The employer should have a procedure to make inquiries of women of childbearing potential to establish pregnancy or breastfeeding status.
EP5	Schedule 2(i)	The employer should provide adequate information in relation to the benefits and risks associated with radiation dose
EP6	Schedule 2(n)	The employer should establish appropriate dose constraints and guidance for the exposure of carers and comforters.
EP7	Schedule 2(f)	The employer should use and review diagnostic reference levels.
EP8	Schedule 2(e)	The employer should ensure doses are within safe limits.
EP9	Schedule 2(k)	The employer should ensure the probability and magnitude of accidental or unintended exposures are reduced as far as practicable.
EP10	Schedule 2(j)	The employer should carry out and record clinical evaluation for each exposure

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EP11	Schedule 2(l)	The employer should have a procedure in place to investigate and report Clinically Significant Accidental and Unintended Exposures (CSAUE) and Significant Accidental and Unintended Exposures (SAUE).
EP12	Schedule 2(g)	The employer should carry out and record research programmes where appropriate including the use of dose constraints.
EP13	Schedule 2(p)	Making, amending and cancelling referrals for a medical exposure
EP14	Schedule 2(o)	Clinical audit and actions in compliance with regulation 7

Schedule 2(h) is not applicable as patients do not receive radioactive substances in Breast Test Wales.

Schedule 2(m) is not applicable as non-medical imaging is not undertaken in Breast Test Wales.

[Breast Test Wales Portal - IRMER Procedures - A-Z Document Order](#)

Other related documents are:

- Health and Safety Policy
- Incident Reporting Policy

[All Corporate policies and procedures are available on the Public Health Wales Website](#)

Scope

This policy applies to ionising radiation. This means high energy radiation including:

- Radiation produced by medical x-ray equipment
- Radiation emitted by radon gas that may be present in the workplace

This policy applies to risks arising from work with ionising radiation in Public Health Wales, including:

- Exposure of patients as part of their medical diagnosis
- Exposure of staff and others

This policy applies to all staff employed or contracted by Public Health Wales.

Equality and Health Impact Assessment	An Equality, Health Impact Assessment has been completed.
Approved by	Quality, Safety and Improvement Committee
Approval Date	XXXXX

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Review Date	XXXXX
Date of Publication:	XXXXX
Group with authority to approve supporting procedures	Business Executive Team
Accountable Executive Director/Director	Dr Fu-Meng Khaw, National Director, Health Protection and Screening Services, Executive Medical Director
Original Author	Anna Burch, Head of Medical Physics, Breast Test Wales (Retired)
Reviewed and updated by	Martha Stuffsins, Medical Physics Expert for Breast Test Wales, Dean Phillips, Head of Programme Breast Test Wales

Disclaimer

If the review date of this document has passed please ensure that the version you are using is the most up to date either by contacting the document author or [Board Business Unit](#)

Summary of reviews/amendments				
Version number	Date of Review	Date of Approval	Date published	Summary of Amendments
1	2013	31 January 2013		Original version
2	2014	20 August 2014		Minor amendments to Appendix 1 following review by Trust Radiation Protection Group, plus revisions requested by Partnership Forum policy group
3	2016	25 October 2016		Document reviewed. No amendments required.
4	2018	24 October 2018	01 November 2018	Document updated to take account of new regulations and new policy/procedure templates.

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5	2021	May 2022	27 October 2022	Reviewed and updated in November 2021 and approved by Breast Screening Programme Board in May 2022. Only minor amendments to update staff changes made. Change to policy reference number from PHW26 to PHW74
6	2026	XXXX	XXXXX	Updated to include employer obligations in relation IRR 17 on page 6. Minor wording changes. Approved Employer Procedures have replaced previous Radiation Procedure for staff and Radiation Procedure for Patients.

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1 Introduction

Public Health Wales uses ionising radiation in some of its screening programmes. It also has premises in areas that may be affected by radon gas. Public Health Wales has a moral and legal duty to minimise the risks arising from its work with radiation¹. This policy describes how Public Health Wales uses radiation safely in order to protect the health and wellbeing of patients², service users, staff and others.

Refer to local service/department procedures for more details.

A glossary of terms is provided in Appendix 1.

2 Scope, aim and objectives

2.1 Scope

This policy covers the safe use of radiation. It applies to all staff³ who use radiation, are involved with medical exposures or work in areas where there are radiation risks. It is also relevant to those who manage or advise services that make medical exposures.

It controls the risks to staff, patients and others arising from:

- Medical x-ray equipment
- Radon

It will need to be revised before Public Health Wales starts any work involving other sources of radiation (e.g. radioactive materials).

2.2 Aim

The aim of this policy is to outline how Public Health Wales will discharge its statutory duties to ensure that radiation doses to patients, service users, staff, and other persons resulting from the work of the Organisation are as low as reasonably practicable.

¹ In this document, the term *radiation* refers specifically to ionising radiation.

² The term *patients* refers to service users undergoing medical exposures.

³ The term *staff* refers to all staff employed or contracted by Public Health Wales.

2.3 Objectives

This policy will:

- Outline the regulations that apply to the use of radiation
- Detail the specific roles and responsibilities for those staff who are charged with the management of radiation safety
- Describe the arrangements for radiation safety
- Outline the training requirements for staff
- Outline the assurance arrangements

3 Legal and regulatory environment

The use of ionising radiation is governed by The Ionising Radiations Regulations 2017. These regulations, and any amendments, are referred to in this policy as IRR. The regulations are supported by an approved code of practice and other official and professional guidance. The Health and Safety Executive enforces IRR.

The use of ionising radiation for medical exposures is governed by The Ionising Radiation (Medical Exposure) Regulations 2017 and its subsequent amendments (2018/19/24) These regulations, and any amendments, are referred to in this policy as IRMER. The regulations are supported by official and professional guidance. Healthcare Inspectorate Wales monitors compliance with IRMER on behalf of the Welsh Ministers.

Under the Ionising Radiations Regulations 2017 (IRR17), the employer holds overall responsibility for ensuring the safe use of ionising radiation across all areas of practice. This includes maintaining a comprehensive and effective management framework for radiation protection, appointing a suitable Radiation Protection Adviser (RPA), and ensuring Local Rules and designated areas are clearly defined and adhered to. Employers must provide appropriate information, instruction, and training to radiation workers, ensure that exposures are kept as low as reasonably practicable (ALARP), and implement a robust risk-assessment process for all radiation-related activities.

The employer is also responsible for establishing dose monitoring arrangements, investigating abnormal exposures or incidents, ensuring appropriate maintenance and quality assurance of radiation-producing equipment, and maintaining compliance through regular audit, review, and governance oversight.

Employer procedures developed under the Ionising Radiation (Medical Exposure) Regulations (IRMER) play a key role in supporting and demonstrating compliance with IRR17 by embedding controlled, safe and auditable practice into clinical radiation use. While IRMER focuses on the

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justification, optimisation and authorisation of medical exposures, the procedures it mandates help ensure that the practical delivery of radiological examinations is consistent with the broader health and safety duties set out under IRR17.

Clear IRMER procedures ensure exposures are justified and optimised to keep doses ALARP, supporting IRR17 requirements for dose restriction and risk minimisation. Documented referral, authorisation, training and entitlement processes help demonstrate that only trained personnel undertake radiation-related tasks, aligning with IRR17 duties for competence and training. In addition, employer procedures provide a formal framework for recording doses, monitoring incidents, undertaking clinical audit, and maintaining equipment quality assurance—mechanisms that in turn support IRR17 requirements for risk assessment, incident investigation, governance oversight and continuous improvement. In this way, well-designed IRMER procedures act as an operational vehicle through which IRR17 safety standards are achieved and evidenced.

PHW has comprehensive approved and implemented IRMER Employer Procedures and Work Instructions which are reviewed regularly and available on the BTW SharePoint site. The Employer Procedures are the mechanism to deliver the Radiation Safety Policy with respect to the Breast Screening Programme.

There are additional regulations applicable only to radioactive sources. They are not relevant to current work within Public Health Wales.

4 Roles and responsibilities

4.1 Chief Executive

Public Health Wales is the employer under IRR and IRMER. The Chief Executive:

- Takes overall responsibility for compliance with IRR and IRMER on behalf of Public Health Wales
- Appoints a suitable Radiation Protection Adviser

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4.2 National Director, Health Protection and Screening Services and Executive Medical Director

National Director, Health Protection and Screening Services and Executive Medical Director:

- Is the Trust Board's nominated Director responsible for ensuring compliance with this policy
- Ensures that Public Health Wales follows the appropriate notification/registration/consent process with the Health and Safety Executive, as advised by the Radiation Protection Adviser

4.3 Divisional Directors

The Director of The Screening Division is responsible for:

- Ensuring that radiation safety arrangements throughout their division follow best practice and comply with IRR
- Ensuring that sufficient funds are made available to service/department managers to implement all radiation protection requirements in this policy or as advised by the Radiation Protection Adviser

In addition, the Divisional Director (Director of Screening Division) whose service make medical exposures is responsible for:

- Ensuring that radiation safety arrangements throughout their Division comply with IRMER
- Ensuring that written procedures are in place in accordance with IRMER Schedule 2
- Entitling individuals to act as IRMER referrers, practitioners and operators, or authorising appropriate staff to undertake this task on their behalf
- Appointing one or more Medical Physics Expert(s)

4.4 Head of Estates and Health and Safety

The Head of Estates and Health and Safety is responsible for:

- Assessing the risk from radon gas in premises occupied by staff
- Ensuring that action is taken to reduce the risk to an acceptable level

4.5 Service/department managers

Managers of services/departments that use radiation are responsible for:

- Implementing all radiation protection arrangements in this policy or as advised by the Radiation Protection Adviser
- Ensuring that radiation risk assessments are carried out and reviewed
- Appointing Radiation Protection Supervisors in consultation with the Radiation Protection Adviser
- Putting in place local rules for radiation safety in consultation with the Radiation Protection Adviser and assisted by the Radiation Protection Supervisors
- Ensuring that relevant staff are informed of the local rules and are trained how to follow them
- Ensuring that periodic reviews of an individual's compliance with the provisions of the local rules are undertaken and recorded
- Ensuring that periodic reviews of the local rules are undertaken and recorded
- Making arrangements to monitor the radiation doses received by staff who work with radiation, for example by issuing personal dosimeters
- Involving the Radiation Protection Adviser as appropriate
- Submitting an annual report to the Radiation Safety Group to demonstrate the level of compliance with this policy

In addition, managers of services/departments that make medical exposures are responsible for:

- Putting in place the written procedures required by IRMER Schedule 2
- Putting in place written procedures for patient referrals
- Putting in place written protocols for medical exposures
- Ensuring that before individuals act as referrers, practitioners or operators they are formally entitled by an authorised person
- Keeping an auditable record of such entitlements
- Keeping a list of referrers, practitioners and operators, specifying the scope of practice for which they are entitled

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- Putting in place a quality assurance programme for equipment used for medical exposures
- Keeping an inventory of equipment used for medical exposures
- Involving the Medical Physics Expert as appropriate
- Submitting an annual report to the Radiation Safety Group to demonstrate the level of compliance with this policy

4.6 Radiation Protection Adviser

The Chief Executive will appoint one or more suitable individuals as Radiation Protection Advisers. The Radiation Protection Adviser advises on the measures to be taken to comply with IRR, together with other relevant legislation on the use of radiation. The scope of the advice will include:

- The implementation of requirements for controlled and supervised areas
- The prior examination of plans for installations and the acceptance into service of new or modified sources of radiation in relation to any engineering controls, design features, safety features and warning devices provided to restrict exposure to radiation
- The regular calibration of equipment provided for monitoring levels of radiation and the regular checking that such equipment is serviceable and correctly used
- The periodic examination and testing of engineering controls, design features, safety features and warning devices and regular checking of systems of work provided to restrict exposure to radiation
- Risk assessment
- The designation of controlled and supervised areas
- The conduct of the various investigations required by IRR
- The drawing up of contingency plans
- Dose assessment and recording

The Radiation Protection Adviser is a member of the Radiation Protection Group and normally reports to the Chief Executive through this route. If the Radiation Protection Adviser believes that immediate action is required he/she reports directly to the Divisional Director and if necessary to the Chief Executive.

4.7 Radiation Protection Supervisors

Service/department managers will appoint one or more members of staff to act as Radiation Protection Supervisors. Each Radiation Protection Supervisor plays a supervisory role in assisting Public Health Wales to comply with IRR. Appendix 3 gives the role specification for a Radiation Protection Supervisor.

4.8 Duty holders under IRMER

4.8.1 Employer

In the context of IRMER, the employer is considered to be Public Health Wales. If Public Health Wales contracts a third party to provide services then Public Health Wales is the employer for the purpose of IRMER, but the third party is the employer for employment law purposes.

Equipment ownership has no impact on the employer responsibilities under IRMER.

4.8.2 IRMER referrers

Referrers are registered health care professionals who are entitled to refer individuals to a practitioner for medical exposures. They must supply enough information to enable the practitioner to decide whether each exposure is justified.

4.8.3 IRMER practitioners

Practitioners are registered health care professionals who are entitled to take responsibility for individual medical exposures within a specified scope of practice. They justify and authorise exposures, either directly or by issuing guidelines to operators.

4.8.4 IRMER operators

Operators are staff who are entitled to undertake the practical aspects of medical exposures within a specified scope of practice. They are responsible for optimising exposures by selecting appropriate equipment and methods. They may also authorise exposures by following guidelines issued by a practitioner.

4.8.5 Medical Physics Expert

The Divisional Director will appoint one or more suitable individuals as Medical Physics Experts. A Medical Physics Expert must also be entitled as an IRMER operator. A Medical Physics Expert is involved with certain aspects of medical exposures, including:

- Optimisation

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- Specification and quality assurance of medical radiological equipment
- Analysis of events involving accidental or unintended exposures
- Training of staff in relevant aspects of radiation safety
- Provision of advice to Public Health Wales relating to compliance with IRMER

4.9 All staff

All staff working with radiation must:

- Exercise reasonable care and follow the local rules and related working instructions
- Use, as instructed, any protective equipment and personal dosimeters provided, and report any defects in such equipment and dosimeters to the department manager and Radiation Protection Supervisor
- Undertake any training deemed necessary
- Follow Public Health Wales' incident reporting procedure if an incident occurs in which a member of staff or other person is unintentionally exposed to radiation

5 Arrangements for radiation safety

5.1 Radiation Protection Group

The Radiation Protection Group is responsible for overseeing the management of radiation safety throughout Public Health Wales. The Director of Screening Division chairs the Group. It reports to the Health and Safety Group on matters of staff and public safety and to the Quality, Safety and Improvement Committee on matters of patient safety. This provides assurance to the Board and Chief Executive about the radiation safety arrangements within Public Health Wales. The terms of reference and membership of the Radiation Protection Group are given in Appendix 2.

5.2 Arrangements for the safety of patients undergoing medical exposures

The following arrangements apply to departments where medical exposures are undertaken.

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5.2.1 *Written procedures*

Each department must have the following standard operating procedures required by IRMER Schedule 2:

- To identify correctly the individual to be exposed to ionising radiation
- To identify individuals entitled to act as referrer or practitioner or operator within a specified scope of practice
- For making enquiries of females of childbearing potential to establish whether the individual is or may be pregnant or breastfeeding
- To ensure that quality assurance programmes in respect of written procedures, written protocols, and equipment are followed
- For the assessment of patient dose and administered activity
- For the use and review of diagnostic reference levels
- For exposures within medical and biomedical research programmes
- For the giving of information and written instructions to patients receiving radioactive medicinal products
- For the carrying out and recording of an evaluation for each medical exposure including, where appropriate, factors relevant to patient dose
- To ensure that the probability and magnitude of accidental or unintended doses to patients from radiological practices are reduced so far as reasonably practicable
- To ensure that the referrer, the practitioner, and the individual exposed or their representative are informed of the occurrence of any relevant clinically significant unintended or accidental exposure, and the outcome of the analysis of this exposure
- To be observed in the case of non-medical imaging exposures
- To establish appropriate dose constraints and guidance for the exposure of carers and comforters
- For the making, amending, and cancellation of referrals
- For conducting clinical audit

Each department must also have the following:

- Written procedures for patient referrals

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- Written protocols for medical exposures

All new or updated IRMER procedures must be submitted to the Radiation Protection Group for ratification and formal adoption on behalf of Public Health Wales.

5.2.2 Entitlement of referrers, practitioners and operators

Entitlement must only be undertaken by authorised individuals following the department's standard operating procedure.

The department must keep an auditable record of each entitlement including:

- Role (referrer, practitioner or operator)
- Name of person being entitled
- Scope of practice
- Name and signature of person undertaking the entitlement
- Date

Each department must keep a list of its referrers, practitioners and operators, specifying the scope of practice for which they are entitled.

5.2.3 Referral criteria

Public Health Wales, through the Radiation Protection Group, has established referral criteria for medical exposures, reflecting current national professional guidance. These are referenced in departmental documentation.

5.2.4 Equipment used for medical exposures

Each department must set up a quality assurance programme for equipment used for medical exposures. This programme must:

- Enable the radiation dose to a patient to be estimated
- Ensure that all equipment is tested before it is first used, at regular intervals, and after maintenance
- Specify acceptable performance criteria for equipment and ensure that corrective action is taken if these criteria are not met

Each department must keep an inventory of equipment used for medical exposures that contains the following information:

- Name of manufacturer
- Model number

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- Serial number or other unique identifier
- Year of manufacture
- Year of installation

5.3 Arrangements for the safety of staff, public and others

The following arrangements apply to departments where work with radiation is undertaken.

5.3.1 Radiation risk assessments

Managers must ensure that a radiation risk assessment is carried out for each activity where work with radiation is involved. Radiation risk assessments must be reviewed regularly and whenever there are changes to equipment or working practices.

5.3.2 Controlled and supervised areas

Certain rooms may need to be designated as controlled or supervised areas according to the level of radiation risk. Warning signs will indicate the presence of such areas and the Radiation Protection Supervisor will ensure that staff work safely in accordance with local rules.

5.3.3 Local rules

Each department with controlled or supervised areas must have local rules to protect staff and others. Local rules specify general radiation protection arrangements and particular requirements identified in IRR.

The Radiation Protection Supervisor must ensure that all staff are adequately supervised. The Radiation Protection Supervisor must report any non-compliance with the local rules to the department manager who, in consultation with the Radiation Protection Adviser, will investigate the reasons for the non-compliance and put in place measures to ensure that such breaches are not repeated. In instances where breaches are identified by the Radiation Protection Adviser as serious or in instances where breaches cannot be resolved within the department the manager will seek a solution by referring the issue to the Divisional Director and the chair of the Radiation Protection Group.

5.3.4 New or modified equipment installations

The radiation safety features of all new equipment installations must be subject to a critical examination. The critical examination is the responsibility of the installer. The department manager must obtain confirmation that the outcome is satisfactory before putting the equipment into use. The manager must consider the implications for radiation safety before making any

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modifications to equipment or premises, and should consult the Radiation Protection Adviser if necessary.

5.3.5 Staff of other employers

Staff of other employers such as agency staff, staff on secondment or staff of contractors may need to undertake work in Public Health Wales involving radiation or located in a radiation area. Managers must act in collaboration with such employers to define responsibilities and exchange information to ensure the safety of all staff.

5.4 Incident reporting

5.4.1 Radiation incidents involving patients

Staff must report all incidents involving accidental or unintended radiation exposures of patients using the Public Health Wales incident reporting procedure. The department manager must carry out an appropriate level of investigation and take any remedial and/or preventative action. If the investigation shows that a significant overexposure occurred, a more detailed investigation is required and Public Health Wales may need to report the incident to Healthcare Inspectorate Wales. Where appropriate, the Medical Physics Expert should be consulted for advice.

5.4.2 Radiation incidents involving staff or others

Staff must report all incidents involving accidental radiation exposures of staff or others using the Public Health Wales incident reporting procedure. The department manager must carry out an appropriate level of investigation and take any remedial and/or preventative action, in consultation with the Radiation Protection Supervisor. Where appropriate, the manager should ask the Radiation Protection Adviser to assess the risks associated with the incident and advise about the need for reporting the incident to the Health and Safety Executive.

5.5 Radon

Radon is a gas that emits radiation. It occurs naturally in some parts of the country. Staff may receive a radiation dose by breathing in radon in their workplace. Public Health Wales has a duty to protect staff from this risk. The Head of Estates and Health and Safety makes arrangements to:

- Review the potential radon hazard in all workplaces used by Public Health Wales staff
- Monitor the level of radon in workplaces identified as being in radon affected areas

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- Undertake remedial work to reduce levels in any workplaces that are above the relevant action level
- Re-monitor such workplaces every 2-3 years
- Re-monitor other workplaces on a less frequent basis

The Head of Estates and Health and Safety should consult the Radiation Protection Adviser about the suitability of the arrangements.

6 Training requirements

Before allowing any individual to work with radiation, a manager must assess the individual's training requirements, provide any required training, monitor the training programme and assess the individual's performance.

Radiation Protection Supervisors need more detailed training as specified by the Health and Safety Executive. The Radiation Protection Adviser can recommend suitable training if required.

There are additional training requirements for duty holders under IRMER. Before any individual is formally entitled to act as referrer, practitioner or operator, arrangements must be made to assess their experience and to determine what training must be undertaken before entitlement can take place. Departments must keep training records for referrers, practitioners and operators. This should include records of professional qualifications and update training relevant to their role(s) under IRMER.

7 Communication to staff

Department managers must put systems in place to keep all staff aware of their general responsibilities with regard to radiation protection and keep all staff aware of the need to report any incident or near misses involving radiation that may have resulted in the unintended exposure of patients, staff or other persons.

The local rules identify potential hazards and provide measures that enable staff to work safely. Managers must ensure that all staff working within the department are made aware of all issues detailed in the local rules and are given training in their implementation and observance.

This policy will be posted on the Public Health Wales intranet site.

8 Monitoring compliance

The Radiation Protection Group monitors compliance with this policy by reviewing:

- Annual reports from Radiation Protection Supervisors and managers
- Reported radiation incidents
- Radiation Protection Adviser inspection visits and audits including review of personal dosimetry results
- Patient radiation dose surveys
- Reports of inspections by relevant external bodies

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Appendix 1 - Glossary of Terms

Ionising radiation – a type of high energy radiation that can lead to damage in human tissue and increase the risk of cancer.

IRMER – an abbreviation for the Ionising Radiation (Medical Exposure) Regulations 2017

IRR – an abbreviation for the Ionising Radiations Regulations 2017

Justification – ensuring that the benefit from a medical exposure outweighs the risk from the radiation.

Medical exposure – in this policy, this means the use of ionising radiation during medical diagnosis.

Optimisation – ensuring that the radiation dose is as low as reasonably practicable consistent with the intended purpose.

Patient – in this policy, this means anyone undergoing a medical exposure.

Radon – a gas that occurs naturally and emits ionising radiation.

Radiation dose – a measure of the amount of ionising radiation. In general, a higher radiation dose means a higher risk.

Radiation protection – the protection of people and the environment from the harmful effects of ionising radiation.

X-ray - a type of ionising radiation used for medical imaging.

Appendix 2 - Radiation Protection Group

Terms of reference

The Chief Executive has established a Radiation Protection Group to oversee the management of radiation safety throughout Public Health Wales. The Director of Screening Division chairs the Group.

The remit of the Radiation Protection Group is to:

- Review the Radiation Safety Policy
- Establish and review referral criteria for medical exposures
- Evaluate and ratify procedures drafted by managers to control work involving ionising radiation and radiation risks to patients and other persons
- Monitor and review the level of compliance with the Radiation Safety Policy and procedures within Public Health Wales
- Receive annual reports from Radiation Protection Supervisors and managers demonstrating the level of compliance with the Radiation Safety Policy and procedures
- Initiate remedial action where required
- Keep the Chief Executive informed of specific issues that require his/her attention

The Radiation Protection Group reports to the Health and Safety Group on staff and public safety matters and to the Quality, Safety and Improvement Committee on patient safety matters.

Membership

- Chair
- Heads of programmes that use ionising radiation
- Managers of departments that use ionising radiation
- Radiation Protection Supervisors
- Radiation Protection Adviser
- Medical Physics Expert
- Nominated clinician (IRMER practitioner)
- Trade Union or Health and Safety Representative

Radiation safety policy

- Public Health Wales Health and Safety Manager
- Screening Division Risk, Health, Safety and Clinical Governance Manager
- Facilities Compliance Officer (representing Head of Estates and Health and Safety)

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Appendix 3 - Radiation Protection Supervisor role specification

Base Location: [INSERT LOCATION HERE]

Department: [INSERT DEPARTMENT HERE]

Accountable to: [INSERT SERVICE MANAGER HERE]

Reports to: [INSERT LINE MANAGER HERE]

Liases with: Radiation Protection Adviser

Job Summary The Radiation Protection Supervisor (RPS) plays a supervisory role in assisting Public Health Wales to comply with the requirements of the Ionising Radiation Regulations 2017. The RPS is directly involved in the work with ionising radiation and exercises close supervision to ensure that the work is done in accordance with local rules.

The only responsibility of the RPS specified under the regulations is to supervise the work with ionising radiations. Overall responsibility for radiation safety lies with the departmental manager.

Main duties and responsibilities

1 Restriction of exposure

Observe, from time to time, all procedures involving ionising radiation and to keep a record of this process for audit purposes. Issue instructions necessary to maintain radiation doses as low as reasonably practicable.

2 Notification of changes and incidents

Notify the manager, in writing:

- Of any change in work activity, equipment, usage or conditions that might affect radiation safety
- Immediately of any incident or suspected incident involving unintended radiation exposure of staff or others

Radiation safety policy

3 Local rules and systems of work

Assist in the writing of local rules and systems of work and ensure that all staff comply with them.

4 Information, instruction and training

Attend courses and receive training as recommended by the Radiation Protection Adviser. Ensure that necessary safety information and guidance is given to all staff, outside contractors and any other persons who enter controlled or supervised radiation areas.

5 Additional duties

Provide a report to the Radiation Protection Group.

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Equality & Health Impact Assessment for (Radiation safety Policy)

Part 1

Please answer all questions:-

1.	For service change, provide the title of the Project Outline Document or Business Case and Reference Number	Radiation Safety Policy/Procedures
2.	Name of Corporate Directorate and title of lead member of staff, including contact details	Health Protection and Screening Services Directorate Mr Dean Phillips – Head of Programme BTW Martha Stuffins, Lead Physicist, Medical Physics Expert for Breast Test Wales Sharon Hillier, Director Screening Division, PHW
3.	Objectives of strategy/ policy/ plan/ procedure/ service	To enable Public Health Wales to use ionising radiation safely in order to protect the health and wellbeing of patients, service users, staff and others.
4.	Evidence and background information considered. For example <ul style="list-style-type: none"> • population data • staff and service users data, as applicable • needs assessment • engagement and involvement findings • research 	Developed in line with statutory requirements under IRR17 and the IR(ME)R

	<ul style="list-style-type: none"> • good practice guidelines • participant knowledge • list of stakeholders and how stakeholders have engaged in the development stages • comments from those involved in the designing and development stages <p>Population pyramids are available from Public Health Wales Observatory and the 'Shaping Our Future Wellbeing' Strategy provides an overview of health need.</p>	
5.	<p>Who will be affected by the strategy/ policy/ plan/ procedure/ service</p> <p>Consider staff as well as the population that the project/change may affect to different degrees.</p>	<p>This policy applies to staff employed by Public Health Wales who use x-rays for medical imaging, and the participants and their carers and others affected by this work. It also applies to any Public Health Wales staff who work in premises potentially affected by radon gas.</p>

Part 2- Equality and Welsh language

6. EQIA / How will the strategy, policy, plan, procedure and/or service impact on people?

Questions in this section relate to the impact on people on the basis of their 'protected characteristics'.

How will the strategy, policy, plan, procedure and/or service impact on:-	Potential positive and/or negative impacts (unintended consequences) Opportunities or gaps	Action taken by Directorate. Make reference to where the mitigation is included in the document, as appropriate This column is to be updated in future reviews	Recommendations for improvement/ mitigation/ identified gaps or opportunities
6.1 Age For most purposes, the main categories are: <ul style="list-style-type: none"> • under 18; • between 18 and 65; and • over 65 	Equal impact on all groups		
6.2 Persons with a disability as defined in the Equality Act 2010 Those with physical impairments, learning disability, sensory loss or impairment, mental health conditions, long-term	Equal impact on all groups		

How will the strategy, policy, plan, procedure and/or service impact on:-	Potential positive and/or negative impacts (unintended consequences) Opportunities or gaps	Action taken by Directorate. Make reference to where the mitigation is included in the document, as appropriate This column is to be updated in future reviews	Recommendations for improvement/ mitigation/ identified gaps or opportunities
medical conditions such as diabetes			
6.3 People of different genders: Consider men, women, people undergoing gender reassignment NB Gender-reassignment is anyone who proposes to, starts, is going through or who has completed a process to change his or her gender with or without going through any medical procedures. Sometimes referred to as Trans or Transgender	Equal impact on all groups		
6.4 People who are married or who have a civil partner.	Equal impact on all groups		

How will the strategy, policy, plan, procedure and/or service impact on:-	Potential positive and/or negative impacts (unintended consequences) Opportunities or gaps	Action taken by Directorate. Make reference to where the mitigation is included in the document, as appropriate This column is to be updated in future reviews	Recommendations for improvement/ mitigation/ identified gaps or opportunities
6.5 Women who are expecting a baby, who are on a break from work after having a baby, or who are breastfeeding.	Equal impact on all groups		
6.6 People of a different race, nationality, colour, culture or ethnic origin including non-English speakers, gypsies/travellers, migrant workers	Equal impact on all groups		
6.7 People with a religion or belief or with no religion or belief.	Equal impact on all groups		

How will the strategy, policy, plan, procedure and/or service impact on:-	Potential positive and/or negative impacts (unintended consequences) Opportunities or gaps	Action taken by Directorate. Make reference to where the mitigation is included in the document, as appropriate This column is to be updated in future reviews	Recommendations for improvement/ mitigation/ identified gaps or opportunities
The term 'religion' includes a religious or philosophical belief			
6.8 People who are attracted to other people of: <ul style="list-style-type: none"> • the opposite sex (heterosexual); • the same sex (lesbian or gay); • both sexes (bisexual) 	Equal impact on all groups		
6.9 People according to their income related group: Consider people on low income, economically inactive, unemployed/workless, people who are unable to work due to ill-health	Equal impact on all groups		
6.10 People according to where they live:	Equal impact on all groups		

How will the strategy, policy, plan, procedure and/or service impact on:-	Potential positive and/or negative impacts (unintended consequences) Opportunities or gaps	Action taken by Directorate. Make reference to where the mitigation is included in the document, as appropriate This column is to be updated in future reviews	Recommendations for improvement/ mitigation/ identified gaps or opportunities
Consider people living in areas known to exhibit poor economic and/or health indicators, people unable to access services and facilities			
6.11 Consider any other groups and risk factors relevant to this strategy, policy, plan, procedure and/or service	Equal impact on all groups		
6.12 Welsh Language			
There are 2 key considerations to be made during the development of a policy, project, programme, service to ensure there are no adverse effects and/or a positive or increased positive effect on: (please note these will continue to be reviewed to ensure Public Health Wales fulfils their duties to comply with one or more standards outlined within the Welsh Language Standards (No 7) Regulations 2018)			
Opportunities for persons to use the Welsh language	No impact		
Treating the Welsh language no less	No impact		

How will the strategy, policy, plan, procedure and/or service impact on:-	Potential positive and/or negative impacts (unintended consequences) Opportunities or gaps	Action taken by Directorate. Make reference to where the mitigation is included in the document, as appropriate This column is to be updated in future reviews	Recommendations for improvement/ mitigation/ identified gaps or opportunities
favourably than the English language			

Part 3 – Health

Questions in this section relate to the impact on the health and wellbeing outcomes of the population **and** specific population groups who could be more impacted than others by a policy/project/proposal.

The part of the assessment identifies;

- which specific groups in the population could be impacted more (inequalities)
- what those potential impacts could be across the wider determinants of health framework?
- Potential gaps, opportunities to maximise positive H&WB outcomes
- Recommendations/mitigation to be considered by the decision makers

7. Identification of specific population groups

Use the WHIASU Population Groups checklist as a reference to identify the population groups who could be more impacted than others by a policy/project/proposal. The check list can be found on the PHW Integrated EqHIA guidance pages (requires link to PHW Intranet pages for additional information and resources)

The groups listed have been identified as more susceptible to poorer health and wellbeing outcomes (health inequalities) and therefore it is important to consider them in a HIA assessment. In a HIA, the groups identified, as

more sensitive to potential impacts will depend on the characteristics of the local population, the context, and the nature of the proposal itself.

7.1 Groups identified	Rational/explanation
n/a	

Assessment

Complete the wider determinants framework table below providing rational/evidence where appropriate:

1. Consider how the proposal could impact on the population and specific population groups identified above (positive/negative) for each of the wider determinants (the bullets under each determinant are there as a guide)
2. Record any unintended consequences (negative impacts) and/or gaps identified
3. Record any positive impacts or missed opportunities to maximise positive health and wellbeing outcomes
4. identify and record mitigation/recommendations where appropriate

Please note you may find that not all determinants are relevant to the project/plan however recording N/A is not acceptable a rational or evidence should be explained/referenced

Wider determinant for consideration	Positive impacts or additional opportunities	Unintended consequences or gaps	Population groups affected	Mitigation/recommendations
7.2 Lifestyles <ul style="list-style-type: none"> • Diet/nutrition/breastfeeding • Physical activity • Use of alcohol, cigarettes, e-cigarettes • Use of substances, non-prescribed drugs, abuse of prescription medication • Social media use • Sexual activity • Risk-taking activity i.e. gambling, addictive behaviour 	No impact			

<p>7.3 Social and community influences on health</p> <ul style="list-style-type: none"> • Adverse childhood experiences • Citizen power and influence • Community cohesion, identity, local pride • Community resilience • Domestic violence • Family relationships • Language, cultural and spirituality • Neighbourliness • Social exclusion i.e. homelessness • Parenting and infant attachment • Peer pressure • Racism • Sense of belonging • Social isolation/loneliness • Social capital/support/networks • Third sector & volunteering 	No impact			
<p>7.4 Mental Wellbeing</p> <ul style="list-style-type: none"> • Does this proposal support sense of control? • Does it enable participation in community and economic life? • Does it impact on emotional wellbeing and resilience? 	No impact			
<p>7.5 Living/ environmental conditions affecting health</p> <ul style="list-style-type: none"> • Air quality • Attractiveness/access/availability/quality of area, green and blue space, natural space. • Health & safety, community, individual, public/private space • Housing, quality/tenure/indoor environment • Light/noise/odours, pollution • Quality & safety of play areas (formal/informal) 	Reduction of potential risks arising from the use of x-rays and from radon gas in Public Health Wales premises			

<ul style="list-style-type: none"> • Road safety • Urban/rural built & natural environment • Waste and recycling • Water quality 				
<p>7.6 Economic conditions affecting health</p> <ul style="list-style-type: none"> • Unemployment • Income, poverty (incl. food and fuel) • Economic inactivity • Personal and household debt • Type of employment i.e. permanent/temp, full/part time • Workplace conditions i.e. environment culture, H&S 	No impact			
<p>7.7 Access and quality of services</p> <ul style="list-style-type: none"> • Careers advice • Education and training • Information technology, internet access, digital services • Leisure services • Medical and health services • Other caring services i.e. social care; Third Sector, youth services, child care • Public amenities i.e. village halls, libraries, community hub • Shops and commercial services • Transport including parking, public transport, active travel 	No impact			
<p>7.8 Macro-economic, environmental and sustainability factors</p> <ul style="list-style-type: none"> • Biodiversity • Climate change/carbon reduction/flooding/heatwave • Cost of living i.e. food, rent, transport and house prices • Economic development including trade • Government policies i.e. Sustainable Development principle (integration; 	No impact			

collaboration; involvement; long term thinking; and prevention) <ul style="list-style-type: none"> • Gross Domestic Product • Regeneration 				
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Stage 3

Summary of key findings and actions Please answer question 8.1 following the completion of the EHIA and complete the action plan

Key findings: Impacts/gaps/opportunities	Actions (what is needed and who needs to do) to address the identified mitigation and recommendations	Lead		
n/a				

Alternatively, if appropriate, please explain the steps taken to consult with and consider the differential impact of the changes on the various protected characteristic groups (part 2) or any specific identified population groups (part 3).