Arolygiaeth Gofal Iechyd Cymru
Healthcare Inspectorate Wales

Ionising Radiation (Medical Exposure) Regulations Inspection Report (Announced)

Radiology Department, University Hospital Llandough, Cardiff and Vale University Health Board

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Copies of all reports, when published, will be available on our website or by contacting us:

In writing:

Communications Manager
Healthcare Inspectorate Wales
Welsh Government
Rhydycar Business Park
Merthyr Tydfil
CF48 1UZ

Or via

Phone: 0300 062 8163
Email: hiw@gov.wales
Website: www.hiw.org.uk

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Healthcare Inspectorate Wales (HIW) is the independent inspectorate and regulator of healthcare in Wales

Our purpose

To check that healthcare services are provided in a way which maximises the health and wellbeing of people

Our values

We place people at the heart of what we do. We are:

- Independent – we are impartial, deciding what work we do and where we do it
- Objective - we are reasoned, fair and evidence driven
- Decisive - we make clear judgements and take action to improve poor standards and highlight the good practice we find
- Inclusive - we value and encourage equality and diversity through our work
- Proportionate - we are agile and we carry out our work where it matters most

Our goal

To be a trusted voice which influences and drives improvement in healthcare

Our priorities

- We will focus on the quality of healthcare provided to people and communities as they access, use and move between services.
- We will adapt our approach to ensure we are responsive to emerging risks to patient safety
- We will work collaboratively to drive system and service improvement within healthcare
- We will support and develop our workforce to enable them, and the organisation, to deliver our priorities.

Contents

1. What we did

Full details on how we conduct Ionising Radiation (Medical Exposure) Regulations inspections can be found on our website.

Healthcare Inspectorate Wales (HIW) completed an announced Ionising Radiation (Medical Exposure) Regulations inspection of the Radiology Department, Cardiff and Vale Orthopaedic Centre (CAVOC) and the Breast Centre at University Hospital Llandough, Cardiff and Vale University Health Board on 15 and 16 July 2025. During our inspection we looked at how the departments complied with the Regulations and met the Health and Care Quality Standards.

Our team for the inspection comprised of three HIW healthcare inspectors and two Senior Clinical Officers from the Medical Exposures Group (MEG) of the UK Health Security Agency (UKHSA), who acted in an advisory capacity. A Senior Healthcare Inspector led the team.

During the inspection we invited patients or their carers to complete a questionnaire to tell us about their experience of using the service. We also invited staff to complete a questionnaire to tell us their views on working for the service. A total of 27 questionnaires were completed by patients or their carers and nine were completed by staff. Feedback and some of the comments we received appear throughout the report.

Where present, quotes in this publication may have been translated from their original language.

Note the inspection findings relate to the point in time that the inspection was undertaken.

2. Summary of inspection

Quality of Patient Experience

Overall summary:

HIW received 27 responses to the patient questionnaires, with all respondents rating the service as ‘very good’ or ‘good’. Feedback was overwhelmingly positive, highlighting efficient service and courteous staff. Comments included praise for the professionalism and clarity of communication from staff, with patients feeling well-informed and reassured throughout their care.

Patients reported being treated with dignity and respect, with appropriate measures in place to maintain privacy. Staff were observed interacting with patients in a friendly and professional manner. Most respondents felt involved in decisions about their treatment and confirmed they received sufficient information regarding the benefits and risks of their procedures.

Care was delivered in a timely manner, with staff communicating clearly about appointment times and delays. Reception staff proactively kept patients informed while waiting.

The Welsh language was well promoted through bilingual signage and materials. Welsh-speaking staff were identifiable via the ‘Iaith Gwaith’ logo. Although a translation service was available, staff reported limited use. Some multilingual staff supported patients in their own language when possible. The employer is encouraged to improve awareness and access to translation services.

The environment was accessible and inclusive, with good physical access and equipment to support patients with mobility needs.

This is what we recommend the service can improve:

- Improve staff awareness of and access to translation services.

This is what the service did well:

- patients felt that they were treated with dignity and respect and measures were in place to maintain privacy
- Clean, tidy, uncluttered and welcoming environment.

Delivery of Safe and Effective Care

Overall summary:
The department complied with IR(ME)R) 2017 through established protocols and procedures, with ongoing reviews and updates recommended for certain areas, such as mini C-arm use in theatres and employer's procedures documents. Diagnostic Reference Levels (DRLs) were monitored, with processes in place for escalation and audit, though further formalisation was required. Medical Physics Experts (MPEs) provided guidance and support on radiation protection and equipment quality assurance.

Patient identification procedures were robust, though some inconsistencies needed review. Enquiries for individuals of childbearing potential were made as per guidelines. Benefit and risk information for mammography needed improvement to ensure all patients were informed. Clinical evaluation was carried out with support from Everlight personnel and AI tools, with required updates to documentation.

Risk management, infection control, and safeguarding practices were effective, with good facilities for disabled access. Patient records management was appropriate, though referral processes should be streamlined to enhance efficiency and reduce risk. Overall, the inspection highlighted notable practices and areas for improvement to ensure delivery of safe, effective and equitable care.

This is what we recommend the service can improve:

- Improve provision of benefit and risk information for mammography patients
- Streamline referral processes to enhance efficiency and reduce risk, facilitating safer and more effective patient pathways
- Formalise processes for escalation and audit of diagnostic reference levels (DRLs) to strengthen monitoring and compliance
- Review and update mini C-arm usage and employer's procedures documentation to ensure protocols are current and robust across the whole health board, especially for paediatric use
- Address inconsistencies in patient identification procedures to maintain high standards of safety and accuracy
- Update documentation supporting clinical evaluation with Everlight personnel and AI tools for greater clarity and effectiveness.

This is what the service did well:

- Effective risk management processes were in place,
- infection control systems and processes
- Comprehensive safeguarding practices

Quality of Management and Leadership

Overall summary:
The inspection highlighted that clear governance and management systems were in place. All radiology staff felt the establishment and skill mix in their department was suitable. Though support for radiology staff at University Hospital Llandough (UHL) appeared less robust compared to University Hospital of Wales (UHW), especially in the Breast Centre. The health board is advised to review and balance staffing and support levels.

Training compliance was strong, with 90% of staff completing mandatory training though some faced challenges accessing higher-level safeguarding training IR(ME)R training documentation was generally well maintained, although some improvement is needed for mini C-arm operators.

In terms of leadership, the Chief Executive delegated responsibilities for IR(ME)R compliance and managers were mostly accessible, though staff called for more local engagement and face-to-face meetings, especially at UHL. Complaint procedures were well known, and feedback was shared mainly by email, with learning disseminated across departments. Most staff understood and practiced the duty of candour, although not all had completed formal training. Overall, the inspection found areas of strong practice and identified opportunities for improvement in support, training, and engagement across hospital sites.

This is what we recommend the service can improve:

- Improve face to face managerial support and communication with staff
- Review staffing level to ensure appropriate number and skill mix of staff available in all areas.

This is what the service did well:

- Training compliance
- IR(ME)R awareness.

Details of the concerns for patient's safety and the immediate improvements and remedial action required are provided in Appendix B.

3. What we found

Quality of Patient Experience

Patient feedback

HIW issued online and paper questionnaires to obtain the views of patients that used this service. In total we received 27 responses from patients at this setting. Responses were mostly positive across all areas, with all who answered rating the service as 'very good' or 'good.'

Patient comments included:

> ***"Very quick service, lovely staff members. Thank you."***

> ***"Excellent service throughout."***

Person-centred

Health promotion
Health promotion material was displayed in the waiting areas within all departments inspected. This included information on the benefits of adopting a healthy lifestyle and smoking cessation.

Bilingual posters, in Welsh and English, were displayed that provided information to patients about having an X-ray and to advise staff if they may be pregnant or breastfeeding. Relevant information was made available to most patients about the associated benefits and risks of the intended exposure on various posters in most areas inspected.

Dignified and respectful care
There were suitable arrangements in place to promote patient privacy. Most respondents who answered the questionnaire confirmed that:

- Staff treated them with dignity and respect
- Measures were taken to protect their privacy
- They were able to speak to staff about their procedure without being overheard by other patients
- Staff listened to them.

Reception and clinical staff were observed speaking to patients in a polite, friendly and professional manner.

Suitable arrangements were in place to promote patient privacy, and we noted staff made efforts to promote patents' privacy and dignity.

Individualised care
Most respondents felt they were involved as much as they wanted to be in decisions about their treatment and that staff explained what they were doing.

Most confirmed that they were provided with enough information to understand the benefits and risks of the exposure. Everyone we spoke with was complimentary about their care and the staff.

One commented on the care that they received:

> ***"The staff here have been brilliant, I have had a number of different investigations, and they have taken time to explain the process and put me at ease."***

Timely

Timely care
During the inspection, patients were seen in a timely manner. Staff we spoke with explained the arrangements in place for communicating appointments, timings and any delays to appointments. Staff confirmed they would let clients know if there was a delay to their appointment time. Reception staff within the different areas also told us that they would advise patients in the waiting area if there were any delays.

Equitable

Communication and language
The Welsh language was well promoted within the department. We saw bilingual posters in Welsh and English with information clearly displayed. We saw clear bilingual signage in place to direct visitors to the department. Some staff members told us that they were Welsh speakers, and these were identified by wearing the 'Iaith Gwaith' logo.

We saw feedback posters for patients to share feedback. As well as a "You Said, We Did" board in the main Radiology area, showing how the department had listened and made improvements based on patient feedback. The NHS Wales Putting Things Right process was on display in the department as well as posters

promoting Llais, the organisation that represents patients in health and social care in Wales.

Staff we spoke with said that they would try to resolve any concerns or complaints initially at the point the issue was raised. Then it would be escalated to management as appropriate.

Staff we spoke with all confirmed that a translation service was available to support those patients for whom English or Welsh was not a first language. No staff member that we spoke with said they had needed to use this service. Radiology staff spoke many different languages, and some said that they supported patients in their own language, if they were able to or were asked by a colleague.

The health board must improve awareness of and access to translation services amongst staff, a list of staff languages available for those that are willing to share, could also be developed to help.

Rights and equality

There were arrangements in place to make the services accessible to patients, this included good wheelchair level access, spacious corridors and treatment areas. Staff we spoke with said that equality and diversity was promoted within the organisation. This included everyone being treated fairly and there were equality and diversity policies and processes that included staff training. The examination beds could be lowered to enable easy access for patients and there were also hoists available.

In the patient questionnaire, three patients said they felt they could not access the right healthcare at the right time regardless of any protected characteristic. Additionally, three patients said they had faced discrimination when accessing or using this health service.

The health board must ensure all patients have equal and fair access to the right health care at the right time, without fear of discrimination.

Delivery of Safe and Effective Care

Compliance with The Ionising Radiation (Medical Exposure) Regulations 2017 (as amended)[1]

Employer's Duties: establishment of general procedures, protocols and quality assurance programmes

Procedures and protocols
The employer had written employer's procedures (EPs) and protocols in place as required under IR(ME)R. Documentation was provided in advance of the inspection as part of the completed Self-Assessment Form (SAF).

We reviewed all IR(ME)R documentation submitted in advance of the inspection and spoke to duty holders and senior management to confirm understanding of processes and practice. There were separate employer's procedures in place for the use of mini C-arms in theatres. The EPs for the use of mini C-arms in theatres need reviewing and updating to ensure that they accurately reflect clinical practice.

The employer must review and update the EPs for the use of mini C-arms in theatres, to ensure they accurately reflect practice.

The main EPs provided clear and detailed instructions on how and when a process should be carried out and who was responsible for carrying out these tasks. It was positive to see the development and implementation of EPs related to recent amendments to IR(ME)R.

Some further specific improvements and amendments were recommended as part of the inspection, these were shared with department leads throughout the SAF evaluation meeting and inspection, with some highlighted within this report.

In relation to the ratification of EPs, it was not clear from the EP, submitted EP D, what process was in place for the approval and ratification of employer's procedures.

The employer must update EP D to include a formal ratification process for all procedures, ensuring it is appropriately documented and communicated to

[1] As amended by the Ionising Radiation (Medical Exposure) (Amendment) Regulations 2018 and the Ionising Radiation (Medical Exposure) (Amendment) Regulations 2024

stakeholders for transparency, consistency and assurance before implementation.

Referral guidelines
The SAF, submitted by the department in advance of the inspection, described how referrals were made in accordance with the latest Royal College of Radiologists imaging referral guidelines; 'iRefer', which could be accessed from any NHS Wales site.

It was positive to see that EP P reflected the amendments to IR(ME)R.

Diagnostic reference levels (DRLs)
There was an EP on the use and review of DRLs which described the process for establishing, using and reviewing DRLs.

DRLs within the service were proposed by the Radiation Protection Service (RPS) based in Cardiff and were subsequently reviewed by the RPS or the area clinical leads, to ensure appropriateness for the relevant clinical areas. Notably, CAVOC maintains separate DRLs from the main department due to the specialist nature of its work.

Senior staff confirmed where issues were identified, concerns were escalated to RPS Cardiff, with ultimate accountability residing with the professional lead for that area. It was noted that this escalation process was not currently formalised or documented, though discussions were held at various forums by clinical leads. While not officially recorded in procedural documents, relevant matters were minuted at Radiation Protection Group (RPG) meetings. There was agreement to document the ratification process for DRLs within EPs.

Systems to monitor and manage exceeded DRLs were in place. Instances where DRLs were exceeded, these were recorded in a department logbook, with escalation to the responsible superintendent, as required. Retrospective audits were undertaken to assess occurrences of exceeded DRLs over the preceding six months, with any resultant actions documented. Superintendents reviewed the logbooks monthly and initiate investigations, as necessary. This monitoring and escalation process was not comprehensively described within the EPs.

DRLs for the mini C-arms had been reviewed by Medical Physics Experts (MPEs), although currently international DRLs were utilised for these devices.

The employer must ensure that EP F, ratification process for DRLs, is documented along with the process that is currently in place for dealing with consistently exceeded DRLs.

Medical research
We reviewed the relevant EP, EP G, for exposures carried out as part of medical research programmes, which outlined the necessary governance arrangements and processes to manage research exposures. This EP included all relevant information and was well written.

Entitlement
Staff we spoke with were aware of their duties and scope of entitlement under IR(ME)R and described their entitlement form which outlined their scope of practice.

The process for the entitlement of duty holders was delegated by the employer to appropriate senior post-holders with relevant expertise in the clinical area. The entitlement chain was Employer/Chief Executive Officer, Executive Director of Allied Health Professionals, Health Scientists and Community Services Development, Clinical Board Directors, Directorate Clinical Directors and medical staff. Non-medical staff in Radiology were entitled by the Professional Head of Radiology.

Senior staff demonstrated a clear understanding of their roles and responsibilities in relation to entitlement under IR(ME)R. Staff provided evidence of current entitlement letters, which defined their specific scope of practice within the service.

A review of entitlement documentation confirmed that robust records were maintained and regularly audited. Entitlement records were found to be up to date and accurately reflected staff duties. The process for issuing and reviewing entitlement letters to duty holders was also evidenced during inspection.
It was noted, however, that EP B (Entitlement) required review and strengthening to ensure continued compliance. In particular, the process for updating entitlement for Everlight personnel by the employer.

The employer must update and strengthen EP B to ensure the process of entitlement for Everlight duty holders is in line with health board processes.

Senior staff confirmed that entitlement letters were not reissued unless there had been a significant change in scope. We asked senior staff to review this to ensure entitlement letters were current and reflected updated guideline and practice.
The process, systems and documentation related to the entitlement of non-medical referrers was reviewed and considered appropriate.

Patient identification
We reviewed the EP for the correct identification of the individual to be exposed to ionising radiation. A process was in place for theatre-based staff as well as radiology department staff. Staff we spoke with were aware of the procedure to correctly identify individuals, as well as the procedure to correctly identify individuals who may not be able to identify themselves. This aligned to the processes described in the procedure. Some inconsistencies were noted on what was classed as a minor or major discrepancy.

The employer must review and update the EP for the correct identification of the individual to be exposed to ionising radiation to ensure that it correctly reflects the process should a discrepancy in patient ID be noted.

Individuals of childbearing potential (pregnancy enquiries)
An EP was in place for making enquiries of individuals of childbearing potential to establish whether the individual was or may be pregnant or breastfeeding. Staff we spoke with described the procedure for making enquiries of individuals of childbearing potential to establish pregnancy. The processes described were consistent with the EP.

Benefits and risks
The Breast Centre provision of benefit and risk information on the exposure involved in mammography was limited. Appointments were made via telephone with a receptionist. Staff conversations during the inspection confirmed that documentation and information around benefits and risks, was limited for these patients. During the inspection, senior staff confirmed that the Breast Centre would ensure that benefit and risk information would be shared with all patients at reception when they presented for their appointment.

The employer must ensure that all patients, including those receiving appointments via text or telephone are given relevant benefit and risk information as required by IR(ME)R 2017.

Clinical evaluation
There was an employer's procedure in place for carrying out and recording of evaluation of medical exposures performed at the department. The SAF described how clinical evaluation was undertaken and evidenced for each type of exposure.

The SAF confirmed Everlight was engaged as a third party to provide both justification and clinical evaluation of imaging services for Cardiff and Vale University Health Board. Their support covered routine and emergency imaging

requirements as needed, assisted with out-of-hours service provision within specified timeframes, and was utilised to address staff absences due to sickness.

The SAF confirmed that non-medical personnel may undertake clinical evaluation and additional training undertaken and competency assessment completed prior to entitlement for this task. The EP for clinical evaluation, EP J, had been reviewed and updated recently. Within the SAF it was noted that artificial intelligence (AI) software was implemented for stroke assessment, specifically for patients on the stroke pathway; CT scans were processed by the AI system, which generated reports for review by the stroke clinician and Radiologist.

Radiologists utilise the AI stroke evaluation tool as an adjunct, continuing to produce their own reports. Senior staff confirmed that the triage assessment, generated by the AI software, served as an initial indicator to highlight patients that may need onward treatment. However, referrals undergo further evaluation by a radiologist before any action is taken.

The employer is required to update EP J to include procedures for AI software use, ensuring compliance with IR(ME)R legislation. It is essential that the site communicates clearly regarding the assistive role of the AI software.

We reviewed some standardised report evaluation comments and found these not consistent.

The employer must review standardised ('canned') reports for consistency and record clinical evaluations in patient notes where applicable.

Non-medical imaging exposures
The EP for non-medical imaging was reviewed and was appropriately written. The SAF confirmed that the only non-medical imaging examinations undertaken were those required for legal purposes.

Employer's duties: clinical audit
The SAF described the clinical audit program and the process to register and agree the audits. The EP detailed the process for the carrying out of clinical audits and for any appropriate action to be taken following review of the findings and results.

We reviewed some comprehensive examples of both clinical and IR(ME)R audits from all areas. Targets of 100% for IR(ME)R audits were evidenced. Audits were presented well with findings, conclusions, key successes, key concerns and action plans included. The audit schedule was very comprehensive and covered all areas, we considered these areas of notable practice.

Employer's duties: accidental or unintended exposures
We reviewed evidence indicating that incidents and near misses were systematically monitored, communicated, logged and addressed through the implementation of appropriate actions targeting root causes.

The EP regarding clinically significant accidental and unintended exposures (CSAUE) was evaluated. We advised senior leadership to update this EP to clarify who made the clinical decision, as it did not stipulate who made the decision to determine if SAUE was clinically significant and whether the referrer was the correct person to communicate this. The employer must review and update EP L to identify the correct person to make a decision.

Actions arising from SAUEs were examined; it was encouraging to note that national coding standards had been applied. However, some open action plans had not been consistently reviewed or closed. Leadership indicated they were considering regular meetings to ensure adequate documentation and closure of these actions.

Trend analysis posters displayed within the department were positively noted for clearly presenting themes and corresponding actions addressing root causes, representing notable practice. However, some staff interviewed were not aware of these posters.

The employer must share trend analysis findings with staff and referrers, by distributing the poster and its information more widely.

Duties of practitioner, operator and referrer
The entitlement of referrers, practitioners and operators to carry out their duties was included in an EP and described in the completed SAF. The SAF also described the training programmes in place for all duty holders under IR(ME)R and how training records for practitioners and operators were managed.

We reviewed a duty holder entitlement matrix that was clear and well laid out with separate tabs for different staffing groups and links to additional information.

Justification of individual exposures
The SAF described the processes of how justification and authorisation was performed and where this was recorded. We also reviewed a Standard Operating Procedure for Justification and Authorisation. Whilst staff we spoke with described what they considered when justifying exposures, there appeared to be some

confusion around where to document authorisation on the radiology information system (RIS).

The employer must ensure that the Standard Operating Procedure for Justification and Authorisation, is amended to correctly reflect the actions that need to be taken when justifying and authorising medical exposures.

Optimisation
Practitioners and operators ensured that doses were kept as low as reasonably practicable (ALARP) through several measures. This included the use of the newest room with the latest equipment whenever possible, as it provides better image quality. Routine quality control (QC) of equipment was conducted to ensure doses remained within acceptable ranges. Additionally, three-yearly audit programmes of DRLs for equipment were undertaken for various examinations. These audits included any changes in local DRLs from previous audits, to ensure there was no unexpected increases in examination doses.

Quarterly Radiology Image Optimisation Team meetings were scheduled, with ongoing projects across all modalities being proposed, monitored, and outcomes fed back upon completion. Medical Physics Experts (MPEs) participated in these meetings. Audit projects were also conducted against guidelines and imaging protocols, in addition to operator image quality audits. Any changes to protocols resulting from optimisation efforts were disseminated through modality teams.

Carers or comforters
The SAF and EP for Carers or Comforters, EP N, outlined procedures and guidance on exposure to carers and comforters, and included an established dose constraint.

EP N states that '*For X-ray and nuclear medicine procedures, a dose constraint of 1 mSv will be applied.*' However, it was not clear from the outset on reading the procedure if this constraint was annual or per exposure. The MPE explained that they would look to review the dose constraint and potentially changing to a dose constraint per episode, for ease of recording and calculating dose.

The employer must review and update EP N for clarity on dose constraints for carers and comforters, once this dose constraint is established.

Expert advice
We confirmed the employer had appointed and entitled MPEs to provide advice on radiation protection matters and compliance with IR(ME)R 2017.

Staff we spoke with said they could access expert advice, when required. It was positive to note the involvement of the MPEs, who were clearly engaged with the

department despite not being on site daily. This was evidenced by their involvement in a range of groups and committees, as well as advising staff when required. MPEs were an integral part of QC testing, dose audits, procurement and commissioning of equipment.

Of note was the IR(ME)R training offered by the MPE's, including face to face training and general updates for managers and those working clinically.

On review of the documentation for mini-c arms used in theatres, there was no evidence of a QA programme, QC testing or dose audits being carried out on this equipment by either the MPE's or operators responsible for the equipment.

The employer must ensure that MPEs are engaged in the QC and support of theatre-based IR(ME)R equipment and staff.

Equipment: general duties of the employer
We noted the employer's procedure for ensuring that quality assurance programmes in respect of written procedures, written protocols and equipment were followed. The policy for Quality Assurance and Routine Testing of Diagnostic Imaging Equipment for all departments inspected, with the exception of theatres and the use of mini C-arms, where processes needed strengthening.

The SAF outlined the existing quality assurance programme in place for all relevant equipment (except for mini C-arm equipment, at the time of inspection) including testing of any equipment before first use and performance testing at regular intervals.

Actions had begun prior to the inspection to improve IR(ME)R compliance regarding the use of mini C-arms in theatres, with scheduled plans for additional improvements in the subsequent weeks. Department leads reported acquisition of a new QC equipment tool, and MPEs were awaiting confirmation of dates to perform QC testing. Post-inspection information indicated that MPEs provided staff training on QC testing for all mini C-arms to establish baseline results.

Paper referrals existed for mini C-arm usage; however, these were not recorded on the site RIS at the time of inspection. Each machine had an accompanying logbook for doses, and dose data was also exported directly from the mini C-arm. It is recommended that this information be digitalised to protect it from being lost and to facilitate monitoring.

Staff assured us that Level B frequency for testing the mini C-arms was in line with institute of Physics and Radiation in Medicine (IPEM) recommendations.

The employer must ensure that all aspects of mini C-arm use in theatres are fully compliant with IR(ME)R and those staff using, testing and quality checking all IR(ME)R equipment are, trained, competent and entitled to do so.

In the main radiology department, senior staff stated that three radiographers were trained to conduct QC testing on site. Engineers could access equipment remotely when necessary.

There was currently no written procedure for handover for remote engineer access or for informing staff about changes in testing or requirements before equipment is put back into clinical use.

The employer should develop and distribute a written procedure to maintain safe equipment handover following remote engineer access.

Safe

Risk management

All departments visited were accessible with disabled access and facilities for people with mobility difficulties. There was good signage from the hospital entrance to the relevant department. The environment was clean and in a good state of repair, including furniture, fixtures and fittings. There were spacious waiting areas with small sub-waiting areas. We saw that patient flow was controlled, with no overcrowding observed. The area was safe and secure, with no hazards such as blocked corridors, clutter or tripping hazards. Patient areas and corridors were kept clear.

Infection prevention and control (IPC) and decontamination

All areas seen were clean and well maintained. There were suitable handwashing and drying facilities available throughout, and staff were seen using relevant personal protective equipment PPE). IPC policies and procedures were in place and staff knew how to access them.

Staff we spoke with were aware of their responsibilities in relation to IPC and decontamination and were able to describe how medical devices, equipment and relevant areas of the unit were decontaminated. PPE was available within the examination rooms and staff we spoke with confirmed they had access to suitable PPE which was readily available.

All patients who expressed an opinion in the questionnaire said that IPC measures were being followed and all felt the setting was clean.

Safeguarding of children and safeguarding adults
Staff we spoke with were aware of the health board's safeguarding policies and procedures and how to access them and knew what actions to regarding any safeguarding concerns.

Our review of five staff training records showed four were current with level two safeguarding training, and plans were in place to train staff to level three as needed for their role.

Effective

Patient records
We found there were suitable arrangements in place for the management of records used within the department.

We checked a sample of five patient referral documentation, a mixture of current and retrospective referrals. The sample showed that the referral records had been completed fully to demonstrate appropriate patient checks had been performed. This included patient identification, sufficient clinical details, enquiries made of pregnancy status, where applicable, justification had been carried out and the referral appropriately signed by an entitled referrer.

There was evidence of clinical evaluation for each type of exposure included in the episode of care for three records. Two had not yet been reported on after a two week wait.

Overall, we found IR(ME)R records reviewed were appropriate. However, referral process detailed many ways to refer into the services including paper and electronic systems which may increase the risk of duplicate referrals.

The employer must review referral processes to ensure that this is streamlined to improve efficiency and minimise potential risk of duplicate referrals.

Quality of Management and Leadership

Staff feedback

We collected staff feedback via online questionnaires and received nine responses from this setting. Most responses were positive; all respondents felt staffing levels were sufficient, patients were well-informed and involved in decisions about their care, and the quality of patient care and support was satisfactory. However, only six out of nine staff stated that their immediate manager sought their opinions before making workplace decisions, and that communication with senior management was less effective. Staff commented that:

> ***"All staff are helpful, and genial. Good support from upper management. Wish annual leave was easier to get."***
>
> ***"We have multiple immediate managers so it is hard to give responses to that section as the answers may be different depending on which manager I think about. One is much less patient facing."***
>
> ***"A number of building/estates related issues (leaks from pipes etc) that have not been easy to manage or rectify. Difficult to pin down accountability. "***
>
> ***"We do not have any staff meetings. The last one was 2020! We desperately need a group setting to raise concerns, discuss the service and future developments."***

Leadership

Governance and leadership

The Chief Executive was designated as the 'employer' in relation to IR(ME)R 2017. Whilst they had overall responsibility for ensuring the regulations were complied with, where appropriate, the employer had delegated tasks to other professionals working in the health board to implement IR(ME)R.

The management team from all departments inspected demonstrated a commitment to learn from HIW's inspection findings and make improvements, where needed. We reviewed some evidence that indicated previous inspection feedback from other IR(ME)R inspections in the health board, had been considered and implemented in the University Hospital Llandough.

Departmental managers and surgical leads participated well with the inspection process. Most staff confirmed that site-based managers were accessible. However, some managers responsible for UHL do not work onsite, and staff would appreciate and benefit from more onsite engagement at UHL.

The health board must consider staff feedback on communication and management support and address these issues.

All staff that we spoke with said some meetings were held at University Hospital of Wales and noted challenges engaging effectively when attending these meetings remotely. All staff expressed a preference for incorporating face-to-face meetings to facilitate communication and build relationships locally. Additionally, some staff indicated that in person training opportunities would be beneficial.

The health board must consider staff feedback and consider how improvements will be made for in-person engagement between senior manager and staff based at UHL.

Workforce

Skilled and enabled workforce

We spoke with staff and leaders within the department and received key documentation related to training and appraisals.

All radiology staff we spoke with felt that the number and skill mix of staff in their department was appropriate. However, the inspection team noted that radiologists at UHL, may receive less support than those at UHW, particularly in the Breast Centre. It was unclear if the structure and higher-level support at the Breast Centre were sufficient, given the high patient volume, especially compared to UHW staffing levels.

The health board must review radiology staffing levels at UHL and ensure equitable numbers and adequate support is available to staff.

We found an appropriate system in place to monitor staff training compliance. Mandatory training records showed around 90% compliance. While accessing face to face level three safeguarding training was challenging, all reviewed staff had completed level two, and plans were in place for the level three training.

It is positive to note that staff records also indicated that 84% of staff had received an annual Performance Development Review.

IR(ME)R specific training and entitlement records for radiographers and advanced practitioners were clear, well maintained and consistent across all modalities. Opportunities for advance practitioners to carry out HSGs and future work for clinical evaluation of head CTs was positive to note.

There was no evidence of up-to-date mini C-arm training. Certificates that were available for review, were issued 10 years previously when the equipment was purchased. Entitlement documents had recently been issued for duty holders using this equipment but there were no written examination protocols or DRL's available to support staff in using the equipment.

The employer must ensure that IR(ME)R training and entitlement documentation is up to date and available for all IR(ME)R operators including those who are not directly linked to the radiology department.

Staff that we spoke with confirmed a recent change in shift pattern and rest period had been positively received and meant that shifts were positive for work life balance.

Culture

People engagement, feedback and learning
Senior staff confirmed appropriate processes for capturing, monitoring and resolving informal and formal complaints. Staff we spoke with were aware of the process of how verbal and informal concerns (complaints) were captured. Staff said that information from complaints was shared mainly by emails and there was sharing of learning across the departments and organisation. Staff we spoke with confirmed that they would seek to deal with any verbal complaints on the day and would inform the manager.

Staff we spoke with were able to describe the duty of candour procedure, but not all could confirm whether they had received duty of candour training. Training records confirmed that duty of candour training was offered. For the questions asked about the duty of candour in the questionnaire, just over half agreed that they knew and understood the duty of candour and understood their role in meeting the duty of candour standards.

4. Next steps

Where we have identified improvements and immediate concerns during our inspection which require the service to take action, these are detailed in the following ways within the appendices of this report (where these apply):

- Appendix A: Includes a summary of any concerns regarding patient safety which were escalated and resolved during the inspection
- Appendix B: Includes any immediate concerns regarding patient safety where we require the service to complete an immediate improvement plan telling us about the urgent actions they are taking
- Appendix C: Includes any other improvements identified during the inspection where we require the service to complete an improvement plan telling us about the actions, they are taking to address these areas.

The improvement plans should:

- Clearly state how the findings identified will be addressed
- Ensure actions taken in response to the issues identified are specific, measurable, achievable, realistic and timed
- Include enough detail to provide HIW and the public with assurance that the findings identified will be sufficiently addressed
- Ensure required evidence against stated actions is provided to HIW within three months of the inspection.

As a result of the findings from this inspection the service should:

- Ensure that findings are not systemic across other areas within the wider organisation
- Provide HIW with updates where actions remain outstanding and/or in progress, to confirm when these have been addressed.

The improvement plan, once agreed, will be published on HIW's website.

Appendix A – Summary of concerns resolved during the inspection

The table below summarises the concerns identified and escalated during our inspection. Due to the impact/potential impact on patient care and treatment these concerns needed to be addressed straight away, during the inspection.

Immediate concerns Identified	Impact/potential impact on patient care and treatment	How HIW escalated the concern	How the concern was resolved
No immediate concerns were identified on this inspection.			

Appendix B - Immediate improvement plan

Service: University Hospital Llandough Radiology

Date of inspection: 15 and 16 July 2025

The table below includes any immediate concerns about patient safety identified during the inspection where we require the service to complete an immediate improvement plan telling us about the urgent actions they are taking.

Risk/finding/issue		Improvement needed	Standard / Regulation	Service action	Responsible officer	Timescale
1.	No immediate assurance / noncompliance issues.					

The following section must be completed by a representative of the service who has overall responsibility and accountability for ensuring the improvement plan is actioned.

Service representative:

Name (print):

Job role:

Date:

Appendix C - Improvement plan

Service: University Hospital Llandough, Radiology

Date of inspection: 15 and 16 July 2026

The table below includes any other improvements identified during the inspection where we require the service to complete an improvement plan telling us about the actions they are taking to address these areas.

Risk/finding/issue		Improvement needed	Standard / Regulation	Service action	Responsible officer	Timescale
1.	Staff that we spoke with had not used the translation services. Radiology staff spoke many languages however this information was not available to colleagues.	The health board must improve awareness of and access to translation services amongst staff, a list of staff languages available for those that are willing to share, could also be developed to help.	NHS Wales, Health and Care Quality Standards - Equitable	List of languages spoken by UHL Radiology staff to be created Training and information for online training resources to be recirculated with Radiology staff	Professional Head of Radiography and UHL site superintendent QSE Lead Radiographer	2 months 2 months
2.	Three patient questionnaires said that they had face discrimination when	The health board is to inform HIW of the actions they will take to monitor and ensure all patients have equal and fair access to the right health	NHS Wales, Health and Care Quality Standards - Equitable	Radiology staff complete equality and diversity training, compliance is	Professional Head of Radiography	Already in place

	accessing this health service.	care at the right time, without fear of discrimination.		monitored by management and reviewed at values-based appraisals annually.		
				Radiology obtains feedback from patients and ensure robust action plans are formulated and improvements implemented where indicated following feedback.	QSE Lead Radiographer / Professional Head of Radiography	Already in place
				Health and Equality Impact Assessments undertaken during the development stage of new services / policies / procedures with actions assigned where required.	QSE Lead Radiographer / Professional Head of Radiography	Already in place
				Development and dissemination of		In place

				Equity, Equality, Experience and Patient Safety support pack - this aligns to 'The 3I Framework: Equity, Equality, Experience and Patient Safety framework'. Inclusive recruitment from underrepresented groups. Creating a positive and accessible working environment. Annual equality reports and employment data monitoring	Executive lead for equity and inclusion Executive lead for equity and inclusion Executive lead for equity and inclusion Executive lead for equity and inclusion	In place In place In place
3.	The employer's procedures related to the use if mini C-arms	The employer must review and update EPs related to the use of mini C-arms in	IR(ME)R Regulation 6 Schedule 2 (1)	The Employer's Procedures for the mini c-arm to be	Surgical Hub CD UHL	3 months

	in theatres did not accurately reflect practice.	theatres to ensure they accurately reflect practice.		reviewed and updated where current practice varies that in the EP.		
4.	The employer's procedure (EP D) related to ratification of employer's procedures was unclear	The employer must update EP D to clearly document a formal ratification process for all employer's procedures, ensuring this process is included in relevant documentation and communicated to all stakeholders. This will provide transparency, consistency and assurance that all procedures have been appropriately reviewed and authorised before implementation.	IR(ME)R Regulation 6 Schedule 2 (1)	Employer's Procedure D to be updated to include the formal ratification process for all EPs. Communication to be issued to relevant stakeholders once complete.	Professional Head of Radiography	3 months
5.	This ratification, monitoring and escalation process for exceeded DRLs was not comprehensively described within the EPs.	The employer must ensure that EP F, ratification process for DRLs, is documented along with the process that is currently in place for dealing with	IR(ME)R Regulation 6 Schedule 5 (c)	Employers Procedure F to be updated to include the ratification process for DRLs.	Professional Head of Radiography	3 months

		consistently exceeded DRLs.				
6.	EP B (Entitlement) required review and strengthening to ensure continued compliance. In particular, the process for updating entitlement for Everlight personnel by the employer.	The employer must update and strengthen EP B to ensure the process of entitlement for Everlight duty holders is in line with health board processes	IR(ME)R Regulation 5 Schedule 2	Employer's Procedure B to be updated to ensure the entitlement process for Everlight duty holders is accurately reflected.	Professional Head of Radiography	3 months
7.	EP related to patient identification contained some inconsistencies on what was classed as a major or minor discrepancy.	The employer must review and updated the EP for the correct identification of the individual to be exposed to ionising radiation to ensure that it correctly reflects the process should a discrepancy in patient ID be noted.	IR(ME)R Regulation 6	Employers Procedure A to be reviewed and updated to provide more clarity regarding the process to follow for minor and major discrepancies and clearly define what constitutes these.	Professional Head of Radiography	3 months
8.	Some patients who received appointments by	The employer must ensure that all patients, including those receiving	IR(ME)R Regulation 6	Review the benefit and risk information provided to patients	Professional Head of Radiography	3 months

	telephone or text were not consistently given benefit and risk information prior to their exposure.	appointments via text or telephone are given relevant benefit and risk information as required by IR(ME)R 2017.		in the breast unit and update this where appropriate, ensuring all patients irrespective of how they received their appointment have access to this written information.		
9.	EP J did not include procedure for the use of AI software.	The employer is required to update EP J to include procedures for AI software use, ensuring compliance with IR(ME)R legislation. It is essential that the site communicates clearly regarding the assistive role of the AI software.	IR(ME)R Regulation 6 Regulation 12	EP J to be reviewed and updated to include procedures for the use of AI software, ensuring this is accessible to all stakeholders.	Professional Head of Radiography	3 months
10.	Automated / canned reports were not consistently worded or routinely recorded in records where applicable.	Standardised ('canned') reports should be reviewed for consistency, and documentation of clinical evaluations must be recorded in patient notes where applicable.	IR(ME)R Regulation 12	Review of canned reports to ensure they are consistent and document the requirement for clinical evaluations to be recorded in patient notes.	Professional Head of Radiography	3 months

11.	Whilst trend analysis related to accidental and unintended exposures was available, no staff that we spoke with could recall reading this information.	The employer must increase awareness of trend analysis findings among staff and referrers through wider distribution of the poster and the information contained in the posters.	IR(ME)R Regulation 7	Trend analysis information and posters circulated to all Radiology staff via email, monthly Radiology Safety and Quality meeting and displayed throughout the Radiology departments. Trend analysis poster circulated to all Cardiff and Vale staff via patient safety communication network and displayed on Radiology SharePoint.	QSE Lead Radiographer QSE Lead Radiographer	Complete Complete
12.	Staff we spoke with described what they considered when justifying exposures, there appeared to be some confusion around where to document	The employer must ensure that the Standard Operating Procedure for Justification and Authorisation, is amended to correctly reflect the actions that needed to be taken when justifying and	IR(ME)R Regulation 11 Schedule (1) (b)	Review the SOP for Justification and Authorisation to ensure this reflects the different scenarios for justification and authorisation,	Professional Head of Radiography	3 months

	authorisation on the radiology information system (RIS).	authorising medical exposures.		including how and where this is required to be documented by staff.		
13.	EP N states that '*For X-ray and nuclear medicine procedures, a dose constraint of 1 mSv will be applied.*' However, it was not clear from the outset on reading the procedure if this constraint was annual or per exposure.	The employer must review and update EP N for clarity on dose constraints for carers and comforters, once this dose constraint is established.	IR(ME)R Regulation 6	Review and update EP N to clarify how the dose constraint for carers and comforters is established and how this is applied with consideration given as to whether this dose constraint requires review / amending.	Medical Physics Expert / Professional Head of Radiography	3 months
14.	On review of the documentation for mini-c arms used in theatres, there was no evidence of a QA programme, QC testing or dose audits being carried out on this equipment by either the MPE's or operators responsible for the equipment.	The employer must ensure that MPEs are engaged in the QC and support of theatre-based IR(ME)R equipment and staff. The employer must ensure that all aspects of mini C-arm use in theatres are fully compliant with IR(ME)R and those staff	IR(ME)R Regulation 6 (3) (b) Regulation 17 (4) Schedule 3	Establish QA programme for mini - arms used in theatre. Programme of QC testing/ dose audits established for mini - arms used in theatre.	Surgical Hub CD UHL/ supporting Medical Physics Experts Surgical Hub CD UHL/ operators responsible for the equipment	Completed Completed

		using, testing and quality checking all IR(ME)R equipment are, trained, competent and entitled to do so.				
15.	There was currently no written procedure for handover for remote engineer access or for informing staff about changes in testing or requirements before equipment is put back into clinical use.	The employer should develop and distribute a written procedure to maintain safe equipment handover following remote engineer access.	IR(ME)R Regulation 6	Develop a procedure with associated handover documentation for remote engineer access, procedure to include how staff are informed of changes and actions required prior to equipment being put back into clinical use.	Professional Head of Radiography	3 months
16.	However, referral process detailed many ways to refer into the services including paper and electronic systems which may increase	The employer must review referral processes to ensure that this is streamlined to improve efficiency and minimise potential risk of duplicate referrals.	IR(ME)R Regulation 6 Schedule 2	The range of referral processes currently in place in Cardiff and Vale has previously been reviewed and streamlined where possible, the risks associated with the	QSE lead / Professional Head of Radiography	Complete

	the risk of duplicate referrals.			current position has been escalated and noted on the risk register. Electronic requesting to be implemented alongside the replacement of the Radiology Information System and PACS system or sooner if possible. The new electronic requesting platform will replace all current forms of requesting imaging unless not clinically safe to do so. Estimated implementation date for new RIS and PACS is February 2026.	Directorate Management Team	February 2026
17.	Some staff we spoke with told us that managers based out of University Hospital Cardiff would benefit	The health board must consider comments made by staff around communication and managerial support and	NHS Wales, Health and Care Quality Standards - Efficient	Job plans have been reviewed for cross site managers who previously had clinical commitments	Professional Heads of Radiography and Site	Complete

	from spending more time working from Llandough and effectively engaging with staff based there.	address areas raised and provide HIW with an appropriate plan on the measures to be put and in place.		on UHW site Monday to Friday. This has enabled protected time to facilitate working in UHL on a weekly basis.	Superintendents (UHL & UHW)	
18.	All staff that we spoke with told us that they did not have face to face staff meetings in Llandough and they would benefit from these.	The health board must consider feedback from staff and confirm with HIW plans to improve face to face engagement with staff based in University Hospital Llandough (UHL).	NHS Wales, Health and Care Quality Standards - Efficient	Daily staff huddles established in the different clinical areas. In addition to group emails and regular meetings with industrial relations representatives which are already in place, monthly face to face meetings re-established.	Professional Head of Radiography Professional Head of Radiography	Completed 3 months
19.	It was not clear if the structure and higher-level support, for radiology staff based within the Breast Centre was sufficient,	The health board should review staffing levels across radiology based in UHL and ensure that equitable numbers and	NHS Wales, Health and Care Quality Standards - Efficient	Radiography professional structure currently under review, mammographer lead	Professional Head of Radiographer / Clinical Board Director of Operations	Partially complete – completion dependent on timescale

	especially given the high numbers of patients seen and when comparing staffing levels to UHW.	higher-level support was available to staff.		post identified as a requirement. Management of Consultant Radiologists working in the breast centre has been identified to be moved under the Radiology management structure, this action is underway.	Radiology Clinical Director / Clinical Director for Surgery Clinical Board	of restructure actions. In progress, estimated completion 3 months
20.	There was no evidence of up-to-date mini C-arm training. Certificates that were available for review, were issued 10 years previously when the equipment was purchased. Entitlement documents had	The employer must ensure that IR(ME)R training and entitlement documentation is up to date and available for all IR(ME)R operators including those who are not directly linked to the radiology department.	IR(ME)R Regulation 17 Schedule 3	Confirmation of training competency and assurance to be received and evidenced annually via the Hand Quality and Safety meeting held quarterly. Where additional training needs identified, this will be delivered by an application	Clinical Director of Surgical Hub UHL	3 months

	recently been issued for duty holders using this equipment but there were no written examination protocols or DRL's available to support staff in using the equipment.			specialist and evidenced. Written examination protocols to be developed and made available to all users of the mini c-arm. Local DRLs have been developed, circulated among users and displayed with mini c-arms.	Clinical Director of Surgical Hub UHL Clinical Director of Surgical Hub UHL / Medical Physics Expert	3 months Complete

The following section must be completed by a representative of the service who has overall responsibility and accountability for ensuring the improvement plan is actioned.

Service representative

Name (print): Alicia Christopher

Job role: General Manager for Radiology, and Physical Science, Illustration, Engineering and Research

Date: 4/09/2025