

Ionising Radiation (Medical Exposure) Regulations Inspection (Announced)

Radiology (X-ray) Department/

Bronglais Hospital / Hywel Dda University

Health Board

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Contents

1.	What we did	5
2.	Summary of our inspection	6
3.	What we found	8
	Quality of patient experience	9
	Delivery of safe and effective care	14
	Quality of management and leadership	23
4.	What next?	28
5.	How we inspect services that use ionising radiation	29
	Appendix A – Summary of concerns resolved during the inspection	30
	Appendix B – Immediate improvement plan	31
	Appendix C – Improvement plan	32

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

Our purpose

To check that people in Wales are receiving good care.

Our values

- **Patient-centred:** we place patients, service users and public experience at the heart of what we do
- **Integrity:** we are open and honest in the way we operate
- **Independent:** we act and make objective judgements based on what we see
- **Collaborative:** we build effective partnerships internally and externally
- **Professional:** we act efficiently, effectively and proportionately in our approach.

Our priorities

Through our work we aim to:

Provide assurance:

Provide an independent view on the quality of care.

Promote improvement:

Encourage improvement through reporting and sharing of good practice.

Influence policy and standards:

Use what we find to influence policy, standards and practice.

1. What we did

Healthcare Inspectorate Wales (HIW) completed an announced Ionising Radiation (Medical Exposure) Regulations inspection of Bronglais Hospital within Hywel Dda University Health Board on the 20 and 21 November 2018. The following area was visited during this inspection:

- Radiology (X-ray) department

Our team, for the inspection comprised of two HIW Inspectors and a Senior Clinical Officer from the Medical Exposures Group of Public Health England, who acted in an advisory capacity.

HIW explored how the service:

- Complied with the Ionising Radiation (Medical Exposure) Regulations (IR(ME)R) 2017
- Met the Health and Care Standards (2015).

Further details about how we conduct Ionising Radiation (Medical Exposure) Regulations inspections can be found in Section 5 and on our website.

2. Summary of our inspection

Patients provided positive comments about their experiences of using the X-ray department at Bronglais Hospital.

Overall, we found compliance with the Ionising Radiation (Medical Exposure) Regulations 2017. However, an additional employer's procedure was needed in respect of a quality assurance programme for X-ray equipment.

A management structure was in place and clear lines of reporting were described and demonstrated.

This is what we found the service did well:

- We found staff treated patients with dignity, respect and kindness
- Most patients said that they had received clear information to understand the risks and benefits of their treatment options
- Overall, we found good compliance with the Ionising Radiation (Medical Exposure) Regulations 2017
- We found visible and supportive leadership being provided by senior staff responsible for the management of the X-ray department.

This is what we recommend the service could improve:

- Increase patients' awareness of how they may provide feedback about their experiences and how to raise a concern about their care and treatment
- Demonstrate that all entitled practitioners, operators and referrers working to the employer's procedures have read and understood them
- Develop and implement a suitable written procedure in respect of a quality assurance programme for equipment used for medical exposures

- Make available for inspection by HIW the training records for all practitioners and operators engaged by the employer to carry out medical exposures.

We identified regulatory breaches during this inspection regarding one of the employer's procedures and the availability of staff training records. Further details can be found in Appendix B.

Whilst this has not resulted in the issue of a non compliance notice, there is an expectation that the employer takes meaningful action to address these matters, as a failure to do so could result in non compliance with regulations.

3. What we found

Background of the service

Hywel Dda University Health Board provides healthcare services throughout Carmarthenshire, Ceredigion and Pembrokeshire. It provides acute, primary, community, mental health and learning disabilities services via general and community hospitals, health centres, GP's, dentists, pharmacists and optometrists and other sites.

Bronglais Hospital is located in Aberystwyth and provides a range of in-patient and out-patient services together with a 24 hour Emergency and Urgent Care Centre.

The radiology (X-ray) department carries out a range of diagnostic imaging procedures. These include general radiography and interventional radiology, CT¹, MRI² and ultrasound³ scanning.

At the time of our inspection consultant radiologists, advanced practice radiographers, radiographers and assistant practitioners worked in the department. The staff team also had access to medical physics experts in the area of diagnostic radiology.

¹ A computerised tomography (CT) scan uses X-rays and a computer to create detailed images of the inside of the body.

² Magnetic resonance imaging (MRI) is a type of scan that uses strong magnetic fields and radio waves to produce detailed images of the inside of the body.

³ An ultrasound scan, sometimes called a sonogram, is a procedure that uses high-frequency sound waves to create an image of part of the inside of the body.

Quality of patient experience

We spoke with patients, their relatives, representatives and/or advocates (where appropriate) to ensure that the patients' perspective is at the centre of our approach to inspection.

Patients provided positive comments about their experiences of using the X-ray department at Bronglais Hospital.

We found staff treated patients with dignity, respect and kindness.

Aspects of the environment presented significant challenges for staff in promoting patient privacy.

Overall, we found that patients were provided with enough information about their procedures.

The health board had arrangements in place for patients to provide feedback about their experiences and to raise concerns about their care and treatment. However, some patients told us they did not know how to raise a concern about the services they had received.

Before our inspection, we asked senior staff to hand out HIW questionnaires to patients to obtain their views on the service provided by the X-ray department. A total of 21 were completed and returned. We also spoke to a number of patients during the inspection

Patients were asked in the questionnaire to rate their overall experience provided by the service. Responses were positive; the majority of patients rated the service as either 'excellent' or 'very good'. Patients told us:

"Excellent could not be better"

"Generally good"

Patients were asked in the questionnaires how the department could improve the service it provides; suggested improvements included:

"Trying to find a parking space near to the hospital is a nightmare, otherwise the service I receive is very good"

“Private waiting area for expectant mother and partners”

“Larger patient waiting room”

“Long outpatients wait”

Staying healthy

We saw that information was displayed about how patients can look after their own health and wellbeing.

Health promotion material was displayed within patient waiting areas. This included posters about smoking cessation, healthy eating and the benefits of having a flu vaccine.

Posters were clearly displayed around the department requesting individuals who are or may be pregnant or breast feeding to inform a member of staff. This is important to promote patient safety.

Dignified care

We found staff treated patients with dignity, respect and kindness. Aspects of the environment presented significant challenges for staff in promoting patient privacy.

Every patient who completed a questionnaire agreed they had been treated with dignity and respect by the staff at the hospital and felt that they were always able to maintain their own privacy, dignity and modesty during their appointments.

All patients who completed a questionnaire felt that they were listened to by staff during their appointment and were asked to confirm their personal details before starting their procedure or treatment. Patients also told us that they were able to speak to staff about their procedure or treatment without being overheard by other people.

Whilst we did not observe patients having their procedures, we saw staff greeting patients in a friendly manner. Staff were clearly mindful of respecting patient privacy and dignity. We saw that staff spoke to patients in hushed tones to prevent conversations from being overheard. We also saw that doors to treatment rooms were closed and privacy curtains were used to help promote patients' privacy and dignity.

Changing cubicles were available for patients so that they could change into hospital dignity gowns in private before their procedures.

The department was organised over three floors and there were patient waiting areas located around the department. One of these areas was located in a main thoroughfare, which created significant challenges for staff in maintaining the privacy of in-patients visiting the department on beds. Whilst privacy curtains were used to deter hospital staff and visitors from walking through this area, we observed hospital staff and visitors using this route to access other wards and departments.

Improvement needed

The health board is required to provide HIW with details of the action taken to promote, as far as possible, in-patients' privacy and dignity when they are waiting in the department.

Patient information

Communicating benefits and risks

Overall, we found that patients were provided with enough information about their procedures.

The majority of patients that completed a questionnaire told us that they felt involved as much as they wanted to be in any decisions made about their treatment, and all but two of the patients said that they had received clear information to understand the risks and benefits of their treatment options.

Where applicable, the majority of patients also told us that they had been given information on how to care for themselves following their treatment. However, just over a half of patients that had completed a questionnaire said that they had not been given written information on who to contact for advice about any after effects from any treatments they had received. Given the comments made by patients, further efforts should be made to inform patients of who to contact for advice.

The employer had an up-to-date written procedure in place to guide staff when providing information to individuals relating to the benefits and risks associated with having an X-ray procedure. This is required by the regulations and helps ensure that patients and their carers are fully informed about their care and treatment.

We saw that information was displayed about X-ray procedures for patients and their carers to read to further promote their understanding in this regard.

Communicating effectively

We found arrangements were in place to meet the communication needs of patients.

The majority of patients that completed a questionnaire told us that they were always able to speak to staff in their preferred language.

Staff told us that Welsh speaking staff were available. This meant that patients could communicate in Welsh if they expressed a wish to do so. A working hearing loop system was available to assist those patients with hearing difficulties (and who wear hearing aids) to communicate with staff.

Large colour coded pictorial signage was clearly displayed throughout the hospital to help patients and visitors find wards and departments located within the hospital. All but one of the patients that completed a questionnaire felt that it was 'very easy' or 'fairly easy' to find their way to the department once in the building.

Timely care

The vast majority of patients that completed a questionnaire told us that it was 'very easy' or 'fairly easy' to get an appointment at a time that suited them.

A third of patients that completed a questionnaire told us they had waited more than 15 minutes to have their procedure or treatment. Just over half of patients that completed a questionnaire said that they were not told on arrival how long they would likely have to wait before having their procedure or treatment.

We saw that an information board was displayed within the department that provided patients with an approximate waiting time. On the days of our visit we saw that patients were seen in a timely manner. Given the comments made by patients, further efforts should be made to inform patients of any significant delays.

Individual Care

Listening and learning from feedback

The health board had arrangements in place for patients to provide feedback about their experiences and to raise concerns about their care and treatment.

Whilst information on these arrangements was available within the department, this was not prominently displayed. This meant that patients and their carers would need to ask staff for this information rather than having easy access to the procedure to follow.

A half of patients that completed a questionnaire said they did not know how to raise a concern or complaint about the services they had received.

Improvement needed

The health board is required to provide HIW with details of the action taken to increase patients' awareness of how they may provide feedback about their experiences and how to raise a concern about their care and treatment.

Delivery of safe and effective care

We considered the extent to which services provide high quality, safe and reliable care centred on individual patients.

Overall, we found good compliance with the Ionising Radiation (Medical Exposure) Regulations 2017. However, an additional employer's procedure was needed in respect of a quality assurance programme for X-ray equipment.

Whilst we identified some areas for improvement, We found arrangements were in place to provide patients visiting the X-ray department with safe and effective care.

Compliance with the Ionising Radiation (Medical Exposure) Regulations

Duties of employer

Patient identification

The employer had a written procedure to correctly identify patients prior to them having their exposure (X-ray procedure). This aimed to ensure that the correct patient had the correct exposure.

This clearly identified that operators⁴ were responsible for ensuring the correct identification of patients undergoing exposures. The procedure required operators to ask patients to confirm their name, date of birth and address). It also described alternative ways that operators must use should patients be unable to confirm their identity themselves (e.g. unconscious patients).

⁴ Under IR(ME)R an operator is any person who is entitled, in accordance with the employer's procedures, to carry out the practical aspects of a medical exposure.

Staff we spoke to were able to describe the procedure to correctly identify patients.

Females of childbearing age

The employer had a written procedure for making enquires with regard to pregnancy.

This aimed to ensure that such enquires were made in an appropriate and consistent manner. The procedure clearly identified that operators were responsible for making relevant enquires and set out the actions they must follow depending on the individual's responses and the type of exposure.

The written procedure included the age range of patients who should be asked about pregnancy or breastfeeding in accordance with UK guidance⁵.

Staff we spoke to were able to describe their responsibilities with regards to the above procedure.

Non-medical imaging exposures

The employer had a written procedure for identifying the criteria for carrying out non-medical imaging exposures⁶.

The procedure clearly set out the criteria for accepting referrals for such exposures. It also set out when staff had to seek further information from the referrer⁷ and the checks that had to be made prior to exposures being

⁵ Department of Health and Social Care (2017) Guidance to the Ionising Radiation (Medical Exposure) Regulations 2017

⁶ Non-medical imaging exposures include those for health assessment for employment purposes, immigration purposes and insurance purposes. These may also be performed to identify concealed objects within the body.

⁷ Under IR(ME)R a referrer is a registered healthcare professional who is entitled, in accordance with the employer's procedures, to refer individuals for medical exposures

performed. The procedure clearly stated that the practitioner⁸ for such exposures had to be a consultant radiologist.

Senior staff confirmed that the only non-medical imaging exposures (i.e. those performed for insurance or legal purposes) performed in the department were immigration chest X-rays.

Referral criteria

The employer had written procedures for making and accepting referrals for exposures.

These clearly set out that referrals could only be made by healthcare professionals entitled by the employer to do so. These were mainly doctors and dentists who were currently registered with their respective professional regulatory bodies.

The procedure also set out the way in which referrals could be made and the information that needed to be recorded.

All referrals had to be made in accordance with nationally recognised referral guidelines. The aim of these guidelines is to help healthcare professionals decide on the most appropriate examination to answer the clinical question posed.

Staff we spoke to were able to describe the procedure for checking that referrals had been made by healthcare professionals entitled by the employer to do so. The employer's procedure clearly stated that if the identity of the referrer could not be established then the exposure must not be performed.

Duties of practitioner, operator and referrer

The employer had a written policy and procedure for the entitlement and identification of practitioners, operators and referrers (known as duty holders). This clearly set out their respective roles.

⁸ Under IR(ME)R a practitioner is registered healthcare professional who is entitled, in accordance with the employer's procedures, to take responsibility for an individual medical exposure. The primary role of the practitioner is to justify medical exposures.

Staff working within the X-ray department were expected to comply with the employer's procedures and sign to show that they had read and understood those procedures relevant to their role. We saw signing sheets demonstrating this process.

Whilst staff working in the department were expected to sign, this arrangement did not extend to those staff who did not directly work in the department (e.g. surgeons using X-ray equipment in theatre).

Improvement needed

The employer is required to provide HIW with details of the action taken to demonstrate that all entitled practitioners, operators and referrers working to the employer's procedures have read and understood them.

Justification of Individual Medical Exposures

The employer had a written procedure for the justification and authorisation⁹ of exposures. This is important to ensure that patients only have exposures that they need as part of their care and treatment.

This clearly stated that practitioners were entitled to justify exposures. We saw examples of patients' records that demonstrated authorisation (i.e. evidence of justification) of exposures.

Optimisation

The employer had arrangements in place for the optimisation¹⁰ of exposures.

These arrangements aimed to ensure that radiation doses delivered to patients and their carers and comforters as a result of exposures are kept as low as reasonably practicable (also referred to as ALARP).

⁹ Justification is the process of weighing up the expected benefits of an exposure against the possible detriment for that individual from the exposure. Authorisation is the evidence that justification has taken place.

¹⁰ Optimisation refers to the process by which individual doses are kept as low as reasonably practicable.

Senior staff clearly described how the MPE was involved in the optimisation of exposures. This included testing equipment, staff training and the setting of local DRLs.

Diagnostic reference levels

The employer had a written procedure for the use of diagnostic reference levels¹¹ (DRLs).

This set out the arrangements for recommending DRLs for exposures performed in the department together with the action to be taken should DRLs be exceeded.

We saw DRLs were displayed and available to staff working in the department in accordance with the above procedure.

Staff were aware of the procedure to follow for checking and recording the doses delivered. They were also aware of the action to take should DRLs be exceeded. Where DRLs are regularly exceeded, this may indicate issues relating to equipment or practice and would need to be investigated. The employer's procedure confirmed that where DRLs were consistently exceeded the medical physics expert¹² (MPE) would be informed, an investigation started and any corrective action implemented.

Paediatrics

The employer had developed guidelines for performing exposures of children.

¹¹ The objective of diagnostic reference levels is to help avoid excessive radiation doses to patients. DRLs are used as a guide to help promote improvements in radiation protection practice.

¹² A medical physics expert is a person who holds a science degree or its equivalent and who is experienced in the application of physics to diagnostic and therapeutic uses of ionising radiation.

These aimed to ensure that children attending the department were as calm as possible when having their exposures and that the radiation doses involved were kept to a minimum. The guidelines also set out the procedure to follow when referrals were received in respect of suspected physical abuse.

We saw that clear, age related paediatric exposure charts were readily available. Those staff we spoke to were aware of their responsibilities and the employer's guidelines in respect of exposures of children.

Clinical evaluation

The employer had a written procedure for the clinical evaluation (reporting) of all medical exposures performed within the department. This is important to promote the timely care of patients.

This clearly set out who could perform the clinical evaluation of exposures and the reporting process, including when urgent reports were needed.

We reviewed a sample of patients' records and found evidence of the clinical evaluation of exposures.

Equipment: general duties of the employer

Senior staff provided an up-to-date inventory (list) of equipment used within the department. This included the information required by IR(ME)R.

We were told that some of the equipment used in the department was old and would need to be replaced at the same time. Senior staff explained that there was no specific monies set aside to regularly replace aging equipment used within the health board. Rather, the health board maintained an up-to-date risk register and resources were allocated accordingly using a risk based approach.

We did identify that an additional employer's procedure needed to be developed and implemented. This was in relation to a quality assurance programme for equipment. Whilst there was no written procedure, we were assured that radiographers conducted regular quality assurance equipment checks and that MPEs completed regular equipment testing in accordance with professional guidance.

Improvement needed

The employer is required to provide HIW with details of the action taken to develop and implement a suitable written procedure in respect of a quality assurance programme for equipment used for medical exposures.

The health board is required to provide HIW with details of the action taken to promote the timely replacement of equipment used for ionising exposures involving ionising radiation.

Safe care

Managing risk and promoting health and safety

We saw that the department was accessible to patients and their carers and was generally well maintained.

The department appeared clean and was free from obvious trip hazards. Signage was in place to deter unauthorised persons entering rooms where X-ray equipment was being used.

We found staff were aware of the safety procedures to follow when using the X-ray equipment.

Infection prevention and control

We found arrangements were in place for infection prevention and control.

There were no concerns given by patients over the cleanliness of the department; all of the patients that completed a questionnaire felt that, in their opinion, the department was 'very clean' or 'fairly clean'.

We saw that the environment was clean and generally free from clutter. We saw that personal protective equipment (e.g. disposable gloves and aprons) was available to protect staff and patients from infection. We also saw that handwashing and drying facilities were readily available for staff. Good hand hygiene is important to help prevent the spread of infection. Staff we spoke to were aware of their responsibilities in relation to infection control procedures.

Safeguarding children and adults at risk

The health board had arrangements in place to promote and protect the welfare and safety of children and adults who become vulnerable or at risk.

We saw that the health board had an up-to-date policy and procedures in respect of safeguarding. Senior staff confirmed that staff were expected to attend safeguarding training as part of the health board's mandatory training programme.

Whilst training records were available, these provided an overview of staff compliance with their overall mandatory training and not individual training topics. Therefore, it was not possible to establish staff compliance with safeguarding training at the time of our inspection.

Staff we spoke to confirmed that should they have any concerns about a child or vulnerable adult's welfare, they would seek advice from senior staff within the department or the health board's safeguarding team. However, some staff appeared unclear about aspects of the health board's process.

Improvement needed

The health board is required to provide HIW with details of the action taken to ensure staff are adequately trained and understand the health board's safeguarding procedures.

Effective care

Quality improvement, research and innovation

Clinical audit

Senior staff provided examples of audits that had been conducted during the last year. They were also able to explain how these had contributed to promoting consistent practice across the different X-ray departments within the health board for the benefit of patient care and wellbeing.

An agreed health board wide programme of clinical audit, including timescales for completion, was to be introduced across the health board in respect of IR(ME)R.

Expert advice

Senior staff clearly described how MPEs are involved in exposures.

The health board's overarching Ionising Radiation Safety Policy set out the role of the MPE and this reflected the requirements of IR(ME)R.

Medical research

Senior staff confirmed that medical research studies involving exposures were not being conducted within the department at the time of our inspection.

However, the employer had a written procedure in this regard should medical research studies be undertaken. This procedure set out the process for obtaining approval and ensuring compliance with IR(ME)R.

Information governance and communications technology

Comprehensive information management systems were described and demonstrated. This allowed for relevant patient details and information about diagnostic procedures performed in the department to be recorded and easily accessed by staff.

Record keeping

We reviewed a sample of patient referral records (for X-ray procedures) and saw that these had been completed with appropriate details by those staff involved in the medical exposure. They also demonstrated that staff had adhered to the relevant employer's procedures.

Quality of management and leadership

We considered how services are managed and led and whether the workplace and organisational culture supports the provision of safe and effective care. We also considered how the service review and monitor their own performance against the Health and Care Standards.

A management structure was in place and clear lines of reporting were described and demonstrated.

We found visible and supportive leadership being provided by senior staff responsible for the management of the X-ray department.

Staff demonstrated that they had the correct knowledge and skills to undertake their respective roles within the department.

We saw evidence of relevant staff training for staff working in the department.

However, training records for staff working in other departments but who still need to comply with the employer's IR(ME)R procedures were not available as required by the regulations.

Governance, leadership and accountability

A management structure with clear lines of reporting was described and demonstrated. We found that governance arrangements were in place to support the implementation and ongoing compliance of the Ionising Radiation (Medical Exposure) Regulations 2017 as they apply to the diagnostic imaging service provided at Bronglais Hospital.

During the course of the inspection we found visible and supportive leadership being provided by the site lead radiographer. Staff we spoke to confirmed that they felt supported by their line manager.

Senior managers, a senior member of clinical staff and a medical physics expert made themselves available on the days of the inspection to provide support to the department and facilitate the inspection process. They were

receptive to our feedback and demonstrated a willingness to make improvements as a result of the inspection.

Ahead of the inspection, HIW required senior staff within the department to complete and submit a self-assessment questionnaire. This was to provide HIW with detailed information about the department and the employer's key policies and procedures in respect of IR(ME)R. The self-assessment form was returned to HIW within the agreed timescale and was comprehensive.

Duties of the employer

Entitlement

As previously described, the employer had a written policy and procedure for the entitlement¹³ and identification of practitioners, operators and referrers (known as duty holders).

These clearly described the arrangements for entitlement and identified duty holders by staff group. The procedure set out the expected level of training for each entitled staff group together with their scope of practice.

Staff we spoke to were able to explain the employer's procedure for entitlement and confirmed that they had received written notification (an entitlement letter) of their entitlement to perform tasks associated with medical exposures.

Procedures and protocols

The chief executive of the health board was designated as the employer. This is usual practice. The health board's Ionising Radiation Safety Policy clearly set out that the chief executive was responsible for complying with the duties of the employer as described by IR(ME)R.

We saw that clear and concise written procedures and protocols had been developed and implemented in accordance with IR(ME)R. We saw that these were up-to-date and review dates were clearly stated.

¹³ Entitlement refers to the process of defining the duty holder roles and tasks that individuals are allowed to undertake

We did identify that an additional employer's procedure needed to be developed and implemented. This was in relation to a quality assurance programme for equipment and our findings are described earlier in this report (see section - Compliance with Ionising Radiation (Medical Exposure) Regulations).

Incident notifications

The employer had a written procedure for reporting and investigating accidental or unintended exposures within the department. This is important to help identify themes and trends and share learning from incidents to help prevent similar incidents happening again.

This clearly set out the procedure staff should follow should they suspect that an accidental or unintended exposure has occurred. The procedure also provided helpful advice for staff on what constitutes a 'clinically significant' unintended or accidental exposure.

The procedure correctly guided staff to inform Healthcare Inspectorate Wales (HIW) of such incidents in a timely manner.

We found that where incidents had occurred, that learning from these was shared amongst staff within the department via team meetings. Arrangements were also in place to share any learning with staff teams working with ionising radiation in other departments within the health board. However, from considering a sample of team meeting minutes and clinical audit findings we identified that some incidents may have needed to be reported to HIW.

Improvement needed

The employer is required to provide HIW with details of the action taken to promote the reporting and ongoing analysis of relevant IR(ME)R related incidents, including near misses, via the health board's reporting system and where appropriate to Healthcare Inspectorate Wales.

Staff and resources

Workforce

During the course of our inspection, staff demonstrated they had the correct skills and confirmed they were supported to perform their respective roles within the department.

Senior staff confirmed that there were difficulties in recruiting certain grades of staff. They also confirmed that the health board had an ongoing recruitment campaign in an attempt to attract new staff to work within the health board's hospitals.

As described earlier, the employer had a written policy and procedure for the identification and entitlement of practitioners, operators and referrers. These set out the expected level of training for each entitled staff group. In addition, the employer also had a written procedure for training practitioners and operators (and students) on how to use X-ray equipment.

Senior staff described an induction process for new and agency staff and provided evidence of this process.

We looked at a sample of training records for staff working within the department. Generally, these were complete and included signatures to demonstrate that training required by IR(ME)R had been provided and received. Senior staff confirmed that new staff were supervised as part of their induction and training but a competency based approach was not used.

Whilst training records for staff who worked in the X-ray department were available for inspection, those for staff who did not work directly in the department (e.g. hospital based nurse practitioners) but who were still subject to the employer's procedures were not available. This was attributed to these records being held by individuals or the heads of other departments.

We discussed this with senior staff and acknowledged that management staff within the X-ray department do not have the resources or authority to oversee training for staff working within other departments. According to the employer's policy and procedure for entitlement of duty holders, responsibility for this, including that such staff comply with the employer's procedures would fall to senior managers and clinical leads of the relevant department. In accordance with IR(ME)R the employer needs to ensure that all relevant training records are available for inspection by HIW.

With regards to the health board's mandatory training programme, as previously described we saw that records had been maintained to monitor the compliance percentage with the health board's own standards. These records showed that not all staff were up-to-date with the health board's mandatory training requirements. Senior staff gave a firm verbal assurance that this was being monitored.

Improvement needed

The employer is required to provide HIW with details of the action taken to make available for inspection by HIW the training records for all practitioners and operators engaged by the employer to carry out medical exposures

The health board is required to provide details of the action taken to support staff working within the X-ray department to complete mandatory training.

4. What next?

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

Where we identify any serious regulatory breaches and concerns about the safety and wellbeing of patients using the service, the registered provider of the service will be notified via a [non-compliance notice](#). The issuing of a non compliance notice is a serious matter and is the first step in a process which may lead to civil or criminal proceedings.

The improvement plans should:

- Clearly state when and how the findings identified will be addressed, including timescales
- 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.

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.

5. How we inspect services that use ionising radiation

HIW are responsible for monitoring compliance against the [Ionising Radiation \(Medical Exposure\) Regulations \(IR\(ME\)R\) 2017](#) and its subsequent amendment ([2018](#))

The regulations are designed to ensure that:

- Patients are protected from unintended, excessive or incorrect exposure to medical radiation and that, in each case, the risk from exposure is assessed against the clinical benefit
- Patients receive no more exposure than necessary to achieve the desired benefit within the limits of current technology
- Volunteers in medical research programmes are protected

We look at how services:

- Comply with the Ionising Radiation (Medical Exposure) Regulations 2017
- Meet the [Health and Care Standards 2015](#)
- Meet any other relevant professional standards and guidance where applicable

Our inspections of healthcare services using ionising radiation are usually announced. Services receive up to twelve weeks notice of an inspection.

The inspections are conducted by at least one HIW inspector and are supported by a Senior Clinical Officer from Public Health England (PHE), acting in an advisory capacity.

Feedback is made available to service representatives at the end of the inspection, in a way which supports learning, development and improvement at both operational and strategic levels.

These inspections capture a snapshot of the standards of care relating to ionising radiation.

Further detail about [how HIW inspects the NHS](#) can be found on our website.

Appendix A – Summary of concerns resolved during the inspection

The table below summarizes 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 at this inspection.	-	-	-

Appendix B – Immediate improvement plan

Hospital: Bronglais Hospital
Ward/department: Diagnostic Imaging (X-ray) Department
Date of inspection: 20 and 21 November 2018

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.

Immediate improvement needed	Standard	Service action	Responsible officer	Timescale
No immediate assurance plan was required	-	-	-	-

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

Hospital: Bronglais Hospital
Ward/department: Diagnostic Imaging (X-ray) Department
Date of inspection: 20 and 21 November 2018

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.

Improvement needed	Standard/ Regulation	Service action	Responsible officer	Timescale
Quality of the patient experience				
The health board is required to provide HIW with details of the action taken to promote, as far as possible, in-patients' privacy and dignity when they are waiting in the department.	Standard 4.1 Dignified Care	Notices will be placed in department reminding staff of the importance of utilising the dignity curtains. Verbal communication will also be had with staff.	Site Radiographer Lead	28/02/19
		A memo sent to all departmental heads to remind all staff outside of radiology not to use the department as a thoroughfare.	Site radiographer Lead	28/02/19
			Site radiographer Lead	Completed-Monitoring ongoing

Improvement needed	Standard/ Regulation	Service action	Responsible officer	Timescale
		<p>Senior staff within the department will monitor the corridor, and any unauthorised staff using the corridor will be challenged and relevant senior hospital staff informed.</p> <p>Radiology reception reminded of the need to be aware of patient privacy when using the telephone or receptioning patients.</p> <p>Information Governance (IG) code screen activated in January 2019, and communicated to all UHB staff via a Global Email with supporting information/further detail.</p>	<p>Services Manager</p> <p>IG Manager, WGH</p>	<p>28/02/19</p> <p>Complete</p>
<p>The health board is required to provide HIW with details of the action taken to increase patients' awareness of how they may provide feedback about their experiences and how to raise a concern about their care and treatment.</p>	<p>Standard 6.3 Listening and Learning from feedback</p>	<p>Posters will be displayed in the waiting areas indicating how to raise concerns and leaflets placed on reception desks for patients to access. This will be replicated across all Radiology</p>	<p>Radiology Services Manager</p>	<p>30/04/19</p>

Improvement needed	Standard/ Regulation	Service action	Responsible officer	Timescale
		<p>Departments within the Health board.</p> <p>Radiology staff made aware of the location of these leaflets and posters.</p> <p>Reports will be generated from the Datix reporting system and will be reviewed at site lead meetings and the Radiology Quality and Governance Group. This will help identify trends and potential bespoke training that is required.</p>	<p>Radiology Services Manager</p> <p>Radiology Services Manager</p>	<p>30/04/19</p> <p>Completed-Monitoring of trends ongoing</p>
Delivery of safe and effective care				
<p>The employer is required to provide HIW with details of the action taken to demonstrate that all entitled practitioners, operators and referrers working to the employer's procedures have read and understood them.</p>	<p>IR(ME)R Regulation 6(2)</p>	<p>Operators Practitioners and Referrers within radiology to indicate their knowledge and understanding by signing a record sheet. For staff working outside radiology the procedure this will be replicated by requesting a return of a similar record.</p>	<p>Chair, Medical Exposures Committee (MEC)</p>	<p>30/04/19</p>

Improvement needed	Standard/ Regulation	Service action	Responsible officer	Timescale
		A coordinated process of distribution and communication to referrers outside of radiology will be addressed at the next Medical Exposures Committee (MEC).	Chair, MEC	30/04/19
The employer is required to provide HIW with details of the action taken to develop and implement a suitable written procedure in respect of a quality assurance programme for equipment used for medical exposures.	IR(ME)R 6(1)(a) Schedule 2 (1)(d)	The outstanding employers procedure for equipment QA is currently being reviewed by the radiology site leads for agreement, with input from the Medical Physics Experts, followed by ratification at the next MEC.	Chair, MEC	Chair, MEC
The health board is required to provide HIW with details of the action taken to ensure staff are adequately trained and understand the health board's safeguarding procedures.	Standard 2.7 Safeguarding children and adults at risk	Safeguarding leads to arrange and deliver bespoke face to face training for radiology staff.	Radiology Services Manager	30/06/19
The health board is required to provide HIW with details of the action taken to promote the timely replacement of equipment used for ionising exposures.	2.9 Medical devices, equipment and diagnostic systems	The extent of required radiology equipment replacement has been highlighted to the executive team via the Medical Devices Committee. A paper outlining the current and future investment required is currently being	Radiology Services Manager	28/02/19

Improvement needed	Standard/ Regulation	Service action	Responsible officer	Timescale
		developed to identify the highest risk equipment and inform discussion with Welsh Government to request sufficient resources.		
Quality of management and leadership				
The employer is required to provide HIW with details of the action taken to promote the reporting and ongoing analysis of relevant IR(ME)R related incidents, including near misses, via the health board's reporting system and where appropriate to Healthcare Inspectorate Wales.	Governance, Leadership and Accountability IR(ME)R Regulation 8(3)	Reports from the Datix system to be agenda items on the site lead meetings the quality and governance group and the MEC.	Radiology Services Manager	Complete
		Develop a learning outcome notice to be utilised to share learning across all sites.	Radiology Services Manager	Complete
		A review of the level of reportable incidents will be undertaken at the next MEC meeting to analyse the levels of reporting and consistency across the Health Board.	Radiology Services Manager	30/04/19
The employer is required to provide HIW with details of the action taken to make available for inspection by HIW the training records for all	7.1 Workforce IR(ME)R	The list of practitioners and operators outside radiology will be reviewed.	Chair, MEC	30/04/19

Improvement needed	Standard/ Regulation	Service action	Responsible officer	Timescale
practitioners and operators engaged by the employer to carry out medical exposures	Regulation 17(4)	Relevant service leads to complete documentation developed by the MEC to demonstrate training records are complete.	Chair, MEC	30/04/19
The health board is required to provide details of the action taken to support staff working within the X-ray department to complete mandatory training.	7.1 Workforce	Monthly performance reports from site leads to be received outlining the areas for improvement within mandatory training and plans to facilitate the time to complete (utilising service days etc.).	Radiology Service Manager	Complete and ongoing
		Bespoke face to face training to be requested from the training department as required.	Radiology Service Manager	Complete and ongoing

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): Amanda Evans

Job role: Radiology Service Manager

Date: 18.Jan.2019