

Health Information and Quality Authority

Report of the assessment of compliance with medical exposure to ionising radiation regulations

Name of Medical Radiological Installation:	University Hospital Limerick
Undertaking Name:	Health Service Executive
Address of Ionising Radiation Installation:	St Nessian's Road, Dooradoyle, Limerick
Type of inspection:	Announced
Date of inspection:	10 February 2026
Medical Radiological Installation Service ID:	OSV-0007379
Fieldwork ID:	MON-0049309

About the medical radiological installation (the following information was provided by the undertaking):

University Hospital Limerick (UHL) is a model 4 hospital and acts as the main acute site for the Mid-West region, covering Limerick city and county, Clare and North Tipperary. UHL, HSE Mid-West Acute Services Hospital, serves a population of 413,059. Presently, it has capacity (since Oct 2025) of 650 inpatient beds. A new 96 bed block is under construction at the moment. The hospital is the hub for the three Model 2 hospitals, Ennis Hospital, Nenagh Hospital and St John's Hospital. Within the UHL complex, inpatient services are provided for a range of specialities such as Paediatrics, E.N.T, Ophthalmology, Obstetrics and Gynaecology, Cardiology, Orthopaedics, Oncology, including Radiotherapy, Haematology, Dermatology, Rheumatology, Oral and Maxillofacial Surgery. Support services include Radiology, Pathology, Physiotherapy, Dietetics, Social Work and Pharmacy. Daycare is provided in the surgical specialities and an Acute Medical Assessment Unit is in place at the hospital to treat medical patients. A full range of out-patient services are provided in each of the above specialities. In addition, out-patient clinics are also provided in Neurology, Sexually Transmitted Diseases/Genito-Urinary Medicine (GUM) and Orthodontics. University Hospital Limerick has a maternity hospital off-site. It is the only maternity hospital in the Mid-West area and is categorised as a level three unit capable of providing clinical services to high risk women and their infants.

How we inspect

This inspection was carried out to assess compliance with the European Union (Basic Safety Standards for Protection against Dangers Arising from Medical Exposure to Ionising Radiation) Regulations 2018, as amended. The regulations set the minimum standards for the protection of service users exposed to ionising radiation for clinical or research purposes. These regulations must be met by each undertaking carrying out such practices. To prepare for this inspection, the inspector¹ reviewed all information about this medical radiological installation². This includes any previous inspection findings, information submitted by the undertaking, undertaking representative or designated manager to HIQA³ and any unsolicited information since the last inspection.

As part of our inspection, where possible, we:

- talk with staff and management to find out how they plan, deliver and monitor the services that are provided to service users
- speak with service users⁴ to find out their experience of the service
- observe practice to see if it reflects what people tell us
- review documents to see if appropriate records are kept and that they reflect practice and what people tell us.

About the inspection report

In order to summarise our inspection findings and to describe how well a service is complying with regulations, we group and report on the regulations under two dimensions:

¹ Inspector refers to an Authorised Person appointed by HIQA under Regulation 24 of S.I. No. 256 of 2018 for the purpose of ensuring compliance with the regulations.

² A medical radiological installation means a facility where medical radiological procedures are performed.

³ HIQA refers to the Health Information and Quality Authority as defined in Section 2 of S.I. No. 256 of 2018.

⁴ Service users include patients, asymptomatic individuals, carers and comforters and volunteers in medical or biomedical research.

1. Governance and management arrangements for medical exposures:

This section describes HIQA's findings on compliance with regulations relating to the oversight and management of the medical radiological installation and how effective it is in ensuring the quality and safe conduct of medical exposures. It outlines how the undertaking ensures that people who work in the medical radiological installation have appropriate education and training and carry out medical exposures safely and whether there are appropriate systems and processes in place to underpin the safe delivery and oversight of the service.

2. Safe delivery of medical exposures:

This section describes the technical arrangements in place to ensure that medical exposures to ionising radiation are carried out safely. It examines how the undertaking provides the systems and processes so service users only undergo medical exposures to ionising radiation where the potential benefits outweigh any potential risks and such exposures are kept as low as reasonably possible in order to meet the objectives of the medical exposure. It includes information about the care and supports available to service users and the maintenance of equipment used when performing medical radiological procedures.

A full list of all regulations and the dimension they are reported under can be seen in Appendix 1.

This inspection was carried out during the following times:

Date	Times of Inspection	Inspector	Role
Tuesday 10 February 2026	09:30hrs to 15:55hrs	Noelle Neville	Lead
Tuesday 10 February 2026	09:30hrs to 15:55hrs	Kay Sugrue	Support
Tuesday 10 February 2026	09:30hrs to 15:55hrs	Kirsten O'Brien	Support

Governance and management arrangements for medical exposures

An inspection of University Hospital Limerick (UHL) was carried out on 10 February 2026 by inspectors to assess compliance with the regulations at the hospital. As part of the inspection, inspectors followed up on the compliance plan from the previous inspection in May 2023 and noted that some of the actions set out had been completed, however, others required further work to meet regulatory compliance. Inspectors visited the computed tomography (CT), nuclear medicine, fluoroscopy, mammography and cardiology units, spoke with staff and management and reviewed documentation. Inspectors found that the undertaking, the Health Service Executive (HSE), demonstrated compliance during this inspection with Regulations 4, 5 and 16, substantial compliance with Regulations 8 and 10 and non-compliance with Regulations 6, 11, 13, 14, 17, 19, 20 and 21.

While inspectors were satisfied that a culture of radiation protection was embedded at UHL and staff demonstrated a strong and dedicated commitment to radiation safety, inspectors were not satisfied that the undertaking had provided a clear allocation of responsibilities for the protection of patients as required by Regulation 6(3). For example, due to decreased medical physics resourcing since the previous inspection in May 2023, inspectors were not satisfied that the undertaking had provided adequate resources to ensure that the level of involvement in radiation protection of medical physics experts (MPEs) was commensurate with the radiological risk posed by the practices in place at UHL. The lack of a clear allocation of responsibilities and resourcing of same impacted several regulations throughout this report. Similar issues relating to MPE resourcing were first identified during an inspection under the regulations in 2020 and also during subsequent inspections.

Following this inspection, the undertaking was required to submit an urgent compliance plan to address urgent risks in relation to Regulations 14, 19, 20 and 21. The undertaking's response provided assurance that the risks were being adequately addressed.

Regulation 4: Referrers

A document titled *HSE Mid-West Acute Hospitals' Policy on Justification of Medical Exposures*, which was effective from February 2026, was in place at UHL. This document outlined who was entitled to make a referral for a medical radiological exposure at the hospital and this included medical doctors, dentists, radiographers and X-ray nurse prescribers. Inspectors were satisfied from discussions with staff and management and from reviewing a sample of referrals that medical radiological exposures were only accepted from individuals entitled to refer as per Regulation 4.

Judgment: Compliant

Regulation 5: Practitioners

Inspectors were satisfied from a review of documentation and speaking with staff that only individuals entitled to act as practitioner as per Regulation 5 took clinical responsibility for medical exposures at UHL.

Judgment: Compliant

Regulation 6: Undertaking

The Health Service Executive (HSE) was the undertaking for University Hospital Limerick (UHL) and the hospital was part of the HSE Mid-West Acute and Older Persons Services. Inspectors reviewed documentation and governance structure organograms and spoke with staff and management in relation to governance arrangements in place at UHL.

A radiation safety committee (RSC) was in place at UHL and this committee met twice a year. Inspectors reviewed the terms of reference for this committee which were approved in March 2023 and noted that they were overdue review since March 2025. The committee had a multidisciplinary membership which included the chief executive officer (CEO), chief operations officer (COO), clinical directors, general directorate managers, medical physics experts (MPEs), radiography service managers, radiation safety officers and a representative of the local implementation group for nurse referrers. Inspectors noted that the committee had a standing agenda and items such as quality assurance and equipment replacement programmes, clinical audit, incidents and training were discussed. The committee was incorporated into local governance structures, chaired by a consultant radiologist and reported to the HSE Mid-West Acute Quality and Safety Committee.

A radiation protection task force (RPTF) was also in place at the hospital and a document titled *HSE Mid-West Acute Services Radiation Protection Task Force Terms of Reference*, issued in January 2026, outlined the roles and responsibilities of the task force. Inspectors were informed that this committee supported the CEO, RSC and the organisation to achieve compliance with the regulations relating to radiation protection. Its membership included MPEs, radiography service managers, radiation safety officers, clinical specialists, a diagnostics directorate manager and consultant radiologist representatives. While noting the radiology governance arrangements in place at UHL facilitated communication of issues to the undertaking, inspectors found that stronger oversight was required to support staff and meet regulatory compliance.

From records reviewed and discussions with management and staff, inspectors were satisfied that systems and processes were in place to ensure that referrals were only accepted from those entitled to refer and only individuals entitled to act as practitioner took clinical responsibility for medical radiological exposures. The practical aspects of medical radiological procedures were only carried out by individuals entitled to act as practitioner.

However, inspectors were not satisfied that the undertaking had provided a clear allocation of responsibilities and resourcing of same for the protection of patients as required by Regulation 6(3). For example, due to decreased medical physics resourcing since the previous inspection in May 2023, inspectors were not satisfied with the level of involvement in radiation protection of MPEs at the hospital. The lack of a clear allocation of responsibilities and resourcing of same impacted several regulations throughout this report. Similar issues relating to MPE resourcing were first identified during an inspection under the regulations in 2020 and also during subsequent inspections.

In addition, in relation to Regulation 7: Justification of Practices, while the designated manager was responsible for applying to HIQA for generic justification before the commencement of any new practice, inspectors found that there was scope to document the allocation of responsibilities for identification, oversight, management and approval of new types of practices and applications to HIQA, when required. Inspectors also noted that documentation in relation to the justification of dual X-ray absorptiometry (DXA) procedures should be reviewed.

Overall, while inspectors were satisfied that a culture of radiation protection was embedded at UHL and staff demonstrated a strong and dedicated commitment to radiation safety, significant work and resourcing of responsibilities by the undertaking was required to ensure the radiation protection of service users and meet the requirements of the regulations.

Judgment: Not Compliant

Regulation 10: Responsibilities

Inspectors noted that all medical exposures took place under the clinical responsibility of a practitioner, as defined in the regulations. The practical aspects of medical radiological exposures were only carried out at the hospital by individuals entitled to act as practitioner in the regulations. The undertaking had retained the presence of radiographers in areas where medical exposures were conducted outside of the radiology department, for example, theatre. In the absence of new training requirements being implemented as per Regulation 22, this was viewed as good practice to ensure the radiation protection of service users at the hospital. While inspectors were satisfied that referrers were involved in the justification process for individual medical exposures, inspectors found that there was scope for improvement in relation to practitioner involvement in the justification of cardiology

procedures. In addition, although practitioners were involved in the optimisation of medical exposures to ionising radiation, there was scope for improvement in relation to MPE involvement in optimisation for all medical exposures.

Judgment: Substantially Compliant

Regulation 19: Recognition of medical physics experts

Inspectors were not satisfied from discussions with staff and management and a review of documentation that the undertaking at UHL had arrangements in place to ensure access to, and continuity of, MPE services as required by Regulation 19. Inspectors were informed that medical physics resources had decreased since the last inspection in May 2023 impacting the stability of on-site MPE resourcing. Inspectors were also informed that the medical physics department at UHL consisted of two medical physics experts and one basic grade physicist at the time of the inspection and this department provided cover across six hospitals in the mid-west region. In addition, some contingency arrangements to access external MPE resources had come to an end since the last inspection. However, staff confirmed to inspectors that medical physics resourcing was a priority and recruitment and arrangements to access external MPE resources were continuing in an effort to ensure continuity of MPE resources to meet the demands of a large, complex and ever expanding radiology service at the hospital.

Following the inspection, the undertaking was required to submit an urgent compliance plan to address urgent risk in relation to Regulation 19. The undertaking's response provided assurance that the risk was being adequately addressed.

Judgment: Not Compliant

Regulation 20: Responsibilities of medical physics experts

Inspectors noted that MPEs were involved in some responsibilities outlined in Regulation 20(2) including giving advice on medical radiological equipment, contributing to acceptance testing of equipment, performing quality assurance testing on some units of equipment, providing advice and dose calculations for radiation incidents and attending RSC and RPTF meetings. MPEs at UHL liaised with radiation protection advisers (RPAs) assigned to the hospital, therefore satisfying the requirements of Regulation 20(3).

However, inspectors were informed that medical physics resources at UHL had decreased since the previous inspection in May 2023. As a result, inspectors were not satisfied that the undertaking had ensured that MPEs gave specialist advice, as

appropriate, on matters relating to radiation physics as required by Regulation 20(1) due to the limited medical physics resources available at the time of the inspection. For example, sufficient resources were not available to ensure that MPEs could take responsibility for dosimetry at the hospital, perform quality assurance testing on all units of equipment, contribute fully to optimisation including the application and use of diagnostic reference levels (DRLs) and contribute to the training of staff in relevant aspects of radiation protection.

Following the inspection, the undertaking was required to submit an urgent compliance plan to address urgent risk in relation to Regulation 20. The undertaking's response provided assurance that the risk was being adequately addressed.

Judgment: Not Compliant

Regulation 21: Involvement of medical physics experts in medical radiological practices

From documentation reviewed and discussion with MPEs and staff at UHL, inspectors were not satisfied that the level of MPE involvement at the hospital was commensurate with the radiological risk posed by the facility as required by Regulation 21. For example, as outlined in Regulation 20, inspectors noted that MPE resources allocated by the undertaking were not sufficient to enable MPEs to take responsibility for dosimetry, perform quality assurance testing on all units of equipment, contribute to optimisation including the application and use of DRLs and contribute to the training of staff in relevant aspects of radiation protection.

Following the inspection, the undertaking was required to submit an urgent compliance plan to address urgent risk in relation to Regulation 21. The undertaking's response provided assurance that the risk was being adequately addressed.

Judgment: Not Compliant

Safe Delivery of Medical Exposures

Inspectors visited computed tomography (CT), nuclear medicine, fluoroscopy, mammography and cardiology units, spoke with staff and management and reviewed documentation to assess the safe delivery of medical exposures at UHL. In relation to the safe delivery of medical exposures, while Regulation 16 was compliant, inspectors noted that further work was required to bring Regulations 8, 11, 13, 14 and 17 into compliance.

Good practices were noted by inspectors in relation to Regulations 16 and 13(1). For example, inspectors were satisfied from a sample of records reviewed, that a referrer and practitioner inquired as to the pregnancy status of service users and recorded the answer to this inquiry in writing. Written protocols were also in place at UHL for standard radiological procedures as required by Regulation 13(1). Inspectors found that corrective actions taken since the previous inspection in May 2023 had improved compliance with Regulation 13(2). However, further improvements were required to ensure full compliance with this regulation.

Further improvements were also required to meet full compliance with Regulation 8 in relation to cardiology records. Inspectors noted that there was scope to further align clinical audit to HIQA's national procedures, published in November 2023, to ensure compliance with Regulation 13(4).

For Regulation 11, inspectors found that considerable work had been carried out since the previous inspection in May 2023 in relation to data collection across a large number of modalities by radiography staff and the analysis of data by medical physics staff. However, while inspectors found that DRLs had been established and used for the majority of modalities at the hospital, they had not been regularly reviewed as set out in the hospital's policy and as required by Regulation 11(5). There was also scope to improve the carrying out of reviews and corrective actions where local DRLs exceeded national DRLs and the documentation of same as required by Regulations 11(6) and 11(7).

Significant improvement was required in relation to the strict surveillance of equipment at UHL as required under Regulation 14 and an urgent compliance plan was issued in relation to this regulation to address a risk that was identified by inspectors. In addition, to ensure full compliance with Regulation 17, the undertaking should ensure that HIQA is notified of any reportable incidents within the required three day timeframe and that incidents and near misses are analysed.

Overall, while acknowledging the commitment of staff to the radiation protection of service users, inspectors noted that improvements were required by the undertaking to ensure the requirements of the regulations are met for the safe delivery of medical radiological exposures to service users at UHL.

Regulation 8: Justification of medical exposures

There was a policy in place at UHL titled *HSE Mid-West Acute Hospitals' Policy on Justification of Medical Exposures*, effective from February 2026. This policy outlined the justification process for each modality and who was responsible for carrying out this process at the hospital. Inspectors noted that staff demonstrated an understanding of this policy. However, inspectors noted that this policy required review in relation to the justification of DXA procedures.

From a sample of records reviewed for CT, nuclear medicine, fluoroscopy and general X-ray, inspectors were satisfied that justification in advance was recorded

for the medical exposures reviewed. Inspectors were satisfied that the majority of referrals were in writing, stated the reason for the request and were accompanied by sufficient medical data to facilitate the practitioner when considering the benefits and risks of the medical exposure as required by Regulation 8(10). However, inspectors noted that there was scope for improvement in cardiology in relation to meeting the requirements of Regulations 8(8), 8(10), 8(11) and 8(15). For example, inspectors found that a recognisable written referral was not readily identifiable for a sample of interventional cardiology procedures reviewed and staff awareness in relation to what constituted a written referral for these medical exposures required improvement. In addition, the sample of records reviewed in interventional cardiology did not contain a record of justification in advance and as a result impacted compliance with this regulation.

Inspectors were satisfied that information about the benefits and risks associated with the radiation dose from medical exposures was available to service users on posters and leaflets. In addition, staff demonstrated to inspectors that previous diagnostic information from procedures which took place in the hospital and other hospitals was available for review on the hospital's radiology information system.

Judgment: Substantially Compliant

Regulation 11: Diagnostic reference levels

The undertaking at UHL had a policy titled *HSE Mid-West Acute Hospitals' Policy to Establish and Review Diagnostic Reference Levels* in place, effective from February 2026. This policy set out the responsibilities of staff in respect of diagnostic reference levels (DRLs) and also the method for establishing and using local DRLs. It stated that DRLs should be reviewed annually or sooner after the introduction of new equipment, software, techniques, or changes in the protocols. Inspectors found that considerable work had been carried out since the previous inspection in May 2023 in relation to data collection across a large number of modalities by radiography staff and the analysis of data by medical physics staff. Inspectors were informed that a dose management system was also being considered at the hospital with a view to reducing the resources needed to manually collect DRL data.

However, while inspectors found that DRLs had been established and used for the majority of modalities at the hospital, they had not been regularly reviewed as set out in the hospital's policy and as required by Regulation 11(5). This meant that local DRLs in the hospital were based on data predominantly collected during 2024 with a small number based on 2025 data. Inspectors were also informed that there were no current local DRLs for DXA due to recent equipment replacement and data collection to facilitate the establishment of local DRLs was underway at the time of the inspection. Inspectors also found that where local DRLs exceeded national DRLs, appropriate reviews had not been carried out in all instances to determine whether the optimisation of protection and safety for patients is adequate and as a result corrective action had not been taken without undue delay as required by Regulation

11(6). In addition, since reviews and corrective actions had not been carried out in all instances, records relating to Regulation 11(7) were not available as required.

Judgment: Not Compliant

Regulation 13: Procedures

Written protocols were in place at UHL for standard radiological procedures as required by Regulation 13(1). Since the previous inspection in May 2023, inspectors noted that some improvements had been made in relation to meeting the requirements of Regulation 13(2). A technical solution had been implemented at the hospital to meet compliance with Regulation 13(2). Inspectors reviewed a sample of reports across modalities and noted that information relating to the patient exposure formed part of the report for the majority of records reviewed, with a small number in fluoroscopy and cardiology not meeting the requirements of Regulation 13(2). In addition, inspectors noted that in a sample of reports reviewed, information relating to the patient exposure did not accurately reflect procedures that involve ionising radiation. A consistent approach to ensuring information relating to the exposure forms part of the report of each medical radiological procedure should be in place at UHL to ensure compliance with Regulation 13(2). Referral guidelines were adopted at the hospital and were available to staff as required by Regulation 13(3).

Regulation 13(4) requires that an undertaking shall ensure that clinical audits are carried out in accordance with national procedures established by the Authority, which were published in November 2023. Inspectors noted that there were two audit committees in place at UHL, a hospital-wide audit committee and a radiology audit committee (RAC). The terms of reference for the RAC stated that it is responsible for planning and coordinating a structured programme of clinical audit and assuring that clinical audit activity is meeting all national regulatory requirements. Inspectors noted that a range of audits were carried out at the hospital including *Optimisation of Nuclear Medicine Diagnostic Reference Levels (DRLs): A Seven-Year Audit (2018-2024)*, *Optimisation of Exposure Factors for Paediatric Mobile X-ray Imaging* and *An audit investigating anterior-posterior (AP) Chest X-ray radiographic technique in adults*. While arrangements were in place to support clinical audit at UHL and staff carried out a range of audits, inspectors noted that improvements were required to align to HIQA's national procedures. For example, a clinical audit strategy was not available at the time of the inspection. The undertaking should ensure that an overarching clinical audit strategy is in place which incorporates the principles and essential criteria for clinical audit and identifies how clinical audit is prioritised, including based on risk and information from incidents and near misses. In addition, inspectors noted that further work was required in auditing the full medical exposure pathway of the service user, which should also be addressed in the clinical audit strategy.

Judgment: Not Compliant

Regulation 14: Equipment

A document titled *HSE Mid-West Acute Services Radiation Safety Procedures*, effective from January 2026, was in place at UHL. This document outlined the quality assurance (QA) programme in place at the hospital including the frequency of testing and responsibilities for same for each modality. Inspectors received an up-to-date inventory of medical radiological equipment in advance of the inspection as required by Regulation 14(10) and were satisfied that acceptance testing was carried out on equipment before the first use for clinical purposes as required by Regulation 14(3). However, inspectors noted that almost a third of equipment was overdue annual QA testing as required by Regulation 14(2). Inspectors were informed that this was due to competing priorities such as new projects and commissioning of units coupled with a lack of medical physics resources. Inspectors also reviewed records of regular performance testing and noted that the majority of modalities had performance testing carried out as set out in the QA programme. However, due to issues obtaining appropriate test equipment, inspectors noted that dental equipment did not have regular performance testing carried out as required by Regulation 14(3). As a result, inspectors were not satisfied that the undertaking had ensured that all equipment was kept under strict surveillance at UHL as required by Regulation 14(1).

Following the inspection, the undertaking was required to submit an urgent compliance plan to address urgent risk in relation to Regulation 14. The undertaking's response provided assurance that the risk was being adequately addressed.

Judgment: Not Compliant

Regulation 16: Special protection during pregnancy and breastfeeding

A document titled *HSE Mid-West Acute Hospitals' Protocol for Pregnancy Involving Ionising Radiation*, effective from February 2026, was in place at UHL. This policy included information on the pregnancy procedures in place at the hospital including the practitioner and referrer role in ensuring that all reasonable measures are taken to minimise the risks associated with potential fetal irradiation during medical exposure of female patients of childbearing age. From a sample of records reviewed, inspectors were satisfied that a referrer and practitioner inquired as to the pregnancy status of service users and recorded the answer to this inquiry in writing. In addition, inspectors noted multiple notices in the hospital to raise the awareness of the special protection required during pregnancy and breastfeeding in advance of medical exposures.

Judgment: Compliant

Regulation 17: Accidental and unintended exposures and significant events

The incident management process in place at the hospital was outlined in a document titled *HSE Mid-West Acute Hospitals' Procedure for Managing Radiation Incidents*, which was effective from February 2026. Inspectors noted that staff demonstrated a clear understanding of the incident management process. However, inspectors were informed and noted from documentation reviewed that the system of reporting did not adequately facilitate the analysis of incidents and near misses as required by Regulation 17(1)(c). In addition, considering the number and type of procedures taking place in the hospital each year, the undertaking should ensure that the systems and processes in place facilitate the identification and reporting of all incidents and near misses.

The procedure for managing radiation incidents included information on the requirement to notify HIQA of certain notifiable incidents and the timeframe for completing same. Inspectors noted that while 13 incidents were reported to HIQA since the previous inspection in May 2023, three of these incidents did not meet the three day reporting timeline to HIQA as required by Regulation 17(1)(e). The undertaking should ensure that HIQA is notified of any reportable incidents within the three day timeframe and that incidents and near misses are analysed to ensure full compliance with Regulation 17.

Judgment: Not Compliant

Appendix 1 – Summary table of regulations considered in this report

This inspection was carried out to assess compliance with the European Union (Basic Safety Standards for Protection against Dangers Arising from Medical Exposure to Ionising Radiation) Regulations 2018, as amended. The regulations considered on this inspection were:

Regulation Title	Judgment
Governance and management arrangements for medical exposures	
Regulation 4: Referrers	Compliant
Regulation 5: Practitioners	Compliant
Regulation 6: Undertaking	Not Compliant
Regulation 10: Responsibilities	Substantially Compliant
Regulation 19: Recognition of medical physics experts	Not Compliant
Regulation 20: Responsibilities of medical physics experts	Not Compliant
Regulation 21: Involvement of medical physics experts in medical radiological practices	Not Compliant
Safe Delivery of Medical Exposures	
Regulation 8: Justification of medical exposures	Substantially Compliant
Regulation 11: Diagnostic reference levels	Not Compliant
Regulation 13: Procedures	Not Compliant
Regulation 14: Equipment	Not Compliant
Regulation 16: Special protection during pregnancy and breastfeeding	Compliant
Regulation 17: Accidental and unintended exposures and significant events	Not Compliant

Compliance Plan for University Hospital Limerick OSV-0007379

Inspection ID: MON-0049309

Date of inspection: 10/02/2026

Introduction and instruction

This document sets out the regulations where it has been assessed that the undertaking is not compliant with the European Union (Basic Safety Standards for Protection against Dangers Arising from Medical Exposure to Ionising Radiation) Regulations 2018, as amended.

This document is divided into two sections:

Section 1 is the compliance plan. It outlines which regulations the undertaking must take action on to comply. In this section the undertaking must consider the overall regulation when responding and not just the individual non compliances as listed in section 2.

Section 2 is the list of all regulations where it has been assessed the undertaking is not compliant. Each regulation is risk assessed as to the impact of the non-compliance on the safety, health and welfare of service users.

A finding of:

- **Substantially compliant** - A judgment of substantially compliant means that the undertaking or other person has generally met the requirements of the regulation but some action is required to be fully compliant. This finding will have a risk rating of yellow which is low risk.
- **Not compliant** - A judgment of not compliant means the undertaking or other person has not complied with a regulation and considerable action is required to come into compliance. Continued non-compliance — or where the non-compliance poses a significant risk to the safety, health and welfare of service users — will be risk rated red (high risk) and the inspector will identify the date by which the undertaking must comply. Where the non-compliance does not pose a risk to the safety, health and welfare of service users, it is risk rated orange (moderate risk) and the undertaking must take action *within a reasonable timeframe* to come into compliance.

Section 1

The undertaking is required to set out what action they have taken or intend to take to comply with the regulation in order to bring the medical radiological installation back into compliance. The plan should be **SMART** in nature. **S**pecific to that regulation, **M**easurable so that they can monitor progress, **A**chievable and **R**ealistic, and **T**ime bound. The response must consider the details and risk rating of each regulation set out in section 2 when making the response. It is the undertaking's responsibility to ensure they implement the actions within the timeframe.

Compliance plan undertaking response:

Regulation Heading	Judgment
Regulation 6: Undertaking	Not Compliant
Outline how you are going to come into compliance with Regulation 6: Undertaking: The terms of reference (TOR) for the Radiation Safety Committee (RSC) were recently revised (approved on the 26th March 2026); the TOR now include a section entitled 'Key Performance Indicators of the RSC', documenting what indicators will be used to re-assure the HSE Mid-West Acute Services and regulators how legislative compliance will be assessed to provide stronger oversight in RSC and RPTF operations. Regarding Regulations 19, 20 and 21 there are 8 staff approved for the Acute Hospitals Mid-West which comprise of the following – 1 Chief Physicist, 2 Principal Physicists, 2 Senior Physicists and 3 Basic Physicists. The current status is as follows – 1 Chief Physicist, 1 Principal Physicist and 2 basic grade physicists. The status of the recent recruitment campaigns are as follows: 1 Basic Grade Physicist in post since 30/03/2026. 2nd Basic Grade Physicist expected to start by 25/05/2026. 1 Senior Physicist expected to start by 30/04/2026. Recruitment campaigns for 1 Principal and 1 additional Senior Physicist are currently live. There are currently 2 MPEs in the HSE Mid-West Acute Services. The support of three external Medical Physics Experts (MPE)s has been acquired. Currently they are supporting in-house MPEs to deliver the equipment performance assessments, training and review of DRLs. They are available for consultation on matters relating to optimisation. Dosimetry calculations are currently undertaken by in-house MPEs. Regarding the finding in relation to Regulation 7: Justification of Practices; applying to HIQA for generic justification before the commencement of any new practice: the HSE Mid-West Acute Hospitals Policy on Justification of Medical Exposures is currently being revised to improve upon the documentation within of the allocation of responsibilities for identification, oversight, management and approval of new types of practices and applications to HIQA, when required	

This policy will also be amended in relation to the justification of dual X-ray absorptiometry (DXA) procedures.

Regulation 10: Responsibilities

Substantially Compliant

Outline how you are going to come into compliance with Regulation 10: Responsibilities: Regarding practitioner involvement in the justification of cardiology procedures: it is acknowledged that there is scope for improvement in the referral process. The pathway for documenting the justification of cardiology procedures is currently under review (commenced 19/02/26) and will be modified to clearly document and comply with legal justification requirements.

It is noted that there is scope for further involvement of MPE support in optimisation for all medical exposures. MPE support for establishing and review of Diagnostic Reference Levels has been outsourced to assist the medical physics service in addressing the current lack of MPE resources. The external MPEs are also available for consultation when National DRL values are exceeded or if unusually low DRL values have been identified. DRLs are a standing item for discussion at the monthly RPTF meetings and where issues are noted by an MPE, the matter is raised. Where relevant, multidisciplinary meetings are convened to discuss appropriate interventions.

Regulation 19: Recognition of medical physics experts

Not Compliant

Outline how you are going to come into compliance with Regulation 19: Recognition of medical physics experts:

There are 8 staff approved for the Acute Hospitals Mid-West which comprise of the following – 1 Chief Physicist, 2 Principal Physicists, 2 Senior Physicists and 3 Basic Physicists. The current status is as follows – 1 Chief Physicist, 1 Principal Physicist and 2 basic grade physicists.

The status of the recent recruitment campaigns are as follows:

1 Basic Grade Physicist in post since 30/03/2026.

2nd Basic Grade Physicist expected to start by 25/05/2026.

1 Senior Physicist expected to start by 30/04/2026.

Recruitment campaign for 1 Principal and 1 additional Senior Physicist currently live.

There are currently 2 MPEs in the HSE Mid-West Acute Services. The support of three external Medical Physics Experts (MPE)s has been acquired. Currently they are supporting in-house MPEs to deliver the equipment performance assessments, training and review of DRLs.

Dosimetry calculations are currently undertaken by in-house MPEs.

Acute Hospitals Mid-West remains committed to the continued evaluation of outsourced Medical Physics Expert (MPE) services, alongside the structured development and enhancement of internal MPE capability within the department of Medical Physics.

Regulation 20: Responsibilities of medical physics experts

Not Compliant

Outline how you are going to come into compliance with Regulation 20: Responsibilities of medical physics experts:

There are 8 staff approved for the Acute Hospitals Mid-West which comprise of the following – 1 Chief Physicist, 2 Principal Physicists, 2 Senior Physicists and 3 Basic Physicists. The current status is as follows – 1 Chief Physicist, 1 Principal Physicist and 2 basic grade physicists.

The status of the recent recruitment campaigns are as follows:

1 Basic Grade Physicist in post since 30/03/2026.

2nd Basic Grade Physicist expected to start by 25/05/2026.

1 Senior Physicist expected to start by 30/04/2026.

Recruitment campaigns for 1 Principal and 1 additional Senior Physicist are currently live.

There are currently 2 MPEs in the HSE Mid-West Acute Services.

The support of three external Medical Physics Experts (MPE)s has been acquired. They are supporting in-house MPEs to deliver the equipment performance assessments and training.

Training of practitioners and other staff in relevant aspects of radiation protection continues to be provided by the Radiation Safety Officer and the external RPA and external MPE provider. Recent training was delivered to members of the Radiation Protection Task Force (includes radiographer practitioners) on the 24/03/2026 by the External RPA/MPE. Delivery of future training is under review with priority being given to staff working in high dose/risk areas. The matter is discussed and monitored during the monthly RPTF meetings.

The in-house medical physics staff analyse the DRL data collated by radiographers. The external MPEs also support in-house MPEs to review this data. The external MPEs are available for consultation on matters relating to optimisation in particular when National DRL values are exceeded or if unusually low DRL values have been identified. DRLs are a standing item for discussion at the monthly RPTF meetings and where issues are noted by an MPE, the matter is raised. Where relevant, multidisciplinary meetings are convened to discuss appropriate interventions.

Dosimetry calculations are currently undertaken by in-house MPEs.

Acute Hospitals Mid-West remains committed to the continued evaluation of outsourced Medical Physics Expert (MPE) services, alongside the structured development and enhancement of internal MPE capability within the department of Medical Physics.

Regulation 21: Involvement of medical physics experts in medical radiological practices

Not Compliant

Outline how you are going to come into compliance with Regulation 21: Involvement of medical physics experts in medical radiological practices:

MPEs are made aware of matters relating to medical radiological practices during monthly RPTF, monthly Research Ethics Committee and bi-annual RSC meetings. MPEs are requested to provide advice as required.

There are currently 2 MPEs in the HSE Mid-West Acute Services.

The support of three external Medical Physics Experts (MPE)s has been acquired. They are supporting in-house MPEs to deliver the equipment performance assessments and training.

Training of practitioners and other staff in relevant aspects of radiation protection continues to be provided by the Radiation Safety Officer and the external RPA and external MPE provider. Recent training was delivered to members of the Radiation Protection Task Force (includes radiographer practitioners) on the 24/03/2026 by the External RPA/MPE. Delivery of future training is under review with priority being given to staff working in high dose/risk areas. The matter is discussed and monitored during the monthly RPTF meetings.

The in-house medical physics staff analyse the DRL data collated by radiographers. The external MPEs also support in-house MPEs to review this data. The external MPEs are available for consultation on matters relating to optimisation in particular when National DRL values are exceeded or if unusually low DRL values have been identified. DRLs are a standing item for discussion at the monthly RPTF meetings and where issues are noted

by an MPE, the matter is raised. Where relevant, multidisciplinary meetings are convened to discuss appropriate interventions.

Dosimetry calculations are currently undertaken by in-house MPEs.

Regulation 8: Justification of medical exposures

Substantially Compliant

Outline how you are going to come into compliance with Regulation 8: Justification of medical exposures:

Regarding the justification of DXA procedures: The HSE Mid-West Acute Hospitals Policy on Justification of Medical Exposures will be amended in relation to the justification of dual X-ray absorptiometry (DXA) procedures.

Regarding the justification pathway for Cardiology procedure referrals: The pathway for documenting the justification of cardiology procedures is currently under review (commenced 19/02/26) and will be modified to clearly document and comply with legal justification requirements (Regulations 8 (8), 8 (10) and 8 (15)) as outlined in the inspection report.

Regulation 11: Diagnostic reference levels

Not Compliant

Outline how you are going to come into compliance with Regulation 11: Diagnostic reference levels:

Progress continues on the acquisition of a dose management system for the HSE Mid-West Acute Hospitals to improve compliance with this regulation; stakeholders have scheduled a site visit to review one such system on the 9th April with a view thereafter to invite vendors onsite to present their systems to enable stakeholders to make an informed decision as to what system will best suit the needs of the HSE Mid-West Acute Hospitals. In the interim to assist with compliance of this regulation, clinical specialist radiographers (CSRs) have been requested to commence 2025 manual dose data extraction (26/03/26) to initiate the establishment of 2025 local DRLs. DXA staff are currently extracting data to progress establishment of their 2026 local DRLS (20/03/26).

The in-house medical physics staff analyse the DRL data collated by radiographers. The external MPEs also support in-house MPEs to review this data. The external MPEs are available for consultation on matters relating to optimisation in particular when National

DRL values are exceeded or if unusually low DRL values have been identified. DRLs are a standing item for discussion at the monthly RPTF meetings and where issues are noted by an MPE, the matter is raised. Where relevant, multidisciplinary meetings are convened to discuss appropriate interventions.

Regulation 13: Procedures

Not Compliant

Outline how you are going to come into compliance with Regulation 13: Procedures: On the day of the inspection, the patient exposure documentation that forms part of cardiology reports was unable to be retrieved; it has been located within the reports since.

Regarding Regulation 13(2) and ensuring information relating to the exposure forms part of the report for ionising radiation procedures delivered to service users, the undertaking has committed to auditing all radiologists' profiles reporting ionising radiation procedures in the HSE Mid-West Acute Services; the profiles found to be non-compliant will be updated to the required approach for compliance with this regulation.

Regarding Regulation 13 (4), clinical audit: The Radiology Audit Committee (RAC) met on the 20/03/26 and committed to the following further to the inspection report:

- To develop a clinical audit strategy based on the nine key principles set out in the HIQA guidance document 'National procedures for clinical audit of radiological procedures involving medical exposure to ionising radiation'
- To include in the clinical audit strategy the full medical exposure pathway of the service user to align with HIQA's national procedures guidance document
- To consider and prioritise in the strategy:
 - o Risk &
 - o Information from incidents and near misses

The Clinical Audit Facilitator of the Quality & Safety Department facilitating the meeting informed the RAC that a HSE Mid-West Hospitals' Forward Plan for clinical audit was in development; this is based on national HSE strategy. Subsequent to the Forward Plan approval, a Diagnostics Directorate strategy will be developed. The RAC will include this forward plan to establish its clinical audit strategy.

Regulation 14: Equipment	Not Compliant
Outline how you are going to come into compliance with Regulation 14: Equipment: There is currently 1 system from 2025 overdue for annual QA testing in the HSE Mid-West Region. The QA reports for the systems tested are in progress. Systems due for testing in 2026 have commenced and the medical physics teams are supporting chronological prioritisation based on due dates. The updated QA programme schedule was submitted to HIQA for the urgent compliance plan response incorporating the scheduled testing dates. The above schedule identifies the percentage of testing outsourced to external MPEs with the remainder of the assessments being undertaken by HSE Mid-West Region medical physics and MPE staff. The “date to be complied with of 1st May, 2026” is noted and any outstanding QA testing will be completed by this date. The governance and oversight of the QA programme is monitored and an update is given on the status of the medical physics assessments and discussed at the Medical Physics Department meetings, the Radiation Protection Task Force meetings and at the Radiation Safety Committee meetings. The dental QC phantom referred to in the inspection report was delivered to UHL in mid March and training of operators is scheduled for the 9th April.	
Regulation 17: Accidental and unintended exposures and significant events	Not Compliant
Outline how you are going to come into compliance with Regulation 17: Accidental and unintended exposures and significant events: Regarding compliance with Regulation 17(1) (c): the Quality & Safety Department’s Diagnostics’ Directorate Risk Advisor is liaising with the radiation safety officer (RSO) to optimise data extraction from the current system of reporting to better facilitate the analysis and trending of incidents and near misses. Regarding non-compliance with the three day reporting timeline in 3 instances since 2023: the undertaking acknowledges same. Stakeholders within the undertaking were informed of the non-compliance with this reporting timeframe requirement at the last Radiation Safety Committee meeting on the 25/02/26 and at the last Quality and Patient Safety Committee meeting on the 03/03/26. The recently revised TORs for the RSC now document a KPI for compliance with legislative agenda items; compliance with the reporting timeline will be monitored formally through this forum.	

Section 2:

Regulations to be complied with

The undertaking and designated manager must consider the details and risk rating of the following regulations when completing the compliance plan in section 1. Where a regulation has been risk rated red (high risk) the inspector has set out the date by which the undertaking and designated manager must comply. Where a regulation has been risk rated yellow (low risk) or orange (moderate risk) the undertaking must include a date (DD Month YY) of when they will be compliant.

The undertaking has failed to comply with the following regulation(s).

Regulation	Regulatory requirement	Judgment	Risk rating	Date to be complied with
Regulation 6(3)	An undertaking shall provide for a clear allocation of responsibilities for the protection of patients, asymptomatic individuals, carers and comforters, and volunteers in medical or biomedical research from medical exposure to ionising radiation, and shall provide evidence of such allocation to the Authority on request, in such form and manner as may be prescribed by the Authority from time to time.	Not Compliant	Orange	30/06/2026
Regulation 8(8)	An undertaking shall ensure that all individual medical exposures carried out on its behalf are justified in advance, taking into account the	Substantially Compliant	Yellow	30/06/2026

	specific objectives of the exposure and the characteristics of the individual involved.			
Regulation 8(10)(a)	A referrer shall not refer an individual to a practitioner for a medical radiological procedure unless the referral is in writing,	Substantially Compliant	Yellow	30/06/2026
Regulation 8(10)(b)	A referrer shall not refer an individual to a practitioner for a medical radiological procedure unless the referral states the reason for requesting the particular procedure, and	Substantially Compliant	Yellow	30/06/2026
Regulation 8(10)(c)	A referrer shall not refer an individual to a practitioner for a medical radiological procedure unless the referral is accompanied by sufficient medical data to enable the practitioner to carry out a justification assessment in accordance with paragraph (1).	Substantially Compliant	Yellow	30/06/2026
Regulation 8(11)	A practitioner carrying out a medical radiological procedure on foot of a referral shall, having taken into account any	Substantially Compliant	Yellow	30/06/2026

	medical data provided by the referrer under paragraph (10)(c), satisfy himself or herself that the procedure as prescribed in the referral is justified.			
Regulation 8(15)	An undertaking shall retain records evidencing compliance with this Regulation for a period of five years from the date of the medical exposure, and shall provide such records to the Authority on request.	Substantially Compliant	Yellow	30/06/2026
Regulation 10(2)(b)	An undertaking shall ensure that the optimisation process for all medical exposures involves the medical physics expert, and	Substantially Compliant	Yellow	30/06/2026
Regulation 10(3)(a)	An undertaking shall ensure that the justification process of individual medical exposures involves the practitioner, and	Substantially Compliant	Yellow	30/06/2026
Regulation 11(5)	An undertaking shall ensure that diagnostic reference levels for radiodiagnostic examinations, and where appropriate for interventional radiology procedures, are established,	Not Compliant	Orange	30/06/2026

	regularly reviewed and used, having regard to the national diagnostic reference levels established under paragraph (1) where available.			
Regulation 11(6)	An undertaking shall ensure that appropriate reviews are carried out to determine whether the optimisation of protection and safety for patients is adequate, where for a given examination or procedure typical doses or activities consistently exceed the relevant diagnostic reference level, and shall ensure that appropriate corrective action is taken without undue delay.	Not Compliant	Orange	30/06/2026
Regulation 11(7)	An undertaking shall retain a record of reviews and corrective actions carried out under paragraph (6) for a period of five years from the date of the review, and shall provide such records to the Authority on request.	Not Compliant	Orange	30/06/2026
Regulation 13(2)	An undertaking shall ensure that information relating to patient exposure forms	Substantially Compliant	Yellow	30/06/2026

	part of the report of the medical radiological procedure.			
Regulation 13(4)	An undertaking shall ensure that clinical audits are carried out in accordance with national procedures established by the Authority.	Not Compliant	Orange	30/06/2026
Regulation 14(1)	An undertaking shall ensure that all medical radiological equipment in use by it is kept under strict surveillance regarding radiation protection.	Not Compliant	Red	01/05/2026
Regulation 14(2)(a)	An undertaking shall implement and maintain appropriate quality assurance programmes, and	Not Compliant	Red	01/05/2026
Regulation 14(2)(b)	An undertaking shall implement and maintain appropriate programmes of assessment of dose or verification of administered activity.	Not Compliant	Red	01/05/2026
Regulation 14(3)(b)	An undertaking shall carry out the following testing on its medical radiological equipment, performance testing on a regular basis and after any maintenance procedure liable to	Not Compliant	Red	01/05/2026

	affect the equipment's performance.			
Regulation 17(1)(c)	An undertaking shall ensure that for all medical exposures, an appropriate system is implemented for the record keeping and analysis of events involving or potentially involving accidental or unintended medical exposures, commensurate with the radiological risk posed by the practice,	Substantially Compliant	Yellow	30/06/2026
Regulation 17(1)(e)	An undertaking shall ensure that the Authority is notified, promptly and as soon as possible, of the occurrence of any significant event, as defined by the Authority in guidelines issued for that purpose, and	Not Compliant	Orange	25/03/2026
Regulation 19(9)	An undertaking shall put in place the necessary arrangements to ensure the continuity of expertise of persons for whom it is responsible who have been recognised as a medical physics expert under this Regulation.	Not Compliant	Red	29/05/2026

Regulation 20(1)	An undertaking shall ensure that a medical physics expert, registered in the Register of Medical Physics Experts, acts or gives specialist advice, as appropriate, on matters relating to radiation physics for implementing the requirements of Part 2, Part 4, Regulation 21 and point (c) of Article 22(4) of the Directive.	Not Compliant	Red	29/05/2026
Regulation 20(2)(a)	An undertaking shall ensure that, depending on the medical radiological practice, the medical physics expert referred to in paragraph (1) takes responsibility for dosimetry, including physical measurements for evaluation of the dose delivered to the patient and other individuals subject to medical exposure,	Not Compliant	Red	29/05/2026
Regulation 20(2)(b)	An undertaking shall ensure that, depending on the medical radiological practice, the medical physics expert referred to in paragraph (1) gives advice on medical	Not Compliant	Red	29/05/2026

	radiological equipment, and			
Regulation 20(2)(c)	An undertaking shall ensure that, depending on the medical radiological practice, the medical physics expert referred to in paragraph (1) contributes, in particular, to the following: (i) optimisation of the radiation protection of patients and other individuals subject to medical exposure, including the application and use of diagnostic reference levels; (ii) the definition and performance of quality assurance of the medical radiological equipment; (iii) acceptance testing of medical radiological equipment; (iv) the preparation of technical specifications for medical radiological equipment and installation design; (v) the surveillance of the medical radiological installations; (vi) the analysis of events involving,	Not Compliant	Red	29/05/2026

	or potentially involving, accidental or unintended medical exposures; (vii) the selection of equipment required to perform radiation protection measurements; and (viii) the training of practitioners and other staff in relevant aspects of radiation protection.			
Regulation 21(1)	An undertaking shall ensure that, in medical radiological practices, a medical physics expert is appropriately involved, the level of involvement being commensurate with the radiological risk posed by the practice.	Not Compliant	Red	29/05/2026
Regulation 21(2)(b)	In carrying out its obligation under paragraph (1), an undertaking shall, in particular, ensure that in standardised therapeutical nuclear medicine practices as well as in radiodiagnostic and interventional radiology practices, involving high doses as referred	Not Compliant	Red	29/05/2026

	to in Regulation 15(c), a medical physics expert shall be involved, and			
Regulation 21(2)(c)	In carrying out its obligation under paragraph (1), an undertaking shall, in particular, ensure that for other medical radiological practices not covered by subparagraphs (a) and (b), a medical physics expert shall be involved, as appropriate, for consultation and advice on matters relating to radiation protection concerning medical exposure.	Not Compliant	Red	29/05/2026