The Regulation and Quality Improvement Authority

Inspection Report

12 August 2026



Ulster Hospital Diagnostic/Interventional Radiology Department

Address: Upper Newtownards Road, Dundonald, BT16 1RH
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Information on legislation and standards underpinning inspections can be found on our website https://www.rqia.org.uk/ and The Ionising Radiation (Medical Exposure) Regulations (Northern Ireland) 2018 known as IR(ME)R

1.0 Service information

Organisation/Registered Provider: South Eastern Health and Social Care Trust (SEHSCT)	**Department Inspected:** Ulster Hospital – Diagnostic/Interventional Imaging Department
Name of Employer: Ms Roisin Coulter, Chief Executive SEHSCT	**Radiology Services Manager:** Ms Jayne Hutchinson

Brief description of how the service operates:

The Ulster Hospital Dundonald (UHD) provides a range of diagnostic and interventional radiology services to include inpatients, outpatients, emergency department and paediatrics. The imaging service provides the following:

- CT and general x-ray: Monday – Friday 9-5pm; emergency imaging 24/7 cover
- Fluoroscopy: Monday – Friday9am – 5pm (no out of hours cover)
- Interventional radiology: Monday – Thursday 9am – 1pm; Friday 9am – 5pm (no out of hours cover)

The interventional service provides an adult only district general level cover for interventional radiology. Examinations include biopsies, drainages, nephrostomy insertions, line insertions, percutaneous trans hepatic cholangiography (PTC) and emergency embolisations. The service does not include neuro-interventional radiology or lower limb vascular interventional radiology. Paediatric imaging is provided in general x-ray, fluoroscopy and CT. Imaging is provided in theatres for orthopaedics, urology, plastics and the pain management clinics. The service noted that a radiographer is always present for imaging in theatres.

Before the inspection Ms Jayne Hutchinson, RSM, and her team were asked to complete a self-assessment form. The submitted self-assessment confirmed that each year, the Ulster Hospital radiology department carries out approximately 130,842 general radiography (plain film) examinations; 2,143 general fluoroscopy; 969 interventional radiology procedures; 42,706 computed tomography (CT) scans; 230 CT interventional procedures and 1739 dental examinations.

The Ulster Hospital radiology department has 10 general radiography rooms; nine mobile general radiography units; one general fluoroscopy unit; one dedicated interventional unit; five CT scanners and six C-arms (theatres).

The department is staffed by 28.5 whole time equivalent (WTE) consultant radiologists, two WTE consultant interventional radiologists, 126.07 WTE radiographers, nine radiology registrars. Out of hours (OOH) radiologist cover is provided by one radiology registrar, with a consultant radiologist as the second on call person. From 8pm onwards radiologist cover is outsourced to a third party provider. For radiographer OOH cover in CT two radiographers are on site from 5pm to 8am, for general X-ray two radiographers are onsite 5pm to 8am with one radiographer available on call.

The urgent care centre has one radiographer cover until 10pm. Medical Physics Expert (MPE), contracted from Regional Medical Physics Service (RMPS) based in the Belfast Health and Social Care Trust (BHSCT), supports the team.

2.0 Inspection summary

On 12 August 2026, warranted Ionising Radiation (Medical Exposure) Regulations (IR(ME)R) inspectors from the Regulation and Quality Improvement Authority (RQIA), with advice being provided by the United Kingdom Health Security Agency (UKHSA) staff, carried out an IR(ME)R inspection of Ulster Hospital radiology department, as part of RQIA's IR(ME)R inspection programme.

For the 2026/27 inspection year the inspections focused on the following key themes:

- Entitlement
- Clinical Audit and IR(ME)R Audit
- Diagnostic Reference Levels(DRLs)
- Management of Significant Accidental or Unintended Exposures (SAUE), incidents and near misses
- The administration of radioisotopes (Nuclear Medicine only)
- Breast radiotherapy pathway (Radiotherapy only)
- Any other areas identified through the review of the submitted SAF and supporting documentation

Previous areas for improvement (if applicable) were also reviewed.

The purpose of our focus is to minimise risk to service users and staff, whilst being assured that ionising radiation services are being provided in keeping with IR(ME)R (Northern Ireland) 2018.

The service was notified of the inspection date and time; and requested to complete and submit a SAF and include supporting documentation, which was reviewed in advance of the inspection.

The site inspection process included:

- Discussion with management and staff
- Examination of relevant radiology documentation
- Review of the department and facilities
- Review of patient records to ensure compliance with IR(ME)R
- Discussion with patients/representatives (where appropriate)

IR(ME)R is intended to protect individuals undergoing exposure to ionising radiation as follows:

- Patients as part of their own medical diagnosis or treatment
- Individuals as part of health screening programmes
- Patients or other persons voluntarily participating in medical or biomedical, diagnostic or therapeutic, research programmes
- Carers and comforters
- Asymptomatic individuals
- Individuals undergoing non-medical imaging using medical radiological equipment

3.0 How we inspect

RQIA is responsible for monitoring, inspecting and enforcement of IR(ME)R. The inspection process includes the gathering and review of information we hold about the service, examination of a variety of relevant written procedures, protocols and records, and discussion with relevant staff. RQIA inspection reports reflect on how a service was performing at the time of inspection, highlighting both good practice and any areas for improvement.

The information obtained is then considered before a decision is made on whether the service is operating in accordance with the relevant legislation and professional standards. Examples of good practice are acknowledged and any areas for improvement are discussed with the relevant staff in charge and detailed in the quality improvement plan (QIP).

As already stated, prior to the inspection, the service was requested to complete a SAF and provide RQIA with all relevant supporting information including written policies and procedures. This information was shared with UKHSA prior to the inspection and was used to direct discussions with key members of staff working within the radiology department and provide guidance for the inspection process.

It is the responsibility of the Employer to ensure compliance with legislation, standards and best practice, and to address any deficits identified during our inspections.

4.0 What people told us about the service

As this was a busy radiology department, patients were awaiting or immediately recovering from diagnostic procedures, it was deemed inappropriate to seek to speak to these patients on the day of the inspection.

5.0 The inspection

5.1 What has this service done to meet any areas for improvement identified at or since the last inspection?

Areas for improvement from the last inspection on 19 January 2022		
Action required to ensure compliance with The Ionising Radiation (Medical Exposure) Regulations (Northern Ireland) 2018		**Validation of compliance**
Area for Improvement 1 **Regulation:** 6 (a) Schedule 2 (b) **Stated:** Second time	The Employer should ensure non-medical referrers have formal written periodic review of their entitlement and the register of named non-medical referrers is updated accordingly. **Action taken as confirmed during inspection:** There are formal entitlement arrangements in place for non-medical referrers which includes periodic review.	**Met**
Area for Improvement 2 **Regulation:** 7 **Stated:** Second time	The Employer should consider linking the clinical and IR(ME)R audits currently being performed in the department and establish/implement an audit of the services provided by Alliance Medical, (Third party providers). **Action taken as confirmed during inspection:** There are clinical and IR(ME)R audits in place which have been developed since the previous inspection. There are robust governance arrangements for third party providers which includes audit. Clinical and IR(ME)R Audit is further discussed in section 5.2.2	**Met**
Area for Improvement 3 **Regulation:** 11 (5) **Stated:** Second time	The Employer shall ensure the guidelines for justification and authorisation are reviewed and complete clarification on their use is provided. Staff should be informed of the outcome of this review. **Action taken as confirmed during inspection:** Authorisation guidelines were in place and duty holders were knowledgeable with regards their use.	**Met**

Area for improvement 4 **Regulation:** 15 (a) Schedule 2 (d) **Stated:** Second time	The Employer shall amend Employer's Procedure (EP) I to include more information on the Quality Assurance of equipment and to include links to the any relevant QA policy and procedures.	**Met**
	Action taken as confirmed during inspection: EP I has been updated as outlined above.	
Area for improvement 5 **Regulation:** 12 (4) Schedule 2 (g) **Stated:** Second time	The Employer shall amend the EP L to include the research procedure to be followed at departmental level; for example how referrals are identified, how staff know the correct protocol to be used, where the research file is kept, how each individual exposure is justified and who would performs this task.	**Met**
	Action taken as confirmed during inspection: Since the previous inspection, additional employer's procedures have been devised and EP M now relates to research. It was found to be clear and well written.	
Area for improvement 6 **Regulation**: 8 Schedule 2 (l) **Stated:** First time	The Employer must establish a clear management process for the management of a clinically significant accidental or unintended exposure (CSAUE). EP K and EP L should be reviewed to fully outline arrangements for managing radiology incidents.	**Met**
	Action taken as confirmed during inspection: A clear management process for the management of a clinically significant accidental or unintended exposure (CSAUE) is now in place. EP K and EP L have been reviewed to fully outline arrangements for managing radiology incidents.	

Area for improvement 7 **Regulation:** 11 (5) **Stated:** First time	The Employer must ensure that the practitioner for the exposures undertaken using authorisation guidelines is clearly identifiable within the guidelines and this individual has signed the guidelines as the practitioner justifying the exposures.	**Met**
	Action taken as confirmed during inspection: The practitioner for the exposures undertaken using authorisation guidelines is clearly identifiable within the guidelines and this individual has signed the guidelines as the practitioner justifying the exposures.	
Area for improvement 8 **Regulation:** 6 (3) **Stated:** First time	The Employer must ensure radiographers have evidence of training and assessment of competency to underpin their entitlement as practitioners to justify exposures to carers and comforters (C&C).	**Met**
	Action taken as confirmed during inspection: Radiographers do not act as practitioners for C&Cs. They have been entitled as operators to authorise the exposure to C&Cs under authorisation guidelines. Radiographers had evidence of training and competency in accordance with their duty holder roles and scope of practice.	
Area for improvement 9 **Regulation:** 6 (4) Schedule 2 (m) **Stated:** First time	The Employer shall amend EP G to include details such as views to optimise the exposure, the diagnostic reference levels (DRLs) used for non-medical exposures, examples of non-medical exposures provided in the Trust and that the referrer must be a health care professional.	**Met**
	Action taken as confirmed during inspection: Employer's procedure G has been amended to reflect the above information.	

Area for improvement 10 **Regulation:** 7 **Stated:** First time	The Employer must establish an audit action plan that is underpinned by specific, measurable, achievable, realistic and timely goals.	**Met**
	Action taken as confirmed during inspection: An audit action plan has been established and includes specific, measurable, achievable, realistic and timely goals. Clinical and IR(ME)R audit are further discussed in section 5.2.2 of this report.	
Area for improvement 11 **Regulation:** 15 (3) **Stated:** First time	The Employer must ensure the equipment quality assurance (QA) procedures are robustly complied with by suitably qualified, trained and competent staff and associated governance arrangements are rigorously implemented to ensure the safety and wellbeing of patients.	**Met**
	Action taken as confirmed during the inspection on 22 May 2022: Equipment QA was the focus of the inspection and it was confirmed this area of improvement had been met.	
Area for improvement 12 **Regulation:** 14 (2) & (3) **Stated:** First time	The Employer must ensure that the involvement of medical physics experts (MPEs) in radiological practice is in accordance with IR(ME)R.	**Met**
	Action taken as confirmed during the inspection: There was evidence of MPE involvement in accordance to IR(ME)R.	

Area for improvement 13 **Regulation:** 6 (1) (a) Schedule 2 **Stated:** First time	The Employer must review the EPs and prioritise the following EPs as detailed within the main body of this report: • EP B – the title states Authorisation and Justification, this is not in line with the process of justification and authorisation, consideration should be given to re-titling this document • EP E - Assessment of patient dose • EP P – carers and comforters • EP H – evaluation and reporting on diagnostic imaging examinations	**Met**
	Action taken as confirmed during the inspection: Employer's Procedures were in place which had been reviewed several times since the previous inspection and the recent version had been issued in January 2026.	
Area for improvement 14 **Regulation:** 6 (1) (a) Schedule 2 (b) **Stated:** First time	The Employer must review the entitlement of staff who work outside of the radiology department to ensure it reflects all the duty holder roles they undertake and entitlement records outline a clear scope of practice.	**Partially met**
	Action taken as confirmed during the inspection: A review the entitlement of staff who work outside of the radiology department to ensure it reflects all the duty holder roles they undertake and entitlement records outline a clear scope of practice has commenced. However further meaningful action is required and is outlined in section 5.2.1. This area for improvement is stated for a second time.	
Area for improvement 15 **Regulation:** 6 (3) & 17 (4) **Stated:** First time	The Employer must retain records of training and competency for third party provider radiologists to underpin their entitlement.	**Met**
	Action taken as confirmed during the inspection: There are clear entitlement arrangements in place for third party providers which includes access to training and competency records if required.	

Area for improvement 16 **Regulation:** 6 (4) **Stated:** First time	The Employer must develop and implement written examination protocols.	**Met**
	Action taken as confirmed during the inspection: Written examination protocols have been developed and implemented. They were noted to be well written and clear frameworks to follow.	

5.2 Inspection findings

5.2.1 Are there appropriate Entitlement arrangements in place to ensure compliance with the legislation?

Entitlement
Entitlement is the term used to describe the process of endorsement by an appropriate and specified individual within an organisation. They must have the knowledge and experience to authorise on behalf of the Employer, that a duty holder or group of duty holders, have been adequately trained and deemed competent in their specific IR(ME)R duty holder roles.

The SEHSCT has a formal entitlement process to ensure that all referrers, practitioners and operators are appropriately entitled to undertake their roles in accordance with IR(ME)R. This process is defined within the Trust's Employer's Procedures (EP) A.

The Chief Executive, as IR(ME)R Employer, holds overall responsibility for entitlement. Entitlement responsibilities are formally delegated to named senior staff including, clinical director of radiology and radiology service manager.

These individuals act as 'Entitlers' within their defined areas of responsibility and are themselves appropriately trained, competent and formally entitled.

The management described the process of entitlement, noting entitlement is provided following the provision of evidence of training and competency. The entitlement will include a defined scope of practice and this must be agreed between the individual and the individual entitling. This process is documented on individual entitlement forms.

Evidence of induction, training, competency and continuing professional development for radiographers and consultant radiologists was reviewed and found to be in line with duty holder roles. Systems are in place to check the professional qualifications and registration of all employees with their appropriate professional bodies.

Individual entitlement records for consultant radiologists, radiographers, an assistant practitioners and non-medical referrers (NMRs) were reviewed. A review was undertaken of group entitlement records for MPEs and third-party providers. The entitlement records were overall well completed.

Radiographers and assistant practitioners
Radiographers have individual entitlement records with clear signed competency in accordance with the duty holder roles and a defined scope of practice. There was evidence of annual review of individual entitlement arrangements.

Radiographers are entitled by the Radiology Service Manager (RSM). They are entitled as operators for a range of tasks which are outlined in the entitlement document. Radiographers are not entitled as practitioners. They authorise the exposure to carers and comforters under authorisation guidelines. It was confirmed magnetic resonance imaging (MRI) radiographers are entitled as referrers for imaging to determine if there is a foreign body present pre MRI examination.

The assistant practitioners are entitled as operators for a specific range of tasks. Assistant practitioners work in general x-ray, mammography and fluoroscopy. Their role in fluoroscopy is restricted to ID checks and dose recording.

Staff demonstrated understanding of their duty roles and responsibilities and confirmed they felt well supported to carry out their duty holder roles. Entitlement was found to be carried out as outlined in EP A.

Radiologists
Radiologists are entitled through a process aligned with that used for radiographers. The clinical director for radiology entitles radiologists and radiology registrars in line with their specific scopes of practice.

Radiologists from other Trusts
Management confirmed that there are no radiologists external to SEHSCT (known as visiting radiologists) who provide radiology services in the Ulster Hospital radiology department.

Third party providers
The clinical director for radiology described the process of entitlement for third party provider consultant radiologists. They are entitled through group entitlement. This is supported by a list of third party consultant radiologists held on a database, which is accessible to radiology staff. An up to date database is maintained. Third party provider consultant radiologists are entitled by the clinical director of radiology to act as practitioners and operators with a defined scope of practice. The third party provider's medical director provides assurances to the clinical director for radiology SEHSCT in relation to the training and competencies of the duty holders. The service can request these assurances as and when required. Meetings are held with third party provider's senior management on a quarterly basis. Management confirmed that the audit process with the third party provider services is very robust.

Referrers
Management confirmed that General Practitioners (GPs), Trust medics and non-medical referrers (NMRs) within the SEHSCT are typically the cohorts acting as referrers into the service. Referrers are entitled by the clinical director radiology under group entitlement arrangements. Occasionally, there are referrals from other trusts whereby the patient is receiving treatment from a regional unit, but reside in SEHSCT and there are entitlement arrangements in place for this type of referral. Management confirmed that the service does not accept referrals from the Republic of Ireland or the independent sector.

Non-Medical Referrers
A clear process of entitlement of NMRs was demonstrated. They receive formal written confirmation of their entitled scope of practice. The entitlement process requires completion of request supported by evidence of IR(ME)R training, which is delivered via an online regional training platform. Entitlement records are co-signed by the relevant individual's line manager to provide assurance of clinical competency, and subsequently reviewed and entitled by the clinical director for radiology and the RSM. Once entitled, the individual's name is added to a central database, which is accessible to all radiology staff.

Re-application and re-entitlement occurs every three years, aligned with the mandated training refresh cycle. Any changes in role or scope are required to be declared by the individual.

Non- Radiology staff

Entitlement for non-radiology staff was explored through lengthy discussion. The orthopaedic theatre pathway was examined as an example. Management outlined that the referrer is the orthopaedic surgeon/consultant/registrar. The practitioner for the exposures is a consultant radiologist, who has devised authorisation guidelines for radiology imaging in theatre. The exposure is authorised by an entitled radiographer under authorisation guidelines. The radiographer is entitled as an operator for the exposure for all practical aspects of performing the exposure. The orthopaedic surgeon carries out clinical evaluation of the imaging. It was also confirmed that for the pain management clinics, the anaesthetist acts as the referrer and operator for clinical evaluation.

However, entitlement arrangements in line with the IR(ME)R were not evidenced for this group of medical staff acting as duty holders in providing radiology services in theatre. Management outlined that a register for duty holders outside radiology is currently being developed, however could not provide a timescale for completing this. They noted updates on this matter are provided to the Radiation Safety Sub Committee (RSSC). The RSM, governance lead and general x-ray lead are currently involved in progressing this piece of work. The MPE noted that they had provided an IR(ME)R training list which was intended for dissemination across that group. Any medical staff commencing a new post in the Trust is now required to complete IR(ME)R training, which must be updated every 3 years. This is discussed at the clinical leaders meeting with the medical director.

An area of improvement had previously been identified with regards to the entitlement of non-radiology staff as outlined section 5.1 and has been found to be partially met. In light of the lack of meaningful action, management was requested to submit an action plan with timescales on this matter by 19 August 2026. The detailed action plan was submitted to RQIA which outlined a range of actions and appropriate timescales for completion. To ensure this action plan is fully implemented an area of improvement has been identified in this regard.

In addition the previous area of improvement has been stated for a second time-
'The Employer must review the entitlement of staff who work outside of the radiology department to ensure it reflects all the duty holder roles they undertake and entitlement records outline a clear scope of practice.'

Clinical evaluation of imaging undertaken in the Emergency Department (ED) was explored, particularly in relation to the use of artificial intelligence (AI) software such as BoneView. Management confirmed reporting radiographers, entitled as operators, carry out prompt clinical evaluation of this imaging undertaken in ED. However, this is not a 24-hour service, and the clinical evaluation of images during uncovered periods was less clear. It was highlighted there is potential for an emergency nurse practitioner or a member of the ED medical team to carry out clinical evaluation with the assistance of AI during these periods. An area of improvement has been identified to ensure any individuals within the ED carrying out clinical evaluation are entitled to do so.

Speech and language therapy imaging

The entitlement arrangements for speech and language therapy (SLT) imaging service were examined. Management outlined the justification and authorisation process for these exposures. SLT examinations are included in the fluoroscopy authorisation guidelines with an identifiable practitioner. Entitled operators authorise the exposures using these guidelines. Discussion with staff regarding the clinical evaluation of these exposures noted the SLTs were performing the clinical evaluation.

However, it was unclear if they were entitled as operators to carry out the function of clinical evaluation for these exposures. It was confirmed that clinical evaluation is recorded on the Epic system. Review of the patient records noted the clinical evaluation report was signed by both the SLT and the radiographer. An area improvement has been identified to review the clinical evaluation of SLT exposures and ensure there is entitlement of operators to carry out this operator task; and that the entitlement process is underpinned by appropriate training and competency.

The Stroke Pathway

The stroke pathway was discussed in detail with the service. The service identified the stroke physicians/consultants acting as the referrers for this cohort of imaging. They are exploring the potential role of a nurse specialist within this pathway. The service noted the radiologist/radiology registrar acts as the practitioner for the exposures. During out-of-hours, the third party radiologists are responsible as the practitioners for these exposures. Radiologists/radiology registrars will authorise the exposure on RIS/PACS. Where a third party provider acts as practitioner, they will evidence this and the protocol through their 'control centre' account.

The CT lead noted that radiographers have access to a template on RIS/PACS based on the clinical guidelines, however these are not authorisation guidelines. Management stated that stroke physicians act as practitioners and operators. The stroke physician acts as the practitioner for the CT perfusion exposure and this is recorded on RIS. The stroke physician will clinically evaluate the perfusion, this clinical evaluation is documented on the Epic system.

The entitlement documentation for stroke physicians was provided on the day of the inspection. The stroke physicians were not entitled as practitioners on this document. During staff discussions, the radiographer noted the consultant radiologist as the practitioner for all exposures in relation to stroke imaging (including CT perfusion).

During record keeping checks, an example of the stroke pathway was reviewed. The named consultant radiologist was evidenced as the practitioner for the CT brain and CT angiography, with details of the named stroke physician acting as the practitioner for the CT perfusion also evidenced on RIS.

Clinical evaluation of the CT perfusion study, performed by the stroke consultant, was evidenced on the Epic system during the record keeping checks.

The justification and authorisation evidenced for the CT stroke pathway was as follows:

- A named consultant radiologist for the CT brain and CT angiography
- A named stroke consultant for the CT perfusion

An area of improvement has been identified to review the stroke pathway to ensure the relevant individuals are entitled as duty holders and have a defined scope of practice.

Governance for entitlement arrangements outside of radiology

Management outlined that a number of meetings have occurred with the RSM, governance lead, plain film lead and theatre representatives regarding entitlement. The clinical director for radiology also attended these meetings. An area of improvement has been identified to formalise these meetings, with a set agenda and frequency, terms of reference, agreed actions, minutes of meetings to monitor action. These meetings should then feed into the Trust governance structures.

Management confirmed updates regarding entitlement compliance is provided at the RSSC which is chaired by the medical director. The RSSC feeds into the corporate committee, which feeds into the governance committee, which then feeds into the trust board. In terms of assurances, each area will submit a briefing paper in the absence of a verbal update. Theatre is typically represented by a radiation protection supervisor (RPS) as well as the assistant director or clinical director for that area occasionally. Management outlined entitlement as a standing agenda item at the RSSC however, this was not evidenced in the minutes provided.

Review of the submitted SAF, supporting documentation and discussion with key staff during the inspection evidenced there are good entitlement arrangements within the radiology department. Entitlement arrangements outside of the main radiology department require to be strengthened and it is hoped the areas of improvement identified will assist on this matter. The inspection team acknowledge the commitment of staff in this regard.

5.2.2 Does the service adhere to legislation in relation to Clinical Audit and IR(ME)R Audit?

Clinical Audit
IR(ME)R tells us that clinical audit is the systematic examination or review of medical radiological procedures which seek to improve the quality and outcome of patient care through a structured review.

It was evident the radiology service has an underpinned culture of quality improvement. Management and staff demonstrated an inclusive, enthusiastic and proactive approach to patient-centred service improvement.

The clinical audit lead radiologist described the process for clinical audit. There is an annual clinical audit programme which is managed by the clinical audit lead and the governance lead.

Audits are requested and approved by the safe and effective care team (the Trust Audit department) and presented back on audit days. Audit reports and presentations are circulated to all radiology staff for wider learning and made available on Quality Management System (QMS).

The procedure for the clinical audit plan is outlined in the Department of Radiology Quality Management Policy.

Any areas of concern or issues that need escalating from audits are shared using a shared learning template by the service and sent to the shared learning committee. These are then shared with Risk Advisory and tabled for the quarterly Corporate Control Committee which the Chief Executive attends. The Trust Annual Audit report includes all audit activity across directorates and this is shared with the Chief Executive (Employer).

The governance lead provides a quarterly update on audits in a Governance Report and action plans are reviewed as part of this report. The audit department will follow up on action plans to ensure they are completed within the correct timeframe.

The clinical audit lead confirmed the clinical audit template had been reviewed leading to a more consistent approach to recording the clinical audit, which supports the governance lead in monitoring these audits. This was evident in the three clinical audits provided in advance of the inspection. There are dedicated audit sessions each month. When an audit is complete and ready to share, it is presented at this monthly audit session to colleagues.

Staff will identify audits of interest to undertake. This may be influenced by topics of interest from the Royal College of Radiologists (RCR). Additionally, the RCR send audits to the clinical audit lead for completion throughout the year. Audits may be triggered following incident investigation findings. The governance lead is involved in this process and adds the audit to the schedule once an individual has raised the audit. The trust audit team will support clinical audits where required. These are typically larger audits or audits of significance.

Typically consultant radiologists and registrars are involved in clinical audits, but audits will involve radiographers where appropriate.

The clinical audit lead described one particular example following an audit of a particular cohort of CT examinations (CT pulmonary angiography), whereby actions were identified in relation to the quality of information provided during referral for this examination. The issues were escalated to the clinical director for radiology who is then responsible for escalating it with the relevant clinical directors to improve in relation to this finding. This was an example of robust clinical audit. The clinical director for radiology has oversight of the clinical audits.

IR(ME)R Audit

Management described their rolling IR(ME)R audit programme. The governance lead is responsible for leading the IR(ME)R audit programme. They are supported by the Quality Standards for Imaging (QSI) lead. The PACS team and the governance admin lead undertake the audits.

Management use a dashboard which displays results and the associated action plan. Audit results are shared with leads and staff for awareness. Non-compliances identified are raised. An email overview is provided, detailing a summary of findings.

IR(ME)R audits are discussed at the fortnightly senior management team (SMT) meetings. Concerning or time sensitive findings are escalated through this forum. Leads receive a list of non-conformances. Assurances are provided to the radiation safety sub committee (RSSC) through the bi-annual IR(ME)R report. There is also an annual quality report provided.

Examination of a sample of IR(ME)R audits led to discussions on the non-compliance rates. Management noted challenges with compliance. In terms of escalating these challenges, the non-compliances were discussed at the RSSC, image optimisation team (IOT) meetings and SMT meetings. Management described work ongoing to revise the IR(ME)R audit programme. As part of this process, the service worked with staff focus groups, reviewed the employer's procedures and created short videos to support staff. From this and discussions with staff regarding challenges, it identified misunderstandings around audit processes and audit criteria. Management explained that the revised IR(ME)R audit programme included some changes to methodology, to include some prospective / observation audits. The importance of robust IR(ME)R audits to ensure IR(ME)R compliance was emphasised.

Management noted that whilst a new IR(ME)R audit programme is being drafted, the current programme is still rolling as they haven't transitioned yet. It was confirmed that the transition to the new programme is expected within the next two months. The draft audit programme was provided during the inspection. It was found to be more robust and it was recommended to include detail regarding the methodology for the user guide.

Whilst acknowledging the ongoing work to strengthen the IR(ME)R audit programme , management were reminded target IR(ME)R compliance rates are always set at 100% and they were requested to submit an action plan with timescales to drive the required improvement in terms of IR(ME)R compliance through robust audits.

Following the inspection a detailed action plan was submitted to RQIA which provided a specific action and associated timescales to implement a new IR(ME)R audit programme and follow up to non-compliance, confirming the current programme is still being carried out until the transition is complete. It was advised to ensure clinical evaluation is included in the IR(ME)R audit programme. An area of improvement has been identified to fully implement the IR(ME)R audit programme.

Review of the submitted SAF, supporting documentation and discussion with key staff during the inspection evidenced that the clinical audit process is well understood by staff and implemented in accordance with the Employer's procedures. However, the IR(ME)R audit programme and in particular the follow up on non-compliance requires to be strengthened and the area for improvement will assist on this matter. The inspection team acknowledge the commitment of staff in this regard.

5.2.3 Does the service adhere to legislation with regard to DRLs?

Diagnostic reference levels (DRLs) are defined as radiation dose levels, or for Nuclear Medicine the administered activity, for typical diagnostic examinations for groups of standard size adults and paediatrics for broadly defined types of equipment.

They are not expected to be exceeded when good and normal practice regarding diagnostic and technical performance is applied. DRLs should be used with professional judgement, and all operators must be familiar with and be trained in their appropriate use.

DRLs are used as a guide to help promote improvements in radiation protection practice and can help identify issues relating to equipment or practice by highlighting unusually high radiation doses. DRLs do not apply to individual patient exposures and any assessment against the DRL should be based on the results of patient dose surveys for groups of patients.

The Trust has currently adopted the National DRLs (NDRLs) and have established local DRLs (LDRLs) across a range of modalities. It was good to note that the Trust DRLs are under review following the introduction of updated NDRLs. However, the Trust do not have a range of plain film paediatric DRLs in place. An area of improvement has been identified to establish, implement and review plain film paediatric DRLs.

DRLs are a standing item at the IOT meetings, which are attended by the MPE. At the IOT meeting, the team will agree what examinations will be the focus of dose audits for DRLs, this is typically based on the most frequently performed imaging examinations. Dose audit data is collected prospectively and sent to the MPE. The results are then discussed at the following IOT meeting. If a new DRL is agreed to be proposed, a form is submitted to the RSSC and ratified at that forum. This process is applied across the modalities.

An example of the scrutiny applied by the IOT in relation to DRLs was outlined. The IOT agreed to audit doses for water soluble enemas. The results highlighted doses exceeded the NDRL. The IOT followed up with processes to optimise the doses for this type of examination, which included changes to practice. A follow-up dose audit was performed, demonstrating doses in line with or below the NDRL.

The ratification of the DRLs was discussed, in particular the fluoroscopy DRLs as the document submitted was not in a standard trust template. Management provided assurances that the DRLs had been ratified and were in the standard template. The DRLs were provided on site and were as described by management .

It was noted the lateral chest radiograph DRL value was not consistent with NDRL value. It was confirmed this was a typo error and the DRL is based on the NDRL. An area of improvement has been identified to amend the lateral chest radiograph DRL to accurately reflect the NDRL and to ensure DRLs are thoroughly scrutinised as part of the ratification.

In terms of persistently exceeded doses, staff are required to record doses on picture archiving and communication system (PACS). If they have concerns regarding doses or identify a trend, they can highlight these to the clinical lead.

The dose constraint for carers and comforters was discussed. Management confirmed it is a dose constraint per procedure, which is available in the employers procedures.
Staff demonstrated an understanding on the use of DRLs and action to take in the event of consistently exceeding them.

Review of the submitted SAF, supporting documentation and discussion with key staff during the inspection evidenced there are good processes in place for the establishing, implementing and reviewing of DRLs. The area for improvements will assist on this matter. The inspection team acknowledge the commitment of staff in this regard.

5.2.4 Does the service adhere to legislation and best practice with regard to the management of SAUEs, radiology incidents and near misses?

Incident and near miss management
Management and staff described the process of incident identification, reporting and investigation. The incident is recorded on DatixWeb which will include details regarding the patient, dose and incident. It was positive to note a poster available to support staff with providing the appropriate information (such as dose details, equipment details) when recording an incident on DatixWeb.

The Modality/site lead, RSM and the governance lead receive an alert from DatixWeb informing them that an incident has been recorded. The radiographer involved is also required to inform the modality/site lead or a senior member of staff when they discover the incident has occurred. The DatixWeb is reviewed by the lead and undertakes preliminary investigation to ascertain process failure which lead to the incident (Root Cause Analysis).

Modality/Site Lead will meet with staff member as part of preliminary investigation and a reflective diary must be completed. Any shared learning from interview and reflection is added to a shared learning form. If there is any wider learning identified, the governance lead will complete the Trust's Shared Learning template, which will be submitted to the Risk Management Incident Group. This will include any corrective measures adopted and /or remedial actions implemented to reduce the likelihood or prevent this type of incident from happening again. This is shared with relevant team by email, discussed and minuted at staff team meetings and uploaded to Quality Management System (QMS).

Management confirmed that if the incident involves other members of staff, a letter is sent to that individual informing them of the incident, a request to complete a reflective diary and complete IR(ME)R refresher training if appropriate. This letter is sent by the RSM if the incident involves a non-medical referrer (NMR), by the clinical director radiology if the incident involves a medical referrer. Radiographers involved in incidents will receive a similar letter from the lead of the area.

Measures to mitigate recurrence are identified through DatixWeb investigation, root cause analysis, MPE dose/risk assessment where applicable, staff reflection, shared learning forms and Incident Review Group review.

Actions are recorded on DatixWeb and the Radiology Incident and Near Miss spreadsheet. Learning is shared through staff meetings, email briefings, shared learning forms, quarterly incident analysis and the RSSC. Learning is shared outside of Radiology through the Trust Shared Learning form. High level incidents and near miss events are discussed at the weekly Directorate Governance meeting. A representative from radiology and the assistant director attends this forum with the risk management team. The discussions from this forum are fed back to the RSM and SMT as appropriate. Where recurrent themes are identified, targeted focus audits, refresher training, standard operating procedures updates or changes to relevant procedures processes are implemented.

The reporting of significant accidental and unintended exposures (SAUE) was discussed and the importance of adhering to timeframes set out in this guidance. It was noted that EP K reporting, investigation and learning from radiological errors did not reflect details of the current SAUE guidance and an area of improvement has been identified on this matter.

Management confirmed the interventional lead radiographer produces a quarterly report on trend analysis of incidents, which is presented to the governance lead and RSM. It is shared with the teams across the SEHSCT and uploaded to SharePoint to support staff access to the document. The spreadsheet as described previously, is used to produce this analysis and report. The spreadsheet details the date of incident, identifying number for the incident, a description of the event, if it is related to referrer or operator, if shared learning has been disseminated, dates for closing the incident, notifying the regulator etc. Through the reflective diaries, they encourage the staff member to explore factors which influenced the event such additional training requirements, procedures.

It was noted to that whilst reflection is important, it would be beneficial to adopt a systems-based approach to incident investigation overall. The service was encouraged to move away from a duty holder focused approach. An area of improvement has been identified to develop a robust systems-based approach to the management of incidents to ensure meaningful findings and shared learning.

The incident analysis report is shared with the RSSC. Where an incident needs to be escalated, it is escalated through the governance lead, RSM and clinical director radiology. In addition, the assistant director will be informed who will then inform the director and medical director.

Where a clinically significant accidental or unintended exposure (CSAUE) occurs, the governance lead will discuss this incident with the RSM, clinical director radiology and MPE. The Clinical Director for Radiology will then decide if the incident is considered a CSAUE. The patient may be notified at the time of the incident. The decision regarding communication of the incident is made in line with the Trust policy. It is typically communicated by the governance lead and is documented in a letter sent to the patient with shared outcomes of the investigation. If it is decided not to inform the patient, the clinical director radiology will make this decision and it will be made following discussions with the governance lead and RSM. The decision is documented in a specific section on DatixWeb, which would include the rationale. It is also recorded in the patient records and the Trust serious adverse incident forms.

Review of the submitted SAF, supporting documentation and discussion with key staff during the inspection evidenced good incident and near misses management processes are in place. It is hoped the areas of improvement will assist to strengthen incident and near miss management. The inspection team acknowledge the commitment of staff in this regard.

5.2.5 Additional areas reviewed - other areas identified through the review of the submitted self-assessment form and supporting documentation

Equipment QA
The Employer must keep an up-to date inventory of all medical radiological equipment including ancillary devices that can directly control or influence the exposure.

It was noted that the equipment inventory did not fully reflect all information required under IR(ME)R. An area of improvement has been identified on this matter.

Management and staff confirmed there is an appropriate amount of equipment available for the workload of the radiology department.

There is a formal, written equipment quality assurance (QA) programme in place. It was confirmed that the MPE had been involved in devising the equipment QA procedures. It was confirmed that daily and monthly quality control (QC) checks of the radiology equipment including that which is operated outside of the main radiology department, are carried out by appropriately trained and entitled operators.

The gaps identified regarding service dates on the inventory were discussed. Management described their process for monitoring servicing of the equipment. The leads for each area is responsible for updating the service log, with each modality having a folder on SharePoint to hold service information. The RSM's personal assistant is responsible for updating the overarching log.

Management clarified the service records inconsistent completion. They confirmed the cone beam CT (CBCT) on the inventory is not currently used as a CBCT, but is used as an orthopantomogram (OPT). Regarding the two C-arms, they were out of clinical use for the preceding 12 months and management were currently exploring decommissioning of this equipment.

Where a new piece of ionising radiation equipment is purchased by a department outside radiology, that department is responsible for informing the RSM as processes need to be explored and clarified. Management described a particular example whereby theatres purchased a C-arm, but following discussions with the RSM, Imaging took responsibility for the QA of the C-arm. In addition to these discussions, the finance team contacts the RSM where a department is seeking to purchase ionising radiation equipment to ensure the appropriate conversations have occurred.

6.0 Conclusion

There were 12 areas of improvement identified as a result of this inspection. These are fully outlined in the appended QIP.

The management team and staff are to be commended for their ongoing commitment and enthusiasm to ensuring that the radiology department is well managed and operating within the legislative framework; and maintaining optimal standards of practice for patients.

The inspection team would like to extend their gratitude to the management team and staff for their contribution to the inspection process.

7.0 Quality Improvement Plan/Areas for Improvement

Areas for improvement have been identified where action is required to ensure compliance with The Ionising Radiation (Medical Exposure) Regulations (Northern Ireland) 2018 known as IR(ME)R and other published standards which promote current best practice to improve the quality of service experienced by patients.

Total number of areas for improvement	12

Areas for improvement identified during this inspection are detailed in the QIP. Details of the QIP were discussed with senior management as part of the inspection process. The timescales commence from the date of inspection.

It is the responsibility of the Employer to ensure that all areas for improvement identified within the QIP are addressed within the specified timescales.

The QIP should be completed and detail the actions taken to address the areas for improvement identified. The Employer should confirm that these actions have been completed and return the completed QIP via BSU.Admin@rqia.org.uk for assessment by the inspector.

Quality Improvement Plan	
Action required to ensure compliance with The Ionising Radiation (Medical Exposure) Regulations (Northern Ireland) 2018	
Area for improvement 1 **Ref: Regulation 6 (1) (a)** **Schedule 2.1 (b)** **Stated: First time** **To be completed by: 12 November 2026**	The Employer must ensure the SEHSCT action plan for entitlement of staff outside of the radiology department is fully implemented. Ref 5.2.1
	Response by Employer detailing the actions taken: An action plan is in place and will be led by Radiology Services Manager(RSM) & Clinical Director (CD) . Adherence to the action plan will be monitored through Senoir Management (SMT) relevant meetings & Radiology Safety Sub Committee
Area for improvement 2 **Ref: Regulation 6 (1) (a)** **Schedule 2.1 (b)** **Stated: Second time** **To be completed by: 12 November 2026**	The Employer must review the entitlement of staff who work outside of the radiology department to ensure it reflects all the duty holder roles they undertake and entitlement records outline a clear scope of practice. Ref 5.2.1
	Response by Employer detailing the actions taken: The application form for non medical referrers will be updated to ensure it covers all duty holder roles.Entitlement records will clearly define the duty holders scope of practice. CD will review all duty holder roles of medical staff through their Clinical Leads .Entitlement for Independent Sector (IS) will be reviewed and actioned by CD

Area for improvement 3 **Ref: Regulation 6 (1) (a)** **Regulation 17 (1)** **Schedule 2.1 (b)** **Stated: First time** **To be completed by:** **12 November 2026**	The Employer must ensure any individuals within the Emergency Department carrying out clinical evaluation are appropriately trained, competent and entitled to do so. Ref 5.2.1
	Response by Employer detailing the actions taken: Individuals undertaking clinical evaluation currently undergo additional training by the reporting radiographers . The entitlement form will be amended to reflect those who carry out this role and their scope of practice will be clearly outlined. Assurance regarding competency is provided through their application form which is signed by their Clinical Lead outlining training , competency and governance arrangements
Area for improvement 4 **Ref: Regulation 6 (1) (a)** **Regulation 17 (1)** **Schedule 2.1 (b)** **Stated: First time** **To be completed by:** **12 November 2026**	The Employer must review the clinical evaluation of speech and language therapy exposures and ensure there is entitlement of operators to carry out this operator task; and that the entitlement process is underpinned by appropriate training and competency. Ref 5.2.1
	Response by Employer detailing the actions taken: The entitlement form will be amended to reflect those who carry the operator task role and their scope of practice will be clearly outlined. Assurance regarding competency is provided through their application form which is signed off by their Clinical Lead outlining training, competecy and governace arrangements
Area for improvement 5 **Ref: Regulation 6 (1) (a)** **Schedule 2.1 (b)** **Stated: First time** **To be completed by:** **12 November 2026**	The Employer must review the stroke pathway to ensure the relevant individuals are entitled as duty holders and have a defined scope of practice. Ref 5.2.1
	Response by Employer detailing the actions taken: The stroke pathway clinical guidelines will be updated to reflect each individual duty holder roles .The entitlement form will be amended to reflect the duty holder roles with a defned scope of practice demonstrated
Area for improvement 6 **Ref: Regulation 6 (2)** **Stated: First time** **To be completed by:** **12 November 2026**	The Employer must formalise meetings with theatre staff in relation to IR(ME)R compliance, to include a set agenda and frequency, terms of reference, agreed actions and minutes of meetings to monitor action. These meetings should then feed into the Trust governance structures. Ref 5.2.1
	Response by Employer detailing the actions taken: A monthly theatre meeting already takes place which Radiology will now attend . Radiology will be added as a roling agenda item

	and existing Terms of Reference (TOR)will be updated to reflect membership. Governance structure will be updated and assurance provided through Radiology Safety Sub Committee

Area for improvement 7 **Ref: Regulation 6 (2)** **Stated: First time**	The Employer must fully implement the revised IR(ME)R audit programme. Ref 5.2.2
To be completed by: **12 November 2026**	**Response by Employer detailing the actions taken**: A meeting was held on 13/10/2026 with the RSM, Modality/Site Leads and QSI Lead to discuss the IR(ME)R programme . This programme is now part of a Quality Improvement project being undertaken by th Radiology QSI Lead radiographer . See attached new IRMER Audit action plan
Area for improvement 8 **Ref: Regulation 6 (5) (c)** **Stated: First time**	The Employer must establish, implement and review plain film paediatric diagnostic reference levels (DRLs). Ref 5.2.3
To be completed by: **12 November 2026**	**Response by Employer detailing the actions taken**: A Plain Film Image Optimisation Team (IOT) meeting has been organised for 12th November 2026 where Paediatric DRLs will be reviewed in conjunction with the Medical Physices Expert (MPE)
Area for improvement 9 **Ref: Regulation 6 (5) (c)** **Stated: First time**	The Employer must amend the lateral chest radiograph DRL to accurately reflect the national DRL and to ensure DRLs are thoroughly scrutinised as part of the ratification. Ref 5.2.3
To be completed by: **12 November 2026**	**Response by Employer detailing the actions taken**: The DRL figure has been amended and the paperwork has been updated and communicated with staff . This is displayed in the plain film rooms and is available on SharePoint (SP)
Area for improvement 10 **Ref: Regulation 8** **Stated: First time**	The Employer must update Employer's Procedure K reporting, investigation and learning from radiological errors to reflect details of the current SAUE guidance. Ref 5.2.4
To be completed by: **12 November 2026**	**Response by Employer detailing the actions taken**: The Employers Procedures (EPs) will be updated to relect the current SAUE guidance , communicated to staff , training undertaken , monitored through the Incident Review Group (IRG) and assurances provide through Radiology Safety Sub Committee
Area for improvement 11 **Ref: Regulation 8** **Stated: First time**	The Employer must develop a robust systems-based approach to the management of incidents to ensure meaningful findings and shared learning. Ref 5.2.4

To be completed by: **12 November 2026**	
	Response by Employer detailing the actions taken: The Employer will discuss the implementation of the National Coding Taxonomy with the MPE at the next IRG meeting. The Medical Exposures Group (MEG) has recorded presentations to support the adoption of the coding taxonomy and participation in the National Incident Learning System which the team will review with a planned rollout in January 2027

Area for improvement 12 **Ref: Regulation 15 (2)** **Stated: First time** **To be completed by: 12 November 2026**	The Employer must ensure the equipment inventory fully reflects all information required under IR(ME)R. Ref 5.2.5
	Response by Employer detailing the actions taken: Modality leads will update the relevant equipment inventory for their service . This is discussed at all IOTs as part of the rolling agenda.



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