Inspection Report of Compliance with the Ionising Radiation (Medical Exposure) Regulations (Northern Ireland) 2018

16 January 2020

SHSCT Banbridge Health and Care Centre, Diagnostic Department

Address: 10 Old Hospital Road, Banbridge, Co.Down, BT32 3GN

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Assurance, Challenge and Improvement in Health and Social Care

It should be noted that this inspection report should not be regarded as a comprehensive review of all strengths and areas for improvement that exist in the service. The findings reported on are those which came to the attention of RQIA during the course of this inspection. The findings contained within this report do not exempt the service from their responsibility for maintaining compliance with legislation, standards and best practice.

1.0 What we look for

RQIA has employed refreshed inspection methodology in relation to compliance of radiology services with The Ionising Radiation (Medical Exposure) Regulations (Northern Ireland) 2018, known as the IR(ME)R regulations. The regulations came into force on 6 February 2018.

The inspection had a particular focus on the key changes to the regulations including:

- Communication of benefits and risks
- Diagnostic reference levels (DRL's)
- Accidental and unintended exposures
- Equipment
- Carers and comforters
- Medical physics expert advice
- Non-medical imaging using medical radiological equipment

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

Medical exposures

- 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
- To carers and comforters
- To asymptomatic individuals
- Non-medical exposures using medical radiological equipment

2.0 Service details

Name of Establishment: SHSCT Banbridge Health and Care Centre	**Department Inspected:** Diagnostic Department
Name of Employer: Mr Shane Devlin, Chief Executive Southern Health and Social Care Trust (SHSCT)	**Head of Diagnostics Services:** Ms Jeanette Robinson
Clinical Director of Radiology: Dr Imran Yousuf	**Medical Physics Expert:** Ms Julie Smyth

3.0 Profile of services

The self-assessment form submitted prior to the inspection confirmed that each year, Banbridge Health and Care diagnostic department carries out approximately:

- 6191 General radiology (plain film)
- 1962 Ultrasound scan (US)

US services were not inspected, as these services do not involve the use of ionising radiation and therefore are not subject to the IR(ME)R regulations.

Banbridge Health and Care Centre diagnostic department employs:

- 1 Radiographer
- 1 Medical Physics Expert (MPE) under contract to the Belfast Health and Social Care Trust from the Regional Radiation Protection Service

It was confirmed that at present radiographers from Craigavon Area Hospital (CAH) radiology department rotate to cover the department which is operational from 9am to 5pm Monday to Friday. Consultant radiologists based in CAH radiology department can be contacted by telephone in accordance with their Practitioner role and for advice and support.

4.0 Methodology

On 16 January 2020, warranted IR(ME)R inspectors from RQIA, with advice being provided by Public Health England (PHE) staff, carried out an announced inspection to SHSCT Banbridge Health and Care Centre, diagnostic department, as part of RQIA's IR(ME)R proactive inspection programme.

Prior to the inspection, the service was requested to complete a self-assessment form and provide RQIA with all relevant policies and procedures. This information was shared with PHE prior to the inspection visit, and was used to direct discussions with key members of staff working within the radiology department, and provide guidance for the inspection process.

SHSCT staff and Medical Physics Expert (MPE) staff in attendance for part or all of the inspection:

Mr Shane Devlin	Chief Executive Officer
Mr Barry Conway	Assistant Director – Acute Services
Dr Imran Yousuf	Clinical Director of Radiology
Ms Jeanette Robinson	Head of Diagnostic Services
Ms Helena Kinkaid	Lead Radiographer
Ms Ann Tate	Site Lead Radiographer
Ms Sharon McGuigan	QSI Radiographer
Ms Janet Eagle	Lead Radiographer
Ms Grainne Forsythe	Lead Reporting Radiographer
Ms Denise Newell	PACS Manager
Ms Emma Lawless	PACS Manager
Ms Cathy Johnson	Radiographer -Radiation Protection Supervisor (RPS)
Ms Chris Swain	Radiographer (RPS)
Ms Julie Smyth	Medical Physics Expert (MPE)

The inspection team reviewed relevant documentation and patient records. A tour of some areas of the diagnostic department was undertaken and the inspectors took the opportunity to speak with a radiographer.

5.0 Inspection outcome

	Regulations
Total number of areas for improvement	6

Details of the Quality Improvement Plan (QIP) were discussed with senior management as part of the inspection process. The timescales for completion commence from the date of inspection.

6.0 The inspection - key findings

6.1 Review of area of improvements from previous inspection.

No prevoius IR(ME)R inspections have been carried out to Banbridge Health and Care Centre diagnostic department.

6.2 Duties of the employer

Employer's procedures

Banbridge Health and Care Centre, SHSCT had the required Employer's Procedures in place which had been reviewed and updated in accordance with IR(ME)R 2018 and issued in November 2019. The Employer's Procedures are reviewed every two years or more frequently if change is necessary.

A Radiation Safety Policy had been issued in November 2019 and confirmed that the Employer has been clearly identified in line with IR(ME)R legislation. We found that the overall responsibility for IR(ME)R lies with Mr Shane Devlin, Chief Executive Officer (CEO), SHSCT and his subsequent responsibilities are clearly set out.

The Radiation Safety Policy outlined governance and reporting structures in relation to the use of ionising radiation. The CEO, through the Executive Team nominates the Clincal Director of Radiology as the Chair of the Radiation Safety Committee (RSC) with the tasks associated for ensuring compliance with the requirements set out in the Radiation Safety Policy and the IR(ME)R regulations. Clarification was sought on the wording within the Radiation Safety Policy in relation to delegation and responsibilities. The inspection team suggested a review of the policy should be undertaken to ensure that there is no reference to the delegation of Employer responsibilities.

Review of the submitted documentation and discussion with the management team outlined that systems are in place to ensure that Employer's Procedures are complied with by Referrers, Practitioners and Operators, through audit, induction and training.

Document and version control are clearly noted on the Employer's Procedures and inspectors were informed that all relevant policies and procedures can be found on SHSCT intranet.

Quality Assurance programme for written policies and procedures

The inspection team reviewed documentation provided and confirmed that a quality assurance system of documentation is in place. We found that relevant authors are responsible for reviewing the document in the timescale specified according to: current practice; internal audit results; national guidelines; codes of practice and evidence based practice; statutory or regulatory requirements and standards; patient requirements; technological developments; and associated competency levels of staff. We found that changes are communicated to relevant staff via staff meetings; verbal day to day communication to staff; fortnightly team briefs; and email communication.

The Q Pulse Quality Management System(QMS) distributes documents for acknowledgement and has the facility of electronic read signatures which provides an audit trail to ensure documents have been read by the required individuals.

'Employer's Procedure F', outlines the quality assurance programmes in respect to equipment, written procedures and protocols. It was suggested to include a statement outlined in the self-assessment form (section 10.2) in relation to the role of QMS in document control.

Equipment Quality Assurance (QA) is further discussed in section 6.6 of this report.

Diagnostic Reference Levels (DRLs)

The process for establishing, reviewing, and checking compliance with DRLs has been developed in the collaboration with the MPEs and is set out in 'Employer's Procedure H'.

The Trust has adopted the National DRLs (NDRLs) whilst some local DRLs (LDRLs) are progressing with data collection. The Radiology Safety Committee (RSC) has assigned the task of establishing LDRL values to the Diagnostic Radiology and Nuclear Medicine (DR&NM) sub-committee who have further delegated this to the modality specific Image Optimisation Teams (IOTs). The IOTs are involved in collection of data for a range of regularly performed examinations that reflect the scope of typical radiographic, CT and fluoroscopic procedures undertaken within the Trust.

The MPE provides a report on this collated data and advises when optimisation of a specific examination or protocol is needed. Once optimisation is completed the LDRLs are assessed and approved by the Diagnostic Radiology and Nuclear Medicine (DR&NM) sub-committee. Further recommendations may be added by the RSC before final approval.

It was positive to note that there is one LDRL for general radiography (chest x-ray) and three for CT across the Trust which have been implemented by the RSC. Work is ongoing on paediatric LDRLs with data collected for orthopantomogram (OPG) and chest x-ray as there are enough numbers of examinations for meaningful data. We found that all of adult data has been collected and is being analysed. We were advised that the SHSCT plan to have these LDRLs in place this year.

Staff spoken with demonstrated a clear understanding on the use of DRLs and the action to take in the event of a DRL being consistently exceeded. DRLs were noted to be displayed in the radiology department and are available to all staff on Q-pulse to view.

Clinical audit

We found that the imaging service has an underpinning culture of quality improvement. Management and staff demonstrated an inclusive, enthusiastic and proactive approach to patient centred service improvement.

A planned Trust wide Radiology Audit Schedule is in place and evidence of audits was provided. There is an audit list for each site which is completed by staff in the respective radiology department. The inspection team reviewed radiology audits carried out in Banbridge Health and Care Centre and it was good to note that where there were areas of non-compliance, there was evidence of a re-audit being carried out within a specified timeframe.

This resulted in increased compliance rates. Audits are used to improve and change practice with results being shared at the fortnightly team brief, emailed to staff and provided online. The Trust hold monthly radiology audit days where audit findings can be presented and discussed.

The Clinical Director of Radiology confirmed that the audit findings and shared learning is part of a fixed topic on the agenda for the RSC which in turn feeds into Divisional Governance meeting.

The Trust has entered into third party contracts with Alliance Medical, Fourways and Everlight to provide radiological services. On discussion it was confirmed that formal auditing arrangements in relation to these services has been developed.

'Employer's Procedure Q' (Audit) is in place and it was suggested to expand the procedure to reflect the detailed good work being carried out in relation in radiology audit.

Accidental and unintended exposures

Management and staff explained the process for reporting accidental or unintended exposures internally and then to the appropriate enforcing authority. We found that there had been no reported radiology near misses or incidents in Banbridge Health and Care Centre.

The Trust has strengthened the management of incidents following previous IR(ME)R inspections to other radiology departments within the Trust.

The inspection team reviewed a radiology error report for April-October 2019. It provided evidence of trend analysis and a new process for the Trust using error taxonomy developed by Clinical Imaging Board. It was acknowledged this is an evolving process and will develop further.

The report highlighted key findings. Theinspection team suggested further work should be completed on key findings in the analysis to strengthen the wording and provide associated actions.

Staff spoken to demonstrated a good understanding of the action to take in the event of an incident occurring and confirmed learning from incidents is shared at fortnightly team briefs.

'Employer's Procedure I' for Radiation Incident Investigation and Reporting is in place. It provided a sound framework to manage incidents. The inspection team noted that there was a reference to 'Much Greater Than Intended' (MGTI) guidance which has been superseded by Significant Accidental or Unintended Exposures (SAUE) guidance. The management gave assurances that this was a oversight on their part and they would update the procedure to reference SAUE guidance.

'Employers Procedure J' for Clinically Significant Incidents was in place and we found it to be in line with legislation.

All radiation incidents are collated and sent to the Radiology Safety Committee and through the governance framework as previously described.

Training, competence and entitlement

There was evidence of induction, training and continuing professional development for all grades of staff. Systems are in place to check the professional qualifications and registration of all employees with their appropriate professional bodies.

It was confirmed there are comprehensive systems in place to provide annual appraisals for all grades of staff. It was further confirmed that training and development needs are identified for individual staff as part of the appraisal process. Consultant radiologists have their appraisals undertaken by an approved medical appraiser.

All grades of staff are responsible for maintaining their own portfolio of evidence to maintain their individual professional accreditation.

The inspection team reviewed a number of completed induction programmes for radiographers and competency and entitlement forms. Training and competency records for radiographers were of a satisfactory standard. We found the completed induction programme records did not clearly outline that the IR(ME)R regulations were covered as part of induction. The inspection team were assured that IR(ME)R was discussed at induction however not captured on the induction record. An area of improvement was identified in relation to further developing the record of induction programme for radiology staff to include the record of training on IR(ME)R regulations.

Staff confirmed that they had received update training from the MPE on the IR(ME)R regulations.

'Employer's Procedure C ' contains clear information on the entitlement process.

The senior team reported that radiographers and radiologists had been appropriately entitled according to their training, competencies and individual scope of practice. Entitlement is reviewed at annual appraisal and adjusted accordingly if a staff member's scope of practice had changed. The entitlement process for radiologists was discussed and a radiologist's entitlement documentation reviewed. MPEs are presently entitled under a group entitlement approach.

It was confirmed that third party radiology staff are subject to the entitlement process. This process was outlined by the Clinical Director of Radiology and evidenced through entitlement documentation. A minor inaccuracy was noted in 'Employer's Procedure C' in relation to the entitlement of third party providers which management gave assurances would be amended.

Discussion on the entitlement of staff outside of the radiology departments highlighted that there are some nurse practitioners from emergency departments within the Trust (not Banbridge Health and Care Centre) who are clinically evaluating medical exposures within their scope of practice and there are surgeons in theatre justifying screening exposures. Management confirmed that they have been entitled however this is not reflected in 'Employer's Procedure C.' An area of improvement was identified on this matter.

Referrals

The referral guidelines currently being used are the Royal College of Radiologists i-Refer Guidelines Making the Best Use of Clinical Radiology 8th edition. Referral guidelines are available on the SHSCT intranet.

Staff described how diagnostic referrals are made to the department, including prioritising referrals and specifically timed future examinations.

A clear process was evidenced for returning/rejecting referrals which are incomplete, inappropriate or unjustified. Cancelling referrals was discussed including how Referrers are made aware of the process to cancel a referral they have made.

'Employer's Procedure A', accepting a referral for a medical exposure, was in place and found to provide clear information.

6.3 Justification and Authorisation of individual medical exposures

Justification and authorisation was discussed with staff, who demonstrated an understanding of the process and described how justification and authorisation is recorded electronically on the radiology information system (RIS). This was evidenced in a randomly selected number of patient records.

It was confirmed that radiographers act as Operators and authorise under guidelines in general radiology. Authorisation guidelines were in place for general radiology examinations which identified the Practitioner for these medical exposures.

The justification of carers and comforters exposures was discussed and it was confirmed that radiographers are entitled as Practitioners for carers and comforters medical exposures. This is fully outlined in 'Employer's Procedure R'. Staff confirmed that they verbally outline the benefits and risks of the exposure to the carer or comforter. They complete a carers and comforters record form which includes written information on the benefits and risks and a pregnancy enquiry form if relevant is signed by the carer or comforter and the radiographer.

Non- medical exposures using medical radiology equipment

Staff confirmed that non-medical imaging is not carried out in Banbridge Health and Care Centre.

6.3 Optimisation

There are good arrangements in place to ensure that medical exposures are kept as low as reasonably practicable. 'Employer's Procedure K' outlines the arrangements in place, these include:

- Applications training
- Radiographic protocols
- Standard operating protocols
- Routine equipment maintenance
- Appropriate exposure charts
- Patient dose surveys
- Daily quality assurance
- DRLs/LDRLs

A minor amendment was suggested to 'Employer's Procedure K' in relation to LDRLs.
IOTs are established and terms of reference are in place. Staff were aware of the work of the IOTs and displayed an understanding of their role in the optimisation of exposures.

The MPE described their involvement on the IOT's and confirmed that they are involved in dose audits; the establishment of LDRLs; setting up of protocols and risk assessment.

Communication of benefits and risks of having an exposure to ionising radiation

Staff displayed clear understanding in relation to the process of providing the individual (or their representative) to be exposed with adequate information on the benefits of having the exposure and the risks associated with the radiation dose. It was confirmed that staff had training from the MPE in relation to providing benefits and risks information.

It was good to note information posters prominently displayed in the waiting areas of the imaging department. Inspectors reviewed written patient information and preparation leaflets which had been developed and found them to be well written.

Paediatrics

Paediatric imaging is provided by the diagnostic department. It was noted that special attention is paid to optimisation when undertaking exposures of children. This includes:

- paediatric exposure charts
- modified views
- alternative techniques not involving ionising radiation where appropriate
- use of lead protection, where justified and appropriate

As stated previously, the IOT is leading a trust wide focus on developing paediatric LDRLs.

Clinical Evaluation

'Employer's Procedure O' is in place for the clinical evaluation for medical exposures and it outlines that a documented clinical evaluation is produced for all medical exposures.

Discussions with management and staff confirmed a clear understanding of the clinical evaluation for medical exposures.

There is an audit trail in the Radiology Information System (RIS) which identifies which exposures have not yet been reported on. It was confirmed that there are instances where clinical evaluation is recorded directly in the patients clinical notes.

6.5 Expert Advice

The SHSCT retains the services of a MPE on a contractual basis. The MPE was present for the duration of the inspection. It was confirmed the appointed MPEs are currently recognised by Department of Health and are entitled as Operators who are competent and appropriately trained for their scope of practice.

The MPE provides ongoing advice and support to the management team on a range of issues including dosimetry and evaluation of dose, QA matters relating to radiation protection, and radiological equipment.

The MPE contributes to radiation protection of patients and others, DRLs analysis, QA of the equipment which will be further discussed in section 6.6, acceptance testing of equipment, installation design and technical specification of equipment, analysis of accidental or unintended exposures, selection of equipment for radiation protection measurements, training of Practitioners and other staff on radiation protection and compliance with regulations. It was confirmed the lead MPE had provided training to staff on IR(ME)R regulations 2018.

6.6 Equipment

An inventory of radiological equipment was submitted to RQIA which did not contain all of the legislative information. 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.

As stated previously 'Employer's Procedure F' includes information on QA of equipment.

The quality assurance records for radiology equipment were reviewed. We evidenced that an internal QA procedure was in place. We reviewed the records in relation QA procedures and found that QA checks on the radiation dose output or light beam alignment – two fundamental checks had not been carried out. Staff stated a QA test had been completed on 8th January 2020 and that this had been undertaken on three consecutive days (required to provide a baseline reading for all other checks to be compared to) but this was not evidenced on the record form provided as only one check had been recorded. There was no signature of who completed the one check nor was the baseline clearly identified for other staff to understand.

The records viewed were incomplete and did not provide assurances that the equipment was being checked in line with manufacturers instructions and QA procedures.

We discussed with senior management the inadequacy of the QA checks; the training and competence of staff undertaking QA of equipment checks; the governance arrangements for compliance with the QA of equipment procedures; and the need for an immediate response to RQIA to assure us that radiology equipment is clinically safe to use. The senior management gave immediate assurances that the matter would be robustly addressed. An action plan was requested to be submitted to RQIA within one week of the inspection outlining action taken and action proposed to ensure all QA of radiology equipment is fully compliant with QA procedures, including governance arrangements.

The Head of Diagnostic Services, submitted a X-ray Equipment QA policy and a Quality Assurance action plan to RQIA on 23 January 2020, which outlined specific action taken and proposed in relation to the QA equipment findings of the inspection. The following was outlined:

QA procedure

- QA procedure to be implemented and disseminated to all QA radiographers by 31 January 2020
- equipment testing and frequency are listed in this procedure as well as the staff members responsible for QA. This has been implemented

Staff training

- medical physics staff to provide training to QA radiographers on 11 February 2020
- training will be cascaded to designated staff and will be signed off using a competency sheet. To be completed by 28 February 2020
- QA testing will be included in the staff induction pack. To be implemented by 31 January 2020

Testing equipment

- testing equipment will be available on each site. To be implemented by 31January 2020
- QA recording form to be updated to include full signature. To be implemented by 31 January 2020

Feedback Mechanisms

- QA tests will be recorded:
- A - on RIS
- B- a paper copy will be kept within each room
- C- a shared database will be available to all staff performing tests. To be implemented by 31 January 2020
- the QA testing database to be sent to relevant IOT radiographer each month. To be implemented first week of February 2020
- the IOT lead radiographer will discuss the QA findings at quarterly IOT meeting. To be implemented first week of February 2020

Schedule

- QA tests will be undertaken on the first week of the month or bimonthly. Designated QA radiographers will undertake testing
- the IOT lead radiographer will inform the site lead radiographer if no QA report is received

Further to receipt of this action plan, the inspection team emailed the Head of Diagnostic Services on 29 January 2020 to confirm that the X-ray equipment in Banbridge Health and Care Centre has been fully tested in line with the legislation and relevant professional standards and is safe for use.

The Head of Diagnostics services confirmed via email that the daily checks have been carried out and x-ray equipment is fully tested in line with legislation. A further email was sent from RQIA to confirm these tests have deemed the radiology equipment safe to use. On 30 January 2020 the Site Lead Radiographer via an email confirmed that the radiology equipment was safe to use.

To ensure the full implementation of all the measures set out above by the Trust an area for improvement has been identified to ensure the equipment QA procedures are robustly complied with by suitably qualified, trained and competent staff and associated governance arrangements are rigourously implemented to ensure the safety and wellbeing of patients.

During discussion with the MPE regarding the frequency of MPE QA of equipment, it was confirmed that at present the QA equipment programme, as agreed in the service level agreement between the Trust and Regional Medical Physics, was behind schedule. This matter had been identified at a previous inspection in another of the Trust's radiology departments in September 2019. The MPE confirmed currently they are having to prioritise high dose equipment annual QA above all else due to staff shortages.

The MPE visited Banbridge Health and Care Centre in April 2019 to commission a replacement automatic exposure control (AEC). The last scheduled annual QA was completed 2018.

An area of improvement was identified to develop an action plan to facilitate compliance with MPE QA programme for radiology equipment.

6.7 Patient identification

'Employer's Procedure B' is in place to correctly identify individuals to be exposed to ionising radiation. The procedure references the three point patient identification process. It clearly outlines that it is the responsibility of the operator who carries out the medical exposure to ensure that the correct patient receives the correct medical exposure according to the referral.

Staff outlined the patient identification procedure and that the operator responsible must sign their name beside the identity (ID) check on the referral form or sign electronically in RIS as appropriate. Review of a sample of patient records confirmed an ID check had been recorded.

6.8 Pregnancy Enquiries

'Employer's Procedure E' for making enquiries of individuals of childbearing potential to establish whether the individual is or may be pregnant or breast feeding was in place and found to be adequate.

Staff interviewed demonstrated a very good understanding of making pregnancy enquiries, describing clearly what they would do in a range situations and where to record details of these enquiries. Pregnancy enquiry forms for different clinical situations were made available and are in use. "Inform the radiographer if you are pregnant" posters were displayed in the changing areas in the department.

6.9 Research

The management team confirmed that no research is currently being conducted in Banbridge Health and Care Centre diagnostic department.

'Employer's Procedure L' was in place for research exposures. We found the procedure to provide high level information which may not be adequately detailed for Operators should research be undertaken in the future or at any other sites within the Trust. An area of improvement has been identified to provide more detail on the Operators functions and role within Employer's Procedure L'.

6.10 Review of environment

The inspection team reviewed the facilities available in relation to diagnostic imaging. The department was found to be clean, tidy and well organised. There were posters to provide patients with information regarding the benefit and risk of the exposure and pregnancy posters were displayed. There was a well-appointed waiting area.

6.11 Staff discussion and review of patient records

The inspection team met with a radiographer and discussed: the application of the Employer's Procedures; the role and responsibilities of duty holders; patient identification; the use of authorisation guidelines; induction; continued professional development; the use of DRLs as a reference tool; and the action to be taken if they thought a patient had received an accidental or unintended exposure. Staff demonstrated a good working knowledge of the Employer's Procedures and the other areas discussed. Review of patient records indicated that the correct procedures are being followed.

6.12 Conclusion

Radiological practice in Banbridge Health and Care Centre diagnostic department was found to be largely safe, effective and in line with the principles of IR(ME)R and good practice guidelines.

The staff were found to be knowledgeable and professional. It is acknowledged the work that has been undertaken to ensure compliance with the IR(ME)R regulations 2018 including: updating the Ionising Radiation Safety Policy and the Employer's Procedures; the MPE providing training on the new regulations to management and staff and developing posters and information leaflets for the communication of the benefits and risks of medical exposures to patients (and or their representative) and developing LDRLs.

As stated previously, it was evident the radiology department has an underpinning culture of quality improvement. Management and staff demonstrated an inclusive, enthusiastic and proactive approach to patient centred service improvement. The staff feedback provided on the day of inspection confirmed this approach.

Inspectors concluded that there was one identified concern regarding the delivery of the service which related to the QA of equipment. The prompt and robust response to this matter from senior management and staff is acknowledged and the action plan provided following the inspection serves to offer assurance that appriopriate action has and will be taken.

There were six areas of improvement identified as a result of this inspection. These are fully outlined in the appended Quality Improvement Plan (QIP).

The management team and staff are to be commended for their commitment and enthusiasm to ensuring that the department is striving to operate within the legislative framework and maintaining optimal standards of practice for patients.

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

7.0 Quality improvement plan

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.

7.1 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.

7.2 Actions to be taken by the service

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 and other published standards which promote current best practice to improve the quality of service experienced by patients.	
Area for improvement 1 **Regulation:**17(4) & 6(3)(b) **Stated:** First time **To be completed by:** 16 March 2020	The Employer shall ensure that the induction programme for radiology staff is further developed to include the training provided on the IR(ME)R regulations is recorded. Ref: 6.2
	Response by the Employer detailing the actions taken: To comply with regulation 17(4) The local induction pack has been updated as to include Radiation Protection covering the following : Description, explanation of use and date issues of Dosemeter, Radiology safety policy (Latest version approved by trust), Local Rules for department Employers procedures, In conjunction with the aforementioned an IR(ME)R (NI) 2018 Competency (Ref: WF-RS-16) has been included comprising of 15 points within every Radiographers competency lists including but not limited to "understanding the Radiation Safety Policy" and where to find the most up to date version, "Be aware of where to find the latest List of Entitled Referrers for referrals into Radiology." These competencies are completed at induction and on a yearly basis.
Area for improvement 2 **Regulation:** Schedule 2(b) **Stated:** First time **To be completed by:** 16 March 2020	The Employer shall ensure that 'Employer's Procedure C', Entitlement, is further developed to reflect the entitlement of nurse practitioners from emergency departments within the Trust (not Banbridge Health and Care Centre) who are clinically evaluating medical exposures within their scope of practice and surgeons in theatre justifying screening exposures. Ref: 6.2

	Response by the Employer detailing the actions taken: Employer's Procedure C has been amended to ensure complience with recommendations and include: individual entitlement under IR(ME)R (NI) 2018, A new scheme of work for non medical referrers and a protocol for Radiological requests by Non-medical Rererrers. This has been complied by the PACS team and is avaliable on QPulse (WF-TW-PACS-16), (WF-TW-PACS-17) & (WF-TW-PACS-19).
Area for improvement 3 **Regulation:** 15(1)(b) & (2)(a-e) **Stated:** First time **To be completed by:** 16 February 2020	The Employer shall ensure an inventory of radiological equipment is established which contains all of the legislative information required. Ref: 6.6
	Response by the Employer detailing the actions taken: 15(1)(b) There is a current L inventory of all medial Radiology equipment which is avaliable on the trust K drive and QPulse which is avaliable to all Radiology staff. A hard copy of each deaprtments inventory is held by the lead Radiographer in that area.
Area for improvement 4 **Regulation**: 15 (1)(a)(i)&(3)(b) **Stated:** First time **To be completed by:** 31 January 2020	The Employer shall ensure that the equipment QA procedures are robustly complied with by suitably qualified, trained and competent staff and associated governance arrangements are rigourously implemented. Ref: 6.6
	Response by the Employer detailing the actions taken: There is a robust QA program with set baselines which are performed at set intervals completed in occordance with the MPE and manufactures guidlines. The equipment controllers ensure this is completed at said intervals and feed back to the head of the Image Optimization Team (IOT). A QA working group has been established which meets twice a year. A QA policy is in place which outlines QA coordinators and QA trainers who are named and identified with their roles clearly outlined. The QA coordinators are responsible for QA testing being performed and then report to the lead Radiographer who rectifies any issues that may arise. A flow chart was developed outlining the process of when QA is carried out and how to feedback and problems identified. A gap analysis has also been carried out as per MPE recommendations to identify any additional tests that may be required or any instances of poor testing quality. QA trainers have been trained, standard operating procedures written and disseminated to staff. QA is now a part of the induction process with a competency based sheet, the tests and recording process is generic as to allow uniformity and allow all staff to perform QA no matter what site they are present at.

	A generic spread sheet has been developed and shared on a shared drive so that the results of all sites can been viewed. QA results are populated onto the spread sheet each month keeping all the information together and accessible. The results and any issues arising are fed into the plain film image optimisation team meetings on a 3 monthly basis as a learning function. The leat IOT Radiographer reports bi-annually to the senior management team on the QA reporting position, outlining any discrepencies or issues that have arisen.
Area for improvement 5 **Regulation:**15(3)(b) **Stated:** First time **To be completed by:** 16 March 2020	The Employer shall develop an action plan to facilitate compliance with the MPE QA programme for radiology equipment. Ref: 6.6
	Response by Employer detailing the actions taken: An action plan was set forth and implimented, all QA tests are carried out in line with MPE & manufacturers guidelines whether this is daily, monthly, bi-monthly or quartly as shown in the QA X-Ray Equipment Policy.
Area for improvement 6 **Regulation:** Schedule (2)(g) **Stated:** First time **To be completed by:** 16 March 2020	The Employer shall ensure more detail on the operational functions and roles are outlined within 'Employer's Procedure L'. Ref: 6.9
	Response by the Employer detailing the actions taken: Amendments have been made to 'Employer's Procedure L' as to include the operators roll within the boundaries of research purposes within the radiology department. There is no research policy within the trust for Radiology as no research is carried out within Radiology.

Please ensure this document is completed in full and returned via BSU.Admin@rqia.org.uk

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