ANNUAL RPA/MPE AUDIT

108 HARLEY STREET

108 X-RAY & IMAGING

Audit Date: 03/01/2020

Report No: IND-TBC-RPA-01-19-DJ

Report Date: 11/02/2020

REPORT

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AUDIT SUMMARY

Date of Audit	03/01/2020	Next Audit Due	Jan 2021
Date of Last Audit	13/07/2018	Previous Report Number	IND-TBC-RPA-01-18-dj

Name of Auditor	David Johnstone	Name of Auditee(s)	Sally Bucklitsch

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Overall Rating of Audit
Fully compliant with no improvements required
Nearly fully compliant with only few minor improvements necessary
Partially compliant with a number of minor improvements necessary
Partially compliant with major improvements necessary
Non-compliant with serious disregard to safety

The overall summary refers to the level of compliance with the current regulations, standards and guidance relating to the use of ionising radiations in diagnostic imaging, namely: The Ionising Radiations Regulations 2017, The Ionising Radiation (Medical Exposure) Regulations 2017; The Environmental Permitting Regulations 2016; HSE Guidance Note PM77 Equipment Used in Connection with Medical Exposure; IPEM88 Guidance on the Establishment and Use of Diagnostic Reference Levels for Medical X-Ray Examinations; IPEM91 Recommended Standards for the Routine Performance Testing of Diagnostic X-ray Imaging Systems.

GENERAL

Health & Safety Structure	**Y/N**	**Comments**
Clear Health & Safety Structure in Place	Y	
Radiation Protection Committee	Y	
Radiation Protection Policy	Y	
Radiology Manager	Y	Sally Bucklitsch
Appointment of RPA	Y	Contract with RPC
Appointment of RPS	Y	Sally Bucklitsch
Training of RPS	Y	Re-attended RPS course May 2018

Controlled Areas	**Activity**	**Comments**
X-ray	Radiography	
Mammography	Breast Screening / Symptomatic and Sentinel node guide wire insertion	Injected off-site, attend dept. for guide wire insertion.

IR(ME)R 2017 PROCEDURES, PROTOCOLS & RECORDS

This section of the audit relates to the requirement for the Employer to establish and maintain written procedures for medical exposures in accordance with Schedule 2 of the Ionising Radiation (Medical Exposure) Regulations. This section also relates to the requirement for "adequate training" of practitioners and operators. According to Schedule 3 of IR(ME)R, "adequate training" includes both theoretical knowledge and practical experience relevant to their function as a practitioner or operator. The evaluation of associated documentation including relevant protocols and records is included in this section.

IRMER Schedule 2 Procedures	Y/N	Comments
Framework of Procedures in Place	Y	Based on RPC templates personalised to reflect local practices
Procedures Reviewed Periodically	**C1**	New templates for IR(ME)R17 compliance available
Signed-off by Employer	Y	Signed off by Dr W The, Head Radiologist
Read and Signed by all Relevant Staff	Y	Staff declaration signed by both operator / practitioners

Referral Criteria		
Referral Criteria in Place for Routine Work	Y	RCR guidelines plus some specific local criteria; breast screening criteria age 40+, > 1 year interval
Pre-Employment X-Rays	Y	CXRs done for emigration purposes
Pre-Op X-Rays	NA	
Non-Medical Imaging X-Rays	N	Not done

Referrers		
Procedure for Identifying Referrers within Specified Scope of Practice	Y	
Process for Accepting Non-Medical referrers	Y	
List of Medical Referrers	Y	
List of Non-Medical Referrers	Y	Includes mammographers for breast screening
Training of Non-Medical Referrers	Y	

Practitioners		
Procedure for Identifying Practitioners within Specified Scope of Practice	Y	Scope of entitlement form completed for both practitioners
Practitioner Authorisation Guidelines	NA	Not required
List of Practitioners	Y	Up to date
List of Practitioners (Non-Radiology)	NA	No non-radiology practitioners
"Adequate Training" of all Practitioners (according to Schedule 3)	Y	

Operators (Radiology)		
Procedure for Identifying Operators within Specified Scope of Practice	Y	Scope of entitlement form completed for both practitioners
List of Operators	Y	Up to date
Equipment-Specific Training of Operators	Y	
"Adequate Training" of all Operators (according to Schedule 3)	Y	Equipment specific training recorded

Operators (Non-Radiology)		
Policy on the Use of X-Ray Equipment by Non-Radiology (NR) Staff	Y	Template policy available, but no non-radiology operators
List of NR Operators	NA	
IRMER Training of NR Operators	NA	
Equipment-Specific Training of NR Operators	NA	
"Adequate Training" of all NR Operators (according to Schedule 3)	NA	

Patient		
Procedure for Identifying In-Patients	NA	
Procedure for Identifying Out-Patients	Y	Procedure requires checks to confirm correct patient and examination. 'PAUSED' poster displayed at consoles to prompt operator
Procedure for Identifying Patients in Exceptional Circumstances (Comatose, Mentally Impaired, Non-English Speaking)	Y	
Procedure for Examinations on Women of Childbearing Age	Y	
Procedure for Identifying Availability of Previous Relevant Images	Y	
Procedure for Communication of Risks/Benefits Associated with Radiation Dose	**C1**	New template procedure should be adopted

Optimisation of Patient Dose		
Procedure for Optimisation	Y	
Radiographic Protocols	Y	
Mammography Protocols	Y	

Patient Dose Audit and DRLs		
DRLs Set for Adequate Range of Exams	Y	Mammography DRLs determined at physics survey – see report. Chest X-rays are the only general exam performed often enough to allow DRL to be calculated (CXR: 0.12 Gycm^2)
Annual Patient Dose Audit	Y	Carried out for CXR in 2019; satisfactory
Patient Doses Below National Ref Level	Y	

Images and Reports		
Procedure for Reporting Radiological Images	Y	
Procedure for Allowing Reporting by Non-Radiology Consultants / Professionals	N	All reported by radiologist
Procedure for Identifying Image / Report Retention Periods	Y	

Radiation Incidents / High Skin Doses		
Procedure for Identifying Incidents Caused by Procedural Error Resulting in Radiation Exposures Greater Than Intended	Y	Procedure (IRMER18) follows latest SAUE guidance
Procedure for Informing Referrer, Practitioner and Patient of Relevant Clinically Significant Unintended or Accidental Exposures	Y	
(See 'General Radiation Protection Records' below for reporting of incidents)		

Research		
Procedure for Identifying Research Exposures	Y	Template procedure available but no research carried out
Current Research Projects Approved by Relevant Ethics Committee	NA	
Record of Research Exposures	NA	

Medical Physics Expert		
Medical Physics Expert Appointed	Y	Contract with RPC
Scope of MPE Adequate	Y	

Carers and Comforters		
Procedure for Justification of Exposures to Carers and Comforters	**C1**	New template procedure to be adopted
Appropriate Dose Constraints for Carers and Comforters	**C1**	

Clinical Audit		
Adequate Range of Clinical Audits	Y	200 referral forms checked for compliance with IRMER procedure
Results of Current Clinical Audits	Y	74.5% had full compliance with all required information recorded on form; for other forms the necessary information was available in the consulting notes

General Comments:

The Employer's procedures and associated protocols and records relating to IRMER are well presented and form a comprehensive set of documents which are reviewed annually by the Radiology Manager / RPS. They reside in the radiology manager's office, in a file entitled "Policies and Procedures for Medical Exposures (IR(ME)R)" where they are available to all members of the radiology department for reference purposes. Compliance with the regulations was demonstrated to be at a very high level.

GENERAL RADIATION PROTECTION RECORDS

This section of the audit relates to the maintenance of general records required under regulations and guidance other than IRMER, including IRR17.

HSE	Y/N	Comments
Registration with HSE	Y	

Staff Training	Y/N	Comments
Radiographic Staff Training Records	Y	
Adequate Update Training for Radiographic Staff	Y	A new module of RPC's online radiation protection update training is now available, focusing on the new legislation
Radiation Protection Training for Non-Radiographic Staff in Controlled Areas (e.g. HCAs, Theatre Staff etc)	Y	

Local Rules		
Local Rules Available	Y	
Reviewed Annually	Y	Updated to new IRR17 compliant template
Scope and Contents of Local Rules adequate	Y	
Consideration of Outside Workers	Y	
Local Rules Identify Employer, RPA, RPS	Y	
Dose Investigation Levels Appropriate	Y	
Read and Signed-off by all Relevant Staff	Y	

Personal Dose Monitoring		
Adequate Monitoring of Radiological Staff	Y	
Appropriate Monitoring of Other Consultants (e.g. Cardiologists)	Y	Radiologists not monitored as no prospect of anything other than minimal exposure
Arrangements in Place for Monitoring of Staff with Multiple Employers ("Cooperation between Employers")	Y	Agency worker wears agency badge
Appropriate Monitoring of Other Staff (e.g. Theatre Staff)	NA	
Instructions for wearing personal dose monitors provided to staff	Y	
Classified Staff	N	
Results Available to all Relevant Staff	Y	
Incidences of Doses Exceeding Investigation Levels (IL)	N	No high doses
Investigations of Doses Exceeding IL	NA	

PPE, Shielding and Warning Devices		
Sufficient PPE Available	Y	
Lead Aprons Appropriate for all Controlled Areas / Imaging Modalities	Y	
PPE Inspected Routinely	Y	
Warning Lights and Signage Inspected Routinely	Y	

Risk Assessments		
Risk Assessments in Place for all Uses of Ionising Radiation	Y	Updated radiation risk assessments are included with this report
Risk Assessments Reviewed Periodically	Y	
Female Staff Advised of Importance of Notifying Employer When Pregnant	Y	
Risk Assessments in Place for Pregnant Staff	NA	

Radiation Incidents		
Policy on Investigation of Incidents Involving Radiation Exposures Greater Than Intended	Y	
Policy on Identifying Radiation Incidents Involving Radiation Exposure **Much** Greater Than Intended	Y	
Notification of Incidents Much Greater Than Intended to Appropriate Authority (CQC)	N	No such incidents

EQUIPMENT

This section of the audit relates to the maintenance of equipment used in connection with medical exposures through the provision of adequate servicing and quality assurance programmes in accordance with HSE Guidance Note PM77 'Equipment Used in Connection with Medical Exposure' and IPEM91 Recommended Standards for the Routine Performance Testing of Diagnostic X-ray Imaging Systems.

Equipment Maintenance	Y/N	Comments
Inventory of X-ray Equipment	Y	
Maintenance / Servicing Records	Y	General room serviced by Hayes Medical
Failing Equipment	N	
Handover Form Used Routinely	Y	

Quality Assurance	Y/N	Comments
QA Coordinator	Y	
Staff Adequately Trained to Perform QA	Y	
Written QA Procedures / Protocols	Y	RPC handbook
Radiographic Equipment	Y	Output checked using DAP meter; alignment tool for light beam; good results
Mammography Equipment	Y	Hologic instructions followed. Daily SNR; Weekly CNR, TOR(MAM), uniformity and artefact evaluation; Monthly CNR for different thickness, Includes 2D and 3D. Good results
CR Equipment	**C2**	Check on constancy of Exposure Index (EI) and image quality tests using test object
Specimen cabinet	Y	Monthly check of engineering controls and calibration
Reporting Workstations	Y	
Other Display Devices	Y	
Reject Analysis	Y	

General Comments:
The radiology equipment is maintained to a very high standard and all equipment is subject to a comprehensive preventative maintenance programme of regular servicing. The in-house quality assurance programme is well established and includes all essential tests in accordance with IPEM91 guidance.

OTHER

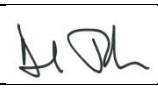
Problems / Issues Raised by RPS	RPA/MPE Comments
No problems were raised.	

COMMENTS AND RECOMMENDATIONS ARISING FROM THIS AUDIT

The overall management of radiation protection was found to be excellent and judged to be substantially in compliance with all relevant radiation protection legislation and guidance. Your attention is drawn to the comments and recommendations below:

C1. Three new template employer's IR(ME)R procedures are available which cover the new requirements of IR(ME)R 2017. These should be adapted for use at 108 Diagnostics and included in the set of written IR(ME)R procedures. The templates are included with this report.	
Action Taken:	
Recommended action completion date	March 2020
Initials:	Completion Date:

C2. Given the scoring system in place for the image quality checks of the Computed Radiography system, the following remedial levels should be applied – Line Pair groups – A score of 10 below the baseline Discs – A score of 6 below the baseline. There are no suspension levels or an upper remedial level.	
Action Taken:	
Recommended action completion date	Ongoing
Initials:	Completion Date:

Name	David Johnstone	Designation	Principal Physicist / Medical Physics Expert
Signature		Date	11/02/2020

Checked by [IB]