Royal Devon University Healthcare NHS Foundation Trust

JOB DESCRIPTION

JOB DETAILS	
Job Title	Clinical Scientist (Diagnostic Radiology Physics)
Reports to	Lead Physicist for Diagnostic Radiology
Band	Band 7
Department/Directorate	Medical Physics Department / Specialist Services Division

JOB PURPOSE

The Clinical & Radiation Physics service provides scientific and technical support to all users of ionising and non-ionising radiation within the Medical Physics SEND network (south, east and north Devon). This includes quality assurance and acceptance testing of radiological equipment and the provision of a radiation protection service. This service provides advice and develops processes and procedures to ensure the Trust's compliance with all relevant legislation.

This role specifically supports the provision of diagnostic radiology physics and radiation protection services to the Trust and others. The jobholder will also liaise with external customers.

KEY RESULT AREAS/PRINCIPAL DUTIES AND RESPONSIBILITIES

Provide clinical technical services to maintain and enhance the medical physics services to both NHS and commercial customers concerned with the safe use of ionising and non-ionising radiation. This includes:

- Undergoing advanced training in all areas of Diagnostic Radiology Imaging Physics and Radiation Safety, to include non-ionising as required.
- Provide scientific support for all aspects of imaging with ionising radiations, making judgements involving complex facts & situations which require the analysis and interpretation of a range of options.
- Perform acceptance and commissioning measurements on new radiological equipment and advise of suitability for clinical use
- Undertake routine and non-routine quality control measurements to a high degree of accuracy on a broad spectrum of highly complex patient-critical equipment.
- Undertake complex analysis of images
- Advise on safety and suitability of equipment for clinical use.
- Contribute to optimisation of medical exposures for patients undergoing diagnosis and treatment
- Carry out complex dose calculations using computational methods to calculate dose and risk to patients
- Contributing to research and development projects as required.
- Contribute to the investigation and analysis of untoward events and, in conjunction with the MPE determine if any such events are notifiable to CQC as a Significant Accidental or Unintended Exposure
- Contribute to the provision of scientific services in support of MRI, Ultrasound, UV and Lasers as requested by the Lead Physicist
- Supervise and/or train staff/students/trainees within scope of practice

- Assist the lead physicist for Radiation Safety in the provision of radiation protection services:

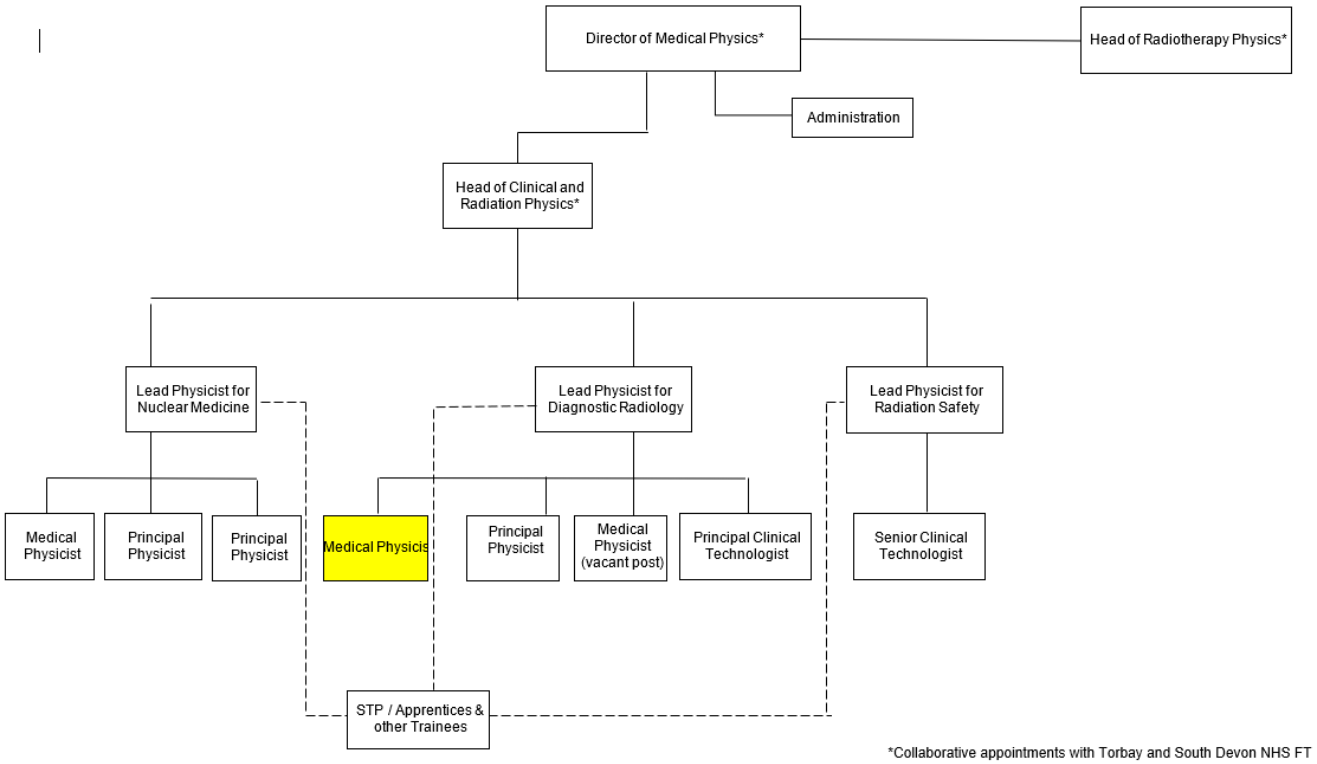
KEY WORKING RELATIONSHIPS

The post holder is required to deal effectively with staff of all levels throughout the Trust as and when they encounter on a day-to-day basis. In addition, the post holder will deal with external engineers, external organisations and the public. This will include verbal, written and electronic media.
Of particular importance are working relationships with:

Internal to the Trust	External to the Trust
• Clinical Scientists • Clinical Technologists • Radiographers • Medical staff • Nursing staff • Clerical staff • Engineers • Trainees	• Engineers • Private customers e.g. vets and dentists

There will also be some liaison with Medical Physics and Clinical Scientist staff on a regional/national basis.

ORGANISATIONAL CHART



FREEDOM TO ACT

As a Clinical Scientist the post holder has the freedom to act within established parameters and is guided by precedent and clearly defined occupational policies, protocols and procedures, or codes of conduct, deciding when it is necessary to refer to their manager. They are expected to:

- Work autonomously under the direction of the Lead Physicists within Clinical & Radiation Physics prioritising and managing own schedule to meet service demands
- Supervise the work of trainees, radiographers and medical-technical staff as required

COMMUNICATION/RELATIONSHIP SKILLS

- Communicate with patients and staff regarding highly complex information regarding exposure to ionising and non-ionising radiations, recognising and dealing with emotional stress and other barriers to receiving information.
- Liaise with clinical staff, non-clinical staff, managers, third party representatives and external suppliers to ensure interpretation and implementation of specialist radiation protection advice, to ensure work with ionising and non-ionising radiations is safe and within statutory requirements
- Perform and advise on dosimetry measurements in relation to medical exposures.
- Advise medical and radiographic staff concerning the physics aspects of uses of ionising and non-ionising radiations in diagnosis and treatment.
- Participate in radiation safety training of staff group exceeding twenty persons.
- Present highly complex information at regional and national conferences

ANALYTICAL/JUDGEMENTAL SKILLS

- Perform Quality Control checks on complex medical equipment, analysing the results to ensure performance is within tolerance and equipment is safe for clinical use.
- Inform the principal physicist and/or the lead physicist of quality control or routine results that require immediate attention.
- Undertake radiation protection measurements so risks to staff and members of the public are minimised.

PLANNING/ORGANISATIONAL SKILLS

- Plan and carry out equipment testing at the required frequency and produce reports in a timely fashion
- Have a keen sense of responsibility with a high degree of accuracy and taking personal initiative.
- Participate in the working of the Medical Physics Department Quality System, suggesting Quality Improvements, undertaking audits and contributing to developments in the documentation system.
- Under the supervision of the lead physicists, maintain and develop departmental documentation (Instructions, Procedures, Clinical protocols etc.) recording all relevant information.
- Be able to prioritise work, work to tights deadlines and meet schedule demands across multiple workstreams.

PATIENT/CLIENT CARE

Liaison with customers is required, interpreting and assisting with implementation of specialist radiation advice, under the indirect supervision of senior members of the team. This advice helps ensure that employers and employees work with ionising and non-ionising radiation safely and within statutory requirements.
Incidental contact with patients is required, courtesy and respect for patient confidentially is required at all times.

POLICY/SERVICE DEVELOPMENT

- To work in accordance with all Trust and Departmental Policies
- Participate in the development and implementation of protocols and procedures as required by the lead physicists and/or head of clinical and radiation physics.
- Contribute to service improvement through auditing and investigations as directed by senior members of staff

FINANCIAL/PHYSICAL RESOURCES

Responsible for the safe use of complex radiological equipment worth millions of pounds.

HUMAN RESOURCES

Participate in the training and supervision of medical physics trainees, technologists and undergraduate students as required by the head of clinical and radiation physics.

INFORMATION RESOURCES

Maintain, enhance and process clinically relevant information associated with:

- Acceptance and commissioning of Medical devices
- Patient related doses, quality control and clinical outcomes
- Protocols and procedures

RESEARCH AND DEVELOPMENT

- Commission new equipment, techniques and software.
- Propose changes to working practices for own work area to improve and develop systems in terms of efficiency and quality, after liaising closely with colleagues implement developments in own area.
- Provide support for clinical trials and assist in the medical physics expert assessments of formal research programmes.
- Participate in clinically relevant research & development, presenting the results in the literature and at meetings and at conferences to large groups of staff and members of the public, so that the innovations and improvements may become embedded in clinical practice.
- Develop and design techniques, software and equipment to enhance the quality and efficiency of clinical & radiation physics.
- Write software where necessary modifying and customising existing scripts, programmes and macros to model clinical and dosimetric situations.

PHYSICAL SKILLS

- Manual dexterity to handle and make small adjustments to equipment
- Good eye-hand coordination

PHYSICAL EFFORT

- Ability to stand up for hours at time while performing computer-aided measurements whilst sometimes wearing heavy PPE
- Manipulate (push) heavy pieces of equipment (assisted by trollies and tables on wheels)
- Lift heavy (>10kg) test equipment (in accordance with relevant manual handling protocols)
- Ability to sit for long (hours) period of time in front of computer monitors

MENTAL EFFORT

- A frequent requirement to be able to concentrate for prolonged periods (hours)
- Able to extract relevant information from complex datasets

EMOTIONAL EFFORT

The post holder must be able to deal with rare but unexpected situations involving emotional distress.

WORKING CONDITIONS

There is frequent potential for exposure to ionising and non-ionising radiation.
The post holder will follow safe working practices to minimise exposure to themselves and others.

OTHER RESPONSIBILITIES

- Take part in regular performance appraisal.
- Undertake any training required in order to maintain competency including mandatory training, e.g. Manual Handling
- Contribute to and work within a safe working environment
- The post holder is expected to comply with Trust Infection Control Policies and conduct themselves at all times in such a manner as to minimise the risk of healthcare associated infection

As an employee of the Trust, it is a contractual duty that you abide by any relevant code of professional conduct and/or practice applicable to you. A breach of this requirement may result in action being taken against you (in accordance with the Trust's disciplinary policy) up to and including dismissal.

You must also take responsibility for your workplace health and wellbeing:

- When required, gain support from Occupational Health, Human Resources or other sources.
- Familiarise yourself with the health and wellbeing support available from policies and/or Occupational Health.
- Follow the Trust's health and wellbeing vision of healthy body, healthy mind, healthy you.
- Undertake a Display Screen Equipment assessment (DES) if appropriate to role.

DISCLOSURE AND BARRING SERVICE CHECKS

This post has been identified as involving access to radioactive sources and in line with Trust policy successful applicants will be required to undertake a Disclosure & Barring Service Disclosure Check.

GENERAL

This is a description of the job as it is now. We periodically examine employees' job descriptions and update them to ensure that they reflect the job as it is then being performed, or to incorporate any changes being proposed. This procedure is conducted by the manager in consultation with the jobholder. You will, therefore, be expected to participate fully in such discussions. We aim to reach agreement on reasonable changes, but if agreement is not possible, we reserve the right to insist on changes to your job description after consultation with you.

Everyone within the Trust has a responsibility for, and is committed to, safeguarding and promoting the welfare of vulnerable adults, children and young people and for ensuring that they are protected from harm, ensuring that the Trusts Child Protection and Safeguarding Adult policies and procedures are promoted and adhered to by all members of staff.

The Royal Devon University Healthcare NHS FT is a totally smoke-free Trusts. Smoking is not permitted anywhere on Trust property, including all buildings, grounds and car parks. For help to quit call: 01392 207462.

PERSON SPECIFICATION

Job Title	Clinical Scientist (Diagnostic Radiology Physics)

Requirements	Essential	Desirable
QUALIFICATION/ SPECIAL TRAINING		
BSc in a Physical Science	**E**	
MSc or higher degree in Medical Physics	**E**	
IPEM full Membership		**D**
State Registration as a Clinical Scientist (specialising in Diagnostic Radiology Physics / Radiation Safety)	**E**	
KNOWLEDGE/SKILLS		
Advanced IT skills including Excel, Word and PowerPoint	**E**	
Ability to communicate effectively with different staff groups – including clinical scientists, clinical technologists, radiographers, medical staff and clerical staff	**E**	
Specialist theoretical and practical knowledge of ionising and non-ionising radiological equipment & testing methods	**E**	
Specialist theoretical knowledge and experience of relevant legislation, national standards and other guidelines	**E**	
Presentation Skills	**E**	
Knowledge of radiology QC and dosimetry in Radiological Physics, patient dosimetry techniques for diagnostic radiology	**E**	
EXPERIENCE		
Experience of working within a medical physics environment	**E**	
Able to accept high level of autonomy and act under own initiative, including knowing when to seek advice from senior colleagues	**E**	
Experience in surveillance of radiological equipment	**E**	
Able to solve complex problems using analytical skills and clinical judgement.	**E**	
Experience in using software to analyse data and extract information.	**E**	
Experience of working within a Quality Management System		**D**

Experience in communicating complex information.	**E**	
PERSONAL ATTRIBUTES		
Ability to prioritise work and to meet deadlines	**E**	
A proactive approach to service improvement	**E**	
Good organisational skills	**E**	
Professional approach	**E**	
Able to work effectively as a member of a team	**E**	
Good verbal and written communication skills, able to communicate complex information to many groups of staff at a range of levels and across professional boundaries	**E**	
Needs to be able to work with concentration and accuracy on complex technical issues where the work pattern is unpredictable, handling interruptions as they arise.	**E**	
Interpersonal skills for collaboration with colleagues	**E**	
Willingness to occasionally work extended hours as required	**E**	
Ability to make accurate measurements using sophisticated fine testing equipment, where accuracy is important	**E**	
While operating QA and test equipment (>10kg / delicate & cumbersome), able to occasionally exert moderate physical effort for several short periods during a shift	**E**	
Emotionally robust enough to work daily on aspects of the diagnosis of cancer patients, who may be children or may be terminally ill (indirect exposure to distressing/emotional circumstances)	**E**	
Able to deal with occasional exposure to unpleasant conditions.	**E**	
OTHER REQUIRMENTS		
The post holder must demonstrate a positive commitment to uphold diversity and equality policies approved by the Trust.	**E**	
Ability to travel to other locations as required.	**E**	
Driving Licence		**D**

		FREQUENCY (Rare/ Occasional/ Moderate/ Frequent)			
WORKING CONDITIONS/HAZARDS		**R**	**O**	**M**	**F**
Hazards/ Risks requiring Immunisation Screening					
Laboratory specimens	N				
Contact with patients	Y	R			
Exposure Prone Procedures	N				
Blood/body fluids	Y	R			
Laboratory specimens	N				
Hazard/Risks requiring Respiratory Health Surveillance					
Solvents (e.g. toluene, xylene, white spirit, acetone, formaldehyde and ethyl acetate)	N				
Respiratory sensitisers (e.g isocyanates)	N				
Chlorine based cleaning solutions (e.g. Chlorclean, Actichlor, Tristel)	N				
Animals	N				
Cytotoxic drugs	N				
Risks requiring Other Health Surveillance					
Radiation (>6mSv)	N				
Laser (Class 3R, 3B, 4)	Y	R			
Dusty environment (>4mg/m3)	N				
Noise (over 80dBA)	N				
Hand held vibration tools (=>2.5 m/s2)	N				
Other General Hazards/ Risks					
VDU use (> 1 hour daily)	Y				F
Heavy manual handling (>10kg)	Y		O		
Driving	Y		O		
Food handling	N				
Night working	N				
Electrical work	N				
Physical Effort	Y		O		
Mental Effort	Y				F
Emotional Effort	Y	R			
Working in isolation	Y	R			
Challenging behaviour	Y	R			