1 JOB DETAILS

Job Title: Healthcare Scientist, Clinical & Radiation Physics
Band: Band 7
Directorate: Medical Physics, Clinical Support Services & Cancer
Location: Royal Cornwall Hospital, Truro

2 JOB PURPOSE

The Clinical & Radiation Physics Group provides scientific and technical services in support of uses of ionising and non-ionising radiations support to all users of radiation within the Cornwall Healthcare community. This includes providing specialist advisory roles to the Trust and other customers regarding safe use of radiations in order to protect patients, staff and members of the public from associated risks of exposure.

The services are integral to providing safe quality care to patients when undergoing procedures using diagnostic and interventional x-rays, radioisotopes and sources of non-ionising radiations.

The post holder primarily acts to assist in the quality assurance programme for radiation imaging, in particular with regard to interventional radiology (including cardiac catheterisation labs), CT imaging, Mammography and in the optimisation/audit of all imaging techniques & new equipment. There is also the opportunity for the post holder to assist in non-imaging QA programme including MRI, Ultrasound and laser safety.

The post-holder liaises between scientific and clinical teams to promote optimisation of radiological examinations and to undertake audits, projects, presentations and training in that field.

The Royal Cornwall Hospital Clinical Imaging service offers imaging services across main sites – Treliske Hospital, Truro, St Michael’s Hospital, Hayle and West Cornwall Hospital, Penzance. Planar imaging services are offered in seven peripheral sites stretching from Stratton in the North to the Isles of Scilly in the West.

3 DIMENSIONS

Support the quality assurance programme for imaging equipment & responsible for testing of a range of equipment, particularly in the areas of fluoroscopy and CT imaging.

Act as an Operator under the IRMER regulations.

Supervises the work of support staff and trainees.

Researches imaging techniques and make recommendations for changes to local practice.

Undertakes audits of patient dose and image quality & write reports.
Responsible for participating in performance review and improvement of a range of imaging techniques.

Supports the provision of radiation protection services to the Trust and other customers.

## 4 ORGANISATION CHART

### Director of Medical Physics & Clinical Technology
- RPA/RWA/LPA

### Clinical & Radiation Physics
- Senior Principal Healthcare Scientist, MPE
- Consultant Healthcare Scientist, RPA
- Senior Principal Healthcare Scientist, MPE

### Healthcare Science Staff Inc This Post

## 5 KNOWLEDGE, SKILLS & EXPERIENCE REQUIRED

The post holder must be a registered professional with relevant academic qualifications (MSc or equivalent experience) and the post requires highly developed specialist theoretical and specialist practical knowledge in radiology and the physics of x-ray imaging.

Under the guidance of the Senior Principal Healthcare & Clinical Scientists the post-holder will provide specialised input/advice on the quality assurance of the imaging services utilising ionising radiation, to ensure radiation doses received are as low as reasonably practicable consistent with the intended clinical purpose, to ensure compliance with statutory legislation.

The nature of the post requires the ability to maintain current up to date knowledge and experience in this complex rapidly developing field.

The post holder must demonstrate skills to research imaging techniques from various information sources, e.g. journals, correspondence with specialists and conduct specialist audits of patient dose and image quality.

The post holder will undertake complex audits using research methodology to improve the service, including collation of research results where these are available from literature or other institutions.

The post holder will use a range computer software to query data, develop reports requiring use of formulae/statistics. They will also support the development of image analysis software.

The post-holder must analyse this complex information made up of several components against available guidelines/recommendations, which may contain conflicting information or indicators.

In conjunction with the relevant MPEs, the post-holder will research, prepare and make recommendations of changes of clinical practice and procedures in the work area. These recommendations will be guided by the post-holder’s knowledge of clinical and scientific principles and relevant occupational policies and as a clinical specialist within their field. The post-holder will pro-actively seek guidance by peers or external reference points as required.
Following approval by others (establishment of how the recommendations made by the post-holder should be interpreted & actioned), the post holder must implement these policy/procedure changes within the clinical work area.

The post-holder will undertake trials of revised techniques and adaptation of equipment/technique factors for standard techniques.

This will involve providing specialist training, including practical aspects to colleagues and undertaking basic assessment of outcomes.

In so doing the post holder must demonstrate excellent communication skills and be able to communicate highly complex scientific information in the field, and in circumstances where there are barriers to understanding and training skills are required.

The post-holder must plan and organise concurrent complex projects, including use of their own initiative to revise planning of dependent on emergent and changing project outcomes and the involvement needs of team members.

The post holder will gain experience and work towards MPE status.

6 KEY RESULT AREAS

6.1 Accountability

6.1.1 Reports to Senior Principal Healthcare Scientist as appropriate, accountable to the Senior Principal Clinical Scientist.

6.1.2 To maintain professional standards at all times upholding professional codes of practice.

6.2 Analytical and Judgement skills

6.2.1 Analysis and manipulation of complex clinical, technical and scientific information and review of options to achieve desired outcomes.

6.2.2 Use advanced problem solving techniques in relation to the application of clinical / clinical support procedures.

6.2.3 Make complex judgements on issues surrounding the safe use of radiations, in situations where there is conflicting information and a range of possible outcomes.

6.3 Planning and organisational skills

6.3.1 The post-holder must plan and organise concurrent complex projects, including use of their own initiative to revise planning of dependent on emergent and changing project outcomes and the involvement needs of team members.

6.3.2 Work closely with others in the team to plan and prioritise group workload and ensure efficient and effective use of resources. Adjust plans as required in response to changing demands and priorities.

6.3.3 Work within all or any areas of the Group as required. Travel to other sites as required.

6.3.4 Participate in the programme of patient & staff dosimetry and quality assurance performance testing for ionising radiation equipment. Ensure with others tests are performed within agreed intervals.
6.4 **Responsibility for policy/service development**

6.4.1 Participate in the review and development of working practices for own area and other areas that use radiation.

6.4.2 Following approval by others (establishment of how the recommendations made by the post-holder should be interpreted & actioned), the post holder must implement these policy/procedure changes within their own work area.

6.4.3 Support the development and maintenance of the quality management system.

6.5 **Responsibility for financial and physical resources**

6.5.1 Responsible for the safe use of expensive and highly complex medical equipment (capital value £50-1000k per item). The Post Holder assists in the assessment of radiation safety management of equipment with other staff. Equipment covered by the service includes capital equipment with an estimated capital value of £20M.

6.6 **Responsibility for information resources**

6.6.1 Participate in Directorate and Trust-wide clinical governance and audit as appropriate.

6.6.2 Support the maintenance and development of quality systems.

6.6.3 Undertake complex audits using research methodology to improve the service, including collation of research results where these are available from literature or other institutions. In so doing, use computer software to query data, develop reports requiring use of formulae/statistics.

6.6.4 Follow procedures for record keeping and maintain accurate records of all work carried out.

6.7 **Management responsibility**

6.7.1 Providing specialist training, including practical aspects to colleagues and undertaking basic assessment of outcomes.

6.7.2 Supervise trainees and the training of other staff within own area of work as required.

6.8 **Responsibility for research and development.**

6.8.1 Undertake audit programmes – as part of radiological compliance assurance for customers, and internal quality systems. Make recommendations to improve practice.

6.8.2 The post-holder will undertake trials of revised techniques and adaptation of equipment factors for standard & non-standard techniques.

6.8.3 To take part in the Clinical Imaging audit programme and present work outcomes as required.

6.8.4 Actively pursue a programme of continuous professional development and maintain a personal record of professional development, suitable for registration purposes as required.

6.8.5 To promote an environment that fosters innovation and service improvement.
7 COMMUNICATIONS & WORKING RELATIONSHIPS

Key relationships:
- Consultant Medical Staff
- Service Managers
- Radiographers, Nurses, Other clinical & non-clinical staff
- Scientific staff within group

Communications:
- Communicate complex scientific and technical information within and outside of the Group.
- Liaise with healthcare scientists and other professional staff, e.g. radiographers, nurses, medical staff. Communicate in a way to ensure understanding of radiation and radiation risks are understood by all relevant groups.
- Participate in Group, Department and Division and other meetings as required.
- Participate in local, regional, national and international professional meetings and conferences.
- Actively participate in MDT meetings
- To play an active role in maintaining a team approach to the service provided to the Clinical Imaging Directorate.

8 MOST CHALLENGING PART OF THE JOB

Identifying opportunities for service improvement (inc. projects), identifying those with most potential & progressing and prioritising work accordingly. Developing new and improved techniques in line with service improvement. Delivering training to other practitioners.

Maintaining up to date, expert knowledge across broad and rapidly developing area and adapting knowledge and skills, in order to understand the function of specialised medical equipment.
9 OTHER: GENERAL COMPLIANCE

- The post holder must at all times carry out his/her duties with due regard to the Trust’s Equal Opportunities Policy.

- It is the responsibility of all employees to maintain a safe and healthy environment for patients, visitors, and staff.

- It is the responsibility of the post holder to ensure that all duties are carried out to the highest possible standard, and in accordance with current quality initiatives within the area of work.

- All staff who have access to or transfer data are responsible for that data and must respect confidentiality and comply with the requirement of the Data Protection Act 1998, in line with the Trust’s policies.

- The post holder is responsible for data quality and complying with the policies, procedures and accountability arrangements throughout the Trust for maintaining accuracy and probity in the recording of the Trust’s activities.

- Staff are required to comply with the requirements of the Freedom of Information of Act 2000 in line with Trust Policy.

- The Post holder must comply with all RCHT Policies and Procedures.

- The Post holder must comply with the current regulatory framework that applies to NHS provider trusts.

- The Post holder must comply with the RCHT Mandatory Training policy.

- The Post holder must comply with all RCHT Risk Management & Health & Safety policies & procedures, including undertaking associated training as per the RCHT Mandatory Training policy.

**NB: A post-holder who has managerial accountability will have the added responsibility for the management and maintenance of the department/division/directorate risk register[s], ensuring that all appropriate risks are suitably identified, recorded via the appropriate routes, and acted upon. Specific duties are outlined in the Risk Management Policy to which you must comply with.**

- The Post holder must comply with all aspects of confidentiality, professional codes of conduct [where relevant], the RCHT Staff Charter and the NHS Managers/Code of Conduct.

- The Post holder must work within infection control guidelines to ensure that work methods do not constitute a risk of infection either to the health care professional, to the client or to any persons working/visiting in RCHT premises.

- If it is thought that you have breached your code of professional conduct and/or the Managers Code of Professional Conduct, the matter will be investigated in line with the Trust’s disciplinary policy as a matter of personal misconduct. Where there appears to be a case to answer a disciplinary hearing will take place. At any stage of the process the Trust may refer the matter to your professional registering body for their consideration under their own registration review procedures.

- This job description will be subject to regular review and amended to meet the changing needs of the Trust.

- This job description is subject to the Terms and Conditions of service of Royal Cornwall Hospitals NHS Trust, and the post holder will undertake any other duties which may be required from time to time.
THIS JOB DESCRIPTION IS SUBJECT TO REVIEW IN CONSULTATION WITH THE POST HOLDER

JOB DESCRIPTION AGREEMENT

Job holder's Signature: Date:

Head of
Department Signature: Date:

Title:

Please note:
Rehabilitation of Offenders Act

This post is exempt from the Rehabilitation of Offenders Act 1974. A provisional offer of employment will be subject to a criminal record check from the Criminal Records Bureau before the appointment is confirmed. This will include details of cautions, reprimands, final warnings, as well as convictions.

The Royal Cornwall Hospitals Trust is a non-smoking organisation. Smoking will not be permitted on any of the sites by staff in Trust uniform and/or wearing a trust identification badge in any location, in vehicles owned or leased by the Trust or in the homes (including gardens) of any patients visited at home.