#### **NHS SCOTLAND JOB DESCRIPTION TEMPLATE**

|  |
| --- |
| JOB IDENTIFICATION |
|

|  |  |
| --- | --- |
| Job Title: | Clinical Engineer - Practitioner Clinical Technologist – Medical Physics |
| Responsible to (insert job title): | Section Manager, Medical Equipment Management |
| Department(s): | Department of Clinical Physics and Bioengineering |
| Directorate: | Diagnostics |
| Operating Division: | Acute |
| Job Reference: |  |
| No of Job Holders: | 3 |
| Last Update (insert date): | 30/12/2024 |

 |

|  |
| --- |
| 2. JOB PURPOSE |
| The post holder will contribute to the life cycle management of medical equipment, working in-line with standard operating procedures and to support the service by performing essential duties relating to the Asset Management System. Duties will include performing scheduled preventative maintenance, repair, fault finding, commissioning and decommissioning of a wide range of high and medium risk medical devices. Equipment is based across the hospital departments, including theatre, critical care and general wards. This post will be based at Gartnavel General Hospital. |

|  |
| --- |
| **3. DIMENSIONS** |
| The post holder is a member of a team of over 100 Clinical Engineer Technologists working within Medical Equipment Management Services group within NHS Greater Glasgow and Clyde.Full life cycle management is provided for over 50,000 medical device assets. The service are involved in the specification, selection and procurement, planned preventative maintenance and performance assurance of medical equipment. Staff are directly involved in clinical support services and provide training for doctors, nurses and other healthcare professionals.Staff in Medical Equipment Management are expected to have an understanding and knowledge of the clinical use of the equipment so that advice on the use of, and any queries or problems associated with, equipment are dealt with in the manner most effective for the user.Services are provided to all Clinical Directorates operating at Gartnavel General in both the Acute and HSCP Sectors and this post will be based in Gartnavel General Hospital, working across the full Gartnavel campus. The post-holder may be required to work at the other acute sites across NHS GG&C, to meet service provision demand. |

|  |
| --- |
| 4. ORGANISATIONAL POSITION  |
| Head of Service, Medical Equipment ManagementTechnical Manager, North GlasgowSection Manager Gartnavel General 2 x Specialist Clinical Technologist 3 x Practitioner Clinical Technologist (including this post)1 x Associate Clinical Technologist1 x Senior Assistant Clinical Technologist |
| 5. ROLE OF DEPARTMENT |
| The Medical Equipment Management Services Group, part of the Department of Clinical Physics and Bioengineering. Medical Equipment Management provide expert advice on medical equipment and provide a full life cycle medical equipment management and maintenance service. Correct and accurate operation of medical devices is essential for safe diagnosis and treatment of patients. Services are provided to NHSGGC and to other healthcare establishments in neighbouring Health Boards. Staff also support research and development aimed at improving medical technologies and making them easier and safer to use.The Medical Equipment Management service works and is accredited to ISO 55001 Asset Management System for the provision of medical equipment repair, maintenance and equipment management services. |

|  |
| --- |
| 6. KEY RESULT AREAS |
| **Clinical / Technical – 80%**The post holder will work on a wide range of high and medium risk medical devices ensuring that at all times they comply with the Asset Management System.The duties of this post include: –1. Commissioning of medical devices: complete acceptance checking and installation of new medical devices to ensure devices are safe for staff and patients.
2. Scheduled maintenance: carry out scheduled planned maintenance and quality assurance testing on medical devices using standard operating procedures and service manuals.
3. Fault-finding and repair: carry out fault diagnosis on a broad range of medical devices using a planned and systematic approach making use diagnostic aids and test equipment. When required liaising with manufacturers and agents or seeking guidance from specialist staff.
4. Decommissioning of medical devices: decommission medical devices following standard operating procedures.
5. Electrical safety testing: visual inspection and electrical safety testing of equipment for compliance with the Health and Safety at Work Act and Electricity at Work Regulations
6. Safety alerts / field safety notices: complete jobs or actions that have been generated in response to a safety alert, safety notice, etc.
7. Incident investigation: assist with technical equipment evaluation for medical devices involved in incidents
8. Procurement: assist with the evaluation of new medical devices as part of a procurement evaluation
9. Call logging: to accurate and timely log calls for service, determining the urgency of any request and referring requests for complex medical devices to specialist clinical technologists.
10. Record keeping: to maintain accurate and contemporaneous records on the Medical Equipment Management System in accordance with the Asset Management System policies and clinical governance requirements.
11. Device Configurations: ensuring that medical device configurations are recorded accurately, and maintained correctly on the appropriate medical devices.
12. The requisition of parts and consumables on a daily basis, contributing to savings where possible and ensuring prompt delivery of orders.

**Administration / teaching / training – 20%**1. To participate in meetings, short lived working groups, asset management system duties
2. Involved in the formulation and introduction of local policies and protocols for the high and medium risk medical devices, including the development of In-House Test and Check Procedures.
3. To support the training of new members of staff and to act as a mentor for any work placement students.
4. Assist with medical device training for technical and clinical users to operate, care for and look after a broad range of medical devices.
5. Attend relevant manufacturers’ technical courses to ensure continued detailed and specialist knowledge of current medical devices. Keep up to date with medical and technical developments by participating in continuous professional development (CPD), conferences, meetings and workshops.
6. Occasionally becoming involved in Research and Development, including the testing of medical equipment and the construction of equipment for clinical and non-clinical uses
 |

|  |
| --- |
| 7a. EQUIPMENT AND MACHINERY |
| Staff will work with a wide range of high and medium risk medical devices, e.g.* Infusion Devices
* Physiological Monitors
* CPAP Units
* Electronic Thermometers
* Defibrillators,
* Electrosurgery Equipment,
* Oxygen & Suction Therapy Equipment.

Standard test equipment, mechanical and electronic workshop tools and machinery, for example: hand tools, drills, soldering irons, oscilloscopes, multi-meters, etc.Specialist test equipment, for example: pressure meters, electrical safety testers, Spo2 monitor testers, timers, etc.Anti-static equipmentComputer, Scanner, PrintersThe post holder requires basic familiarity with the operation of the application software of a number of computer based monitoring systems. This is required to resolve setup and operation problems.New medical devices may be introduced as the organisation and technology develops, training will be provided |
| **7b. SYSTEMS** |
| Computerised systems are used to maintain records associated with equipment (such as EQUIP) and for the control of purchasing parts and consumables (such as the PECOS stock ordering system).Staff use Microsoft Office products to produce memos, letters, spreadsheets, etc. and to import and export data for further analysis.The requirements of the Asset Management System operated by the Department. Standards are maintained through the use of standard operating procedures, document control, management of training and competency, parts and supplies control and accurate record keeping. Compliance to standards including*:* The Health and Safety at Work Act 1974, and Electricity at Work Regulations 1989.International Standards e.g. IEC 60601-1 MEDICAL ELECTRICAL EQUIPMENT – General Requirements for Safety.Medical Device Safety Alerts produced by HFS, MHRA, etc.. |

|  |
| --- |
| 8. ASSIGNMENT AND REVIEW OF WORK |
| * Work is assigned and reviewed by the Section Manager.
* The post holder works independently on Risk A-D Medical Equipment and will ask for advice when required
* The post holder will work under supervision for Life Support Medical Equipment
* The post holder will follow standard policies and procedures in line with the Asset Management System, they will contribute to the development of these and suggest changes as required.
 |

|  |
| --- |
| **9. DECISIONS AND JUDGEMENTS** |
| The post holder:-* Regularly makes technical decisions on methods of repairing equipment with reference to formal procedures and using knowledge and experience.
* Calls for service are taken unsupervised and entered on to equipment management database. Routine decisions at post-holders discretion.
* Is accountable for professional actions whilst working independently.
* Assist in the supervision of Trainees, Assistant and Associate Technologists.
* Interpretation of information and judgements on data is made when extracting data from service /operator literature and comparing with measured results to determine whether equipment is safe to use in the required environment and on patients.
* Judgements are made on urgency and need for escalation of call requests for service.
* Judgement used to prioritise tasks
* Review and suggest changes to in-house test and check procedures / standard operating procedures / risk assessments, etc.
 |

|  |
| --- |
| 10. MOST CHALLENGING/DIFFICULT PARTS OF THE JOB |
| Sustaining concentration during complex repair procedures whilst being frequently interrupted.Dealing with clinical pressures or anxious medical staff e.g. attending to an emergency breakdown of equipment during a surgical procedure whilst still connected to the patient.Investigating and correcting intermittent faults on medical equipment.Working to tight deadlines whilst maintaining high standards of work and assuring patient care.Prioritising their workload to ensure that clinical procedures run smoothly but also ensuring that the department meets its Key Performance Indicators.Advising medical/nursing staff that their use of equipment is incorrect or unsafe. This requires tact and diplomacy in often contentious situations. |

|  |
| --- |
| **11. COMMUNICATIONS AND RELATIONSHIPS** |
| The post holder will:* Work closely with the Section Manager, and all Clinical Technologists in the Department on a daily basis in aiding the provision of medical equipment management services;
* May compile reports for Section Manager or Manager of Medical Equipment Services.
* Take part in internal audit of the operational policies as per the Asset Management System - this averages at 2 audits (external) per year and 8-12 (internal) audits per year.
* Maintain relationships with external manufacturers, suppliers and agents to facilitate a supply chain for the repair and maintenance of medical equipment.
* Communicate complex technical information to a wide range of NHS colleagues including medical and nursing staff, allied healthcare professionals and liaise with external service agents.
* Provide teaching and training to other staff (e.g. demonstrating and explaining the operation of an infusion pump to nursing staff).
* Work closely with clinical/nursing staff in matters of equipment maintenance and repair; demand-led but is usually a daily occurrence, often requiring tact and persuasive skills. This will be by direct contact or by telephone.
 |

|  |
| --- |
| **12. PHYSICAL, MENTAL, EMOTIONAL AND ENVIRONMENTAL DEMANDS OF THE JOB** |
| **PHYSICAL**A high level of manual dexterity and accuracy in the manipulation of fine tools / screwdrivers and materials is required.Proficiency in various engineering and electronic practices is required e.g. the safe use of drills and physically inspecting electronic equipment, etc.Some equipment can be heavy or awkward to lift or move, frequently resulting in periods of moderate physical effort. Occasionally heavy medical equipment, in excess of 100Kg, needs to be moved e.g. anaesthetic machines. Occasionally medical equipment must be worked on in cramped and awkward positions.Keyboard skills are also required of the post holder.**MENTAL DEMANDS**Long periods of concentration are required during fault finding and calibration work.Several times during the day, the post holder will be subject to interruptions and telephone calls from colleagues, clinical staff, etc. that require immediate attention and disrupt other work.The post holder must reprioritise work during unpredictable periods.**EMOTIONAL DEMANDS**Staff are exposed to distressed and critically ill patients when checking equipment that is still attached to the patient, e.g. during surgical procedures, intensive care ventilation and monitoring.The work requires diligence since incorrect actions or decisions can have serious consequences on patient care or result in a serious incident.**WORKING CONDITIONS**Staff may occasionally be exposed to hazards, by following departmental processes the risks are minimised or removed. The following is a list of examples:* Electricity
* Body fluids, e.g. contaminated medical equipment
* Hazardous Chemicals, e.g. anaesthetic agents
* Ionising and non-ionising radiation
 |

|  |
| --- |
| 13. KNOWLEDGE, TRAINING AND EXPERIENCE REQUIRED TO DO THE JOB |
| **Qualifications**Professional engineering / technical knowledge to SCQF level 9 ( e.g. Degree )Knowledge and TrainingKnowledge of the function and clinical use of a wide-range of medical equipmentKnowledge of the risks and hazards associated with a wide range of medical equipment.Technical training to enable the safe and effective repair and maintenance on a wide-range of medical equipment**Experience**Experience of the testing and calibration of a wide range of medical equipmentPerforming electrical safety testing to a wide range of medical equipmentExperience of electronics including fault-findingExperience in the use of Microsoft office packages, and database systems. |

|  |
| --- |
| **14. JOB DESCRIPTION AGREEMENT** |
| A separate job description will need to be signed off by each jobholder to whom the job description applies. Job Holder’s Signature: Head of Department Signature: | Date:Date: |