

Job Description

Job Title	: Specialist Medical Engineering and Connectivity Technician
Department	: Medical Engineering & Physics
Care Group / Directorate	: PRUH & South Sites
Band / Grade	: 6
Responsible to	: EME Manager
Accountable to	: Technical Director of MEMS
Number of direct reports	: 0
Budgetary Responsibility	: Director of Medical Engineering & Physics
Location	: Kings College Hospital, PRUH and SS

King's College Hospital NHS Foundation Trust is one of the UK's largest and busiest teaching Trusts with a turnover of c£1 billion, 1.5 million patient contacts a year and around 14,000 staff based across 5 main sites in South East London. The Trust provides a full range of local hospital services across its different sites, and specialist services from King's College Hospital (KCH) sites at Denmark Hill in Camberwell and at the Princess Royal University Hospital (PRUH) site in Bromley.

King's is committed to delivering Sustainable Healthcare for All via our Green Plan. In line with national Greener NHS ambitions, we have set net zero carbon targets of 2040 for our NHS Carbon Footprint and 2045 for our NHS Carbon Footprint Plus. Everyone's contribution is required in order to meet the goals set out in our Green Plan and we encourage all staff to work responsibly, minimising their contributions to the Trust's carbon emissions, waste and pollution wherever possible.

The trust-wide strategy Strong Roots, Global Reach is our Vision to be BOLD, Brilliant people, Outstanding care, Leaders in Research, Innovation and Education, Diversity, Equality and Inclusion at the heart of everything we do. By being person-centred, digitally-enabled, and focused on sustainability, we can take Team King's to another level

Job Summary

The post holder's main duties will be the provision of a broad range of support services on behalf of Medical Equipment Management Services to clinical staff within the Trust. This will include playing an active role in medical device integration (MDI) and connectivity.

The successful applicant will be responsible for supporting medical devices and connectivity related issues across all sites of King's College Hospital NHS Foundation Trust; and may be required to take part in the out of hours rota and weekend working.

The post holder will play a key role in ensuring that service levels are met in an efficient and cost effective manner within their area of responsibility.

Additionally there will be a requirement to use a comprehensive information technology system for call logging, job control and maintaining equipment history.

The department is registered to EN ISO 13485 and the post holder will assist in developing systems to achieve high standards of quality across all MEMS activities.

Key Working Relationships

MEMS / MEP colleagues (Internal)

Clinical staff / Service users (Internal)

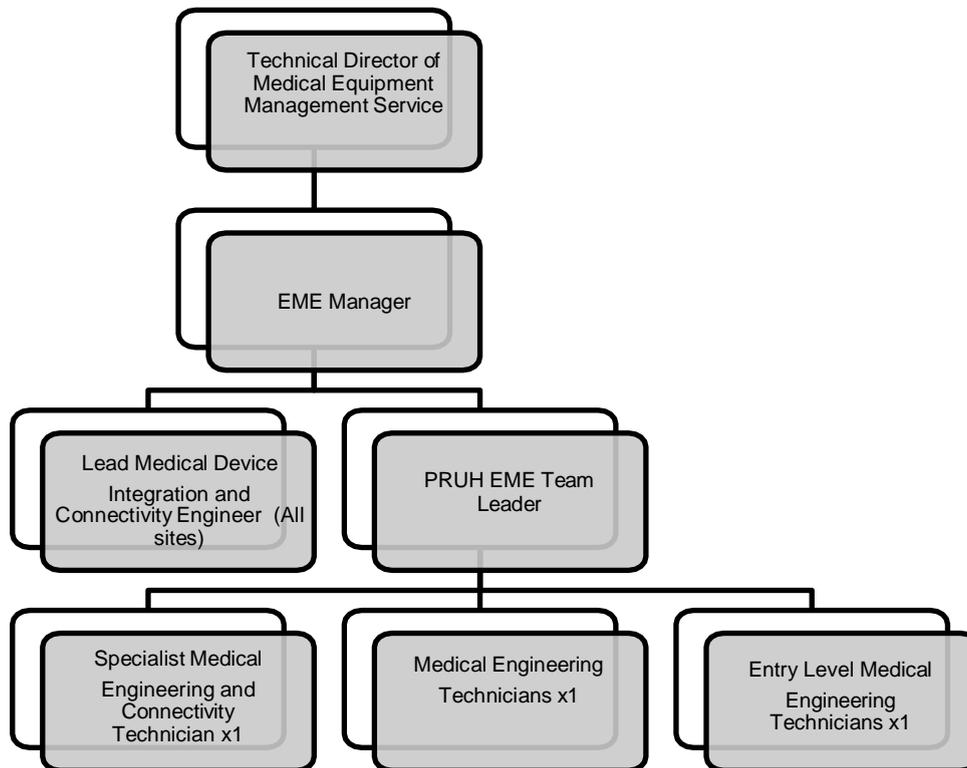
ICT department / EPIC team (Internal)

Procurement department (Internal)

Medical device suppliers and manufacturers (External)

Medical device maintenance and MDI service providers (External)

Organisation Structure Chart



Main Duties and Responsibilities

- To assess and maintain equipment and devices for use in health care services:
 - Ensure that medical device integration and connectivity is successfully implemented/achieved for applicable medical devices.
 - Maintain connectivity of medical devices.
 - Assist/Play active role in any future medical device integration projects or phases.
 - Conduct complex fault finding / repair on electrical / electronic equipment.
 - Calibrate and verify electrical / electronic equipment in the clinical area.
 - Assess new medical devices/equipment for clinical use.
 - Commission and accept new medical devices/equipment for clinical use either in the clinical area or within MEMS.
 - Handle and store equipment and consumables within acceptable safe limits.

Equipment Management

- As part of a team or at the request of the Section manager establish clinical need for new, modified or replacement medical equipment.
 - Correctly interpret clinical needs in respect of intended use, context and performance parameters of the required equipment.
 - Advise on the need for new or replacement medical equipment to clinical or technical users
 - Carry out recommendations within designated clinical area
 - Refer recommendations outside designated clinical area to relevant authority for action
 - Undertake and report on analysis for installation or relocation of medical equipment
 - Respond to specific requests for new or replacement medical equipment.
 - Evaluate new medical equipment prior to clinical use

- In a day to day role for the electronic medical equipment service:
 - Commission medical equipment for clinical use
 - Advise on the adaptation of medical equipment
 - Maintain medical equipment for clinical use
 - Make informed use of the detailed technical information provided by the manufacturers' service manuals
 - Use appropriate test equipment and service tools
 - Confirm test equipment is correctly calibrated for maintenance and repair activities
 - Reference the correct protocol for type and range of equipment
 - Complete planned preventative maintenance to a specified schedule
 - Diagnose complex faults on medical equipment and determine appropriate action
 - Repair equipment
 - Clarify all issues affecting the required maintenance and their impact on delivery of clinical services
 - Complete all paper and computer records accurately and store in correct location for future use
 - Inform users of the progress of repairs
 - Inform users of reasons for fault, the action taken and how to avoid re-occurrence, including the delivery of training
 - Inform the other sections of MEP when repairs or maintenance fall within their area
 - To give advice or support to colleagues or manufacturers when repair or maintenance falls inside own level of expertise
 - Dispose of equipment following Trust policy and European laws
 - Will be expected to work on medical equipment up to, but not limited to, the value of £10,000

- Advise on the use and application of new and existing medical equipment
 - Respond to requests for advice on use or availability of medical equipment
 - Communicate effectively with professional users at all levels and where appropriate technical and end users
 - Identify risks on the use of medical equipment and recommend changes
 - Inform and advise on emergent risks that may affect the clinical use of equipment
 - Keep abreast with scientific, technical and clinical developments that relate to medical equipment

Medical Device Integration (MDI) and Connectivity

- As part of a team complete the initial, and all following phases, of the Trust Medical Device Integration project.
- As part of a team, maintain connectivity of Trust medical devices.
- Provide medical device technical expertise in relation to connectivity, and networking for connectable medical devices utilised within the Trust.
- Correctly perform the fitting and adaption of complex medical equipment to accommodate MDI.
- Assist in creating and improving processes related to all areas of MDI service delivery.
- Ensure stock of MDI/connectivity parts are maintained.
- Liaise directly with staff from MEMS, MEP and ICT departments, and also with clinical, auxiliary staff, managerial staff, training officers, technical, and support staff at all levels within the Trust and other healthcare organisations. The post holder will also deal directly with equipment manufacturers, service suppliers, and external customers. The establishment and maintenance of good relations with all appropriate stakeholders is an essential aspect of this post.

Protocols and Procedures

- In conjunction with or at the request of the Section Manager design protocols, procedures or methods to improve the delivery of the Mems service:
 - Recommend protocols for the delivery of service and repair for own lead technical area
 - Recommend new or adapt existing methods and techniques for the delivery of service to own lead technical area
 - Develop procedures for the delivery of service and repair for own lead technical area

- In conjunction with or at the request of the Section Manager, advise on procedures and protocols which are within the relevant area and boundaries of personal expertise:
 - Advise on access to and use of Mems
 - Provide professional advice to internal and external contacts
 - Maintain awareness of developments within the area of healthcare science

Technical Responsibilities

- In conjunction with, or at the request of, the section manager interpret results from investigations and provide clinical advice on the results:
 - Provide written factual reports on results of complex or difficult investigations, e.g. for an AI investigation
 - Provide professional and or technical advice on the results of the investigation and recommend changes
 - Review and analyse own activity and give recommendations to the Section Manager based on this

Health and Safety

- The post holder has a general duty of care for the health, safety and well-being of colleagues, visitors and patients within the hospital. In addition to this they will need to assess risks associated with the work activity and:
 - Apply relevant health, safety and security regulations to all working environments
 - Identify specific risks associated with work activities to be undertaken
 - Specify actions to be taken to manage risks
 - Ensure appropriate authorisation for working in high risk areas e.g. Theatres, ICU's or Laboratories
 - Report all potential risks immediately
 - Assist in development of health, safety and security practices in the workplace
 - Assess risks associated with the workplace
 - Ensure work areas are free from hazards
 - Apply safe lifting and handling techniques

Service / People Management

- Within the sphere of the post, manage service and individuals activities by:
 - Acting as an identified lead technician for a designated clinical area
 - Managing the use of MEMS physical resources, e.g. test equipment
 - Being familiar with and being able to follow the Trusts Adverse

- Incidence Reporting system.
- Be able to teach other technicians on medical equipment management techniques
- Supervising junior medical engineering technicians in their daily work

Governance / Quality Control

- Manage quality of MEMS activities and outcomes by:
 - Implementing all aspects of quality system
 - Supporting and advising on the development of the quality system
 - Monitoring compliance with the quality system and recommending changes

General

- The post holder has a general duty of care for their own health, safety and wellbeing and that of work colleagues, visitors and patients within the hospital, in addition to any specific risk management or clinical governance accountabilities associated with this post.
- To observe the rules, policies, procedures and standards of King's College Hospital NHS Foundation Trust together with all relevant statutory and professional obligations.
- We want to be an organisation where everyone shares a commitment to delivering the very best care and feels like their contribution is valuable and valued.
- At King's we are a kind, respectful team:
 - Kind.** We show compassion and understanding and bring a positive attitude to our work
 - Respectful.** We promote equality, are inclusive and honest, speaking up when needed
 - Team.** We support each other, communicate openly, and are reassuringly professional
- To observe and maintain strict confidentiality of personal information relating to patients and staff.
- To be responsible, with management support, for their own personal development and to actively contribute to the development of colleagues.
- This job description is intended as a guide to the general scope of duties and is not intended to be definitive or restrictive. It is expected that some of the duties will change over time and this description will be subject to review in consultation with the post holder.
- All employees must hold an 'nhs.net' email account which will be the Trust's formal route for email communication.

Safe Guarding

The Trust takes the issues of Safeguarding Children, Adults and addressing Domestic Abuse very seriously. All employees have a responsibility to support the organisation in our duties by;

- attending mandatory training on safeguarding children and adults
- familiarising themselves with the Trust's processes for reporting concerns
- reporting any safeguarding child or adult concerns appropriately

Infection Control Statement

The post holder has an important responsibility for and contribution to infection control and must be familiar with the infection control and hygiene procedures and requirements when in clinical areas.

The post holder has an important responsibility for and contribution to make to infection control and must be familiar with the infection control and hygiene requirements of this role.

These requirements are set out in the National Code of Practice on Infection Control and in local policies and procedures which will be made clear during your induction and subsequent refresher training. These standards must be strictly complied with at all times.

PERSON SPECIFICATION

Specialist Medical Engineering and Connectivity Technician – Band 6

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Specialist Medical Engineering and Connectivity Technician – Band 6 Essential	Essential	Desirable
Bachelor's degree in electronics or HND / NVQ4 electronics or equivalent.	X	
IPEM diploma in Medical Physics or Medical Engineering Technology.		X
Registered as a member of the Voluntary Register for Clinical Technologists.		X
Knowledge and Experience		
Specialist knowledge of medical electronics and electro- mechanical systems.	X	
Specialist principles. knowledge and experience of ICT networking		X
Specialist knowledge and experience of medical device integration and connectivity.		X
Specialist knowledge of medical device support including; preventative maintenance, servicing, inspection, repair, calibration, quality control, safety, acceptance testing and health service procurement.	X	
In-depth experience of medical device operation and management.		X
Experience in applying workshop technology to patient-critical equipment and techniques in healthcare.		X
Extensive experience in electro-medical engineering workshop practices.		X
Developed practical skills on a broad range of electro-medical equipment.	X	
High level of understanding of patient and staff risks arising from equipment failure.		X
High knowledge of clinical procedures for own area.		X
Able to exercise own initiative when dealing with issues within own specialist area.		X
Working knowledge of relevant legislation, national standards, professional and other guidelines (e.g. EN 13485, DB 9801, MHRA, and Health & Safety).		X
Understanding of the hazards posed by, and precautions needed with: <input type="checkbox"/> Non-ionising radiation <input type="checkbox"/> Electricity – medium voltages and currents <input type="checkbox"/> Cross – infection <input type="checkbox"/> Workshop hazards <input type="checkbox"/> Fumes <input type="checkbox"/> Mercury hazards		X

<input type="checkbox"/> Solvents and glues <input type="checkbox"/> Tools at elevated temperatures (e.g. Soldering iron) <input type="checkbox"/> Compressed medical gases <input type="checkbox"/> Cleaning agents <input type="checkbox"/> Lifting heavy sensitive items of equipment.		
Skills and Competencies		
Able to prioritise and manage own workload.		X
Able to exercise own initiative when dealing with issues within own specialist area.		X
Able to supervise junior staff.		X
Able to use Excel, Word etc. to set up documents and spreadsheets and extract information for written reports.		X
Able to use fine tools for equipment adjustment and assembly.	X	
Able to lift medium weights.		X
Able to maintain concentration with frequent interruptions creating unpredictable working patterns.		X
Able to deal with occasional distressing circumstances when working in clinical areas.		X
Able to communicate complex information.		X
Able to deliver training to groups of other professional or technical staff.	X	
Able to deliver teaching and training on multi-faceted equipment.		X
Good negotiation skills for use with external suppliers and members of the public.		X
Able to deal with complex and unpredictable situations.		X
A clean UK driving license.		X