

Job Description



South Tees Hospitals
NHS Foundation Trust

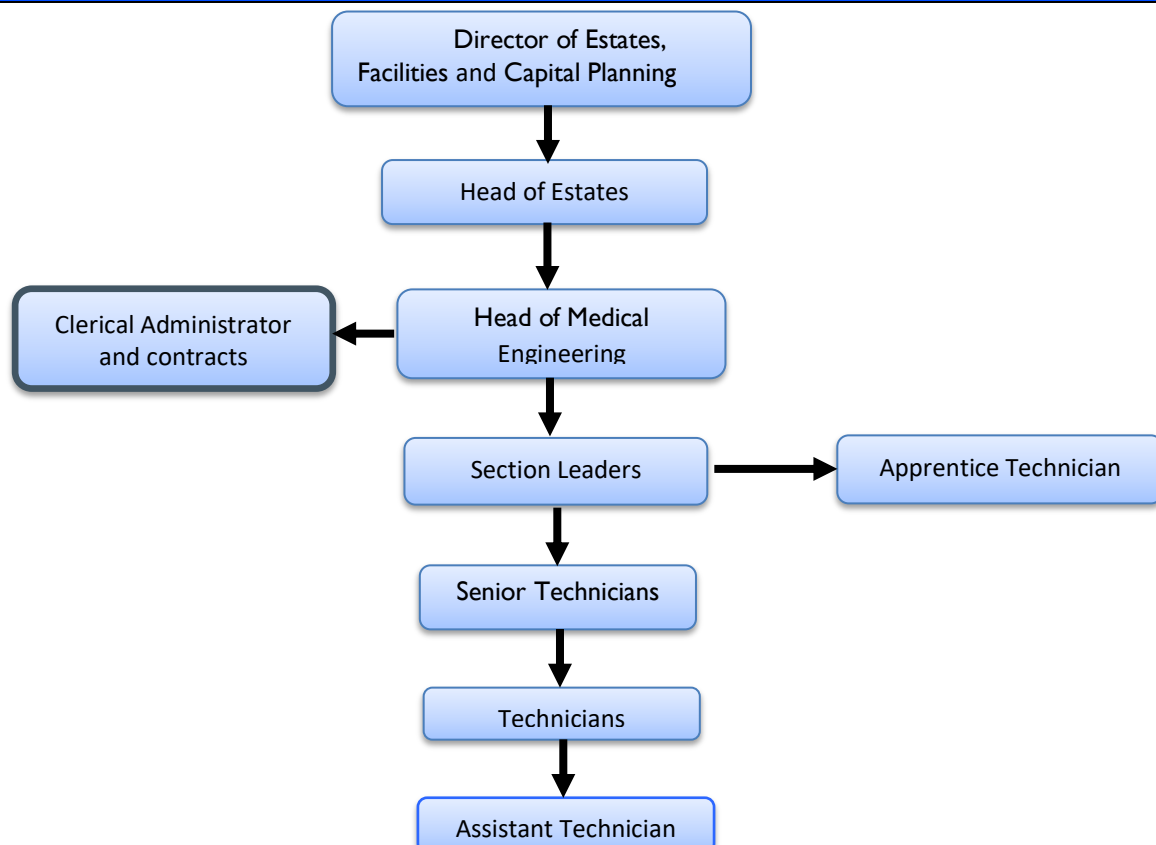
Role Details

Job Title	Medical Engineering Senior Technician
Band	6
Department/Service	Medical Engineering Department (Corporate Services)

Organisational Relationships:

Responsible to:	Medical Engineering Section Leaders
Accountable to:	Head of Medical Engineering
Professionally Accountable to:	Ensure that all activities conform to statutory regulations, local rules and approved codes of practice, in particular Managing Medical Devices – Guidance for health and social care, January 2021 Medicines and Healthcare Products Regulatory Agency.
Responsible for:	Senior Technicians will be expected to provide cover for Section Leaders when necessary.

Organisational Chart:



Job Summary/ Role:

Demonstrate advanced technical skills and competence for analysing and diagnosing faults on highly complex specialist and non-specialist medical equipment, always working to current legislation, as well as Trust and Departmental policies.

Commission new or loan medical equipment and carry out acceptance testing to ensure that equipment meets current legislative standards. Carry out scheduled maintenance. Monitor and assess, as requested, new and loan medical equipment for trial and evaluation purposes prior to purchase and /or clinical use. Supervise external company engineers, contractors and representatives while on site.

Communicate highly complex technical information to other specialists either within the Trust, department or to representatives from external suppliers, in addition to discussing equipment operation with clinical staff, patients and carers working as part of a multi-disciplinary team. Patient confidentiality must be dealt with as per trusts relevant policies and trust terms and conditions.

Take personal responsibility for the safety, accuracy, integrity and functionality of all medical equipment to the point of handover to the clinical user. The Value of this equipment is often more than £50,000. Inform Section Leader and Head of Medical Engineering of essential equipment replacement.

Carry out technical investigations into defect, failure or reported clinical incidents or safety alerts generated by the M.H.R.A. or manufacturer involving medical devices. This may include interrogation of internal software and error logs. Then to liaise with organisations both internally and externally and report any findings, in accordance with trust and departmental policies, verbally, in writing and electronically to the relevant departments and organisations.

Raise purchase order requests for spare parts. Ensure that stock levels recorded on the asset management database, accurately reflects actual stock levels. Maintain adequate stock levels of manufacturer's spare parts and store items. Occasionally, the need to negotiate with manufacturers and spares suppliers arises.

Comply with current health and safety procedures, legislation and trust policies (including MHRA guidelines for medical equipment safety testing requirements), relating to the work of the medical engineering department and all clinical areas. This can include working on live electrical equipment, paying due regard to electrical, hydraulic, pneumatic, biological and other hazards associated with the equipment. To be aware of dangerous working environments as regards to radiation, cytotoxins, UV light etc.

Have the ability, dexterity and competence to use delicate and dedicated specialist test equipment including calibrated test equipment for repair, servicing and calibration of such medical equipment. To use specific computer based software for diagnostic and calibration usage.

Carry out maintenance tasks within clinical areas which may expose the technician to emotionally distressing situations whilst fulfilling their responsibilities. Such situations may include working alongside critically ill patients and their families. These situations require

discretion, compassion and sensitivity to patients, relatives and friends who may be in attendance.

The Medical Engineering Department provides an out of hours on-call emergency service. This requires a rostered Senior Technician to be available for emergency cover during the department's non-operational periods. This is in addition to normal working hours and will require the on call technician to deal with emergencies regarding failure of medical equipment. The on call technician will be responsible for the full range of clinical specialities across all South Tees Trust sites and departments. The Technician will be required to work without supervision and make technical decisions, the impact of which may affect the treatment and diagnosis of patients. Also, to take responsibility for affecting external departments due to a Technician's advice to withdraw equipment from service.

Keep abreast of the latest developments in current medical technology by on the job training and to actively seek additional specialist training through the relevant section leader, regarding continuous professional development.

Organise and prioritise own workload to facilitate planned safety testing, preventative maintenance and to respond to emergency requests for repairs on all types of medical equipment.

Undertake ad hoc requests, relevant to duties and responsibilities, as may be required by team leader or senior management.

There will be regular exposure to harmful chemicals, solvents, calibration gas and compressed gases. Unavoidable exposure to electrical hazards and mains voltages during normal repair and maintenance tasks.

Key Relationships:

Head of Medical Engineering

Medical Engineering Section Leaders

Estates Department and PFI leads

Clinical and non clinical staff from Wards and Departments

Ability to communicate effectively and professionally with the clinical and non clinical staff.

Representatives from external companies

Liaise with other Healthcare professionals and managers, clients and external organisations in the resolution of complex technical issues related to medical devices.

The post holder will be required to receive technical information from medical equipment suppliers for distribution to both the Medical engineering team and clinicians where necessary.

Follow the Trust's hospital infection prevention and control (HIC) policies and procedures to protect patients, staff and visitors from healthcare associated infections and ensure that the correct hand hygiene procedures (as described in HIC 14) are performed when entering and leaving clinical areas.

Core Functions:

Administrative Responsibilities	<p>Ensure that the routine administrative procedures necessary for the smooth running of the service are satisfactorily completed in a timely manner.</p> <p>Responsible for data entry of information on the equipment, job and stores databases.</p> <p>Maintain and update completed maintenance tasks, repairs and commissioning on the department's computer based equipment asset management database. Ensuring accurate test and calibration results are recorded.</p> <p>If working in other departments/wards within the trust the post holder must comply with the departments local policies.</p> <p>Organising and coordinating access for maintenance with other departments within the Trust.</p> <p>The post holder will be required to work at all Trust sites and occasionally patient's homes.</p> <p>Maintaining the necessary stock levels of items of spares and consumables and to order and receive such spare parts and supplies in accordance with Departmental and Trust policies and procedures, being aware of budgetary implications when placing such orders.</p> <p>Have a responsibility for the security, accounting and upkeep of a significant amount of stock spare parts, tools and medical test equipment.</p>
Clinical Responsibilities	<p>Provide complex specialist, technical advice as required to assist clinical staff in making active clinical decisions in relation to medical equipment used in the treatment, diagnosis and monitoring of patients. Developing relationships with clinical staff which promote trust and confidence when giving such advice.</p> <p>Guide and inform clinical users of Medical Engineering working practices to ensure that medical equipment is decontaminated as per Trust policy prior to commencement of any work being carried out, owing to the risk of contamination by bodily fluids (as this occurs on a daily basis). Carry out decontamination of equipment due to the ingress of bodily fluids or other biohazards to non-user accessible parts, under the advice and guidance of the Infection Control Department.</p> <p>Within clinical areas, provide a visual / functional inspection diagnosis of a range of patient connected, therapeutic and diagnostic equipment which have been reported as faulty.</p>

	<p>Identify and resolve faults on complex medical devices to minimise downtime within clinical areas. Return or arrange return of equipment to Medical Engineering where fault is outside own competencies.</p> <p>Organise and participate in the management of, and the setting up of patient treatment systems within clinical areas. This includes the provision of technical services and the monitoring of water quality and quality systems.</p> <p>Keep stock levels of common spare parts to required levels so that common failed/failing components can be replaced in a timely fashion with minimal disruption to the clinical service.</p> <p>Communicate with clinical users and laboratory staff to gain access for periodic testing and to adjust planned maintenance schedules in response to short-term clinical needs.</p> <p>Identify potentially hazardous symptoms and faults during equipment testing. Advise senior clinical staff of the need to remove these devices from service.</p> <p>Occasional exposure to medical equipment contaminated with body fluids. Requirement of post-holder to use personal protective equipment and cleaning materials to eliminate the hazard.</p> <p>It is a requirement of the role to represent the Trust at a coroner's court where the medical equipment service history is required to be presented as an investigatory report as appropriate.</p>
Management and Leadership Responsibilities	<p>Deputise for the relevant section leader in the event of unavailability or absence.</p> <p>Supervision and assistance of 3rd party contractors appointed to work on medical equipment is required.</p> <p>Act as a lead technician for the department within an area after attending specialist equipment courses. To provide specialist technical training for colleagues following attendance at manufacturers training course (e.g. train the trainer). Participate in the technical training of apprentices and students.</p> <p>Act to maintain personal safety and security and that of others.</p> <p>Identify potential and actual risks and advise senior staff. Act in such a manner that promotes the positive image of the department and the Trust.</p> <p>The post holder will maintain the security of sensitive personal and other confidential information and will apply all relevant Information</p>

	Governance policies reliably to working practice. Additionally they will be expected to follow secure operating procedures for handling information in all formats, including verbal, written and that held electronically.
Policy and Service Development	<p>Contribute to the development of the Medical Engineering Department's quality system. Identify required changes due to the service needs.</p> <p>Be aware of and comply with, current departmental standard operating procedures. Where necessary, propose changes and contribute to new policies and procedures within the department. These changes can affect other areas and departments. To inform section leader of required changes to operating and service manuals within the quality system.</p> <p>Report any adverse incidents or Health and Safety concerns through the trust reporting policies and procedures.</p> <p>Contribute to departmental meetings with relevant information and identify departmental or Trust risks which need to be escalated.</p> <p>Liaise with clinical staff to adjust planned maintenance schedules in response to short-term clinical needs.</p>
Research and Audit Responsibilities	Contribute to the development of the department's quality standard ISO9001
Managing Resources Responsibilities	<p>Ensure the Trust's medical devices are maintained in line with manufacturers recommended service intervals. Ensuring the asset maintenance database is kept up to date with completion of planned work and equipment schedules are correct.</p> <p>Provide section leaders with monthly assurance that planned maintenance tasks are completed within the required time frame to comply with the departments KPI's.</p> <p>Work flexibly with all departments across the Trust to access medical devices for maintenance with minimal disruption to patients.</p> <p>Prioritise and manage own work load as assigned by section leaders.</p> <p>Booking spare parts and stock items into the department's operational software and receipting goods into the Trust's procurement system. Ensuring the quantities are recorded correctly.</p>

	<p>Remove unsafe or uneconomic repair equipment from service and prepare it for safe disposal.</p> <p>Report Trust assets which are to be prioritised on the capital replacement program due to unreliability or end of manufacturers support.</p>
Education and Training	<p>Maintain knowledge of the latest developments in current medical technology and actively seek additional specialist training for medical equipment used within the Trust.</p> <p>Provide advice, training and supervision of departmental staff, apprentices, clinical staff, patients and carers. For example, provide advice and guidance to home patients, carers for newly installed / upgraded haemodialysis systems.</p> <p>Maintain knowledge of current standards, mandatory regulations and guidelines relating to medical equipment.</p> <p>Processing of databases and PC based office applications</p> <p>Complete all Trust mandatory training courses identified in the post holders Personal Development Plan to update the knowledge and skills required to promote the continuous professional development.</p> <p>Support and implement the development of departmental policies and procedures.</p> <p>Participation in departmental appraisals and mandatory training for personal development.</p> <p>Work to a high standard in order to carry out the duties as the content of this work has a high direct impact on patient treatment and safety.</p>
<p><i>The job description and duties may be subject to future review as the needs of the service change.</i></p>	



Person Specification

South Tees Hospitals
NHS Foundation Trust

KNOWLEDGE & SKILLS		
Essential	Desirable	Assessment Method

<p>A comprehensive, specialist knowledge of highly complex device technology and both analogue and digital electronic techniques. Knowledge of mechanical, hydraulic, pneumatic and gas system technology.</p> <p>Knowledge of relevant legislation, national standards, Health and Safety electricity at work act, professional and other guidelines. Health and Safety experience.</p> <p>Knowledge of ISO 9001 Quality Management Systems</p> <p>A full understanding of calibration of diagnostic test equipment.</p> <p>Communicate highly complex technical information to other specialists either within the Trust department or to representatives, suppliers and field service engineers from external suppliers. Discussing and advising on equipment operation with clinical staff, patients and carers working as part of a multi disciplined team.</p> <p>PC literate with a good working knowledge of Microsoft Office and competent in the use of internet and E-mail.</p> <p>Keep accurate and complete records consistent with legislation, trust policies and procedures.</p>	<p>Formal qualification in ICT, Physics, Biology or Chemistry.</p> <p>Knowledge of hydraulics, optics, computer networking and audio video systems.</p>	<p>Application Form and Interview</p> <p>Application Form and Interview</p> <p>Application Form and Interview</p> <p>Application Form and Interview</p> <p>Application Form and Interview</p> <p>Application Form and Interview</p> <p>Application Form and Interview</p>
QUALIFICATIONS & TRAINING		
Essential	Desirable	Assessment Method

HNC, HND or Degree in Electrical / Electronic Engineering or related subject and relevant experience.	Specialist manufacturer certified technical training courses.	Application Form and Interview
	Recognised ICT qualification.	Application Form and Interview
	Evidence of continual professional development.	Application Form and Interview
	Membership of a relevant Engineering institute. (Registered technologist, IPEM)	Application Form and Interview

EXPERIENCE

Essential	Desirable	Assessment Method
Minimum of 2 years' experience within a Specialist Medical Engineering related discipline or relevant equivalent.	Broad experience in the maintenance of medical equipment. Gained through formal qualifications, plus in depth experience, specialist manufacturers training courses and NHS biomedical maintenance practice.	Application Form and Interview
Competency certification in model specific manufacturer technical training followed by experience in maintaining this equipment.		Application Form and Interview
Diagnose and repair faults to a component level on a wide range of highly complex medical equipment.	Excellent analytical skills combined with a comprehensive knowledge of general engineering device technology.	Application Form and Interview
Be able to produce a high quality of work consistently.		Application Form and Interview

PERSONAL ATTRIBUTES

Essential	Desirable	Assessment Method
Self motivated, being able to work unsupervised, organise and prioritise own workload and those of subordinate staff.	Health and Safety experience. NVQ assessor.	Application Form and Interview
	COSSH assessor.	
Ability to switch from task to task as priorities change, A complex repair can be interrupted by an emergency	Lives within a reasonable travelling time of the department or is prepared to move.	Application Form and Interview

<p>or higher priority call to a clinical area at any time.</p> <p>Requires intense concentration when carrying out repairs and calibrations. Along with the need to use a high level of manual dexterity to manipulate precision tools and miniature components.</p> <p>Able to exercise own initiative when dealing with matters within own specialist area of competence.</p> <p>Ability to adapt to a changing technological environment. Flexible and responsive to change. Able to meet deadlines and deal with difficult situations.</p> <p>Capable of working effectively in demanding, emergency and distressing situations.</p> <p>Of a professional and smart appearance, dress code to comply with trust, and departmental policies. Good at developing friendly relationships with colleagues at all levels.</p> <p>Physical ability and dexterity required. Requires manoeuvring heavy equipment often more than 120 kg.</p> <p>Have an understanding of hazards posed by and precautions needed with medical equipment (e.g. X-Ray equipment, scanners, cross infection, Bio-Hazards etc.)</p> <p>Must have correct colour vision. Be prepared to take part in departmental on-call service.</p> <p>Demonstrate a good attendance record.</p>	<p>Be prepared to use own vehicle for on call and travelling between Trust sites.</p>	<p>Application Form and Interview</p> <p>Application Form and Interview</p> <p>Application Form and Interview</p> <p>Application Form and Interview</p> <p>Application Form and Interview</p> <p>Application Form and Interview</p> <p>Application Form and Interview</p> <p>Application Form and Interview</p> <p>Application Form and Interview</p>
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Must hold a current, full driving license.		Application Form and Interview
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General Requirements:

Communications and Working Relations

The post-holder must treat colleagues in a manner that conveys respect for the abilities of each other and a willingness to work as a team.

2. Policies and Procedures

All duties and responsibilities must be undertaken in compliance with the Trust's Policies and Procedures. The post-holder must familiarise the ways in which to raise a concern to the Trust e.g. Freedom to Speak Up – Raising Concerns (Whistleblowing) Policy in order that these can be brought to the Trust's attention immediately.

3. Health and Safety

The post-holder must be aware of the responsibilities placed upon themselves under the Health & Safety at Work Act (1974), subsequent legislation and Trust Policies; to maintain safe working practice and safe working environments for themselves, colleagues and service users.

4. No Smoking

All Health Service premises are considered as non-smoking zones; the post-holder must familiarise themselves with the Trust's Smokefree Policy (G35)

5. Confidentiality

All personnel working for, on behalf of or within the NHS are bound by a legal duty of confidentiality (Common Law Duty of Confidentiality). The post-holder must not disclose either during or after the termination of their contract, any information of a confidential nature relating to the Trust, its staff, its patients or third party, which may have been obtained in the course of their employment.

6. Equal Opportunities

The Trust believes that all staff have a responsibility to make every contact count. This is to ensure that we are able to reduce health inequalities to the people we deliver services to and to our employees in our goal to deliver seamless, high quality, safe healthcare for all, which is appropriate and responsive to meeting the diverse needs of individuals. In working towards achieving our goals, it is important that staff and users of our service are treated equitably, with dignity and respect, and are involved and considered in every aspect of practice and changes affecting their employment or health care within the Trust.

7. Infection Control

The post-holder will ensure that (s)he follows the Trust's hospital infection prevention and control (HIC) policies and procedures to protect patients, staff and visitors from healthcare-associated infections. He or she will ensure that (s)he performs the correct hand hygiene procedures (as described in HIC 14), when carrying out clinical duties. He or she will use aseptic technique and personal protective equipment in accordance with Trust policies. All staff must challenge non-compliance with infection, prevention and control policies immediately and feedback through the appropriate line managers if required.

8. Safeguarding Children and Adults

The Trust takes its statutory responsibilities to safeguard and promote the welfare of children and adults very seriously. The Board of Directors expects all staff will identify with their manager during the SDR process their own responsibilities appropriate to their role in line with statute and guidance. This will include accessing safeguarding training and may include seeking advice, support and supervision from the trust safeguarding children or safeguarding adult teams. Where individuals and

managers are unclear of those responsibilities they are expected to seek advice from the safeguarding teams.

HR Use Only*Job Reference No:*

**South Tees Hospitals**
NHS Foundation Trust**APPENDIX 2****PROFILE SUPPLEMENT**

This Role Involves:	Yes	No	Rare	Occasional	Frequent	Examples
Lifting weights/objects between 6-15 kilos	✓				✓	Manual handling of portable medical devices during maintenance.
Lifting weights/objectives above 15 kilos	✓			✓		Lifting of larger medical devices onto test benches.
Using equipment to lift, push or pull patients/objects	✓			✓		Use of trolleys and pallet truck.
Lifting heavy containers or equipment	✓				✓	Movement of equipment and parts to the Medical Engineering department.
Running in an emergency		✓				
Driving alone/with passengers/with goods	✓			✓		Driving between Trust sites and attendance of offsite training.
Invasive surgical procedures		✓				
Working at height or in a confined space	✓			✓		Working in plant rooms.
Concentration to assess patients/analyse information	✓				✓	Analyse clinical and engineering test results for the required action.
Response to emergency situations	✓				✓	Immediate response required for clinical situations involving medical devices.
Clinical interventions		✓				

To change plans and appointments/meetings depending on the needs of this role	✓				✓	React to equipment availability at short notice.
Informing patients/family/carers of unwelcome news		✓				
Caring for terminally ill patients		✓				
Dealing with difficult family situations	✓		✓			Attend patient connected medical equipment within Critical Care or Renal Home patients where family members may be present.
Caring for/working with patients with severely challenging behaviour		✓				
Typing up of formal minutes/case conferences		✓				
Clinical/hands on patient/client care		✓				
Contacts with uncontained blood/bodily fluids	✓			✓		Medical Devices entering the department may be subjected to bodily fluid contamination.
Exposure to verbal aggression		✓				
Exposure to physical aggression		✓				
Exposure to unpleasant working conditions dust/dirt/fleas		✓				
Exposure to harmful chemicals/radiation	✓			✓		Exposure to cleaning products, UV and X-Ray radiation during maintenance.
Attending the scene of an emergency		✓				
Food preparation and handling		✓				
Working on a computer for majority of work	✓				✓	Data input into the departments asset database to update maintenance records, logging jobs, creating new asset records, stock control.
Use of road transport	✓			✓		Driving Trust vehicles

