



**Lancashire Teaching
Hospitals**
NHS Foundation Trust



Together



Lancashire Teaching Hospitals

   @LancsHospitals

**LANCASHIRE TEACHING HOSPITAL NHS TRUST
WORKFORCE DIRECTORATE**

JOB DESCRIPTION

JOB TITLE: Medical Engineer

DIRECTORATE: Facilities and Services

REPORTS TO: Chief Medical Engineer

ACCOUNTABLE TO: Medical Engineering Operations Manager

KEY RELATIONSHIPS: Contractors, Clinical Staff, Engineering staff

DIRECT REPORTS: None

HOURS: 37.5

LOCATION: Chorley & South Ribble Hospital
Royal Preston Hospital

BAND: 5

NB: The Postholder may be required to work in other departments across the Trust including across Trust sites, at other healthcare locations in the north west, or in patients homes.

DBS (Criminal Record) Check Level required for role:

Please indicate the level of DBS Check required in this role	No DBS Required	Standard	Enhanced without Barred List Checks	Enhanced with Child only Barred List Check	Enhanced with Adult only Barred List Check	Enhanced with Child and Adult Barred List Checks
	✓					

KSF Dimension Levels for Role

Communication	Personal & People development	Health, Safety & Security	Service Improvement	Quality	Equality & Diversity
2	1	2	1	1	1

Role Summary

The post holder's responsibility consists of carrying out acceptance testing, planned preventative maintenance, calibration, and repairs down to component level on a range of medical equipment without supervision and overseeing work carried out by external service contractors. Many repairs have to be attended to urgently and some aspects of the work can be hazardous and stressful but all work must attain a high level of quality and safety. Interaction with patients may be required.

The post holder is expected to liaise closely with all users of medical equipment within the Trust, departmental colleagues, manufacturers and service vendors to assist in ensuring that the Trust receives the highest standard of service at the lowest cost.

Key Duties and Responsibilities:

The duties and responsibilities listed below should be undertaken in accordance with the levels of competence as defined in the KSF outline for this post. In addition all staff are expected to act in accordance with the values and behaviours of the Trust



Excellent care with compassion

Our Values



Being Caring and Compassionate

Being caring and compassionate is at the heart of everything we do, it is about understanding what each person needs and striving to make a positive difference in whatever way we can.



Recognising Individuality

Appreciating differences, making staff and patients feel respected and valued.



Seeking to Involve

Actively gets involved and encourages others to contribute and share their ideas, information, knowledge and skills in order to provide a joined up service.



Building Team Spirit

Working together as one team with shared goals doing what it takes to provide the best possible service.



Taking Personal Responsibility

Individuals are accountable for achieving improvements to obtain the highest standards of care in the most professional way, resulting in a service we can all be proud of.

ROLE DUTIES	MEASURABLE OUTCOMES	Link to Values				
						
Communication						
Communicate and develop relationships with a range of organisations and technical and clinical staff on adverse incidents and investigations.	<ul style="list-style-type: none"> • Collation of details of notifiable incidents, quarantined equipment and accessories, • Written reports to the MHRA and liaison with the MHRA, manufacturers and Hospital Staff in any investigations. 	✓	✓	✓	✓	✓
Explain the possible configurations of users' computer / microprocessor based equipment and configure it to operate appropriately and safely for their areas/tasks.	<ul style="list-style-type: none"> • Agreed configurations signed and understood by clinical users 			✓	✓	
Develop relationships with medical equipment	<ul style="list-style-type: none"> • Communication records (email and database 				✓	✓

manufacturers and suppliers so as to obtain best value and quality with the supply of products and services	records) showing discussions and progress of repairs, enquiries and quality issues.					
Liaise with external contractors to request repairs and repair quotations	<ul style="list-style-type: none"> • Quotations 			✓	✓	✓
Communicate efficiently with, and offer advice on medical equipment to, staff at all levels within the Trust.	<ul style="list-style-type: none"> • Database/email records of advice and information provided. 	✓	✓	✓	✓	
Prioritise and negotiate with other Health Care Professionals in obtaining access to medical equipment for maintenance.	<ul style="list-style-type: none"> • Records of repair and attempts to access equipment in use. 	✓		✓	✓	
	<ul style="list-style-type: none"> • 					
Developing oneself and others within the Trust						
Brief clinical staff across the Trust in the function, operation and day-to-day maintenance of medical equipment.	<ul style="list-style-type: none"> • Records of acceptance testing equipment and its introduction into service following department procedures. 		✓	✓	✓	
Support colleagues by providing them with technical information and training on devices where appropriate and passing on information gained from technical and clinical courses where required	<ul style="list-style-type: none"> • Assistance provided to training engineers • Updating others on any changes to servicing requirements 				✓	✓
Undertake CPD to update own technical and clinical knowledge relating to medical equipment and its use	<ul style="list-style-type: none"> • Attendance at study days • Personal CPD file • Involvement in Healthcare Science events 					✓
Health and Safety						
Be aware of, and contribute to, Health, Safety and Security of self and others. Act independently, safely, promptly and efficiently in all situations with patients, colleagues and contractors.	<ul style="list-style-type: none"> • Carryout all duties in accordance with, the requirements of the Health and Safety at Work Act, relevant Statutory Regulations, Approved Codes of Conduct and Local Rules • Alerts senior staff of incidents or issues and completes Datix reports as required. • Makes sure areas and information are secured / locked when not being used or accessed. 	✓				✓

Take appropriate precautions to ensure safety when working with heavy loads.	<ul style="list-style-type: none"> Attend manual handling and mandatory training. Maintains own competence in manual lifting and handling Follows all procedures correctly and is prepared to be audited to ensure compliance. Demonstrate compliance in all tasks. 					✓
Follow departmental guidelines to ensure safety when working on open live electrical equipment, equipment with high pressures, high voltage capacitors, dangerous mechanical parts, dangerous RF / microwave fields, powerful light / laser outputs, dangerous radiation levels or hazardous chemicals and on equipment in the patient environment.	<ul style="list-style-type: none"> Undertaking CPD and relevant training courses. Follow Quality System documented procedures. Carryout all duties in accordance with, the requirements of the Health and Safety at Work Act, relevant Statutory Regulations, Approved Codes of Conduct and Local Rules 	✓				✓
Organise the provision of loan equipment from service providers on occasions when repairs cannot be achieved within a desired time scale, or in incident situations, to enable patient services to be maintained.	<ul style="list-style-type: none"> Database records 	✓		✓	✓	✓
Contribute to and participate in regular meetings with Medical Engineering Management to improve departmental performance.	<ul style="list-style-type: none"> Meeting minutes Offers constructive comment and suggestions for improvements at opportune times. 		✓	✓	✓	✓
When appropriate undertake project work	<ul style="list-style-type: none"> Communication and project updates / reports 	✓				✓
Be involved in the creation and updating of complex written procedures for the performance and functional verification of medical devices.	<ul style="list-style-type: none"> Production of test procedures 				✓	✓
Work unsupervised to Professional Standards in compliance with Department of Health guidelines, relevant standards set by Regulatory Bodies and Departmental Procedures.	<ul style="list-style-type: none"> Database records, Registration, appraisals. 	✓				✓
Use technical expertise and clinical experience to identify potentially hazardous symptoms and faults and act to ensure safety. In conjunction with senior staff, report novel fault conditions to the manufacturers and the	<ul style="list-style-type: none"> MHRA reports 	✓				✓

MHRA.						
Analyse the impact of equipment maintenance on service provision and work to minimise detrimental effects.	<ul style="list-style-type: none"> • Database reports • Flexible working 	✓	✓	✓	✓	✓
Equality and Diversity						
Be familiar with and follow the Trust's reporting procedure for sickness, annual leave and flexi-time.	<ul style="list-style-type: none"> • Compliance 					✓
Act in ways that value diversity and encourage equality both within the department and in the wider Trust and working relationships.	<ul style="list-style-type: none"> • Offering support to colleagues • Appraisal 		✓			
Systems vehicles and equipment						
Carry out the regular maintenance, calibration, function checking and electrical safety testing of a range of complex medical equipment ensuring it is safe and complies with the manufacturer's specification.	<ul style="list-style-type: none"> • PM and repair records on database • Adherence to work procedures 	✓				✓
Prioritise planned preventative maintenance and medical equipment breakdown requests with departmental colleagues to ensure that the overall maintenance plan is achieved and repairs are made as quickly and as efficiently as possible.	<ul style="list-style-type: none"> • Overall PM completion targets • Response time to breakdowns 	✓			✓	✓
Acceptance test / commission new equipment ensuring that it is as ordered, is electrically safe, meets manufacturer's specifications and MHRA guidelines and is appropriately CE marked.	<ul style="list-style-type: none"> • Adherence to Procedures and records of completed forms 	✓				✓
Function and electrically safety test equipment upon its return from external repair and before its release to users.	<ul style="list-style-type: none"> • Database records 	✓				✓
Assess the seriousness and implications of reported problems and respond appropriately to the urgency of the user's request. Ensure that the users receive a high quality, prompt and efficient service and are kept informed of the progress of on-going and outstanding work.	<ul style="list-style-type: none"> • Work order records 	✓			✓	✓
Where necessary, use skills, knowledge and understanding of the clinical applications of medical devices to assist the user with potentially faulty equipment that may still be attached to the patient.	<ul style="list-style-type: none"> • Work order records 	✓			✓	✓

Apply specialised fault finding techniques to diagnose complex problems and make repairs down to component level using expertise, precision engineering techniques and fine control of tools and small components.	<ul style="list-style-type: none"> • Work order records 	✓				✓
Take responsibility for all tools and specialised test equipment within the post holder's care and assist in ensuring workshop facilities are kept clear and well ordered.	<ul style="list-style-type: none"> • Audit of tools, work area and test equipment • Manages own workspace and tools by keeping them clean and tidy. 					✓
Act as Duty Engineer when requested and attend to urgent repairs immediately, distribute demand repair work to colleague engineers and return completed equipment to users.	<ul style="list-style-type: none"> • Work order records 	✓	✓	✓	✓	✓
Be familiar with software in computer based medical equipment systems and microprocessor based equipment so that faults can be accurately identified and corrected.	<ul style="list-style-type: none"> • Work order records 	✓				✓
Appraise loan equipment provided for evaluation and advise user during trials of appropriateness for purpose and future maintainability.	<ul style="list-style-type: none"> • Evaluations of medical devices on loan • Verbal and written reports to line managers 					✓
Be responsible in the care, use and maintenance of vehicles as required, and in the safe delivery of devices by whatever means.	<ul style="list-style-type: none"> • Daily checks • Reporting and resolution of any issues. • Collects and delivers medical devices to various locations internally and across the north west, securing equipment to minimise potential of damage. 	✓				✓
Procurement and commissioning						
Raise orders for spare parts, the dispatch of repairs and engineer call-out dealing with subsequent financial queries regarding price verification and delivery of goods and services	<ul style="list-style-type: none"> • Purchase order requisitions • Receipting of orders • Work order records 					✓
Ensure that stocks of any components and spare parts used, do not fall below agreed levels.	<ul style="list-style-type: none"> • Purchase order requisitions for general and specialist stock 				✓	✓
Information processing						
Take appropriate precautions to ensure that clinical information / event history on computer based systems has been backed-up before maintenance is carried out.	<ul style="list-style-type: none"> • Work order records / data • Awareness of confidentiality / IG 	✓				✓
Keep appropriate records of work performed. Operate the	<ul style="list-style-type: none"> • Work order records completed correctly 	✓				✓

equipment management computer database in an accurate, methodical manner ensuring new items are entered onto the system and disposals are recorded with work being logged as it progresses until completion.	<ul style="list-style-type: none"> Equipment data maintained correctly 					
Obtain information for others through use of the database and present in an appropriate format.	<ul style="list-style-type: none"> Database queries and reports 	✓			✓	✓

Occupational hazards or exposures relevant to this job (please tick)			
Physical			
Patient moving & handling	<input type="checkbox"/>	Regular DSE work	<input checked="" type="checkbox"/>
Regular equipment / material moving & handling > 10kg	<input type="checkbox"/>	Climbing ladders and / or working at height	<input type="checkbox"/>
Noise (LEP,d > 80)	<input type="checkbox"/>	Hand Arm Vibration	<input type="checkbox"/>
Hot or cold conditions	<input type="checkbox"/>	Exposure to Ionising Radiations	<input checked="" type="checkbox"/>
Entry into confined spaces	<input type="checkbox"/>	Other potential ergonomic problems	<input type="checkbox"/>
Driving on Trust business	<input checked="" type="checkbox"/>	Vocational driving (C1,D1, LGV, PCV)	<input type="checkbox"/>
Chemical			
Exposure to known respiratory irritants or sensitisers	<input type="checkbox"/>	Exposure to known skin irritants or sensitisers (including latex)	<input type="checkbox"/>
Exposure to asbestos (non-licenced work)	<input type="checkbox"/>	Exposure to any other chemicals	<input checked="" type="checkbox"/>
Biological			
Exposure-prone procedures	<input type="checkbox"/>	Laboratory exposure to pathogens	<input type="checkbox"/>
Other			
Night work	<input type="checkbox"/>	On-call duties/ lone working	<input checked="" type="checkbox"/>

Governance

The post holder will operate at all times to high standards of probity. This will include compliance with:

- Health and safety regulations
- All policies and procedures approved by the Trust
- Trust Standing Financial Instructions
- Working within the Data Protection act 1984, Health & Safety at work Act 1974, Maintain confidentiality at all times, as required by legislation and Trust Policy
- Working to defined policies and procedures, actively implementing the development of the electronic solution
- Work within the limitations of the role
- Professional codes of conduct including the NHS Managers Code of Conduct (where these apply)
- All policies and procedures related to infection prevention and control as relevant to their post
- To raise any concerns as soon as possible, as per whistle blowing policy, relating to any:-
 - Healthcare matters, e.g. suspected negligence, mistreatment or abuse of patients; the quality of care provided
 - Concerns about the professional or clinical practice or competence of staff
 - The treatment of other staff, including suspected harassment, discrimination or victimisation
 - Health, safety and environment issues
 - Suspicion or knowledge of theft, fraud, corruption, bribery allegations or other financial malpractice
 - Employment standards and/or working practices
 - Criminal offences or miscarriages of justice
 - Failure to comply with any other legal obligation
 - Deliberate concealment of any of the above

Information Governance

- To be fully aware of and committed to all Policies, Procedures and Initiatives relating to Information Governance - this will include, but not limited to, Data Quality improvements, Confidentiality and Information Security
- To take personal responsibility for safeguarding and ensuring the quality of information.

Behaviour

The post holder will be expected to:

- Support the aims and vision of the Trust
- Act with honesty and integrity at all times
- Be a positive ambassador for the Trust
- Demonstrate high standards of personal conduct

- set an example and encourage openness and honesty (particularly in reporting incidents and near misses) and will actively foster a culture of learning and improvement
- Value and respect colleagues, other members of staff and patients
- Work with others to develop and improve our services
- Uphold the Trust's commitment to equality and diversity
- Take personal responsibility for their words, deed and actions and the quality of the service they deliver

Job Review

This job description will be reviewed periodically to take into account changes and developments in service requirements. Any changes will be discussed fully with the post holder.

Signature of Post Holder:

Date:

Signature of Manager:

Date:

LANCASHIRE TEACHING HOSPITAL NHS FOUNDATION TRUST

PERSON SPECIFICATION - Medical Engineer Band 5

ATTRIBUTE	ESSENTIAL	DESIRABLE	HOW ASSESSED
Qualifications & Education	<ul style="list-style-type: none"> • Professional electronics knowledge to degree equivalent level acquired through B Eng in electronics or HNC/D and short courses or equivalent training and experience • Full UK Driving Licence. 	<ul style="list-style-type: none"> • Registered with the RCT • Electronics knowledge to ONC/HNC and short courses or equivalent training and experience 	<ul style="list-style-type: none"> • Certificates
Knowledge & Experience	<ul style="list-style-type: none"> • Comprehensive experience of record keeping on computer based systems. • A contributor to teamwork and experience of working in teams, sharing experience, tasks and responsibility. • Sound knowledge of basic scientific, technical and computing principles coupled with a practical disposition to fault finding. • Knowledge of infection dangers from working on medical equipment.. • Familiarity with a range of medical equipment design, construction, use, maintenance and repair procedures. • Experience in the Health and Safety aspects of maintaining Medical Equipment and its use in a clinical setting. 	<ul style="list-style-type: none"> • Technical interests / hobbies • Experience of mechanical / electrical design and manufacture • Experience of working within a Quality System • Record keeping experience • Lone working experience • Work experience in community / primary settings • Sound knowledge of basic clinical, physiological, computing and Medical Engineering principles. • Familiarity with a range of medical equipment design, construction, use, maintenance and repair procedures. • Experience in the Health and Safety aspects of maintaining Medical Equipment and its use in a clinical setting. 	<ul style="list-style-type: none"> • Application Form • Interview • Exercise • Theory Test

<p>Skills & Abilities</p>	<ul style="list-style-type: none"> • Good verbal communication skills • Ability to correctly undertake medical engineering maintenance tasks in technical and clinical environments. • Ability to monitor and supervise contractors • Ability to work under pressure to deadlines and in stressful circumstances. • Ability to work unsupervised to a high and safe standard. • A proactive disposition, offering solutions, identifying issues and collaborating on solutions. • Computer literate and able to adapt to a range of software tools used in all areas. • Friendly and compassionate personality. 	<ul style="list-style-type: none"> • Ability to coach and instruct equipment users. • Ability to contribute to development of a Quality System • Driving Licence. 	<ul style="list-style-type: none"> • Certificates. • Interview. • Application form.
<p>Values and Behaviours</p>	<ul style="list-style-type: none"> • Empathy with Healthcare in the NHS. • Flexibility towards working hours. • A desire to provide excellent care with compassion • A commitment to the departments vision statement: "We aim to provide an efficient, quality, equipment management service to clinical users for the benefit of our patients". 		<ul style="list-style-type: none"> • Interview

Organizational Structure

