

## JOB DESCRIPTION

### 1. JOB IDENTIFICATION

Job Title: Cardiac Clinical Physiologist (Physiological Measurement)

Responsible to: Lead Cardiac physiologist

Department: Cardiac Clinical Physiology

Directorate: Cardiology (RIE).

Operating Division: Medical

Job Reference:

No of Job Holders: 5

Last Update: April 2023-04-27

### 2. JOB PURPOSE

- To assist in the provision of a high quality ECG and 24hr Ambulatory ECG and Exercise Testing service.
- To be an effective member of the multi-disciplinary team in the Cardiac Catheterisation Lab and participate in the on-call service for Primary PPCI.
- To commence Post Graduate Training in Cardiac Ultrasound and work towards BSE accreditation.

### 3. DIMENSIONS

#### Non Invasive

The Cardiac Clinical Physiology Department NRIE site performs approximately 40,200 non-invasive clinical investigations per annum.

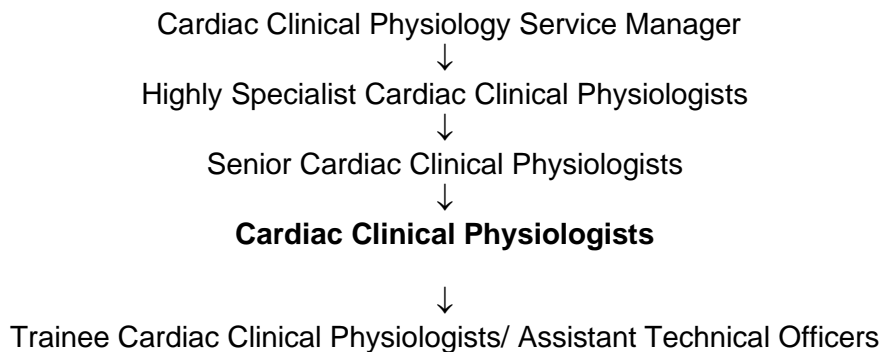
- The post holder assists in providing an ECG service to A/E and Acute Medicine.
- The post holder is responsible for fitting and the analysis of holter monitors.
- The post holder works independently and will refer any ECG abnormalities to the medical or nursing staff caring for the patient.
- The post holder will assist in blood pressure monitoring during Exercise Tests.
- The post holder will be expected to supervise Trainee Cardiac Physiologists and Assistant Technical Officers (ATOs).
- The post holder will eventually be expected to undertake a period of training in cardiac ultrasound to BSE standards.

## Invasive

Cardiology LUHD (NRIE site) carries out 3400 Interventional procedures annually.

- The post holder works unsupervised and provides an ECG and Intracardiac pressure monitoring service during normal working hours and participates in the emergency duty on-call roster.
- The post holder will be trained in the use of the rotablator, RADI pressure wire, temporary pacing box and the defibrillator.

## 4. ORGANISATIONAL POSITION



## 5. ROLE OF DEPARTMENT

The Department of Cardiology is a nationally and internationally acclaimed unit, providing a supra-regional comprehensive service to a population of 1.7 million.

LUHD delivers services within the environment of a University Teaching Hospital setting.

The Department of Cardiology is a centre for National and International Research and Clinical Trials.

The Cardiac Clinical Physiology Department NRIE site plays a pivotal role by providing a full range of Cardiac investigations to A/E and Acute Medicine all In-patients and Out patient Specialities including Neo Natal Services.

The role of the Cardiac Clinical Physiologist has expanded to encompass many duties which were formally that of a Consultant Cardiologist.

Non Invasive:

- Routine ECGs
- 24hr ambulatory ECG monitoring and analysis. (Including event recorders.)
- Cardiac Clinical Physiology (C.C.P.) led Exercise Tolerance Tests; this includes Rapid Access Chest Pain services.
- CCP led Cardiac Ultrasound service.
- CCP led Agitated saline bubble echo service including IV cannulation.
- CCP led exercise stress echo service.
- Ability to assist in transoesophageal echocardiography.
- Ability to assist in dobutamine stress echocardiography.
- ECG training for Nursing staff and Clinical Support Workers.

Invasive:

- Intra cardiac pressure monitoring during Cardiac Catheterisation and Coronary Intervention.
- On- call for Primary PPCI.

## 6. KEY RESULT AREAS

### Clinical Provision

#### Non invasive:

- To provide an ECG and 24hr Ambulatory ECG /Event recorder service
- To assist the Lead Specialist in providing a 24hr ambulatory analysis service.
- To assist the Lead Specialist in the Exercise Lab and to successfully complete training in this speciality.
- To assist in the provision of one stop clinics to Cardiology.
- Work within defined clinical policies and procedures of the service and department to ensure delivery of a high quality service.
- To troubleshoot/identify and report equipment faults.
- To commence post graduate education and training in Cardiac Ultrasound to BSE standard.

#### Invasive:

- Responsible for monitoring and recording intra cardiac pressures during Cardiac Catheterisation and Coronary Intervention
- Responsible for the assembly and calibration of:
  - (a) Intra cardiac pressure monitoring equipment.
  - (b) Radi Pressure Wire for flow measurements during Coronary Intervention.
  - (c) Intra Aortic Balloon Pump.
  - (d) Rotablator.
  - (e) Oximeter
- Responsible for checking the defibrillator and, its use during Cardiac Catheterisation and Coronary Intervention
- Provide an on-call service for the Catheter Lab.
- Maintain appropriate professional and personal development.

#### Education/Training:

- Supervise Trainee Cardiac Clinical Physiologists and ATOs performing ECGs and fitting 24hr Ambulatory ECG monitors/Event recorders.
- Advise patients on the planned procedures, ensuring informed consent.

#### Research Development and audit:

- Participate in both National and International research and clinical trials.

## 7a. EQUIPMENT AND MACHINERY

The post holder will ensure all equipment used is inspected regularly and is safe for use, and all faults reported appropriately.

### NON INVASIVE

#### **Generic:**

Bleep system, Fire Equipment, Oxygen Cylinders, Pat Slides, Wheelchairs/Trolleys/Beds  
12 Lead ECG machine, (£5000) 24 hr Ambulatory Monitors, (£1800) Event recorders, (£1000)  
Transtelephonic Signal Receiving Centre.

**Specialist:**

Cardiac Monitor, Computerised Stress Testing System including Archiving (£24,000) Manual Defibrillator (£7000), Dynamap, Sphygmomanometer, Pulse Oximeter.

**Highly Specialist:**

24hr Ambulatory Tape Analyser (£60,000)

*INVASIVE***Specialist:**

External Pacing Box. (£1500)

**Highly Specialist:**

Intracardiac Pressure and ECG Monitoring and Recording Equipment in Cardiac Catheter Lab. (£40,000) Defibrillator Remote Use (£7000), Intra Aortic Balloon Pump, (£42,000), RADI pressure Wire Sensor (£10,000), Rotablator (£6000) and Blood Oximeter (£7500).

\* **The Intra Aortic Balloon Pump** is an emergency life support system used to increase Coronary and Peripheral blood flow.

\***RADI analyser** calculates fractional flow reserve identifying significant flow restricting lesions in the Coronary Arteries.

\***Rotablator** burrs down calcified plaque deposits in the Coronary Arteries into fragments smaller than Red blood cells in order to allow balloon angioplasty.

**7b. SYSTEMS****Patient information data bases and report archiving for:**

- Exercise Tolerance Tests. (Mortara system)
- Cardiac Catheterisation (GE system)
- Manual logbook for cross-referencing procedure data in the Catheter Lab.
- Departmental data bases for Cardiac Ultrasound and CRM to access reports.
- Internet and Intranet for personal and business.
- Manual logbooks for Non invasive services.
- Maintain patient records.

**8. ASSIGNMENT AND REVIEW OF WORK**

- The post holder will be assigned work by Specialist Cardiac Clinical Physiologists.
- The post holder will be expected to work independently within appropriate occupational guidelines however Specialist CCP staff will be available for advice and guidance.
- Work review and formal appraisal will be carried out by Specialist CCP (ECG Services), and Catheter Lab co-ordinator annually.

## 9. DECISIONS AND JUDGEMENTS

- The post holder will prioritise their workload according to clinical need.
- The post holder analyses and reports on a range of investigations (ECGs and 24hr ambulatory ECG 's) with reference to known variants.
- The post holder will initiate appropriate action when abnormalities are found to ensure effective continuing patient management.
- The post holder will use their judgement in communicating relevant ECG and Intra cardiac Pressure monitoring information to the Cardiologist in the Cardiac Catheter Lab.
- The post holder will work autonomously and independently when on-call for the out of hours emergency service for the Cardiac Catheterisation Lab.

## 10. MOST CHALLENGING/DIFFICULT PARTS OF THE JOB

- Keeping up to date with new developments.
- Providing an excellent efficient service with an unpredictable workload and frequent interruptions.
- On call working as an independent practitioner out-with department support.
- Balancing service provision with post graduate training in sub speciality (Cardiac Ultrasound )

## 11. COMMUNICATIONS AND RELATIONSHIPS

The post holder must have a persuasive, encouraging and re-assuring disposition in order to enable co-operation with confused or anxious patients.

The post holder will provide and receive complex, sensitive and confidential information to and from referring physicians and other health care Professionals.

### **INTERNAL (within the Division)**

Patients and Relatives: - To explain complex procedures and to reassure.

Specialist Cardiac Clinical Physiologists: - For work assignment and appraisal.

Medical staff. To convey test results.

Nursing staff –. As Above

Clerical staff –. For patient scheduling and patient transport requirements.

Management – Line manager for staffing issues.

Medical Physics To reports equipment faults.

### **External:**

G.P.'s: - To give and receive sensitive information and convey test results.

## 12. PHYSICAL, MENTAL, EMOTIONAL AND ENVIRONMENTAL DEMANDS OF THE JOB

### **Physical Effort:**

- Manoeuvring ECG machines in restricted spaces. (Frequent)
- Pushing ECG machines on carpeted areas. (Frequent)
- Pushing trolleys/wheelchairs. (Frequent)
- Assisting patients to transfer from a chair to a bed or examination couch. (Frequent)
- The post holder requires a moderate level of fitness to travel quickly between clinical areas for emergency ECG's in other parts of the hospital (Frequent)

- Requirement on occasion to wear a Lead apron for short periods of time in the resuscitation room in A/E.
- Transferring patients from X-Ray table to trolley in Cardiac Catheter Lab. (Frequent)
- The post holder requires a moderate level of fitness to manoeuvre heavy equipment into the Catheter Lab, and transfer with patient to the Coronary Care Unit (Occasional)
- Sitting or standing for prolonged periods whilst working in the Cardiac Catheter Lab. (Frequent)
- Requirement to wear lead apron for radiation protection whilst working in the Cardiac Catheter Lab. (Frequent)
- Using a desktop PC. (Frequent)

**Physical Skills:**

- Good keyboard skills for entry of data.
- Basic Life Support with Defibrillation skills.
- Pressure monitoring set up in the Cardiac Catheter Lab.
- The post holder must be able to work with speed and accuracy during emergency procedures in the Catheter Lab.
- Correct placement of ECG electrodes.
- Operation of 12 Lead ECG machines.
- Operation of ambulatory ECG monitors.
- Operation of event recorders.
- Blood pressure monitoring during Exercise testing.

**Mental Effort:**

- Concentration required when recording ECG's and fitting 24hr ambulatory monitors whilst dealing with frequent interruptions from other staff, patients and pager for A/E. (Frequent)
- Continuing education in ECG interpretation.
- The post holder is expected to make Intra cardiac measurements and enter data into reporting system in the Catheter Lab. (Frequent)
- Maintenance of precise and accurate records in all areas of the service. Eg 24hr Ambulatory ECG analysis and reports. (Frequent)
- Time management
- Communication difficulties with patients (multicultural, deaf, blind) (Occasional)

**Emotional Effort:**

- Post holder communicates with distressed and anxious patients (Frequently.)
- Dealing with critically ill patients. (Catheter Lab)
- Death of patients. (Catheter Lab very occasionally)
- Exposure to Trauma patients with varying injuries in Accident and Emergency. (Frequent)

**Environmental:**

- The post holder is exposed to body odours and body fluids. (Frequent)
- There is a potential risk of verbal and physical abuse whilst working in A/E from patients who are confused or disorientated, or under the influence of drugs or alcohol. (Occasional)
- Temperature/air quality of working environment.
- The post holder will be expected to work for prolonged periods in artificial lighting. (Frequent)
- Radiation exposure in the Catheter Lab. (Frequent) Health and Safety guided.
- Prolonged periods using monitoring equipment. (VDU)

### 13. KNOWLEDGE, TRAINING AND EXPERIENCE REQUIRED TO DO THE JOB

**Essential:**

- BSc. Hons Cardiac Clinical Physiology (Cardiology) or equivalent.
- Post holder must be registered with Health Professions Council (HPC) or a recognised equivalent statutory body as a Cardiac Clinical Physiologist.
- Successful completion of Cardiac Catheterisation Training Program, which includes Interventional Courses provided by Industry.
- Successful completion of training in non invasive ECG services (ECG's, 24hr tapes/Event recorders, and blood pressure monitoring during Exercise Tests).
- Evidence of excellent ECG interpretation skills
- ILS/BLS with defibrillation skills.
- Effective communication and interpersonal skills.
- IT skills.
- Knowledge of Health and Safety, Infection Control and Manual Handling.

### 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