

## Job Description

**JOB TITLE:** Apprentice Technologist - Nuclear Medicine

**DIVISION:** Clinical Support

**GRADE:** Band 5 Annex 21

**REPORTS TO:** Chief Technologist - MRT

**ACCOUNTABLE TO:** Head of Nuclear Medicine

### VALUES AND BEHAVIOURS



### ABOUT NUH

Every day, our teams at Nottingham University Hospitals NHS Trust (NUH) make a difference. We save lives, we improve lives and we usher in new life. We are proud to play a central role in supporting the health and wellbeing of people in Nottingham, Nottinghamshire and our surrounding communities.

With more than 18,000 colleagues, we are the largest employer in Nottinghamshire and one of the biggest and busiest NHS Trusts in the country, serving more than 2.5m residents of Nottingham and Nottinghamshire and a further four million people across the East Midlands and beyond.

We provide a range of national and internationally renowned specialist services and we are at the forefront of new surgical procedures and research programmes.

We are home to the East Midlands Major Trauma Centre, the Nottingham Children's Hospital and in partnership with the University of Nottingham we host a Biomedical Research Centre carrying out vital research into hearing, digestive diseases, respiratory, musculoskeletal disease, mental health and imaging.

As a teaching hospital, we are instrumental in the education and training of doctors, nurses and other healthcare professionals. We are proud of our strong relationships with universities across the East Midlands, including the University of Nottingham, Nottingham Trent University and Loughborough University.

The last year has been challenging for our teams. Alongside our continued recovery from Covid, our maternity services are subject to an independent review and we must do more to improve our culture. We are more focused than ever on making sustained improvements across our services.

As one of the NHS Trusts identified in the New Hospital Programme, a programme of investment in NHS hospitals, we have extensive plans to improve our hospitals and the services we deliver for patients. As well as the redevelopment of the Queen's Medical Centre and City Hospital, plans for a new 70 bed NHS rehabilitation facility set to be built on the Stanford Hall Rehabilitation Estate near Loughborough, are currently going through the approvals process.

We have recently become home to the latest series of Channel 4's award-winning series 24 Hours in A&E, which takes a look inside one of the country's busiest emergency department at QMC and showcases the dedication, passion and skill of our teams.

This is an exciting time to join NUH and help support our future ambitions.

## **JOB SUMMARY**

The post-holder will participate in a three year, accredited structured training programme. This work will focus on all aspects of the work undertaken by the Nuclear Medicine Section. The apprentice will be expected to attend an accredited apprenticeship degree in Healthcare Science Practitioner (Medical Physics Technology) at the University of West of England (UWE), Bristol.

The role will require close collaboration with colleagues, other staff involved with the provision of nuclear medicine clinic service and other sections of the department. The post holder will carry out the duties in accordance with the written policies and procedures of the department.

## **KEY JOB RESPONSIBILITIES**

To participate in the following Section activities, under appropriate supervision until deemed competent, thereby gaining education and skills required for future registration as a Clinical Technologist;

### **1. Patient/Client care**

- 1.1. Ensure the welfare of patients within their care
  - i. assist patients with personal hygiene if necessary
  - ii. observe patient condition and monitor any deterioration
  - iii. provide "first aid" support if appropriate
  - iv. call for more expert assistance as necessary.
- 1.2. Data acquisition and manipulation according to departmental or research procedures:
  - a. acquire data for imaging and non-imaging nuclear medicine investigations, including X-ray CT and bone densitometry investigation
  - b. perform an initial assessment of the images acquired to determine whether these are technically satisfactory and whether further images are required
  - c. manipulation of images, or extract numerical data from these, in order to present the information in a suitable manner for reporting; in so doing use specialist imaging computer software or Excel spreadsheets on desktop computers
  - d. take blood samples and prepare these and other patient samples according to departmental test procedures

- e. preparation and analysis of data from patient samples and present the data in a manner suitable for reporting; in so doing use specialised sample counting systems, or Excel spreadsheets on desktop computers
  - f. interprets the results from bone densitometry and morphometry scans to provide an independent diagnostic report to the referrer
- 1.3. Radiopharmaceutical preparation for use in the Nuclear Medicine clinics and for external customers, according to departmental procedures:
- a. manufacture radiopharmaceuticals under GMP (Good Manufacturing Practice) in aseptic conditions
  - b. prepare radiopharmaceuticals for oral administration according to food hygiene regulations
  - c. miscellaneous preparations
- 1.4. Administer radiopharmaceuticals (diagnostic and therapeutic) to human subjects (including paediatric) where authorised to do so by the relevant ARSAC (Administration of Radioactive Substances Advisory Committee) licence holder:
- a. obtain access to perform i.v. administration by an appropriate means (direct access, butterfly, cannulation)
  - b. administer radiopharmaceuticals i.v.
  - c. administer radiopharmaceuticals via other routes (e.g. orally, inhalation, interstitially or to the surface of the eye) as necessary.
- 1.5. Administer standard pharmaceuticals identified by departmental procedures as necessary for the proper execution of a particular test (e.g. Furosemide).
- 1.6. Take responsibility for the proper storage and use of radioactive sources and the accumulation and disposal of radioactive waste within own practice, according to local procedures.
- 1.7. Participate in the general management of radioactive materials (record keeping, security, waste accumulation and disposal) according to departmental procedures.
- 1.8. Communicate information regarding the investigations to patients, and if appropriate their carers. This includes explanations about what the tests involve, what is required of the patient, how the tests and pieces of equipment work and about radioactivity and any effect on patients or carers; to facilitate patient compliance and provide reassurance.
- 1.9. Communicate and cooperate with referrers and other health professionals, as required to ensure the efficient and effective delivery of the service.
- 1.10. Authorise patient referral requests on behalf of the relevant ARSAC certificate holder according to documented justification criteria to comply with the requirements of the Ionising Radiation (Medical Exposure) Regulations 2017 (IRMER).
- 1.11. Assess the need for referral for associated plain X-ray investigations according to local criteria and make the referral as required.
- 1.12. Perform quality assurance tests on gamma cameras and other equipment used in the Nuclear Medicine Service.
- 1.13. Participate in the administrative work of the service as necessary.
- 1.14. Use Microsoft Office applications (Excel, Word and PowerPoint), or similar, and develop simple applications when required (e.g. Excel spreadsheets for radioactive waste calculations or the analysis of non-imaging patient studies).
- 1.15. Maintain an up-to-date knowledge of own specialist area including the main provisions of legislation, standards and national guidance.
- 2. Policy and Service Development and Implementation**
- 2.1. Participate in maintaining and improving the clinical and technical quality of the investigations carried out by the Nuclear Medicine Service and the quality of radiopharmaceuticals produced by the Radiopharmacy.

- 2.2. Participate in reviewing existing procedures and the development of new procedures relevant to the provision of the service.
- 2.3. Keep abreast of the latest clinical and technical developments in own specialist area. Attend suitable seminars and courses for the purpose of service and personal development. Report the knowledge acquired to colleagues and recommend development of service policies and procedures as appropriate.
- 2.4. Contribute to the maintenance of statistical information as required for audit, clinical governance and management purposes.

### **3. Physical and Financial Resources**

- 3.1. Be responsible for the operation of equipment with individual value in excess of £500,000.
- 3.2. Carry out quality assurance tests on the gamma cameras, and other clinic equipment as required. Review the outcome of these tests and take action, if necessary, according to departmental procedures.

### **4. Human Resources**

- 4.1. Exercise personal initiative when undertaking work within the clinic and radiopharmacy.

### **5. Information Resources**

- 5.1. Participate in the maintenance of accurate records relating to patient investigations, the use and disposal of radioactive materials and the preparation of radiopharmaceuticals.
- 5.2. Assist with the maintenance of the security and integrity of computer data within the service.
- 5.3. Use standard computer applications programs for the preparation, presentation and analysis of information, as required.

### **6. Research and Development**

- 6.1. Identify possible service developments and new areas of work so as to maximise the benefit of the service to patients and other customers.
- 6.2. Undertake Nuclear Medicine investigations as part of approved research studies, adhering to specialised scanning and analysis protocols where required. Prepare associated data for transfer to the investigators.
- 6.3. Participate in the preparation of novel radiopharmaceuticals or delivery methods according to specialised procedures.

## **GENERAL DUTIES**

In addition to the key job responsibilities detailed in this job description all employees at Nottingham University Hospitals NHS Trust are expected to comply with the general duties detailed below:

### **Infection Control**

To maintain a clean, safe environment, ensuring adherence to the Trust's standards of cleanliness, hygiene and infection control.

### **Safeguarding children, young people and vulnerable adults**

Nottingham University Hospitals is committed to safeguarding and promoting the welfare of children, young people and vulnerable adults. All staff and volunteers are therefore expected to behave in such a way that supports this commitment.

### **Information Governance**

All staff have an individual responsibility for creating accurate records of their work and for making entries into and managing all NHS records effectively in line with the Health Record Keeping Policy and other Health Records and Corporate Records Management policies and procedures in order to meet the Trust's legal, regulatory and accountability requirements.

## **Health and Safety**

To take reasonable care to prevent injury to themselves or others who may be affected by their acts or omissions.

To co-operate fully in discharging the Trust policies and procedures with regard to health and safety matters.

To immediately report to their manager any shortcomings in health and safety procedures and practice.

To report any accidents or dangerous incidents to their immediate manager and safety representative as early as possible and submit a completed accident/incident form.

To use protective clothing and equipment where provided.

Whilst the aim of the Trust is to promote a co-operative and constructive view of health and safety concerns in the organisation, all staff must be aware that a wilful or irresponsible disregard for safety matters may give rise to disciplinary proceedings.

## **Governance**

To actively participate in governance activities to ensure that the highest standards of care and business conduct are achieved.

## **Health and Wellbeing**

Employees are expected to take all reasonable steps to look after both their physical health and mental health. To support employees to achieve this NUH offers a wide range of health and wellbeing activities and interventions. The full programme can be viewed at on the staff intranet.

Line managers are expected to encourage and support staff to look after their health and wellbeing, including the release of staff to attend health and wellbeing activities and interventions.

## **General Policies Procedures and Practices**

To comply with all Trust policies, procedures and practices and to be responsible for keeping up to date with any changes to these.

## **WORKING CONDITIONS**

The post holder is guided by broad legislation and occupational policies.

The post holder will be required to use VDU equipment for significant periods of time on most days.

The post holder will be routinely exposed to ionising radiation controlled through being physically contained or subject to specific health and safety regulations. The post holder may rarely be exposed to radiation in an uncontrolled manner in the event of a radiation/contamination incident.

The post holder will frequently have to concentrate for prolonged periods when working on, for example, the analysis of complex nuclear medicine investigations, interpreting and writing up complex patient test results.

Occasionally be exposed to body fluids and aggressive patients.

Occasionally be exposed to distressing circumstances working with terminally ill patients.

Undertake frequent light/moderate effort assisting patients on and off the imaging couch and positioning them whilst on it.

The post holder will occasionally have to move test equipment weighing between 6 and 15kg to undertake equipment testing.

The post holder will occasionally have to move shielded radioactive material generators weighing up to 19kg.

## **JOB REVISION**

This job description should be regarded as a guide to the duties required and is not definitive or restrictive in any way. The duties of the post may be varied from time to time in response to changing circumstances. This job description does not form part of the contract of employment.

### **Service Review**

A strategic review of all Trust services is taking place, as a result of which some services, or parts of some services, may transfer from one campus to the other. This will be decided in accordance with the most appropriate way to provide the best healthcare for patients in the future and all staff will be fully consulted on about the impact of any such decisions.

**Job description reviewed by: Charnie Kalirai (Joint Head of Nuclear Medicine)**

**Date: 22/03/24**

