

NHS GREATER GLASGOW AND CLYDE

JOB DESCRIPTION

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| 1.  JOB IDENTIFICATION  |
| Job Title: | Trainee Respiratory & Sleep Clinical Scientist |
| Job Grade: | Band 6 |
| Division: | Acute |
| Directorate: | Women and Children’s  |
| Accountable To: | Respiratory & Sleep Physiology Manager  |
| Job Reference Number (Coded): |  |

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| 2. JOB PURPOSE This is a fully-funded postgraduate level training position comprising of a three year  academic and vocational programme, on completion of which the post holder would be  eligible to apply for positions as a Respiratory & Sleep Clinical Scientist or Respiratory &  Sleep Physiologist.

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| The programme is commissioned by NES and leads to the dual attainment of (i) the academic award of MSc in Clinical Science with specialisation in Respiratory & Sleep science and (ii) professional registration as a Clinical Scientist with the Health and Care Professions Council, the statutory regulator. The academic component is delivered by a combination of block release and distance learning at a Higher Education Institute (HEI) to be supported by self-directed, personal study and assessed by written examination and coursework, as well as audit and research projects to be undertaken in the clinical environment. The vocational component requires staged completion of an evidence portfolio of clinical, scientific, technical and professional competencies, assessed by formal workplace-based assessment and OSCEs administeredby the university. Placements in allied disciplines of healthcare science are also included and it is likely that there would be a requirement to complete a placement(s) at other Health Boards in the region or possibly beyond. The curriculum is defined by the National School for Healthcare Science and scientific competencies are defined by the Academy for Healthcare Science ‘Clinical Scientist Standards of Proficiency’. At the outset, the post holder will be entirely supernumerary. Upon incremental demonstrationof competencies, the post holder will expand their repertoire as an independent practitioner but will retain a supernumerary role when performing more complex investigations. Protected personal study time is provided throughout the programme, in addition to the required attendance at university.  |

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ROLE OF DEPARTMENT

The Respiratory & Sleep Physiology Service at the Royal Hospital for Children provides routine & specialised paediatric services to the local population of Glasgow as well as specialised techniques to tertiary referrals from all over Scotland. The hospital has several national service deliveries including congenital cardiac, haematology and chest wall deformity.

Our patient age range is from pre-term babies to young adults. Patient population covers a wide range of medical specialties. The department operates both within the in-patient & out-patient settings performing in the region of 6000 investigations annually.

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| 4. ORGANISATIONAL POSITION **Clinical Respiratory****Physiologist (Manager)** **Clinical Respiratory****Physiologists** **(Band 5)** **Clinical Respiratory****Physiologists** **(Band 6)** **Clinical Respiratory****Physiologist** **(CPET service) band 7****Clinical Respiratory****Physiologist** **(Sleep service) band 7** **Clinical Respiratory****Physiologists** **(Band 6)** **Clinical Respiratory****Physiologists** **(Band 6)** **Clinical Respiratory****Physiologists** **(Band 5)** **Clinical Service Manager (Medical Directorate)****Respiratory Lab****support worker** **(Band 3)** **Women and Children’s directorate** **Clinical Respiratory****Physiologists** **(Band 5)** **STP Trainee****(Band 6)** |

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| 5. SCOPE AND RANGEThe post holder will be expected to perform, interpret and report the full range of basic and specialist respiratory & sleep investigations performed by the department (e.g. PFT’s, CPET’s, pH impedance & Polysomnography).The post holder will be expected to participate in all areas of the department. This will include performing rotational cover of back shifts, night shifts and assisting with external clinics (e.g. Wishaw, Paisley) with frequency dictated by service need.The post holder will be asked to supervise junior staff & may be asked to deliver training and education to other team members, to other medical specialities within the hospital and out with the hospital (e.g. MCN hospitals).  |

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| 6. MAIN DUTIES AND RESPONSIBILITIES**Clinical Scientific and Technical (85-90%)**The post holder will develop competencies in a range of respiratory and sleep investigations and procedures, on acquisition of which these will be performed either independently (section 1a), with indirect supervision (section 1b) or direct supervision (section 2), according to complexity and governance considerations. *Competencies are as specified by the HEI and National School for Healthcare Science and as such are subject to minor change.*1. Developing the knowledge, skills and experience required to act as an Independent Practitioner in a range of respiratory & sleep investigations of up to intermediate complexity

1a) During the course of the training programme (upon incremental completion of the relevant academic and vocational assessments), to work as an independent practitioner in the following:1. Performance and interpretation of spirometry investigations
2. Performance and interpretation of bronchodilator responsiveness testing. Including administration of nebulised and inhaler medication such as Salbutamol
3. Performance and interpretation of static lung volume measurements via body plethysmography and gas dilution techniques
4. Performance and interpretation of single breath uptake of carbon monoxide transfer factor test
5. Performance and analysis of calibration and biological quality control
6. Performance and interpretation of Skin prick investigations for allergy diagnosis
7. Performance of sweat testing (Iontophoresis) for both children and adults while investigating for Cystic Fibrosis
8. Performance of Gastro-oesophageal pH & Impedance monitoring.
9. Performance and interpretation of basic exercise investigations (e.g. six minute walk test)
10. Assisting with the performance of Cardiopulmonary Exercise Testing and Continuous Laryngoscopy during Exercise
11. Performance and Interpretation of overnight pulse Oximetry and transcutaneous Carbon dioxide monitoring
12. Setting up and downloading detailed polysomnography and cardiorespiratory sleep studies.
13. Downloading of ventilators

1b) In relation to the following, the post holder would be expected to be competent to act as an independent practitioner on completion of relevant components of the training programme, but would require indirect supervision +/- counter-signing of reports as a governance requirement until professional registration has been attained:* Performance and interpretation of Indirect and direct bronchial challenge testing
* Performance and interpretation of hypoxic challenge testing
* Performance and interpretation of muscle function testing
* Reporting and interpretation of Impedance pH studies
* Reporting and interpretation of cardiorespiratory sleep studies
* Non-invasive ventilation mask fitting
* Oxygen titration sleep studies
1. Developing the knowledge, skills and experience required to perform a range of respiratory & sleep investigations of intermediate to advanced complexity. During the course of the training

During the course of the training programme, (upon incremental completion of the relevant academic and vocational competencies) to perform the following under direct supervision:* Performance and interpretation of cardiopulmonary exercise testing
* Performance of continuous laryngoscopy during exercise testing alongside ENT team
* Performance and interpretation of multi breath washout (Lung Clearance Index)
* Performance and interpretation of full polysomnography sleep studies
* Initiation and titration of non-invasive ventilation

Responsible for ensuring patients are monitored appropriately during investigations and procedures, always being aware of adverse clinical conditions / events that could occur during investigations and ensuring swift and appropriate action is taken to minimize life threatening or significant medical events.**RESEARCH, AUDIT AND SERVICE IMPROVEMENT (10-15%)**Under the supervision and guidance of workplace and academic supervisors, undertakes a Masters level clinical research project of observational or experimental design, culminating in a dissertation. This requires and acquisition and demonstration of the following competencies:* Literature searching techniques using the main medical databases
* Use of the NHS Knowledge Network
* Critical appraisal of research articles
* Development of a research question; use of PICO framework
* Quantitative research methods
* Use of parametric and non-parametric statistical methods
* Research ethics and governance including GCP

**Education and Training**  Be able to assist in the delivery of training in Sleep-Respiratory physiology to a broad range of healthcare workers including medical, AHP, nurses etc. ensuring that National/Professional standards are adhered to.Provide clinical supervision for junior members of staff within the department.Ensure the personal compliance with CPD guidelines & professional codes of conduct.When required undertake further training to enable the post holder to perform complex investigations.**Financial and Physical resource management** Will be required to liaise with procurement to purchase and maintain stock levels of various for a variety of consumables within the department.Managerial, Human Resources & Asset Management Required to perform rotational cover of Night & Back shift patterns and assisting with external clinics to meet the service need. Contribute to the education and training of Clinical Physiologists (Respiratory & Sleep Medicine) in line with professional body standards.Provide support, guidance and/or assistance to Respiratory/Sleep staff who are dealing with difficult and conflicting situations including those that are of a professional nature.Shadow at senior management meetings representing the respiratory lab to discuss issues such as clinical governance and health and safety alongside the team leads. |
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| 7. EQUIPMENT and MACHINERYRespiratory / Sleep investigation MonitorsSpirometers, body plethysmographs, gas analysers, cycle ergometer, treadmill. APS system, nebulisers, inhalers and spacers. Multi-channel sleep system (Somnomedics), Transcutaneous CO2 monitors, Pulse Oximeters.Treatment modalities including CPAP, Bilevel pressure support and other forms of non-invasive ventilation. Various NIV masks. 35 channel Polysomnography units, EEG & EMG biofeedback units, 6 channel ECG, thermocouple and thermistor sensors, microphone, actimetry (motion) sensors, mouth press meters, blood lactate analysers.IT Equipment Computer operated sleep systems (e.g. Visi-download), Computer operated Lung Function equipment (e.g. Spirometer, Body Box, Metabolic cart), Personal Computers, Data projectors, Digital filters, VDU screens.Lab EquipmentTelephone, digital scales, Methacholine, BOC gases(Air,O2, N2, mix), calibration gases, nebulisers, calibration syringe, lancets for skin prick tests, Bacterial filters. Manual handling equipment Ramps for testing equipment, Mechanical hoists, Wheel chairs, Adjustable beds, Manual  height charts, Investigation trolleys. |

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| 8. DECISIONS AND JUDGMENTSInterpret a comprehensive range of basic & advanced investigations to a high level of competence, requiring the investigator to make immediate interpretations to their validity and acting appropriately in the event of significant adverse findings.Perform and produce a report on all investigations within the service.Asses fitness of child to perform investigation prior to and during testing manoeuvres. Cancelling or terminating an investigation when required.Analyse complex real time data during specialised investigations to ensure patient safety and accuracy of test results (e.g. Polysomnography and cardiopulmonary exercise testing). Make decisions on the patient co-operation performance to help supply a diagnosis to the medical staff.Organise and co-ordinate patient testing as requested by team lead, ensuring laboratory equipment & staff are utilised efficiently & effectively. |

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| 9. COMMUNICATION & RELATIONSHIPSExpected to communicate and liaise with patients of all ages, their parents/relatives or carers. The post holder will be expected to provide information regarding assessment, diagnosis and possible treatment options with the overall aim of encouraging patient compliance.The post holder will liaise with other specialities & disciplines within the hospital to assist in the provision of a safe, efficient and effective service. These would include various Medical wards, Intensive Care unit, Physiotherapy, Psychology, Bioengineering, Infection control, Risk Assessment and Finance.Expected to communicate complex instruction to patients and relatives to ensure cooperation, compliance and to obtain accurate technical & clinical data.Regularly consult with other staff/disciplines to convey or receive information to maximise patient or service management. This will include advice on the selection & appropriateness of test procedures or therapies.Will be required to participate in departmental education programme. This includes a range of training such as educational courses (e.g. Spirometry certificate), inter-departmental training& training within the department, ensuring that National/Professional standards are and adhered to.Liaise with other team members (e.g. Line manager or Team lead) to discuss and resolve problems, which may arise in the department. |

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| 10. PHYSICAL DEMANDS OF THE JOB**Physical Skills**:The post holder must demonstrate highly developed coordination and sensory skills for use of the diagnostic equipment in what can often require a time-dependant window of testing.The post holder must be able to undertake complex hand-eye coordination tasks (e.g. electrode placement), dexterity and co-ordination for use of diagnostic equipment.The post holder must demonstrate the ability to instigate and perform therapeutic techniques (e.g. NIV).Excellent keyboard skill are required. Much of the department’s specialised equipment now uses computers, operation of this specialised and complex is by keyboard which may be used to start and stop analysis during specific breathing manoeuvres performed by the patient.**Physical Demands:**The post holder must be flexible in their working hours as they will be required to perform rotational cover of Night & back shifts according to service needs, this will incorporate anti-social hours in association with the departmental shift pattern.The post holder must have due regard for their own safety and that of the patients or colleagues, paying attention to moving & handling regulations and ensuring the safe positioning of themselves and others.Frequently required to perform tasks requiring moderate effort such as moving of monitoring equipment (trolleys) throughout the hospital and off site to other units (e.g. MCN hospitals)May be required to manoeuvre patients to perform a wide range of physiological assessments and treatments. This may include the use of mechanical aides and manoeuvring of equipment in confined spaces.A sizeable proportion of each shift will be spent standing or walking within the hospital to assess and treat patients in different locations on the hospital campus.The post involves contact with patients with infection, potentially poor hygiene and open wounds. **Mental demands:**The post requires prolonged periods of concentration when performing a real-time investigations which require the investigator to react to patient behaviours that may be unpredictable.The post requires periods of prolonged concentration when reporting highly specialised investigations. Polysomnography studies routinely take 4-6 hrs to report. The post holder must be flexible to adapt to a variable workload, which frequently results in the revision of priorities and work patterns to meet the changing service requirements.**Emotional demands:**The post holder will regularly communicate with distressed, anxious and worried patients +/- relatives.The post holder will work with terminally and critically ill patients on a daily basis, occasionally having to cope with the highly distressing event of a patient dying while an in-patient.The post holder will frequently perform investigations or treatments that the patient and/or parents find stressful and upsetting (e.g. pH studies, Sweat tests, non-invasive ventilation).The post holder will perform investigations that diagnose conditions with life changing implications. As a consequence they may have to deal with issues that arise from worried and stressed patients +/- parents.**Working conditions:**Will be required to show sensitivity to and understanding of children, as this will be the predominant patient group that they will be working with.Will be required to work within infection control and health & safety guidelines in order to deal appropriately with the regular exposure to unpleasant conditions as a result of patient contact and or poor patient hygiene.Will be required to show sensitivity and understanding to patients who may be suffering from a wide range of physical and or mental disorders including those which may be neurological or psychiatric in nature.Must demonstrate the ability to cope with verbal & physical aggression as a consequence of the unpleasant and sometimes invasive procedures they are performing.  |

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| 10. MOST CHALLENGING PART OF THE JOBCommunicating how to and performing highly complex assessments, investigations and therapies with a patient group that are children who may also have physical and learning disabilities leading to difficulties in understanding, behaviour and reproducibility. Especially as some of the investigations performed are multifaceted and can be unpleasant. Some of the investigations will be used to diagnose conditions that will be upsetting for both patient and relatives. Consequently, you frequently have to contend with the behaviours and issues that arise from worried and stressed patient and/or parents.A proportion of the patient population will be terminally ill with treatment being part of a palliative care plan. Caring for a patient who is terminally ill brings with it unique demands, especially the stresses and worries that the patient and parents/carers of the child have.A significant proportion of the patient populations have behavioural conditions. These patients and parents are usually highly complex to assess and or treat, with the physiologist sometimes having to contend with both physical and verbal aggression. |

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| 11. KNOWLEDGE, TRAINING AND EXPERIENCE REQUIRED

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| **Essential** | **Desirable** |
| **Qualifications** |  |
| BSc Honours degree in a relevant science subject. Minimum 2:1 classification | Physiology & sports science related degree |
| Higher/National 5 English and maths | ARTP Spirometry Certificate |
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| **Knowledge Skills and Experience** |  |
| Experience of working with the public | Experience of working in a clinical/healthcare and patient facing environment |
| Ability to work at masters level | Research experience from a higher degree |
| Evidence of a commitment to a career in respiratory physiology and an understanding of what the career involves | Evidence of work experience in a respiratory physiology lab |
| Skills in written English of standards to prepare clinical reports |  |
|  | Experience of working with children |
| **Behavioural Competencies** |  |
| Emotional intelligence and interpersonal skills: empathetic, reflective |  |
| Team working skills | Leadership skills |
| Analytical and critical thinker. Problem solving skills |  |
| Self-disciplined and self-motivated |  |
| Time management & organisational skills. |  |
| Proactive, Dynamic |  |
| High level of precision and accuracy |  |
| Professional, good work ethic |  |
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| **Other** |  |
| Ability to meet the travel requirements and clinical rotations of the training role |  |
| Good working knowledge of word, excel and access | Advanced skills with coding in excel and access |
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| 12. JOB DESCRIPTIONSAll job descriptions are subject to review. Job holders are expected to be flexible and be prepared to carry out any similar or related duties, which do not fall within the work outlined. Any review will be undertaken by the line manager, in consultation with the post holder.May 2022**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: Date:****Head of Department Signature: Date:** |