Standard Operating Procedure:	Respiratory/Sleep Physiologist Workforce Progression Planning
Target Audience:	All registered and unregistered Respiratory and Sleep Physiologists/Clinical Scientists working within a Respiratory/Sleep Laboratory
Author(s):	Peter Moxon and Matt Rutter
Version Author(s):	Reviewed by Ian Cliff
Release date:	July 2024
Current Version:	1.8
Review Date:	July 2027
IQIPS Domain(s):	**The healthcare provider must recruit, select, and train staff to assure competence (FR6).** • Recruitment and selection criteria for each staff group in line with professional registration requirements (FR6.1). • Verification that each member of staff including locum staff is qualified, trained and authorised (registered where necessary) to perform their intended functions and this is reflected in job description / job plan (FR6.3). • Tailored induction training and supervision programmes are available specific to each role, circumstance and/or environment. For example, staff taking on new roles, temporary staff, those returning to work following extended leave and students (FR6.4). • Maintenance of records of staff training activities, professional qualifications, professional registration status, induction and refresher training courses attended and certificates of competence with authorisation to carry out specific tasks (FR6.5). • Regular review of performance and assessment of competence for all staff (FR6.7). • Systematic monitoring of staff retention and succession planning (FR6.10).

	The healthcare provider must assure the technical quality of clinical activities (CL3). • Competent and appropriate supervision of staff (CL3.6). **The healthcare provider must ensure the clinical and technical quality of records, interpretations and reports (CL4).** • Adequate numbers of competent reporting staff are available and documented (CL4.2). **The healthcare provider must manage the release of reports (CL5).** Reports are issued by staff who are authorised to do so (CL5.1).

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Standard Operating Procedure:

1. Introduction

Respiratory and Sleep Physiology services should have defined roles for their staff that are banding-specific. Unfortunately, the opportunity to progress typically occurs when a staff member leaves.

Even following the 'Agenda for Change' (AfC), there is still a discrepancy between staff working in the same pay bands at different NHS trusts. What is expected of the service typically reflects the skill mix and pay banding. For example, a band 3 Assistant Practitioner in one service may perform capillary blood gases, issue CPAP, and issue and download limited respiratory sleep studies (polygraphy), while in another NHS trust, this may be the job role of a band 4 or 5.

A high proportion of respiratory and/or sleep physiologists stay in their posts without an opportunity to progress or to gain a promotion. In most cases, in order to progress, staff need to leave the service or NHS trust. This problem has been identified throughout the NHS, and rectifying it is a remit of the NHS Long Term Plan[1], which focuses on supporting staff (see statement below).

"4.37. One of the top reasons for people leaving is that they need to receive the development and career progression that they need. CPD – specifically, workforce development – can potentially deliver a high return on investment. It offers staff career progression that motivates them to stay within the NHS and, just as importantly, equips them with the skills to operate at advanced levels of professional practice and to meet patients' future needs."

While in their current position, physiologists often gain additional 'specialist knowledge' and skills above their job role or pay banding, and they take on more and more responsibility with the ever-increasing demands placed on services. With the high level of training offered, physiologists get experience in areas that may not be available to them in equal bandings in other hospitals. These opportunities materialise because the service often has a requirement to fill a required skill mix due to the number of patients requiring that expertise, for examples, home oxygen assessment and review services, domiciliary or acute NIV, full polysomnography and specialist occupational asthma services to name but a few. However, after a few years, individuals become specialised with knowledge and experience in those areas but still need a progression route to reflect that. This has led to a staff retention problem with many individuals leaving for higher banded roles in other hospitals.

Services should try to abide by the phrase "*train them well enough to leave, but treat them well enough to stay*", however without progression we do not do, or struggle to achieve, the latter part of that sentence.

NHS trusts are committed to educating and developing staff; however, if the opportunity to progress is absent, then staff may be disinclined to continue developing. Unlike nursing, where the transferable knowledge and skills allow them to move between specialisms and progress within their career, the physiologist will also have transferable knowledge and skills, but the opportunity to progress to other specialisms within the trust is absent, so individuals have to look elsewhere. The NHS careers website, when describing the role of a respiratory physiologist, states:

"*As a healthcare science practitioner, you'd usually start on band 5, with opportunities to progress to more senior positions. Trainee clinical scientists train at band 6 level, and qualified clinical scientists are generally appointed at band 7.*"

Other healthcare science professions have clearer steps of progression, e.g., cardiology. When specialist skills have been developed that allow them to do more advanced tests, there is an opportunity to progress to a higher role. The band 6 echo cardiac physiologist role requires specialist knowledge and skills on a par with those required by a respiratory physiologist performing challenge tests and cardiopulmonary exercise tests (CPET).

Other specialties, such as pharmacy, pathology, clinical chemistry, and radiology, also have workforce plans in place, where recruiting qualified staff is difficult. Key aspects of the plan are to prioritise retention, develop and progress existing staff, provide a supportive environment, and look after their individual well-being.

2. Scope and aims

This document has been designed to support service managers with staff development and describes how to develop a workforce progression plan for Respiratory/Sleep Physiologists and Scientists. It can be used either as a standalone guide or in conjunction with annual staff appraisals and Professional Development Reviews (PDRs).

The aim is to develop a plan that structures the requirements for progression to higher roles and the requirements and expectations of those roles. Then, they will be incorporated into the respiratory and/or sleep scientific workforce plan.

3. Workforce progression plan

3.1. Current pathway

The Department of Health (DoH) developed Modernising Scientific Careers (MSC) following a report in 2010, in part to help create a clear career pathway (see Figure 1 below) to address training and career progression for healthcare scientists. The format is evident but is general guidance for healthcare science. This framework lacks details for roles within specialisms such as respiratory and sleep physiology. This work aims to recognise the current healthcare science pathway and map roles and progression to that.

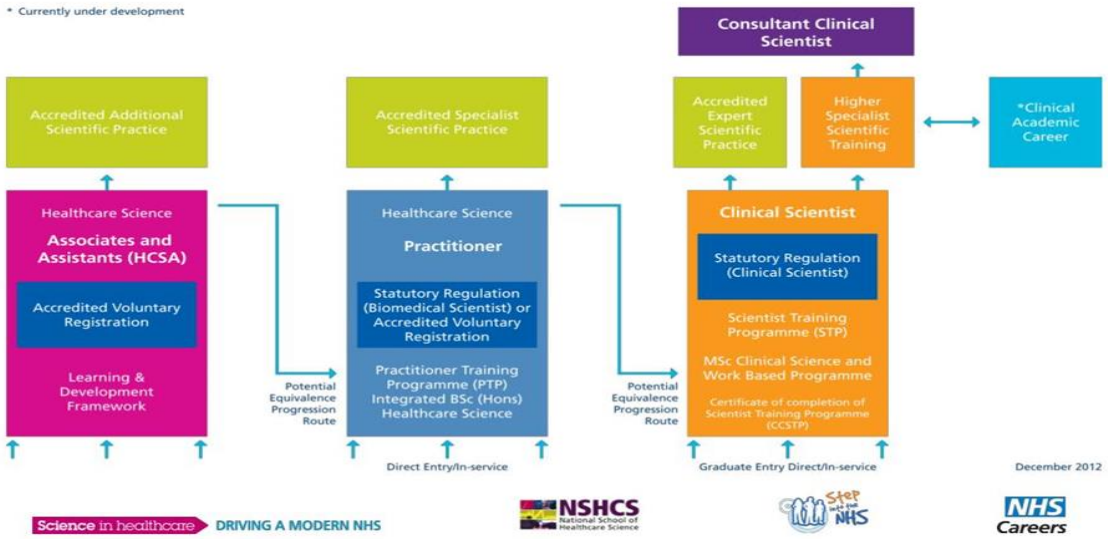

Figure 1: Modernising Scientific Careers: Career and Training Pathway

It is important to note that at the time of reviewing this document (2022/23), a significant proportion of the respiratory physiology workforce has yet to formally progress through the Modernising Scientific Careers (MSC) pathway or via recently developed apprenticeship programs. Due to the current shortfall in the workforce or inability to recruit at certain bandings, services have had to look outside of the MSC career pathway and, for example, recruit from sports and exercise science backgrounds. The difficulty is determining how these staff members will then progress. Within the sport and exercise science degree programs are modules covering clinical diagnostics, so staff recruited from this source commonly have experience in spirometry and cardio-pulmonary exercise testing. Therefore, an applicant for an unregistered post (band 3 or 4) may have an undergraduate degree not currently recognised for example by the Registration Council for Clinical Physiologists (RCCP). One proposed suggestion is that specialist block modules be developed for sports and exercise science degree students to support their entry into clinical jobs.

3.2. Proposed progression plan

Progression from bands 3 to 6 will be based on individuals meeting specific criteria to demonstrate they are ready for progression. Meeting criteria does not guarantee progression, as the senior team will look to encourage leadership qualities and the ability to deal with responsibility. This can be developed through learning and the appraisal process. For bands 7 upwards, individuals must meet the appropriate criteria; positions will only be available if the service requires them or individuals are performing at that level indicating its requirement. This is represented in Figure 2.

Figure 2: Relationship of progression for individual and needs of service

3.3. Timeframes for career progression

Service managers may also need to consider timeframes for career progression. Managers may want to adopt the caveat that experience does not necessarily guarantee promotion. The motivation and qualities of an individual should be considered primarily. To put this simply a team or service may have a staff member who is very motivated, dedicated, has significant research skills or managerial/leadership qualities who puts themselves forward for all tasks including external or voluntary services. They, in turn, may have more relevant or acquired experience than another staff member who has been in the post for 20+ years but, in that time, has yet to undertake any significant personal or professional development. As a profession, we should refrain from promoting staff to higher roles based on the years they have worked. You may find that some human resource departments will advise services that they cannot put a minimum required level of experience required on job descriptions and job specifications for this exact reason. Unless an employer can lawfully justify why candidates need, for example, '*10 years' experience*', then this is likely to be classed as indirect discrimination against younger candidates who can demonstrate they are qualified and capable of performing a role but do not have the specified years of experience due to their younger age.

The requirements and expectations for respiratory and sleep physiologists for each band are outlined below (see sections 3.4 to 3.7); the requirements and expectations for sleep physiologists/technologists are outlined in *italics*.

3.3.1. A brief note on sleep qualifications

In the UK, there are currently no organisations hosting examinations in Polysomnography. In the USA, the American Academy of Sleep Medicine (AASM) recognise the following credentials/certifications in Polysomnography; these have been adopted by UK sleep services to develop staff:

- The Registered Sleep Technologist (RST) certificate is hosted by the American Board of Sleep Medicine (ABSM).
- The Certified Polysomnography Technologist (or CPSGT) is an entry-level certification hosted by The Board of Registered Polysomnography Technologists (BRPT).
- The Registered Polysomnography Technologist (or RPSGT), which the BRPT also hosts, is an internationally recognised credential representing the highest certification in the field for healthcare professionals who clinically assess patients with sleep disorders.

Prior to applying for the above certifications, candidates are required to have completed the AASM 80-hour, 26-module online Accredited Sleep Technologist Education Program (A-STEP).

The European Sleep Research Society (ESRS) also hosts 'The Examination of Certification in Sleep Medicine for Sleep Technologists.' Successful candidates will have the ESRS qualification title of "Somnologist-Technologist" conferred on them. Entry requirements for the ESRS certification state that the candidate must hold at least one of the following:

- Degree in science, nursing, or similar.
- RPSGT qualification.
- A minimum of 5 years experience performing, storing, analyswing, and interpreting Polysomnography, Actigraphy, Polygraphy, Multiple Sleep Latency Tests (MSLT), and Maintenance of Wakefulness Tests (MWT).
- Equivalent national professional registration.

It is also important to note that in the 2016 ARTP report on the 'time allocated for Respiratory and Sleep diagnostic investigations and therapeutics' 66.7% of services are both respiratory and sleep services. Therefore, there is a clear need to outline progression planning for respiratory and sleep physiologists/technologists.

The authors stress that the following requirements and expectations are for guidance purposes only; ultimately, service managers must determine how best to develop their staff to meet the needs and demands of their service.

When considering the job requirements at each banding, also take into account of the **National Job Profiles for Healthcare Science** (see link below)*:*

National Job Profiles for Healthcare Science

3.4. Band 3 Assistant Practitioner/Healthcare Science Support Worker Higher Level

Requirements:

- Qualifications – GCSE grade 4 or above (new GCSE grades) or C or above (old GCSE grades) in Maths/English and Science or equivalent (direct entry).
- NVQ Level III in science/healthcare-related subject or equivalent level/experience.
- Level 2 HCS assistant apprenticeship program (direct entry).
- ARTP Spirometry Practitioner (level III) certificate, perform and interpret spirometry (12-18 months to complete).

Expectations

- Undertake/perform Spirometry with interpretation.
- Consider apprenticeship scheme – level 4 HCS Associate apprenticeship program.
- Phlebotomy/blood tests/capillary blood gas sampling* – role specific.
- Completion of capillary blood gas sampling competency, attendance on ARTP Blood Gas Sampling course – role specific.
- Undertake basic sleep diagnostic setup and downloading (e.g., Overnight Oximetry, Polygraphy, and Actigraphy) – role specific.
- ARTP Associate CPAP Certificate – role specific.
- ARTP Overnight Pulse oximetry Certificate – role specific.
- Undertake CPAP set up**.
- Downloading of CPAP compliance data#.
- Completion of specific modules of the AASM Accredited Sleep Technologist Education Program (A-STEP) – role specific+.

**Only after completion of a competency-based training program and, ideally, certification. Service managers must base this on the skill level required and the potential risk to the patient. For example, service managers may specify that CBG samples taken during a CPET should be performed by band 4 Associate Practitioners and above only (requirement for obtaining samples quickly and efficiently, use of greater hand/eye dexterity, and ensuring good blood flow—sufficient sample obtained).*

***With indirect supervision from an experienced sleep/CPAP practitioner, the prescribed CPAP pressure has been pre-set, and mask interface selection has been made by a clinician or an experienced/competent practitioner. This is only done in patients who have received their diagnosis, management plan, DVLA advice, and discussion regarding treatment and its implications. Appropriately qualified staff must also be available at all times to manage any complex questions or issues raised by patients during the CPAP issue.*

#No changes to CPAP prescription, downloading of CPAP compliance data only. Decision making during CPAP review by ≥band 5 staff.

+Service managers may wish to consider completion of some of the modules of the AASM A-STEP course, for example modules 1 to 4 and perhaps the PAP module (module 20) for band 3 sleep technicians or HCAs working within sleep services.

3.5. Band 4 Associate Practitioner/Healthcare Scientist Assistant

Requirements:

- A minimum of 5 GCSEs (Level 4 or grade C or above), including maths/English and science subjects or equivalent (direct entry), are required.
- Level 4 HCS associate apprenticeship program.
- NVQ Level III or equivalent plus additional theoretical or applied training to diploma equivalent level (direct entry).
- Relevant scientific degree (may be unrecognised by RCCP/AHCS, for example, sport and exercise science degrees containing significant physiology modules).
- Previous experience working within a Respiratory and Sleep Physiology department in an assistant practitioner level (band 3) role.
- ARTP Spirometry practitioner (Level III) spirometry certificate. Perform and interpret Spirometry (if entry-level post).

Expectations

- Undertake routine lung function tests (will need experience in performing full lung function testing – under direct supervision to support development to a band 5 position).
- Phlebotomy/blood tests/capillary blood gas sampling* – role specific.
- Completion of capillary blood gas sampling competency, attendance on ARTP Blood Gas Sampling course – role specific.
- ARTP Overnight Pulse Oximetry Certificate – role specific.
- Undertake basic sleep diagnostic set up and downloading (e.g., Overnight Oximetry, Polygraphy and Actigraphy) – role specific.
- ARTP Associate CPAP Certificate – role specific.
- Undertake CPAP set up**.
- Undertake basic CPAP reviews[#].
- ARTP Associate (Level I) professional qualification – 12-18 months to complete.
- ARTP Clinical Examination (Level II) – which is aimed at individuals who have completed the Associate level qualification (Level I) and wish to 'top up' to the Practitioner (Level III) qualification to progress to a band 5 role.
- Completion of specific modules of the AASM Accredited Sleep Technologist Education Program (A-STEP) – role specific[+].
- Consider apprenticeship scheme – Level 6 HCS Practitioner which follows a recognised degree program.
- PTP equivalence.

**Only after completion of a competency-based training program and ideally certification. Service managers must base this on the skill level required and the potential risk to the patient, for example service managers may specify that CBG samples taken during a CPET should be performed by band 4 Associate Practitioners and above only (i.e., greater skill level -requirement for obtaining samples quickly and efficiently, use of greater hand/eye dexterity and must ensure good blood flow - sufficient sample obtained).*

***Should have successfully completed the ARTP CPAP associate level certificate. Only with indirect supervision from an experienced sleep/CPAP practitioner, the prescribed CPAP pressure has been pre-set by clinician or an experienced/competent practitioner. Only*

in patients who have received their diagnosis, management plan, DVLA advice plus discussion regarding treatment and its implications. There must also be appropriately qualified staff available at all times to manage any complex questions or issues raised by patients during the CPAP issue.

[#]No changes to CPAP prescription, downloading of CPAP compliance data only. Decision making during CPAP review by ≥band 5 staff.

[+]Service managers may wish to consider completion of some of the early modules of the AASM A-STEP course, for example modules 1 to 4 and the perhaps the PAP module (module 20) for band 3 sleep technicians or HCAs working within sleep services.

3.6. Band 5 Clinical Physiologist/Respiratory Healthcare Scientist Practitioner

Requirements

- Significant experience obtained at band 4 Associate level.
- Level 6 (degree) HCS Practitioner program.
- Relevant scientific degree/qualification (new starter), recognised by RCCP/AHCS**.
- PTP Equivalence.
- Recently acquired ARTP Practitioner level III professional qualification.
- Completion of apprenticeship program Level 6.
- RCCP registration or statutory regulation (if PTP equivalence route followed).

***The ARTP workforce committee believe that services should be more flexible when considering relevant degree programs to identify new talent at this level of entry into the profession. Degrees like sports science, human biology (with appropriate modules), medical physiology, etc. need to be actively considered for selection. Graduates of these degree programs should be actively encouraged to apply but perhaps begin in a developmental band 4 role until the appropriate ARTP professional qualifications are obtained.*

Expectations

- 12-18 months complete ARTP professional qualifications (Practitioner Level III).
- Complete post graduate qualifications (physiologist specific top up modules).
- Undertake and report routine and specialist tests.
- Assist with CPET, requires knowledge of basic 12 lead ECG (role specific).
- ARTP Overnight oximetry and Polygraphy Practitioner Certificate – role specific.
- Undertake sleep diagnostic set up and downloading with basic interpretation (e.g., Overnight Oximetry, Polygraphy and Actigraphy) – role specific.
- ARTP Progression/Practitioner CPAP certificate – role specific.
- Undertake CPAP set up and CPAP reviews[$] independently.
- General aspects of daily service.
- Support service improvement.

- Support service document reviews (standard operating protocols, patient leaflets etc.).
- Undertakes quality assurance process.
- Polysomnography set up (no interpretation) – application of electrodes and biocals (must be under supervision if without CPSGT certification).
- AASM Accredited Sleep Technologist Education Program (A-STEP)[+] – role specific.
- Certified Polysomnographic Technologist (CPSGT) examination – role specific.

[$]*CPAP reviews to include decision making, interface selection/changes, interpreting CPAP compliance data. Applying prescription changes or further investigations must include prior discussion with ≥band 6 senior staff. Ideally, at band 5 will hold ARTP practitioner level CPAP certificate.*
[+]*Upon completion of the AASM A-STEP program, sleep physiologists can then apply to sit the CPSGT examination.*

3.7. Band 6 Senior Clinical Physiologist/Respiratory Healthcare Scientist Specialist

Requirements

- Requires ≥2 years' Band 5 experience post ARTP Practitioner level III professional qualification.
- RCCP/HCPC registered or eligible for registration.
- Essential: BLS trained.
- Desirable: ALS/ILS trained.

Expectations

- Clinical Scientist either via STP or to complete STP equivalence route – desirable**, (minimum 4 years' experience required).
- STP program (in service trainee) – requires a successful bid and for the service to be accredited as an STP training centre, direct entry STP would require staff member to leave the service to then be placed in a suitable host department which has been successful with a bid for an STP trainee**.
- Undertake and report specialist and complex tests.
- CPET practitioner, competent to perform CPET, must be able to manage adverse events and identify normal and abnormal response to exercise.
- Completion of Arterial (radial artery) blood gas sampling competency* – role specific.
- ARTP Overnight Oximetry and Polygraphy Practitioner Certificate – role specific.
- ARTP Progression/Practitioner CPAP certificate – role specific.
- Undertake diagnostic analysis and interpretation (Respiratory/Sleep).
- Clinically review sleep and Non-Invasive Ventilation (NIV) therapy.
- Have personal responsibility in a role within the department (for example H&S representative, IP lead, designated training officer/work-based assessor etc.).
- Training/assessor qualification.

- Actively mentoring students and new starters.
- Support all aspects of daily service.
- Actively involved with service improvement.
- Undertake regular service audits.
- Develop and review general and specific service documents.
- Undertakes and reviews quality assurance process.
- Supports recruitment and selection processes.
- AASM Accredited Sleep Technologist Education Program (A-STEP) – role specific.
- Registered Polysomnographic Technologist (RPSGT) examination or Registered Sleep Technologist (RST).
- European Sleep Research Society/ESRS Examination of Certification in Sleep Medicine for Sleep Technologists – role specific.

**Service managers should consider arterial blood gas sampling as a band 6 skill given the potential risks to the patient particularly as the procedure is often performed in an outpatient area without immediate medical support. This may differ from the banding/level required of other professional groups, such as Acute NIV Physiotherapists and ward-based nursing staff who predominantly work in acute settings where performing this skill can be seen as a developmental role due to the accessibility of medical staff. Within respiratory and sleep physiology, the banding/level should reflect the associated risk and independent working of senior respiratory/sleep physiologists within, for example, home oxygen clinics and sleep/ventilation/home NIV services.*

***N.B. A significant proportion of the current respiratory physiology workforce has not progressed through the Modernising Scientific Careers (MSC) pathway (therefore, will not be registered with HCPC or designated officially/hold the protected title of Clinical Scientist); they may have also elected not to apply for STP equivalence for personal or professional reasons. Therefore, band 6/7 staff can have significant experience and clinical skills developed over many years but still do not hold the protected title of Clinical Scientist.*

N.B. Service managers may also refer to the job evaluation scheme described in Annex 20 of the Agenda for Change NHS terms and conditions of service handbook[2], which describes the option to move band 5 staff to band 6 without applying to a higher level post. The handbook states, "There are groups of staff (such as midwives) who tend to move quickly to operate in roles that require autonomous decision making in the overall delivery of care, that exceed that normally associated with jobs allocated to pay band 5. Typically, these roles operate without the influence of other professional groups, where supervision is generally management-orientated and does not impinge on clinical practice. In such circumstances job size should be reviewed no earlier than one year and no later than two years from the date of qualification, using the NHS Job Evaluation Scheme. If the evaluation demonstrates that the post holder's job weight is of sufficient size to move to the next pay band (pay band 6), this should be effected without the need for an application for a post at a higher level". It is not expected that the review will be widespread practice as most staff will work under regular clinical supervision, and the delivery of care and treatment is subject to control or influence from other healthcare professionals.

3.8. Band 7 Advanced Respiratory Physiologist/Advanced Healthcare Scientist/Researcher/Healthcare Scientist Team Manager

Requirements

- Clinical Scientist on HCPC register or RCCP, ideally educated to MSc or equivalent experience level.
- ≥3 years' experience at band 6 level.

- There must be a service need for the band 7 position. The post will need to be applied for; progression is likely dependent on whether service requires the post or if a band 7 post becomes vacant.
- Experience in responsibility and service delivery.
- Experience in performing and interpreting simple, specialist, and complex/advanced testing.
- STP equivalence (desirable)**.
- Training/Assessor qualification.
- Management and leadership experience.
- Experienced in recruitment and selection process.
- Registered Polysomnographic Technologist (RPSGT) examination or equivalent (Registered Sleep Technologist/RST).
- European Sleep Research Society/ESRS Examination of Certification in Sleep Medicine for Sleep Technologists – role specific.

***N.B. a significant proportion of Respiratory Physiology workforce currently working at band 7 level may not have progressed via Modernising Scientific Careers (MSC) pathway.*

Expectations

- Highly specialist expertise underpinned by theory and experience.
- Knowledge and significant experience of a broad range of routine and advanced respiratory physiology procedures.
- Knowledge of highly specialist procedures acquired through accredited courses.
- Provides clinical testing service – Can undertake the full range of routine, advanced and highly specialist respiratory physiological investigations.
- Ability to work independently within established policies and procedures.
- Lead practitioner CPET, extensive exercise testing experience supported by practical and academic knowledge attained through the formal training program. Competent in reporting CPET (role-specific).
- Experience working in a deputy role within a respiratory physiology department and can lead in aspects of the laboratory service in the absence of the head of service.
- Experience in procuring specialist test equipment.
- Understanding of budget setting and expenditure review.
- Experience in undertaking staff appraisal and performance monitoring.

- Ability to teach highly specialist test theories and techniques to postgraduate level student physiologists and medical students.
- Lead on an aspect of the lung function/Sleep/NIV/Home Oxygen service (maybe a sub-specialism lead within the service, e.g., Lead for CPET).
- Perform and report all lung function tests.
- Undertake complex diagnostic analysis and interpretation (Respiratory/Sleep).
- Initiation and clinical review of sleep and Non-Invasive Ventilation (NIV) therapy.
- Implement improvements for daily service and service delivery.
- Oversee departmental audits and support research projects (PTP and STP).
- Responsible for all service documents.
- Responsible for reviewing and improving service quality assurance.
- Continue to develop management and leadership skills with either formal qualifications or attendance at workshops, short courses etc.
- Consider HSST if the service identifies a need. Consideration of the Consultant Clinical Scientist post may need input and agreement with senior management (Divisional, Directorate, or Group Manager), Clinical Director (Respiratory), etc., May be identified as more appropriate for Band 8a (service managers) and above[+]. Role-specific.

[+]*National job profiles for Healthcare Scientists identify Consultant Clinical Scientists at band 8c and above.*

4. Current workforce

Prior to implementation, the service should identify the department's needs and determine whether there are any shortfalls in the workforce/skill mix. If any shortfalls are identified, physiologists may be put through the job matching process to ascertain whether their skills, experience, and qualities require banding adjustment (see National Job Profiles for Healthcare Science—link below).

National Job Profiles for Healthcare Science

Following the result of the matching panel, they can be aligned to the proposed progression pathway (see Figure 3). This will give physiologists goals and objectives for future progression and an understanding of what is required for the current role. The ARTP has developed a workload and staffing toolkit (link below), which is intended to help plan staff levels for the Respiratory and/or Sleep Physiology diagnostic services.

ARTP Workload and Staffing Survey 2018 - Toolkit

It can be used to compare your current staffing levels in terms of Whole-Time Equivalent (WTE) to diagnostic workload, examine the complexities of the service workload, and examine the balance of skill mix. It is

based on data collected in the ARTP Workload & Staffing Survey (link below). This toolkit must be used with the report to understand and appreciate all other staffing elements that are directly related to the workload but not generated by performing tests.

ARTP Workload and Staffing Survey 2018

5. New positions

Planning for new full-time positions (excluding fixed-term contracts) should include the minimum requirements for progression, e.g., a band 5 position has the potential to be a band 6 in 3 years if conditions are met. While this is not guaranteed, the potential financial implications could be prepared early and budgeted for. It is essential to have training pathways in place before advertising the roles. It is also important that management be aware of a potential lag in service provision and productivity as senior/experienced staff may be required to train new staff members (this is particularly relevant in smaller departments consisting of perhaps 1-2 physiologists) when budgeting for training roles there may have to be a provision made for locum staff to help with the workload until the new member of staff starts in post.

Ideally, there should also be an agreement with management regarding future workforce planning, specifically staff retirement. An ideal system would be the ability to recruit into that role before the staff member officially retires from the post. Trainees or recruits can then be trained or even mentored before retirement to ensure firstly a continuity of service, as well as a smooth transition of staff to be promoted into that vacant post after achieving the additional training required for the role. Experience has shown that commonly when a staff member retires, it will enable a team member the opportunity for an internal promotion.

6. Continual Professional Development (CPD)

CPD budget allocation is also to be considered. Where will the money or budget for CPD activities come from? How will it be allocated between staff? Are there any other sources of finance that can be utilised for CPD (for example private patient income)? Service managers need to have discussions with managers and plan CPD activities accordingly.

Services sometimes may not be able to promote staff due to financial restrictions. Service managers can be more transparent about how we can best support staff in their roles by offering CPD opportunities. These discussions at yearly performance reviews or staff appraisals are essential and need to be documented/recorded, including where the funding streams for CPD will be sourced from.

A clearly defined training pathway incorporating CPD activity is essential for staff retention. For example, simply offering CPD opportunities to a band 5 physiologist but with no chance of career progression compared to that same individual applying for a band 6 post in another NHS trust will probably result in that individual leaving for a band 6 post. Having clear pathways agreed by trusts will not only help retain staff but can also be used to attract new staff when advertising roles. For example, a job could be advertised as a developmental role with clearly defined training requirements to be met before promotion to a higher banding.

7. References

1. Alderwick Hugh, Dixon Jennifer. The NHS long-term plan. BMJ 2019; 364 :l84

2. Agenda for Change Terms and Conditions of Service Handbook, The NHS staff Council: Amendment number 41. Pay Advisory Notice (01/2019) and TCS Advisory Notice (02/2019).

AfC terms and conditions of service handbook

8. Appendices – ARTP Generic Job Descriptions

8.1. Band 3 Assistant Practitioner/Healthcare Science Support Worker Higher Level

Clinical Responsibility

1. Plan, undertake, and perform simple/routine diagnostic assessments. Such investigations could include:
    a. Spirometry (with interpretation), peak flow measurements, and diaries.
    b. Overnight sleep apnoea simple diagnostic setup/study download/provision of questionnaires, Actigraphy set up and downloading.
    c. CPAP therapy issue*, basic troubleshooting#.
    d. Exhaled and nasal nitric oxide.
    e. Exhaled carbon monoxide.
    f. Capillary blood gas sampling/phlebotomy.
2. Production of reports.
3. As a minimum be trained in basic life support.

With indirect supervision from an experienced sleep/CPAP practitioner, a clinician or an experienced/competent practitioner has pre-set the prescribed CPAP pressure. Only in patients who have received their diagnosis, management plan, DVLA advice, plus discussion regarding treatment and its implications. There must also be appropriately qualified staff available at all times to manage any complex questions or issues raised by patients during the CPAP issue.

#*No changes to CPAP prescription, downloading of CPAP compliance data only. Decision making during CPAP review by ≥band 5 staff.*

Knowledge, Education, Training, and Experience

1. In-house training, apprenticeship, or experience to NVQ3 equivalent level plus additional theoretical or applied training.
2. Professional examinations.
    a. ARTP accredited spirometry certificate (perform and interpret).
    b. ARTP Associate CPAP Certificate – role specific.
    c. Completion of specific modules of the AASM Accredited Sleep Technologist Education Program (A-STEP) – role specific.

Communication & Relationships

1. Obtain a brief patient medical history before testing to ensure safe practice.
2. Communicate requirements for accurate performance of appropriate investigations to patients/participants/subjects/service users through building and maintaining a good rapport.

Service Development & Improvement

1. Ensure continual service development and improvement with the maintenance of best practice:
    a. Through maintaining up-to-date knowledge of specialist areas.
    b. Obtaining membership within the national professional body and international societies.
    c. Where possible, be regulated via a voluntary/mandatory register of practitioners.
2. Obtain membership in a national professional body to ensure continual service development, improvement, and maintenance of best practices.
3. Ensure equipment used in lung function assessments functions correctly by performing several calibration procedures and participating in validation techniques, including mechanical verification and biological control procedures for quality assurance and quality control.

4. Ensure that the workload is adhered to as directed by senior staff and that it is planned appropriately.
5. Ensure any faulty equipment is reported to senior colleagues and corrective maintenance is undertaken.
6. Ensure that all consumable items required to maintain an efficient running service are kept stocked and communicate with senior colleagues when such items are ordered.
7. Maintenance of Continuing Professional Development

Research & Development

1. Contributes to departmental research where appropriate; examples include:
    a. Performing investigations for commercial research in line with clinical responsibilities.
    b. Assists in undertaking in-house audits.

8.2. Band 4 Associate Practitioner/Healthcare Scientist Assistant

Clinical Responsibility

1. To plan, undertake, and perform a range of simple diagnostic assessments and treatment interventions. Such investigations and treatment interventions could include:
    a. Spirometry (plus interpretation), peak flow measurement/PEF diaries.
    b. Gas transfer factor testing.
    c. Static lung volumes.
    d. Reversibility of airway obstruction with bronchodilators.
    e. Overnight sleep apnoea screen.
    f. Actigraphy set up and downloading.
    g. Capillary blood gas performance and analysis.
    h. Exhaled and nasal nitric oxide.
    i. Exhaled carbon monoxide.
    j. Overnight sleep apnoea basic diagnostic set up (Polygraphy)/study download/provision of questionnaires.
    k. CPAP setup* and basic troubleshooting# (role specific).
2. Production of reports.
3. As a minimum be trained in basic life support.

With indirect supervision from an experienced sleep/CPAP practitioner, the prescribed CPAP pressure has been pre-set by a clinician or a professional/competent practitioner. Only in patients who have received their diagnosis, management plan, DVLA advice, plus discussion regarding treatment and its implications. There must also be appropriately qualified staff available at all times to manage any complex questions or issues raised by patients during the CPAP issue.

#*No changes to CPAP prescription, downloading of CPAP compliance data only. Decision making during CPAP review by ≥band 5 staff.*

Knowledge, Education, Training, and Experience

1. Knowledge of a range of non-routine healthcare science duties acquired through foundation degree, training, or experience to NVQ3 equivalent level plus additional theoretical or applied training to diploma equivalent level.
2. Professional examinations.
    1. ARTP Associate level Certificate.
    2. ARTP Associate CPAP Certificate – role specific.
    3. ARTP Overnight Pulse Oximetry Certificate – role specific.
    4. Completion of specific modules of the AASM Accredited Sleep Technologist Education Program (A-STEP) – role specific.
3. Assist with teaching and mentoring student healthcare scientists the principles and practicalities of basic lung function assessments.

Communication & Relationships

1. Obtain brief patient medical history before testing to ensure safe practice.
2. Communicate requirements for accurate performance of appropriate investigations to patients/participants/subjects/service users through building and maintaining a good rapport.
3. Communicate basic interpretation of results to appropriate senior healthcare professionals, e.g., senior physiologists, consultants, nurses.

Service Development & Improvement

1. Ensure continual service development and improvement with the maintenance of best practice:
    a. Through maintaining up-to-date knowledge of specialist areas.

b. I am obtaining membership within the national professional body and international societies.
c. Where possible, be regulated via a voluntary/mandatory register of practitioners.

2. Ensure equipment used in lung function assessments is functioning correctly by performing several calibration and validation techniques including mechanical verification and biological control procedures for quality assurance and quality control.
3. Ensure that the workload is adhered to as directed by senior staff and that it is planned appropriately.
4. Ensure any faulty equipment is reported to senior colleagues and corrective maintenance is undertaken.
5. Occasionally, on the request of senior staff within the department, assist in the review of departmental standard operating procedures to ensure up to date and fits with current best practice.
6. Ensure that all consumable items required to maintain an efficiently running service are kept stocked and communicate to senior colleagues when such items are ordered.
7. Maintenance of Continuing Professional Development.

Research & Development

1. Contributes to departmental research where appropriate; examples include:
    a. Performing investigations for commercial research in line with clinical responsibilities.
    b. Assists in undertaking in-house audits.
    c. Presentation of outcomes of audit/non-commercial/academic research at local meetings.

8.3. Band 5 Clinical Respiratory Physiologist/Healthcare Scientist Practitioner

Clinical Responsibility

1. To plan, undertake, and perform simple initial interpretation on various diagnostic assessments and treatment interventions. Such investigations and treatment interventions could include:
    a. Spirometry, peak flow measurements/PEF diaries.
    b. Gas transfer factor testing.
    c. Static lung volumes.
    d. Reversibility of airways obstruction with bronchodilators.
    e. Skin allergy tests.
    f. Field exercise tests (e.g., 6-minute walk test).
    g. Overnight sleep apnoea screen.
    h. Capillary blood gas performance and analysis.
    i. Exhaled and nasal nitric oxide.

j. Exhaled carbon monoxide.
k. Undertake basic sleep diagnostic setup (polysomnography - application of electrodes/undertake biocals) and downloading with basic interpretation in polygraphy only – role specific
l. CPAP setup and CPAP Review (role specific).

$ Ideally, will have ARTP progression/practitioner level CPAP certificate. CPAP reviews to include decision-making, interface selection/changes, and interpreting CPAP compliance data. Application of CPAP prescription changes or further investigations must include prior discussion with ≥band 6 senior staff.

2. To assist in patient assessment utilising more specialist tests by international standards including:
    a. Bronchial provocation tests for the diagnosis of asthma/bronchial hyper-responsiveness, (Histamine, Mannitol, Exercise-induced asthma).
    b. Respiratory muscle strength assessment.
    c. Forced oscillation technique.
    d. CPAP/NIV assessment and provision.
    e. Oxygen assessments; ambulatory oxygen assessments.

3. To assist in patient assessment utilising more complex tests in accordance with international standards including:
    a. Hypoxic challenge.
    b. Pulmonary shunt assessments.
    c. Full cardio-pulmonary exercise tests (CPET).
    d. Respiratory/multi-channel sleep studies, Polysomnography (i.e., application of electrodes/undertake biocals), Actigraphy, MSLT, MWT.
    e. NIV assessment and provision.

4. Production of reports.

5. As a minimum be trained in Basic Life Support [Intermediate Life Support may be appropriate in some circumstances and certain workplaces].

Knowledge, Education, Training and Experience

1. Undergraduate degree in clinical physiology or Practitioner Training Programme (PTP) qualification or equivalent science-related subject.

2. Professional examinations:
    a. ARTP Parts I & II.
    b. ARTP Associate & Practitioner Certificates.
    c. AASM Accredited Sleep Technologist Education Program (A-STEP) – role specific.
    d. Certified Polysomnographic Technologist (CPSGT) examination (entry level) – role specific.
    e. ARTP Overnight and Polygraphy practitioner certificate – role specific.

f. ARTP Progression / Practitioner CPAP certificate – role specific.

3. Teach and mentor junior/student healthcare scientists and other healthcare professionals the principles and practicalities of basic and some advanced lung function assessments.

Communication & Relationships

1. Obtain brief patient medical history prior to testing to ensure safe practice.

2. Communicate requirements for accurate performance of appropriate investigations to patients/participants/subjects/service users through building and maintaining a good rapport.

3. Communicate basic interpretation of results to appropriate senior healthcare professionals, e.g., senior physiologists, consultants, nurses.

Service Development & Improvement

1. Ensure continual service development and improvement with maintenance of best practice:
    a. through maintaining up to date knowledge of specialist area.
    b. obtaining membership within the national professional body and/or international societies.
    c. be regulated via a voluntary/mandatory register of practitioners, e.g., RCCP, HCPC.

2. Ensure equipment used in lung function assessments is functioning correctly by performing a number of calibration and validation techniques including mechanical verification and biological control procedures for quality assurance and quality control.

3. Ensure any faulty equipment is reported to senior colleagues and corrective maintenance is undertaken.

4. Occasionally, on the request of senior staff within the department, undertake review of departmental Standard Operating Procedures to ensure up to date and fits with current best practice.

5. Ensure that all consumable items required to maintain an efficiently running service are kept stocked and communicate to senior colleagues when ordering of such items are required.

6. Maintenance of Continuing Professional Development.

Research & Development

1. Contributes to departmental research where appropriate, examples include:
    a. Performing investigations for commercial research.
    b. Undertaking in-house audit.
    c. Presentation of outcomes of audit/non-commercial/academic research at national and/or international meetings.

8.4. Band 6 Senior Respiratory Physiologist/Clinical Scientist/Respiratory Healthcare Scientist Specialist

Clinical Responsibility

1. To plan, undertake and perform routine, specialist, complex and advanced diagnostic assessments. Such investigations could include:
    a. Spirometry, peak flow rates, flow/volume loops.
    b. Gas transfer factor testing.
    c. Static lung volumes.
    d. Reversibility of airways obstruction with bronchodilators.
    e. Skin allergy tests.
    f. Field exercise tests.
    g. Undertake sleep basic diagnostic set up and downloading with full analysis.
    h. Arterial and Capillary blood gas performance and analysis.
    i. Oxygen assessments, ambulatory oxygen assessments.
    j. Exhaled and nasal nitric oxide.
    k. Exhaled carbon monoxide.
    l. Bronchial provocation tests for the diagnosis of asthma/bronchial hyper-responsiveness (Histamine, Mannitol, Exercise-induced asthma).
    m. Respiratory muscle strength assessment.
    n. Forced oscillation technique.
    o. CPAP/NIV assessment and provision.
    p. Hypoxic challenge.
    q. Pulmonary shunt assessments.
    r. Full cardio-pulmonary exercise tests (CPET).
    s. Respiratory/multi-channel sleep studies/full polysomnography with full analysis and interpretation, MSLT, MWT, Actigraphy.

2. Production of reports.

3. Verbal and written interpretation to referring medical team and other healthcare professionals where appropriate for simple and specialist assessments.

4. As a minimum be trained in Basic Life Support [Intermediate Life Support may be appropriate in some circumstances and certain workplaces].

Knowledge, Education, Training and Experience

1. Undergraduate degree in clinical physiology or Practitioner Training Programme (PTP) qualification or equivalent science-related subject.

2. Professional examination
    a. ARTP Parts I & II.
    b. ARTP Associate & Practitioner Certificates.
    c. ARTP Overnight and Polygraphy Practitioner Certificate – role specific.
    d. ARTP Progression/Practitioner CPAP certificate – role specific.
    e. Registered Polysomnographic Technologist (RPSGT) examination or Registered Sleep Technologist (RST).
    f. European Sleep Research Society/ESRS Examination of Certification in Sleep Medicine for Sleep Technologists (note entry requirement is MSc) – role specific.
    g. ≥2 years' post-qualification experience as a Band 5 Respiratory Physiologist.

3. Teach and mentor junior/student healthcare scientists and other healthcare professionals the principles and practicalities of basic and some advanced lung function assessments.

<u>Communication & Relationships</u>

1. Obtain brief patient medical history prior to testing to ensure safe practice.

2. Communicate requirements for accurate performance of appropriate investigations to patients/participants/subjects/service users through building and maintaining a good rapport.

3. Communicate basic interpretation of results to appropriate senior healthcare professionals, e.g. senior physiologists, consultants, nurses.

<u>Service Development & Improvement</u>

1. Ensure continual service development and improvement:
    a. through maintaining up-to-date knowledge of specialist areas.
    b. Obtaining membership and securing roles within the national professional body and/or international societies.
    c. be regulated via a voluntary/mandatory register of practitioners, e.g. RCCP, HCPC.

2. Ensure equipment used in lung function assessments is functioning correctly by performing a number of calibration and validation techniques including mechanical verification and biological control procedures for quality assurance and quality control.

3. Ensure any faulty equipment is reported to senior colleagues and corrective maintenance is undertaken.

4. Occasionally, on the request of senior staff within the department, undertake review of departmental Standard Operating Procedures to ensure up to date and fits with current best practice.

5. Ensure that all consumable items required to maintain an efficiently running service are kept stocked and communicate to senior colleagues when such items are ordered.

6. Maintenance of Continuing Professional Development.

<u>Research & Development</u>

1. Contributes to departmental research where appropriate, examples include:
    a. Performing investigations for commercial research.
    b. Undertaking in-house audit.

Presentation of outcomes of audit/non-commercial/academic research at national and/or international meetings.

8.5. Band 7 Advanced Respiratory Physiologist/Advanced Healthcare Scientist/Researcher/Healthcare Scientist Team Manager/Sub-Specialism lead

Advanced Respiratory Physiologist/Advanced Healthcare Scientist/Researcher

Clinical Responsibility

1. To plan, undertake and quality assure a range of routine, specialist, complex and advanced diagnostic assessments undertaken within the department as outlined below:
    a. Spirometry, peak flow rates, flow/volume loops
    b. Gas transfer factor testing
    c. Static lung volumes
    d. Reversibility of airway obstruction with bronchodilators
    e. Skin allergy tests
    f. Field exercise tests
    g. Overnight sleep apnoea screen
    h. Arterial/Capillary blood gas performance and analysis
    i. Oxygen assessments, ambulatory oxygen assessments
    j. Bronchial provocation tests for the diagnosis of asthma/bronchial hyper-responsiveness (Histamine, Mannitol, Exercise-induced asthma)
    k. Respiratory muscle strength assessment
    l. Forced oscillation technique
    m. Exhaled and nasal nitric oxide
    n. Exhaled carbon monoxide
    o. CPAP/NIV assessment and provision
    p. Hypoxic challenge
    q. Pulmonary shunt assessments
    r. Full cardio-pulmonary exercise tests (CPET)
    s. Respiratory/multi-channel sleep studies/full polysomnography with analysis and interpretation, MSLT, MWT, Actigraphy
    t. Specialist measurements made for clinical or research purpose (i.e., continuous laryngoscopy during exercise – EILO, hyperpolarised MRI, Invasive measurements of respiratory muscle function etc.)

2. To provide verbal and written interpretation to referring medical teams on simple, specialist, complex and highly complex assessments.

3. Provide expert opinion and seek co-operation from medical colleagues regarding the appropriateness of referrals and make the final and on occasions, contentious, decision where changes to the referral form are required or if testing is contraindicated.

4. Record all collected data by adhering to pre-defined reporting procedures.

Knowledge, Education, Training and Experience

1. Understanding of specialist healthcare science activities acquired through training to master's degree or equivalent level of knowledge or Scientific Training Programme (STP) graduate

2. 2 years' post-qualification experience as Band 6 Respiratory or Sleep physiologist

3. Registered Polysomnographic Technologist (RPSGT) examination/Registered Sleep Technologist (RST) or European Sleep Research Society/ESRS Examination of Certification in Sleep Medicine for Sleep Technologists – role specific

4. Using knowledge from previous qualifications, training, and leadership experience, teach junior healthcare professionals how to perform lung function investigations as specified in their job profile and ensure competency to undertake investigations without supervision.

5. Using previous knowledge and/or qualifications, teach other healthcare professionals the theory and practice of simple, specialist, complex, and highly complex lung function testing. Other healthcare professionals could include:
    a. healthcare assistants
    b. trainee nursing staff
    c. physiotherapists
    d. primary care professionals
    e. junior and senior medical staff

6. Teach on (inter)national levels the merits of undertaking quality assured lung function assessments, e.g. to primary care practice nurses/GPs or national/international respiratory and non-respiratory specialists.

Communication & Relationships

1. Communicate with colleagues at all professional levels on a national level on matters which are of a highly sensitive and complex nature

2. Obtain brief medical history from patients to ensure all assessments undertaken are performed safely. Patient groups may include those where barriers to communication exist, such as patients with learning or other disabilities or whose primary language is not English

3. Explain to patients clearly and concisely how to perform the investigations requested

4. Effectively communicate to colleagues and senior staff through means of face-to-face or electronic communication any problems associated with lung function testing

5. Communicate results of simple, specialist, complex and highly complex investigations to medical colleagues

6. To discuss with senior staff, end of life care and advanced care planning for patients receiving NIV.

Service Development & Improvement

1. Ensure continual service development and improvement:
    a. through maintaining up to date knowledge of specialist area
    b. obtaining membership and securing senior roles within the national professional body and/or international societies
    c. be regulated via a voluntary/mandatory register of practitioners, e.g. RCCP, HCPC.

2. Keep up to date with best practices through continual monitoring of relevant professional publications.

3. Ensure long-term succession planning through ongoing investigation of capacity and demand and discuss outcomes with senior medical and management teams.

4. Devise and implement strategies to ensure that service demands can be fulfilled, regardless of interruptions or requests for urgent tests, and without detriment to patient safety or experience for all specialities.

5. Ensure equipment used in lung function assessments functions correctly by performing frequent calibration and validation techniques, including mechanical verification and biological control procedures for quality assurance and quality control.

6. Ensure the timely corrective maintenance of any faulty equipment by attempting in-house rectification for minor faults or communicating with clinical engineering and/or the manufacturing company where appropriate.

7. Devise and ensure up-to-date standard operating policies and procedures to ensure departments fit the current best practices.

<u>Financial Responsibility</u>

1. Act as a signatory on departmental accounts with the ability to procure any required items.

<u>Leadership and Staff Management</u>

1. Provide strategic and innovative leadership and line management to include:
    a. recruitment and retention of staff
    b. allocation of Healthcare Science staff duties
    c. Regular performance reviews are conducted to ensure the continuing professional development of junior healthcare science colleagues.

2. Assist in the continual service development via long-term planning of services.

3. Ensure staff are working to optimum potential by regularly monitoring staff performance and attendance.

4. Supervision of junior respiratory Healthcare Science professionals

5. Assist respiratory Healthcare Science professionals in their continuing professional development through regular feedback sessions and ongoing review of objectives set during the appraisal development review.

Research & Development

1. Assist the Senior chief with strategic direction to an ongoing and successful research program.

2. Assist the lead in laboratory-specific academic research, including
    a. devising in-house research, grant, and ethics applications
    b. in-depth analysis of data
    c. presentation to local, national, and international meetings in a range of formats

Assist in the co-ordination of on-going commercial research trials within the department, including adhering to trial-specific guidance and maintenance of trial-specific participant log.

8.6. Band 8a-c Clinical Services Manager/Healthcare Science Service Manager/Consultant Clinical Scientist/Advanced Clinical Practitioner

Clinical Responsibility

1. To plan, undertake, and be accountable for a range of routine, specialist), complex, and highly complex/advanced diagnostic assessments undertaken within the department as outlined below
    a. Spirometry, peak flow rates, flow/volume loops
    b. Gas transfer factor testing
    c. Static lung volumes
    d. Reversibility of airway obstruction with bronchodilators
    e. Skin allergy tests
    f. Field exercise tests
    g. Overnight sleep apnoea screen with full interpretation
    h. Arterial and capillary blood gas performance and analysis
    i. Oxygen assessments, ambulatory oxygen assessments
    j. Bronchial provocation tests for the diagnosis of asthma/bronchial hyper-responsiveness (Histamine, Mannitol, Exercise-induced asthma)
    k. Respiratory muscle strength assessment
    l. Forced oscillation technique.
    m. Exhaled and nasal nitric oxide
    n. Exhaled carbon monoxide
    o. CPAP/NIV assessment and provision with further referrals for investigation if required.
    p. Hypoxic challenge
    q. Pulmonary shunt assessments
    r. Full cardio-pulmonary exercise tests (CPET)
    s. Respiratory/multi-channel sleep studies/full polysomnography with analysis and full interpretation, MSLT, MWT, Actigraphy
    t. Specialist measurements made for clinical or research purposes (i.e., continuous laryngoscopy during exercise – EILO, hyperpolarised MRI, Invasive measurements of respiratory muscle function, etc.)

2. To provide verbal and written interpretation to referring medical teams on simple, specialist, complex, and highly complex assessments

3. Provide expert opinion and seek co-operation from medical colleagues regarding appropriateness of referrals and make the final and on occasions contentious, decision where changes to the referral form are required or if testing is contraindicated.

4. Record all collected data by adhering to pre-defined reporting procedures.

5. Feedback to Directorate Clinical Governance Meetings on a variety of locally pre-defined matters, which could include:
    a. Adherence and compliance to clinical protocols
    b. departmental staff clinical refresher programs
    c. update on departmental activity.
    d. Discuss patient safety matters.
    e. Negotiate any required changes to service to ensure optimum departmental efficiency

Knowledge, Education, Training, and Experience

1. Understanding of specialist healthcare science activities acquired through training to master's degree or equivalent level of knowledge plus further specialist training [research techniques; acquired through training to a doctorate or equivalent level of expertise if research a requirement of the role]
2. Using knowledge from previous qualifications, training, and managerial experience, teach junior healthcare professionals how to perform lung function investigations as specified in their job profile and ensure competency to undertake investigations without supervision.

3. Using extensive previous knowledge and/or qualifications, teach other healthcare professionals the theory and practice of simple, specialist, complex, and highly complex lung function testing. Other healthcare professionals could include
    a. healthcare assistants
    b. trainee nursing staff
    c. physiotherapists
    d. primary care professionals
    e. junior and senior medical staff

4. Teach the merits of undertaking quality-assured lung function assessments on national and international levels, e.g., to primary care practice nurses/GPs or national/international respiratory and non-respiratory specialists.

Communication & Relationships

1. Communicate with colleagues at all professional levels on a national and/or international level on matters that are highly sensitive and complex and require specific negotiating skills to ensure the maintenance of best practices.

2. Obtain brief medical history from patients to ensure all assessments undertaken are performed safely. Patient groups may include those with barriers to communication, such as patients with learning or other disabilities or whose primary language is not English.

3. Explain to patients clearly and concisely how to perform the investigations requested.

4. Effectively deal with patient complaints through successful negotiation and mediation under challenging circumstances.

5. Communicate effectively to colleagues and senior staff through face-to-face or electronic means any problems associated with lung function testing.

6. Communicate results of simple, specialist, complex, and highly complex investigations to medical colleagues.

7. Communicate departmental research results to local, national, and international research networks and professional societies through symposia, oral, or poster presentations.

8. To discuss and be involved with end-of-life care and advanced care planning for patients receiving NIV.

Service Development & Improvement

1. Ensure continual service development and improvement:
    a. through maintaining up-to-date knowledge of the specialist area
    b. obtaining membership and securing senior roles within the national professional body and/or international societies
    c. be regulated via a voluntary/mandatory register of practitioners, e.g., RCCP, HCPC.

2. Keep up to date with best practices by continually monitoring relevant professional publications.

3. Ensure long-term succession planning through ongoing investigations of capacity and demand and discussions of outcomes with senior medical and management teams.

4. Devise and implement strategies to ensure that service demands can be fulfilled, regardless of interruptions or requests for urgent tests, and without detriment to patient safety or experience for all specialities.

5. Ensure equipment used in lung function assessments functions correctly by performing frequent calibration and validation techniques, including mechanical verification and biological control procedures for quality assurance and quality control.

6. Ensure the timely corrective maintenance of any faulty equipment by attempting in-house rectification for minor faults or communicating with clinical engineering and/or the manufacturing company where appropriate.

7. Devise and ensure up-to-date standard operating policies and procedures to ensure departments fit the current best practices.

Financial Responsibility

1. Solely responsible and accountable for the effective and efficient management of departmental clinical [and research] budgets

2. Act as a signatory on departmental accounts with the ability to procure any required items.

3. Feedback to senior management and finance department every month regarding the budget status and undertake discussions/negotiations regarding areas of budgetary constraints and/or overspends, ensuring overspends can be justified.

4. Undertake annual negotiations regarding budget setting and, subsequently, associated workforce planning.

Leadership and Staff Management

1. Provide strategic and innovative leadership and line management to include
    a. recruitment and retention of staff
    b. allocation of Healthcare Science staff duties
    c. Regular performance reviews are conducted to ensure the continuing professional development of all healthcare science colleagues in all grades.
2. Ensure continual service development via long-term service planning.

3. Ensure staff work to optimum potential by regularly monitoring staff performance and attendance.

4. Supervision of respiratory healthcare science professionals

5. Assist respiratory healthcare science professionals in their continued professional development through regular feedback sessions and ongoing review of objectives set during the appraisal development review.

Research & Development

1. Manage and provide strategic direction to an ongoing and successful research program.

2. Take the lead in laboratory-specific academic research, including
    a. devising in-house research, grant, and ethics applications
    b. in-depth analysis of data
    c. presentation to local, national, and international meetings in a range of formats

3. Negotiate with external commercial clinical trial companies regarding assessments to be performed, the setup and continual running costs for trials, and ensure adherence to specific quality assurance and control procedures.

4. Co-ordinate the smooth running of on-going commercial research trials within the department, including adhering to trial-specific guidance and maintenance of trial-specific participant log.

5. Ensure invoices are processed and payment received for all assessments undertaken as part of commercial research trials.

The authors would like to stress that this document is intended for guidance purposes only. It has been developed to assist with evidence collection required for external visits or departmental accreditation such as IQIPS. It can be used by service managers to support workforce development. The contents of this document/guide can also be used as a tool to help develop a local SOP utilising your own hospital trust policies and procedures formats.

Document Approval Table

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Contributing Committees	ARTP Standards Committee ARTP Sleep Committee ARTP Workforce Committee
Document Author(s):	Peter Moxon and Matt Rutter
Version Author (s)	Reviewed by Ian Cliff
Release date:	July 2024
Current Version:	1.8
Review Date:	July 2027
File name:	ARTP SOP Document Template

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