British Thoracic Society

Better lung health for all

A respiratory workforce for the future

British Thoracic Society

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About BTS

Our vision is better lung health for all.

We represent the professional voice of respiratory medicine in the UK and have over 4,000 members from across the multi-professional workforce. BTS works to raise awareness of the impact of lung disease, and champion the respiratory workforce, while developing and promoting evidence-based standards of care.

BTS also aims to inform and influence healthcare policy in order to achieve better lung health for all. We do this by harnessing the experience, knowledge, skills and contributions of our members, supported by a small staff team, and by involving people with lung disease in the development of our advice about service development and clinical management.

We have over

4,000

members from across the multi-professional workforce

DISCLAIMER:

This document has been prepared by the British Thoracic Society. The figures for the number of posts needed are estimates based on the best information available at the time of publication.

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Foreword

At the heart of respiratory care is a drive to provide holistic patient-centred care, delivered by highly skilled multi-professional teams.

This multi-professional model is being challenged by changing patient demographics, workforce shortages, recruitment and seasonal pressures which directly impact respiratory teams. To address this, we must move towards a sustainable healthcare system, with workforce the most important determinant of our future success.

A key priority for the British Thoracic Society is to ensure there are sufficient numbers of trained professionals across the respiratory workforce, as well as adequate investment in the NHS to deliver better respiratory outcomes for patients.

We need to deliver care to patients by the right person at the right time in the right place. An effectively staffed respiratory workforce can deliver benefits to patients from accurate, early diagnosis and optimal treatment, reduced admission rates and hospital stays, introduction of innovative care pathways and practices, and increased access to new and appropriate therapies for their disease. We want to ensure that patients with lung disease are looked after by respiratory specialists on respiratory wards, Respiratory Support Units [1], in outpatient facilities and integrated care settings by a sustainable respiratory workforce now and in the future.

We need to consider the ways in which we deliver care to ensure that our patients experience seamless healthcare. Addressing the challenges faced by primary and secondary care requires a joined up approach. BTS wholeheartedly supports the drive to Integrated Care Systems as detailed in several UK healthcare policy documents.

Now is the time to act.

Professor Jon Bennett
BTS Chair 2019-2021

Introduction

Millions of people in the UK have a respiratory condition. They deserve high quality treatment, delivered promptly to allow them to live a normal life without disabling symptoms and limitation. They deserve high quality, responsive respiratory services.

Over the last 2 years respiratory medicine has been at the front line, managing people with COVID-19 pneumonia. Respiratory teams have been working in hospitals, on wards and respiratory support units, helping people with COVID-19, first to survive, and then to recover. Respiratory staff, working outside of hospital, have run schemes to keep people with lung disease out of hospital and take people recovering from COVID-19 home early and support them there. They helped set up and run COVID-19 virtual wards and ran oxygen services to aid recovery and allow early discharge from hospital. They are now delivering long-COVID rehabilitation services, long-COVID clinics and are ensuring that people recover fully from COVID-19 infection. Many are exhausted and some deeply scarred by their experiences, but their commitment to respiratory patients continues, often with an even greater passion. However, unsupported, the risk of burnout is high at a time when retention of staff is paramount.

Respiratory professionals face immense challenges. Despite best efforts to continue respiratory services there is a huge backlog of work. More patients need respiratory specialist review because of the consequences of COVID-19 plus pressure and service shortfall elsewhere in the health service. Lung diagnostic services initially stopped due to potential risks from testing have only partially restarted, with lower capacity in order to ensure safe delivery. Millions of reviews for long-term conditions such as asthma and COPD have not taken place. Respiratory disease is closely linked to health inequality so shortfalls particularly effect our most deprived communities.

Funding of community diagnostic centres plus better integration of services, led by Integrated Care Boards, will provide the scaffolding for recovery. New pathways for breathlessness and rehabilitation will streamline service delivery. However, without the workforce to deliver services we cannot provide what respiratory patients and their carers need. Every profession within the respiratory multi-disciplinary team has a major staff shortfall and identifies this as their number one challenge. This is outlined clearly by this report. This shortfall has to be addressed quickly to reduce the risk that currently beleaguered respiratory specialists will walk away from their professions.

We have recorded workforce requirements as they stand, but to support a future sustainable workforce we need ongoing robust data for all respiratory team professions. We need investment to train new respiratory staff in all professions. Most importantly we need these commitments quickly. Respiratory patients need and deserve this.

Dr Paul Walker
Chair, BTS

Executive Summary

The NHS has an inadequate number of skilled respiratory staff across all professions to deal with the growing care demands of the UK population. This has a negative impact on patient outcomes, and on the teams providing their care.

The problems facing the workforce extend beyond the number of vacant posts. The pandemic and the subsequent need to address the backlog of patients has advanced the debate about restructuring care. Respiratory medicine has long been at the forefront of integrated solutions.

In 2019, the NHSE Long Term Plan included respiratory care as a clinical priority for the health service for the first time [2]. The NHSE Long Term Plan includes an emphasis on workforce, training and leadership. The critical importance of the multi-professional workforce to the future of the health service has been emphasised in the NHS People Plan [3], HEE Future Doctor programme [4], Everyone Matters:2020 Workforce Vision [5], Doing things differently: supporting junior doctors in Wales [6], Health and Wellbeing 2026 [7] and the Taskforce for Lung Health [8].

As a specialty already focused on multi-professional working there is a need to change the approach to national workforce planning. Future planning must focus on utilising skills across teams and foster professional collaboration, in order to design and deliver targeted services, so patients receive appropriate care, at the appropriate time, from the appropriately skilled professional. While this report focusses on adult respiratory services, the issues raised apply to the workforce needs of paediatric respiratory services.

BTS will continue to advocate for development of a specialist respiratory workforce, in addition to promoting the development of respiratory skills as a core component of the skill set of healthcare professionals within hospital, primary care and community settings.

Summary

Respiratory Doctors

We need an increase of at least 200 higher respiratory specialist training places to create sufficient respiratory consultants to address patient need.

Respiratory physiologists

GIRFT data identified a **shortfall of over 375 qualified physiologists** (Band 5 and above) with even larger gaps in physiological technical and support staff (Bands 2 and 4) [9].

Physician Associates

We welcome wider employment of Physician Associates within respiratory teams.

Speech and Language Therapists

Speech and Language Therapists should be commissioned as members of specialised respiratory multidisciplinary teams.

Dietitians

All specialist respiratory units should have dedicated dietetic support.

Respiratory Nurses

Expansion of the respiratory nursing workforce is needed to meet the recognised ratios. Specialist nurses play a fundamental role in integrated care which requires further major workforce expansion.

Respiratory pharmacists

A minimum of 250 funded specialist Respiratory Pharmacists are required to ensure 1 specialist lead in each trust for adult respiratory services. In addition, each specialist commissioned respiratory service has a specialist Respiratory Pharmacist embedded within the Multi-Disciplinary Team (MDT). Seven Regional Consultant Respiratory Pharmacists with oversight of above Respiratory services are needed.

Primary care

Primary care plays a key role in caring for people with lung disease. The shortfall in the primary care workforce is well documented [2, 3].

Respiratory physiotherapists

Current estimates suggest at least 600 pulmonary rehabilitation registered physiotherapy posts and a further 400 non-registered posts are needed. The NHSE Long Term Plan demands a large increase in pulmonary rehabilitation capacity requiring additional respiratory physiotherapists to lead these programmes.

Clinical Practitioners

At least an additional 60 advanced clinical practitioners are needed in respiratory medicine.

Respiratory radiologists

We recognise the need for the expansion of the radiology workforce to support many respiratory services, in particular lung cancer. Separate work about radiology shortfalls has been published [10].

Psychologists

All respiratory departments should have a dedicated funded psychologist and this should not be limited to sub-specialist respiratory services.

We are calling for...

A skilled, sustainable respiratory workforce capable of delivering holistic multi-professional care will require:

An increase in staff

1. Investment in retention and support for current respiratory multi-professional teams.
2. A renewed focus on expansion and recruitment of respiratory professionals across the multi-professional team.

Improved training and career development

3. An increase in support for training across respiratory professions, including the return of the respiratory training posts reduced in 2021 by the introduction of the IMT3 training grade, and expansion of support for professionals wishing to expand their respiratory skill set through postgraduate study.
4. Continuing to build sustainability and resilience into the respiratory workforce through optimising the roles and career pathways available to specialist nurses, physiotherapists, physiologists, advanced clinical practitioners and physician associates, within primary, secondary and integrated care.

Commissioning

5. Wider adoption of a joined up approach to service planning, similar to that used in sub-specialist services [9]. Using data on patient need, health inequalities and standards of care to design services, determine workforce needs and deliver innovative holistic care targeted to patient needs.
6. Inclusion of a people plan or workforce specification in all commissioning documents or service specifications for respiratory care.
7. A dedicated, named respiratory commissioning lead for each Integrated Care Board (ICB).
8. Annualised staff scheduling to address the very high acute respiratory workload in winter, compared to summer.
9. When planning workforce expansion, new posts must consider appropriate expansion of other services such as respiratory physiology and radiology.

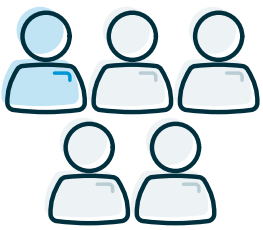
Understanding the challenge

Lung disease forms a major part of the work for the NHS, with rates rising significantly even before the arrival of COVID-19. Acute COVID-19 is predominantly a respiratory disease, and throughout the pandemic respiratory teams have led from the front in managing COVID-19, in its acute stages, at follow up and providing ongoing support for those living with Long COVID. COVID-19 has only added to the burden of respiratory disease already borne by the NHS.

The burden of respiratory disease

1 in 5 people (12 million) has had a diagnosis of lung disease

at some stage in their lifetime [39]



Mortality from respiratory disease overall was higher in the UK

than in EU15+ countries between 1985 and 2015 [41]

550,000 people are diagnosed with lung disease

in the UK each year.

It is responsible for over

700,000 hospital admissions

and more than

6.1m bed days in the UK each year [40]

Hospital admissions for lung disease have risen

over the past seven years at three times the rate of all admissions generally [11]

admissions increase over the past seven years

The annual economic burden of asthma and COPD

on the NHS in the UK is estimated as £3 billion and £1.9 billion respectively.

In total, all lung conditions (including lung cancer) directly cost the NHS in the UK £11billion annually. [42]

Who benefits from a respiratory workforce?

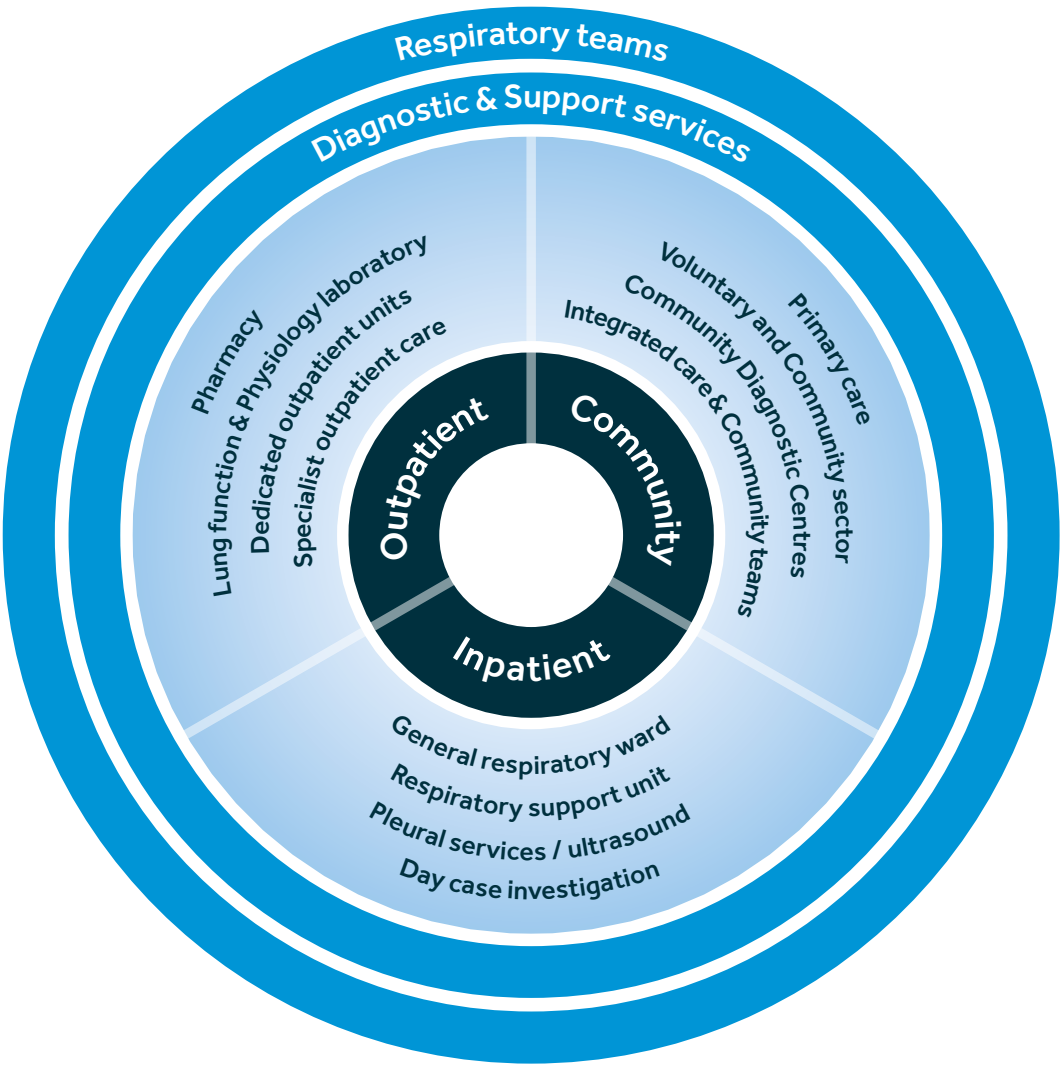
The multi-professional team is involved in the care of patients with a large number of respiratory conditions - some of which are listed below. Respiratory diseases are often long term, can be both chronic and acute, and teams of specialists and their patients start their relationship at diagnosis and continue during treatment, supportive care, monitoring and palliative care. Respiratory teams are focussed on reducing health inequalities and ensuring patients also receive the appropriate psychological and nutritional support.

Acute respiratory distress syndrome (ARDS)	Asthma	Breathlessness
Bronchiectasis	COPD	Coronavirus (acute and long COVID)
Cough	Cystic fibrosis	Fungal lung infections
Interstitial Lung Disease	Lung cancer	Mesothelioma
Non-tuberculous mycobacterial infection (NTM)	Obstructive sleep apnoea (OSA)	Occupational and environmental lung disease
Pneumonia	Pleural disease	Pulmonary vascular disease/ pulmonary embolism
Rare and Orphan lung diseases	Sarcoidosis	Sleep medicine
Tobacco dependence	Tuberculosis	Ventilation

The respiratory team cares for patients with complex comorbidities and are increasingly delivering care across traditional healthcare boundaries. Many patients have long term conditions requiring self-management and support outside of acute settings. Many evidence-based models for multi-professional working exist in respiratory medicine. Increasingly respiratory teams support specialised services in areas such as cystic fibrosis, advanced ILD, selection for lung transplantation, lung volume reduction procedures.

Respiratory physicians	Nurses	Physiotherapists
Health care assistants	Physician associates	Advanced clinical practitioners
Exercise practitioners	Occupational therapists	Speech and language therapists
Pharmacists	Psychologists	Dieticians
Clinical scientists	Physiologists	Admin/support staff
Paramedics	Phlebotomists	Laboratory staff
Radiographers	Thoracic surgeons	Thoracic radiologists
Pathologists	General practitioners	Palliative care physicians

Respiratory Services



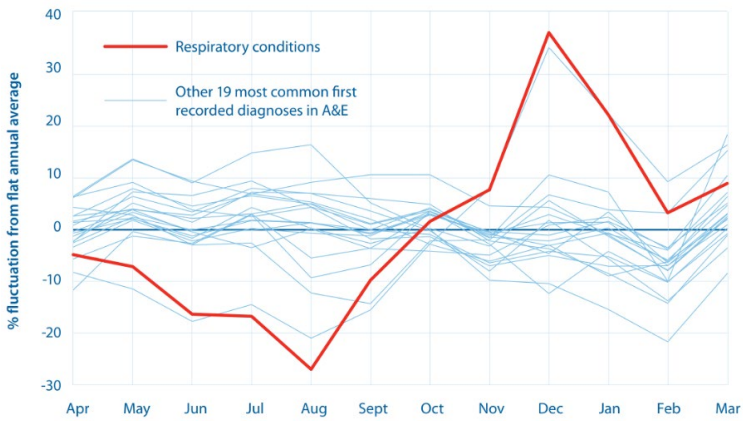
Winter pressures

Respiratory medicine is the largest single contributor to "Winter Pressures". Every winter the NHS experiences a surge in acute respiratory hospital admissions, resulting in a near doubling of the inpatient respiratory workload. Twice as many respiratory admissions occur in December compared to August [9, 11, 43].

Twice as many respiratory admissions occur in December compared to August

How respiratory conditions add to NHS winter pressures.

Average fluctuation in monthly admissions, 2010 to 2017.



Source: Out in the cold Lung disease, the hidden driver of NHS winter pressure, British Lung Foundation, December 2017 [11]

A BTS survey showed

85% of respiratory trainees were considering working flexibly

Building a flexible workforce

With flexible working emphasised in the NHS people plan and a rise in less than full time working, the current narrow outlook of workforce planning must also adapt. A BTS survey of respiratory trainees showed 85% of respondents were considering working flexibly or LTFT in the future [12]. **RCP data shows that 24% of consultants are already working less than full time [13].**

The benefits of flexible working to work-life balance, reducing burnout and building sustainable careers are well-documented [3]. In addition, for the NHS this allows staff to pursue interests in education, research, leadership, management and postgraduate study – all of which benefit the NHS in the long term. Options for portfolio careers, flexible training and working need to increase. We are committed to promoting flexible working, and to help plan a future workforce which can accommodate flexible working for all.

How many respiratory staff are needed?

Members of the respiratory team have experienced increasing workloads since before the pandemic – reflecting better diagnostics, the ageing population, and an increase in patients with complex conditions.

It is vital that the respiratory workforce is expanded, to ensure standards of care are maintained and to support the implementation of proactive, innovative integrated services. A fundamental system-wide change is needed in the approach to service pressures, whether these are predictable winter surges of respiratory disease or unpredictable events such as an outbreak of a novel disease.

Planning, underpinned by realistic and sustainable funding, must start now to prevent a future workforce crisis. A sustainable healthcare system relies on both recruitment and retention. Currently staff are being asked to cover gaps within and across specialties, working beyond their hours and their job description, often with little support or recognition. This contributes significantly to burnout and further workforce shortages [14]. It is also vital to plan for the increased numbers of staff planning to retire in the coming years.

In order to meet the ambitions of the NHS Long Term Plan for England and the needs of the devolved nations, we recommend:

Respiratory physicians (consultants and specialty trainees)

The pandemic has highlighted the critical role of respiratory physicians within secondary, tertiary and integrated care. BTS, RCP and other professional organisations have reported increasing numbers of vacant posts, across the workforce, for a number of years. In 2021 BTS found 82% of hospitals reported vacant respiratory consultant posts, increased from 40% in 2016 [15]. GIRFT data confirms that most trusts have at least one consultant vacancy [9].

The Royal College of Physicians 2020 census also reported significant vacancies in respiratory medicine [79], with only acute [127] and geriatric medicine [111] having more vacancies [13]. Of 79 advertised respiratory consultant posts in 2020, only 46% were filled [13].

RCP data shows 36% of respiratory consultants will reach their planned retirement age in the next 10 years (2018/19 census) [16].

There are an inadequate number of doctors training to be respiratory specialists to replace these retirees, fill current vacant posts and deliver the NHS Long Term Plan.

An increase of at least 200 higher respiratory specialist training places to create sufficient respiratory consultants to address patient need [17].

In 2021 BTS found

82% of hospitals reported vacant respiratory consultant posts

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Of 79 advertised respiratory consultant posts in 2020,

only 46% were filled

Respiratory nurses

50% of specialist respiratory nurses are eligible to retire by 2022, the need for the next generation of respiratory nurses has never been more pressing [18].

The British Thoracic Society (BTS) adult and paediatric respiratory nurse professional development framework documents have been developed to support the necessary training and development needs of the respiratory nurse workforce of the future [19-21].

Pleural disease, COPD, asthma, bronchiectasis, ILD, Lung cancer and pneumonia all require increased nursing support. Specialist nurses play a fundamental role in integrated care which requires further major workforce expansion.

The Respiratory GIRFT report [9] provides the following recommendations for nursing staff ratios across respiratory care:

- There should be a target of 1 nurse for every 300 **COPD** admissions per year.
- To support **pneumonia** there should be a minimum target of one nurse per 400 admissions per year, pro rata; which could be increased if average readmission rate is over 20%.
- To facilitate an effective **pleural service**, dedicated nurse time is required and a minimum Band 6 nurse is needed per 300 pleural procedures per year, pro rata.
- There should be a minimum target of 1 **asthma** nurse per 300 admissions per year (excluding nurse time spent delivering specialised services for more complex patients).
- In relation to the care of patients with COVID-19, **respiratory support units** should be staff in line with national recommendations, and there should be a minimum nurse to patient ratio of 1:4, with nurses trained in administering CPAP and HFNO [1].
- For **tuberculosis** nurses the recommended ratio is 1 nurse to 40 patients [22].
- NICE Quality Standards for Lung Cancer specify that there should be 1 lung cancer specialist nurse for a caseload of 80 new patients [23].
- For **Cystic Fibrosis**, there are recognised number of nurses per clinic size [2 specialist nurse per 75 patients, 3 per 150 patients and 5 per 250 patients [24].
- Current estimates indicate that there should be a minimum of one band 6 nurse for every 300 **Interstitial Lung Disease** patients [9].
- **Long-term Ventilation:** The service specification for complex home ventilation is under development, with staffing ratios part of the review. Current consensus suggests a ratio of one senior nurse (or physiotherapist/ physiologist) per 40 patients who fulfil the service specification criteria (mask ventilation > 14 hours or tracheostomy ventilation) [1, 9, 25].

In addition:

- **Tobacco dependency treatment:** The LTP provides funding to support the provision of tobacco dependency advisors in each trust in England. The level of staffing is decided locally, but it is vital that each hospital has staff with the appropriate training in treating tobacco dependence. A minimum of one specialist tobacco advisor is needed in each hospital.

We support the expansion of the respiratory nursing workforce to meet the recognised ratios.

Respiratory Physiotherapists

Specialist respiratory physiotherapists are involved in the pathway of care for patients with respiratory conditions from emergency department, through admission to discharge and beyond. The workforce is embedded within primary, integrated, secondary and tertiary care. In addition to support for adult and paediatric patients with acute and long-term respiratory disease, Physiotherapists also support those with neuromuscular disorders, and conditions requiring mechanical ventilation and/or augmented cough technique [26-28].

The physiotherapy response to the COVID-19 pandemic has shown the profession to be highly skilled, flexible and adaptable to meet patient needs; working within intensive care and Respiratory Support Units, covering inpatient wards, virtual, integrated care services and rehabilitation.

The 2020 Respiratory GIRFT report interrogated electronic staff records and found 1879 physiotherapy vacancies in England alone – there are **more than 21,000 physiotherapists currently employed by the NHS** (not limited to specialist respiratory physiotherapists) [9].

Much of the current workforce evidence is specifically within rehabilitation pathways; particularly pulmonary rehabilitation and rehabilitation following critical illness [2, 9, 29, 30] and this is likely to underestimate the true workforce size required to cover wider respiratory care.

The NHS Long Term Plan demands a large increase in pulmonary rehabilitation capacity requiring additional respiratory physiotherapists to lead these programmes [2]. Current estimates suggest this requires at least 1000 pulmonary rehabilitation physiotherapy posts are needed – made up of 600 registered physiotherapy posts and 400 non registered posts.

The Chartered Society for Physiotherapy plans to produce further information on workforce requirements later in 2022.

The role of physiotherapists within critical care has also been well documented with recommendations for 1 physiotherapist for every 4 level 3 patients [31].

Specialist respiratory physiotherapists are advised as key workforce members of respiratory support units (RSU) working across a 7 day shift pattern. Staff ratio will depend on acuity of the patients [1].

The NHS Long Term Plan demands a large increase in pulmonary rehabilitation capacity requiring additional respiratory physiotherapists to lead these programmes (2). Current estimates suggest at least 600 pulmonary rehabilitation registered physiotherapy posts and a further 400 non-registered posts are needed.

The 2020 Respiratory GIRFT report interrogated electronic staff records and found

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Advanced Clinical Practitioners

Advanced Clinical Practitioners (ACP) come from a range of registered professionals and have advanced level practice recognised as part of the solution in developing alternative ways to meet health care needs. The role of ACPs within respiratory are expanding and will form an integral part of future respiratory care.

At least an additional 60 advanced clinical practitioners are needed in respiratory medicine.

Physician Associates

Physician Associates are an expanding professional group and should be embraced by the specialty and their appointment actively promoted across respiratory departments and community settings.

We welcome the appointment of Physician Associates within the respiratory team.

Respiratory Physiologists

Physiology services are a key area in respiratory medicine, with almost all patients having physiological measurement at some stage in their journey. Such measurements are mandated by NICE, specialised commissioning, BTS and other organisations, to assist diagnostics, confirm eligibility for treatment, or on-going monitoring [9]. Without physiological support, diagnosis and assessment of respiratory disease is severely compromised, but fewer than 10% of physiology departments are involved in planning for appointment of new medical staff [32].

Fewer than

10% of physiology departments

are involved in planning for appointment of new medical staff

Both groups are fundamental to delivery of community respiratory diagnostics consistent with the Diagnostics: Recovery and Renewal report [33] and delivery of Community Diagnostic Centres. Within sleep services the shortfall is much larger, with a NHSE project underway to address the sheer scale of this problem.

We support the ARTP recommendation that for each new Consultant in Respiratory Medicine, a 0.6 WTE physiologist would be required to support their clinical activities [32].

GIRFT data identified a shortfall of over 375 qualified physiologists (Band 5 and above) (9), with even larger gaps in physiological technical and support staff (Bands 2 and 4).

Lung Cancer and Thoracic Radiology

Respiratory teams rely on radiological investigations to diagnose and manage respiratory disease. The Royal College of Radiologists has reported that the NHS radiologist workforce needs at least another 1,939 consultants just to keep up with pre-coronavirus levels of demand for scans and surgery, and predict the clinical radiology workforce shortfall will be 44% by 2025 [10].

The expansion of the Targeted Lung Health Check (TLHC) has significant implications for reporting of CT scans, which must be performed by thoracic radiologists who meet the required standards, and imaged guided biopsies further down the patient pathway. In addition to expanding specialist thoracic Radiologist numbers, there is a requirement to investment in both scanner hardware and, importantly, the Radiographer and Medical Physics workforce as highlighted in the Diagnostics: Recovery and Renewal report [33].

We recognise the need for the expansion of the radiology workforce. It is important to highlight that the ongoing assessment and management of lung cancer patients is the responsibility of the respiratory workforce and this will require an accompanying increase in the respiratory workforce.

Respiratory Speech and Language Therapists

Speech and language therapists are an essential part of the multi-professional respiratory team and they provide treatment, support and care for people with breathlessness and those who have difficulties with communication, eating, drinking and swallowing, whether due to illness, injury or other circumstances.

Speech and Language Therapists should be commissioned as members of a specialised respiratory multidisciplinary team (MDT) [34].

Psychologists

The need for psychological support in patients with respiratory disease is very high, with **depression, anxiety and other mental health needs highly prevalent** [35, 36]. Currently psychological support is limited only to regional specialist services, including Asthma and Cystic Fibrosis, although the GIRFT report noted poor provision of psychologists in commissioned areas [9]. Wider access to psychological support will improve quality of life, reduce healthcare utilisation and prevent hospital admissions.

All respiratory departments should have a dedicated funded psychologist and this should not be limited to sub-specialist respiratory services.

Respiratory Pharmacists

Respiratory Pharmacists are central to optimal prescribing, improving patient safety, and helping to meet health service demand in a number of ways, within acute trusts and within the community. They play a key role in managing long term conditions. Pharmacists support clinically appropriate prescribing and deprescribing of medicines, ensuring cost-effective, evidence based interventions are utilised, whilst supporting patients in understanding and adhering to their treatment regimens. Expanding access to respiratory pharmacists will improve patient outcomes and reduce avoidable hospital admissions [2, 3]. With an expansion in high cost precision medicines within respiratory care the role of the respiratory pharmacist has never been more critical.

A minimum of 250 funded specialist Respiratory Pharmacists are required to ensure a 1 specialist lead in each trust for adult respiratory service. In addition each specialist commissioned respiratory service has a specialist Respiratory Pharmacist imbedded within the MDT. 7 Regional Consultant Respiratory Pharmacists with oversight of above Respiratory services are needed.

Dietitians

Respiratory disease commonly leads to weight loss, cachexia and nutritional challenges. Dietitian support is essential before and after lung transplantation. All respiratory services should have access to appropriate dietetic support, but currently few services have this.

The British Dietetic Association, in association with HEE have produced a future dietician 2025 workforce report providing recommendations and a roadmap for the future dietetic workforce, [18,19]. The role of first contact and ACP dieticians in community will expand, and future respiratory service should engage with this [37, 38].

All specialist respiratory units should have dedicated dietetic support.

Primary Care

The shortfall in the primary care workforce is well documented [2, 3] and this document does not attempt to describe these issues. The Taskforce for Lung Health highlights the need to focus on retention as well as recruitment of GPs [8].

Primary care plays a key role in caring for people with lung disease.

Building a multi-professional team for the future

Innovation has long been a driver for respiratory care, with early adoption of scientific advances, clinical trials and technological advances driving changes to service delivery. Examples include non-invasive ventilation in hospital and at home, using ultrasound to investigate and manage pleural effusions, widespread adoption of care bundles and self-management plans for airway diseases. Innovation is driven by all members of the multi-professional team, reflecting changing patient needs, and the benefits of having skilled professionals across multiple specialities.

The Future Doctor report emphasises building a greater breadth of practice across professions where a strong generalist workforce is supported by specialists, to effectively manage complex patients across healthcare structures [4]. Competencies and capability statements alongside clear service specifications empower all members of the respiratory team.

Support for a new model for delivering care:

1. The broader introduction of integrated care, through effective commissioning, staffing and sharing of successful models via Integrated Care Systems (ICS).
2. Establishment of Respiratory Support Units (RSU) in all acute Trusts, with dedicated funding and staff, to optimally manage the sickest respiratory patients.
3. Addressing health inequalities by targeting expansion and recruitment to areas with highest levels of need.
4. Support for the establishment of **160 community diagnostic centres (1 per 300,000 population)** all with the capacity (equipment and staff) for basic respiratory diagnostics [33].

Supporting proactive care

Exacerbations and frequent admissions to hospital are common to many respiratory diseases, for example COPD and asthma. Shifting the focus from reactive to proactive care has enormous benefit to patients and the healthcare system. Supported self-management is a key part of the NHS Long Term Plan's commitment to make personalised care the norm for patients [2, 9]. The narrative needs to change from admission avoidance to admission prevention. To deliver this we need:

1. Better prevention of acute exacerbations of respiratory disease using preventative measures in the community, such as vaccinations, rescue packs, tobacco dependency services, and easier access to specialist support.
2. Increased use of initiatives such as respiratory HOT clinics (urgent clinics used for admission prevention), Outpatient Parenteral Antibiotic Therapy (OPAT), virtual wards (including respiratory infection virtual wards) and other innovative solutions to avoiding hospital stays.
3. To ensure that all those in patient facing roles have awareness of and skills in basic respiratory diagnostics.
4. To ensure that those in patient facing roles have awareness of symptom management, with breathlessness a top priority. Introduce breathlessness pathways to streamline diagnosis for patients.
5. To ensure that all those in patient facing roles have the skills and confidence to engage with patients to treat tobacco dependence.
6. To support community pharmacists in building confidence in advising patients with respiratory symptoms.
7. To develop support for patients with respiratory symptoms in the voluntary and community sector/across communities.
8. To support Lung Health Checks for earlier diagnosis and management of patients with lung cancer, COPD, bronchiectasis, pulmonary fibrosis.
9. Implementation of access to pulmonary rehabilitation services as defined in the NHSE Long Term Plan.

Improvements in infrastructure

1. Ensure teams have access to high quality, standardised continuous data collection tools to monitor patient outcomes and drive effective change.
2. Ensure teams have high quality IT systems and digital connectivity to enable remote monitoring, patient self-management, incorporate machine learning/AI into patient care pathways, across all healthcare sectors.
3. Ensure teams have dedicated administrative support for hospital and community based services to co-ordinate care and facilitate strong lines of communication between healthcare staff and patients.

High quality respiratory care cannot be delivered without appropriate staffing.

High quality respiratory care cannot be delivered without appropriate staffing.

Next steps

This report sets out key information about the respiratory workforce. It outlines the current shortfalls, and highlights what is required to build a sustainable, highly trained, skilled workforce that can deliver high quality evidence-based integrated care to patients into the future.

It demonstrates how the respiratory workforce is at the forefront of innovative ways of working which is key to ensuring that the changing needs of patient populations can be met.

The British Thoracic Society will continue to work actively with its members, in partnership with other organisations, and with colleagues in the NHS and Departments of Health across the 4 nations to ensure that we achieve a respiratory workforce to meet the challenges of the future, and to support our vision of Better Lung Health for All.

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Dr Jonathan Rodrigues
Ms Ema Swingwood

The Association of Chartered Physiotherapists in Respiratory Care
The Association for Respiratory Technology and Physiology
The Chartered Society of Physiotherapy
The British Society for Thoracic Imaging

Useful links

British Thoracic Society **www.brit-thoracic.org.uk**
Respiratory Futures **www.respiratoryfutures.org.uk**
Primary Care Respiratory Society **www.pcrs-uk.org**
The Taskforce for Lung Health **www.blf.org.uk/taskforce/plan**
The Association of Chartered Physiotherapists in Respiratory Care **www.acprc.org.uk**
The Association for Respiratory Technology and Physiology **www.artp.org.uk**
The Association of Respiratory Nurse Specialists **www.arns.co.uk**
The Respiratory Advanced Clinical Practitioner Network **www.respiratoryacpnetwork.co.uk**
The Chartered Society of Physiotherapy **www.csp.org.uk**
The British Society for Thoracic Imaging **www.bsti.org.uk**
The UK Clinical Pharmacy Association Respiratory Group **www.ukclinicalpharmacy.org/groups/respiratory**
The Royal College of Speech and Language Therapists **www.rcslt.org**
Getting it Right First Time **www.gettingitrightfirsttime.co.uk**
NHS Specialised Commissioning Respiratory **england.nhs.uk/commissioning/spec-services/npc-crg/group-a/a01**

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> I remain constantly awestruck by the way the respiratory community innovates, shares experiences and learns together, positively impacting the quality of patient care.

Professor Jon Bennett
BTS Chair 2019-2021

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