



Medical staffing in England: a defining moment for doctors and patients



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Foreword

We shouldn't be falsely reassured by images of the healthcare service just managing, barely coping – but still succeeding by the skin of its teeth. If we are, we risk letting it deteriorate to the point where only the desperate will use it and will find it grossly inadequate when they do (The Secret Doctor).

In this report, the BMA illustrates the severity of medical shortages in England, clarifies potential routes out of our predicament and demonstrates the vital roles of the doctor. We urge policy and decision makers to act upon the analysis and proposals that follow. The Health and Care Bill, a new long-term national workforce strategy and the 2021 Spending Review must become vehicles for much needed change across our healthcare services.

As we stand on the precipice of a new defining moment for the services upon which our nation relies, there is hope for a better, healthier and more prosperous future. If we act decisively now, we can continue to manage and improve the population's health for decades to come. If we fail to deliver, we will leave growing numbers of citizens vulnerable to prolonged suffering and without the care they desperately need.

We speak on behalf of all medical professionals working in England today when we say that there are categorically not enough doctors.

It isn't just in our personal day jobs that we see the impact of medical shortages. We hear of them from countless colleagues, peers and BMA members in all sectors of healthcare. Some might view this as a temporary situation brought about by the worldwide pandemic. It is not. Doctors were suffering from overworking and lack of respite for many years before COVID-19 arrived. When asked about their working conditions, the answer remains invariably the same: going to work is an **ordeal**. The arrival of COVID-19 compounded the situation further.

We're working too hard, we're burning out and we're terrified of making mistakes, missing things, accidentally harming our patients or losing our livelihoods. We simply want to be enabled to do our best for them, but resources do not match our population size, changing demographics or projected growth in patient need.

This situation is unsustainable. More and more of us are suffering moral injury because we only have time to do the minimum for the patients we see. We do not get to provide the standard of care we were trained to deliver because, as this report clearly demonstrates, there are simply not enough of us. On top of that, there are not enough nurses or other clinical and non-clinical staff to manage workload either. Moral injury leads to demotivation and affects both emotional and physical wellbeing of staff.

We've been told repeatedly that our health and care services "will get whatever they need"¹ over the past 16 months. We can't wait any longer. The time for Government action is **now**. Years of pay erosion² have left us feeling undervalued and underappreciated. A decade without serious and transparent regional and national workforce planning has left the medical workforce in a perilous position. Under-resourcing has been negatively impacting staff and citizens for too long.

The backlog of care is growing, including long emergency department waiting times, delayed access to general practice appointments through no fault of GPs, and lengthy and growing waiting lists. These have swelled due to the pandemic, but seismic cracks existed well before COVID-19 arrived. Winter pressures were becoming more intense with each passing year. Now



they are even starting to occur in the midst of summer. While the pandemic has temporarily increased staff numbers, sadly this is likely to be no more than a short-lived phenomenon without lasting recruitment and retention interventions. Patient outcomes lag behind comparable economies across the world³. There is no room for further delays or indecision.

Doctors increasingly tell us they are reaching or exceeding their capacity to cope with the intensity of their current workload. They are suffering, both mentally and physically. Many are seriously considering retiring early, reducing their hours, seeking better terms and conditions abroad or finding a new profession altogether. It does not need to be this way.

For the sake of our citizens, and people all around the globe facing shortages like ours, we must train more doctors. That must start now.



A handwritten signature in black ink that reads "L. Patel." with a period at the end.

Dr Latifa Patel

Acting BMA representative body chair
Respiratory paediatrics registrar (ST7)



A handwritten signature in black ink, appearing as a stylized, cursive name.

Dr David Wrigley

BMA UK Council deputy chair
General practitioner



Statement from the BMA Patient Liaison Group

The Government must invest in healthcare services now to protect our futures

The Patient Liaison Group are an independent group of patients and carers advising the BMA on patient and public perspectives. Based on what we see, hear and experience we fully support the BMA in calling for better working conditions for our doctors as a human rights issue, as a workforce retention issue, and for better, safer healthcare services for patients now and into the future. We believe patients and doctors should unite in driving for positive, lasting change for our National Health Service.

We hope this report will help patients and the public understand the current and future demands on healthcare services. It's absolutely **not** the public's fault that systems and people working in them are under this pressure. We know that patient experiences of accessing services and waiting for care have had – and continue to have – very serious, sometimes tragic, consequences. We also know that government messaging throughout the pandemic has been very mixed and, frankly, difficult to understand at times. This report is not intended to discourage people from using healthcare services. Even though services are busy, people must continue to seek treatment and checks so care can be managed better.

The healthcare system and its workforce were under pressure before COVID-19 arrived, but it is now under immense strain. Doctors and other NHS staff are having to deal with rising infection rates and hospitalisations whilst simultaneously trying to get through the backlog of care, which built up while they focussed on treating patients who were ill with COVID-19.

We know some patients have been too scared to access help, whilst others have not wanted to add additional burden to overstretched services or take away staff from someone else in greater need. As we rightly come forward seeking the help we need, more and more doctors and other healthcare staff have been put in the position of having to tell us they simply do not have sufficient resources to meet these needs.

As citizens, both patients and doctors, we deserve better than this. This is a human rights issue for all of us. Poor working conditions are inhumane for doctors and other staff, and they put patient safety at risk.

It does not need to be this way though.

One of the major promises upon which this Government was elected was to not only protect the NHS but to help it to thrive by funding it well. Those who voted were clear that the NHS was a top priority for them as individuals and citizens of England. Since the pandemic arrived, we have been told more than once that "the NHS will get whatever it needs". We want to work together to make sure the NHS is resourced so doctors can deliver, and patients can receive, the services and care everybody needs.

Let's fight for our services together.



Executive summary

What we are calling for

- Primary legislation mandating regular healthcare workforce assessments in the Health and Care Bill.
- Increased Treasury investment in the medical workforce, including:
 1. sufficient medical school, foundation programme and specialty training places
 2. expansion of teaching spaces and student clinical placement options
 3. rapid expansion of the medical educator and researcher, public health consultant and specialist occupational physician workforce
 4. a relaxation of punitive pension taxation rules, so doctors are not forced to consider early retirement, and introduction of flexible working options for all staff and
 5. doctor retention initiatives across all grades of doctor as set out in our *Rest, Restore, Recover*⁴ (2021) and *Consultant workforce shortages and solutions: Now and in the future*⁵ (2020) reports in more detail.

Why we are calling for it

- Since the 2012 Health and Social Care Act, there has been inadequate workforce planning, fuelled by inadequate regional and national workforce data, and a lack of accountability for it at Government level.
- We are not training enough doctors, despite record numbers of people applying (latest figures show a 21% increase on the previous year). This means the NHS is ill-equipped to tackle the backlog of care, is not prepared for future public health crises and cannot meet patient need either now or in the future.
- When comparing England with other EU nations within the OECD, which have an average of 3.7 doctors per 1,000 people, the medical workforce in England is currently short of around **49,000** FTE (full-time equivalent) doctors. Without significant intervention to the current rate of growth, we estimate the future medical workforce shortage to be between **26,889** and **83,779** FTE doctors by 2043.
- Each FTE doctor in the English NHS is doing an average of 1.3 FTE roles at the present time – **one to two more hours per week than the 48-hour per week average cap in the Working Time Regulations.**
- The NHS faces a huge backlog of care post-pandemic. We estimate there were 3.37 million fewer elective procedures and 21.4 million fewer outpatient attendances between April 2020 and March 2021.
- On top of this, the population is expected to grow by around 9% over the next 25 years – to over 61,500,000. At least one in four adults will be aged 65 or over, and the number of people aged 85 years or over will have nearly doubled to three million by 2043.
- Staff retention is poor and is set to worsen without intervention – this is largely caused by the vicious cycle of medical workforce shortages, overworking existing staff, years of demoralising pay erosion and punitive pension taxation rules.
- We have 1,307 fewer qualified FTE GPs now than in September 2015, and while the number of secondary care staff has grown this growth has not kept pace with demand.
- Shortages of specialist occupational physicians and public health doctors are severely impacting efforts to keep the population healthy, while the shortage of medical academics



means training the next generation has become even harder. In the last 10 years, the senior clinical academic workforce reduced by 27% while the number of medical students grew by more than 25%.

- Not a single region in the country meets the current OECD EU country average of 3.7 doctors per 1,000 people.
- The medical workforce itself is ageing, meaning we risk losing around **16,818** secondary and **8,676** primary care doctors, a total of up to **25,494**, in the next 10 years due to natural retirement. With one in five doctors telling us they will leave their career in the NHS altogether post-pandemic, this figure may be as high as **31,820 doctors**.
- Our health services carry a significant number of vacancies. But even if all currently known vacant medical posts were filled tomorrow, we would still need **42,528** more FTE doctors and doctors in training to meet the OECD EU country average of 3.7 doctors per 1,000 people in England.
- International medical graduates have always been and will remain a key part of our medical workforce. Ethical recruitment of doctors from overseas can enable us to partially address shortfalls in homegrown doctors, critical for the delivery of safe patient care. However, international recruitment must not come at the expense of developing countries, so a sustainable long-term workforce strategy is needed.
- While there is increasing multidisciplinary working within healthcare services, and non-medical roles have expanded in recent years, the doctor's unique skillset is essential to the delivery, assurance and improvement of patient care.



Introduction

A long-term workforce growth strategy, backed with significant new investment, is needed to ensure there are enough doctors in the NHS to cope with current and future patient demand.

Mounting evidence shows that the present medical workload is both unsafe for patients and physically and mentally unsustainable for doctors. Chronic staffing shortages are an inherent risk to the healthcare workforce, patients and the public. Working amid persistent shortages fosters an environment of chronic stress, normalising excessive workloads⁶ by continuously requiring overstretched staff to fill gaps that should not exist.⁷ This has a devastating physical and emotional toll. When the extent of shortages makes it impossible for staff to provide the quality of patient care they would expect, this risks mistakes and moral injury.⁸

Stubbornly high NHS staff vacancies existed even before the COVID-19 pandemic (88,347 FTE staff) across staff groups.⁹ Nursing staff group vacancies, for example, accounted for 41% of all vacancies (36,083 FTE nurses). Shortfalls exist largely as a result of a retention crisis driven by burnout and exhaustion, insufficient funding to train enough staff and poor workforce planning, made worse by the pressures of delivering care during the pandemic, and other factors such as punitive pension taxation rules.

Vacancy data, which in itself is unreliable, also only tells one part of the story. At a time of increasing flexible working – which, in turn, impacts the number of available medical hours – a growing number of doctors of all ages are choosing to alter their working patterns and transition to more flexible hours. Our survey of public health doctors at the end of 2020, for example, found that 44% of respondents said they were likely to reduce their hours following the pandemic.¹⁰ We have previously set out clear policy recommendations to improve retention of staff and staff hours in our recent *Rest, Recover and Restore*¹¹ and *Consultant workforce shortages and solutions: Now and in the future*¹² reports.

To understand the full extent of the medical workforce deficit, however, inadequate growth and vacancies must be viewed in the context of increasing patient need. Workforce growth has been lagging far behind increases in NHS activity and patient need for too long. With the gap between supply and demand widening every year, investment in the workforce can no longer be justifiably put off by Government.

This report focuses on what this gap looks like when it comes to the medical workforce and potential solutions to narrowing it. However, clearly our health services do not only need more doctors; we also need other clinical professionals, including nurses and MAPs (medical associate professions), to deliver high quality care to the population and manage growing patient need. As those responsible for leading the multi-disciplinary team and overall patient care, this is not an either/or situation. We need more doctors, as much as we need other staff.

Overcoming the safe staffing challenge

To date, medical staffing numbers and workforce growth have not delivered a proportionate response to rising patient need. The result is that both staff and patient safety is at **severe risk**.

When planning for future workforce growth is not done proportionate to population healthcare demand, this costs more in the longer term due to reduced access, growing waiting times and an expanding backlog of care. If the current trend of workforce growth continues, the gap between doctor supply and patient need will only grow wider. Unsafe levels of staffing lead to patient frustration and resentment towards the health service, and a vicious cycle of declining patient outcomes, staff wellbeing problems and workforce retention issues. Under-resourced health services reduce the overall health of the population, the economic output of the nation and risk losing our workforce to other countries offering better terms and conditions.

To rectify this, the BMA is calling for:



- Primary staffing legislation to be included in the Health and Care Bill:¹³
 - placing a duty on the Secretary of State for Health and Social Care to ensure regular, detailed and publicly available health and care service workforce assessments, including modelling of current and future workforce supply and patient need. This should factor in characteristics such as gender composition, age, disability, ethnicity and requirements to offer flexible working options to all staff¹⁴
 - this will ensure Government/Parliament and importantly HM Treasury are able to plan for and set aside the resources needed for a health and care workforce that meets current and future patient need.
- Increased Treasury investment in the medical workforce to include:
 - sufficient medical school, foundation programme and specialty training places
 - commensurate expansion of the medical educator and researcher, public health consultant and specialist occupational health physician workforce
 - a relaxation of punitive pension taxation rules so older doctors can remain in work flexibly and
 - resourced retention initiatives across all grades of doctor.
- Alternative short and medium-term supply options, eg other supply routes, “retire and return” arrangements,¹⁵ flexible return to practise of former NHS and public health doctors, medical educators and researchers and specialist occupational health physicians
 - This will be important alongside boosting UK-trained staff numbers to required levels
 - however, we have ethical and moral obligations to other countries and individual doctors when recruiting from overseas (see page 39).



Context

Changing population demographics will put increasing demand on the health service

The ONS (Office for National Statistics) expect the population in England to grow by around 9% over the next 25 years. Improvements to life expectancy also mean that more people are reaching much older ages. In 1950, average life expectancy was 66 for males and 71 for females;¹⁶ provisional estimates show that in 2020 it was 78.7 for males and 82.7 years for females.¹⁷ By 2100, it is expected that as many people will be turning 80 as are being born.

By 2043, at least one in four adults will be aged 65 or over, and the number of people aged 85 years or over will have nearly doubled (from 1.6 million in mid-2018 to 3 million).¹⁸ This directly equates to growing demand for the health system which is already severely stretched. Ensuring the NHS can properly and effectively handle the needs of its ageing population will be one of the greatest challenges our society has ever faced. Our citizens deserve good quality care, but this cannot be delivered without commensurate growth of the medical workforce to provide it.

By 2043, at least one in four adults will be aged 65 or over

The number of people aged 85 years or over will have nearly doubled (from 1.6 million in mid-2018 to 3 million)^a

a *National population projections: 2018-based, ONS (2019)*

As mortality decreases due to medical advances, morbidity and the burden of disease also increase.¹⁹ People no longer die from medical conditions but instead live with them for an increasing length of time. This comes with a cost; evidence indicates that, as people pass the age of 65, the average annual cost of their individual healthcare starts to rapidly increase.²⁰ The OBR (Office for Budget Responsibility) have shown that the representative profile for age-related health spending is low during people's working life, before increasing substantially after the age of 65.²¹ This highlights the vital importance of health promotion policies and activity amongst elder citizens, which are known to increase the number of years of active and healthy life.

Growing pressures and waiting lists emphasise the importance of ensuring appropriate staffing levels to preserve service delivery

The backlog of care, which pre-dated the pandemic, has grown immensely because of additional COVID-19 care pressures. In secondary care alone, the BMA estimates that, between April 2020 and March 2021, there were 3.37 million fewer elective procedures and 21.4 million fewer outpatient attendances than would have occurred in non-pandemic times.²²



Similarly, recent GP practice appointment trends – just one measure of general practice activity – indicate a significant drop in demand from March 2020 to August 2020 likely as a result of safety directives from NHS England and Improvement and public fear of COVID-19 infection. By April 2021, the total practice appointment count had increased by over seven million compared to the same month in the previous year.²³ It will be some time before we know the full extent of unmet patient need, both physical and mental, within the community.

Alongside the enormous backlog²⁴ in elective care, the pandemic has also seen a drastic increase in the number of patients waiting for care – with a record high 5.12 million patients now on an NHS waiting list in England alone.²⁵

As of April 2021, 385,490 patients have been waiting more than a year for treatment. While an important improvement on previous months, this is still a 368-fold increase on the 1,047 patients waiting for more than one year prior to the pandemic in April 2019.²⁶

The extent of the waiting list and the backlog of care poses an immense challenge for NHS services and staff but, critically, do not exist in a vacuum. Pressure on wider, non-elective NHS services also continues to grow – not least in A&E departments, where admissions and attendances now exceed pre-pandemic levels and both four and 12-hour waits are increasing.²⁷ Performance against key cancer targets also continues to lag behind expected levels, with national screening services in particular having struggled particularly badly.²⁸

Tackling these pressures, as well as waiting lists and the backlog of care, hinges on the NHS workforce. Ultimately, service delivery and the recovery of those services will fundamentally suffer without a concerted effort to improve the recruitment and retention of staff.

The personal impact of chronic staffing shortages should be a concern to everyone

One of the direct results of shortages is rising levels of burnout amongst staff, which the World Health Organisation defines as:

“A syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions: feelings of energy depletion or exhaustion; increased mental distance from one’s job, or feelings of negativism or cynicism related to one’s job; and reduced professional efficacy.”²⁹

There is increasing evidence suggesting levels of burnout among NHS staff are unacceptably high and growing at alarming rates. **One in two** doctors that responded to our April 2021 COVID-19 tracker survey³⁰ said they were suffering from depression, anxiety, stress, burnout, emotional distress or another mental health condition, while 92% of trusts told NHS Providers that they had serious concerns about staff wellbeing, stress and burnout following the pandemic.³¹

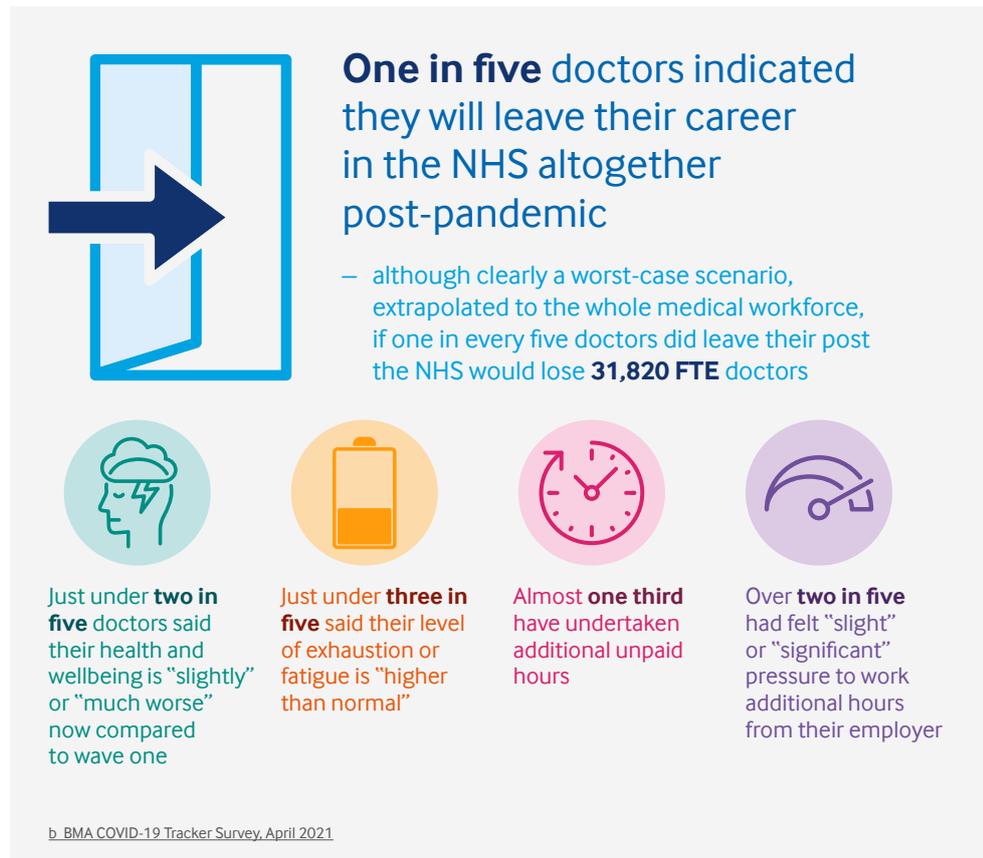
The NHS Staff Survey has also found that the proportion of staff suffering from stress is on an upward trend. The number of respondents who have reported feeling unwell as a result of work-related stress in the last 12 months has risen from around 37% in 2016 to 44% in March 2021.³² The impact and scale of the problem is also starkly illustrated in the Health and Social Care Committee’s recent report following its inquiry into workforce burnout and resilience.³³



Retaining doctors is an ongoing challenge but essential to any long-term growth strategy

Retaining doctors currently working in the NHS, public health, academic and occupational medicine is of the utmost importance in the short, medium and long-term.

Doctors and other staff³⁴ have suffered enormously over the past 15 months, with the burden of providing care during a pandemic severely compounding the existing workload and wellbeing crises. Consequently, a growing number say they are considering leaving the NHS and public health due to the pressure and trauma they have endured. The April 2021 BMA Covid-19 tracker survey results³⁵ (4,230 overall respondents) highlighted that:



- **One in five** doctors indicated they will leave their career in the NHS altogether post-pandemic
- Although clearly a worst-case scenario, extrapolated to the whole medical workforce, if one in every five doctors did leave their post the NHS would lose **31,820 FTE doctors**.
- Just under **two in five** doctors said their health and wellbeing is "slightly" or "much worse" now compared to wave one
- Just under **three in five** said their level of exhaustion or fatigue is "higher than normal"
- Over **two in five** said non-COVID patient demand "is now considerably higher than pre-pandemic"
- Almost **one third** have undertaken additional unpaid hours
- Over **two in five** had felt "slight" or "significant" pressure to work additional hours from their employer.
- Similarly, the BMA's Public Health Medicine Pandemic Experience Survey found that 27% of respondents reported a low or very low desire to continue working in public health.³⁶



Learning from past mistakes will ensure the NHS plans better for its short, medium and long-term workforce supply needs

Considerable damage was done to national and regional workforce planning in England after the 2012 Health and Social Care Act became law. The NHS reorganisation that followed resulted in the closure of organisations that had historic expertise and knowledge and fulfilled essential workforce planning roles. This included the CfWI (Centre for Workforce Intelligence),³⁷ regional Strategic Health Authorities³⁸ and deaneries.³⁹

Those organisations were subsequently replaced by what is now known as NHS Digital (initially called the Health and Social Care Information Centre), HEE (Health Education England) and LETBs (Local Education and Training Boards).⁴⁰ A lack of detail in the duties placed upon them in the Health and Social Care Act 2012, however, led to disjointed and incomplete regional and national workforce planning. The same mistake must be avoided in the Health and Care Bill, which is seeking to abolish LETBs.

To this day, no individual or lead organisation is legally accountable or responsible for future NHS staffing projections and planning. Nevertheless, this is the mechanism needed for Government/Parliament to know whether they have enough staff now, and in the future, and to ensure sufficient funding is allocated to the NHS workforce.

Having had to operate through the best part of a decade of financial austerity measures, limited spending and service rationing, the healthcare workforce was always likely to find itself in a precarious position by the beginning of this decade given England's fiscal direction in the 2010s. It is much better value for taxpayer money to invest in pre-emptive care interventions rather than put investment off until it becomes more costly to rectify.

The public support staffing increases and higher spending on the NHS

[Polling by Ipsos Mori](#) in April 2021 found that the British public's top priority for the NHS is improving waiting times (half said this is a priority) followed by increasing the number of staff working in the NHS (43%).⁴¹ Supporting the wellbeing of NHS staff was identified as a priority by 38% of respondents.

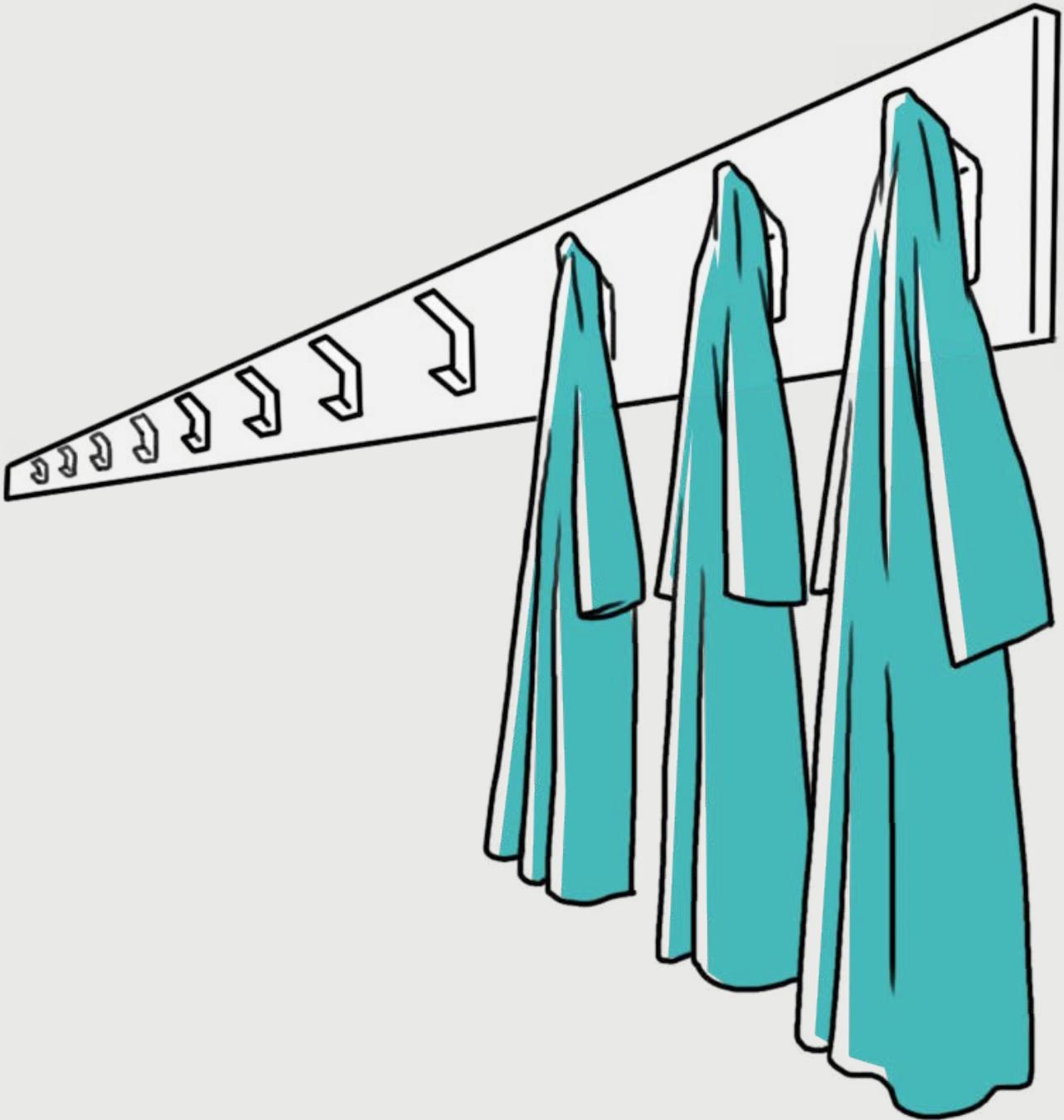
According to the survey results, the public recognise that the pandemic has had an impact on the NHS's ability to deliver services, with 85% saying that waiting times are now longer than before the pandemic. Yet, six in 10 say that current waiting times are unacceptable (61%), which highlights the challenge ahead for government and NHS leaders and crucially frontline staff who are the face of service delivery.

Public opinion prior to the pandemic tracked similarly. Results from the [British Social Attitudes Survey \(2019\)](#)⁴² showed that:

- Overall public satisfaction with the NHS was just 60%
- The top reason people gave for being **satisfied** with the NHS overall was the quality of NHS care (68%)
- The main reason people gave for being **dissatisfied** with the NHS overall was staff shortages (62%), followed by waiting times for GP and hospital appointments (57%) and a view that the government doesn't spend enough money on the NHS (49%)
- More people thought that the general standard of care provided by the NHS would get worse (42%) rather than better (29%) over the next five years – and this was before we knew a pandemic was around the corner, which has significantly impacted on healthcare services' future ability to deliver timely care.



Chapter 1 – Medical workforce growth in England is 25 years behind comparator nations



Chapter 1 – Medical workforce growth in England is 25 years behind comparator nations

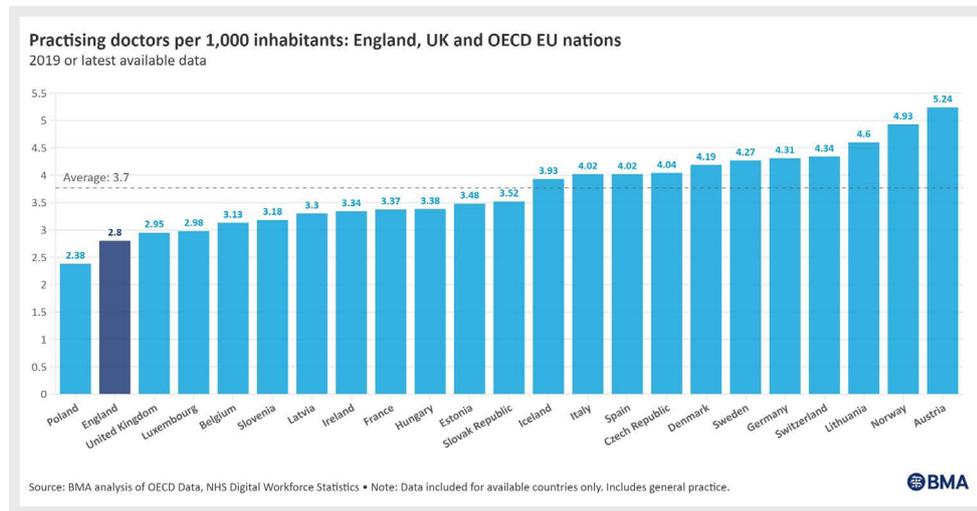
We have one full-time partner and another partner about to retire. I have worked 13.5-hour days just to get immediate clinical work done. I did not feel entirely safe to make decisions by the end of the day. There is much GP non-clinical work that is left undone.
GP

Main points:

- According to the medical workforce’s current trajectory of growth, it will take until 2046 before the NHS has the number of practising doctors per 1,000 people required to match today’s OECD EU nations’ average
- We are therefore **25 years behind** where we should be to sit on par with comparator nations
- Meeting the OECD EU nations’ average of 3.7 doctors per 1,000 people would require scaling up our medical workforce by an additional **31%**
- Using this OECD EU average, and including known medical vacancies, we estimate a shortage of around **49,162 FTE** doctors and doctors in training in England
- These shortages mean that, on average, each FTE doctor in the NHS currently does **1.3 roles**
- Mounting evidence suggests that when doctors are working under conditions of chronic stress, and or suffering with fatigue and burnout, mistakes are more likely to happen and moral injury/distress occurs.

The current estimated medical workforce deficit is alarming

Figure 1 – Doctors per 1,000 inhabitants



While the medical workforce is growing, it simply isn’t growing fast enough. This is evident in England’s doctor to population ratio, which continues to lag behind that of comparator nations. There are currently 2.8 doctors per 1,000 people in England,⁴³ while the average in OECD (Organisation for Economic Co-operation and Development) EU (European Union) countries is 3.7.⁴⁴ Other than Poland, this gives England a lower doctor to population ratio than any other OECD EU nation.

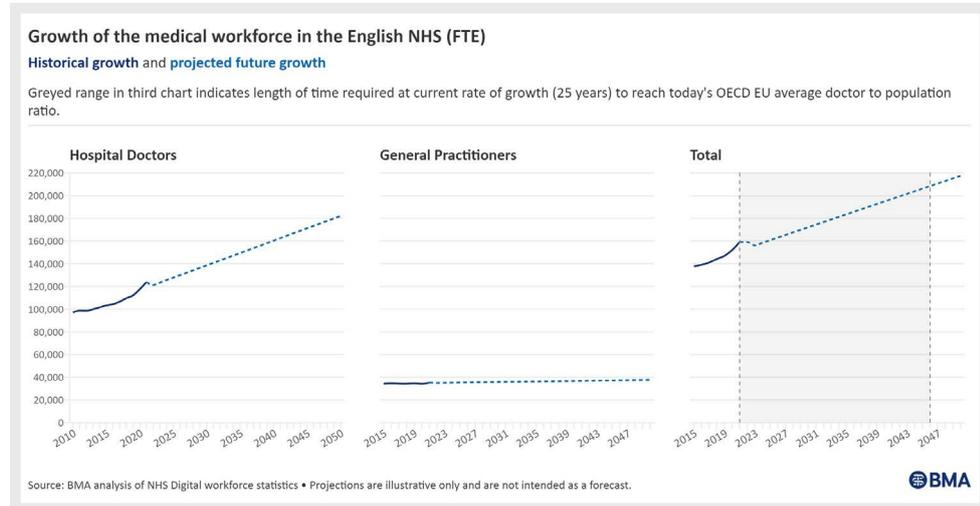
In total, the NHS currently employs 159,100 FTE doctors: this includes all grades of secondary care doctors (123,827 FTE) and General Practitioners (49,162 FTE).⁴⁵ Projecting the growth trend of the medical workforce since 2010 into 2050 indicates that without major changes in long-term workforce strategy and planning it would take until 2046 before the NHS has the



number of practising doctors per 1,000 people that would be required *today* to match the OECD EU nation average.

That puts us **25 years** behind.

Figure 2 – Growth trend of the medical workforce



To meet today's OECD EU nation average, we would need to scale up our medical workforce by an additional **31%** of today's total – bringing the total FTE count up to 208,262. On this basis, we estimate the current size of the current medical workforce deficit to be around **49,162 FTE doctors** and doctors in training. This is the additional number of doctors required *today* to put England on an equivalent standing with comparator OECD EU countries.

This includes the 6,634 known medical vacancies; if all of these were filled tomorrow, the deficit would be reduced to 42,528.

It will take **until 2046** before the NHS has the number of practicing doctors **per 1000 people** required to match today's OECD EU nations' average. We are therefore **25 years behind** where we should be to sit on par with comparator nations.^d

^d BMA analysis of OECD data and NHS Digital General Practice and Secondary Care Workforce Statistics

Time and safety implications

Staffing shortages put pressure on doctors to work longer hours, forcing them to take on overtime and extra workload to smooth over gaps and keep services running. If we assume a current medical workforce deficit of 49,162 FTE doctors – the difference between the current size of the medical workforce and where it should be to hit the OECD EU average – then each FTE doctor in the English NHS is at the present time doing an average of 1.3 FTE roles.⁴⁶ This means each FTE doctor is doing an extra 11 to 12 unpaid hours on average on top of their contracted time⁴⁷ – and many will be doing more. Evidence supplied to the Health and Social Care Committee's inquiry⁴⁸ into workforce burnout and resilience in the NHS and social care



supports this. Chris Hopson, NHS Providers' chief executive, told the committee in January 2021 that:

*'Discretionary effort is the rocket fuel that powers the NHS... if staff worked to contract and worked to rule, we simply would not be able to provide anything like the quality of care that we need to. Part of the problem is that we are relying relentlessly on the good will of our staff.'*⁴⁹

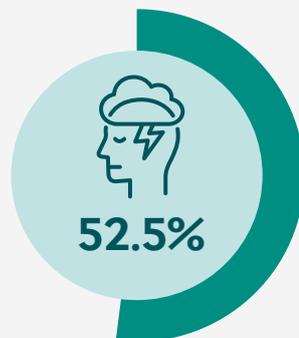
The Working Time Regulations⁵⁰ set a limit of an average of 48 working hours per week⁵¹. This prevents employers from making staff work excessively long hours to avoid health and safety implications for the employee and their patients. At the present time, however, each FTE doctor is doing **one to two more hours per week more than the 48-hour per week average cap**. The peak in staff absences during the first and second waves of the COVID-19 pandemic will also have increased the amount of overtime required to cover gaps.

Overnight, we have one SAS doctor and two FY2 staff for a whole emergency department. This leaves 30+ patients for one senior doctor. Once in a patient rescue situation, I have to neglect supervision of juniors, nurses and patient flow. This is the unsafe part.
SAS doctor

Doctors work long shifts already, and the implicit requirement for staff to patch over systemic gaps with demonstrably unsafe levels of unpaid overtime has tangible safety implications – for both staff and patients. There is a large and mounting evidence base suggesting that when doctors are working under conditions of chronic stress – potentially suffering with varying degrees of physical and emotional exhaustion, fatigue, and other symptoms of burnout – mistakes are much more likely to happen.

A study by Stanford University School of Medicine found that doctors who reported at least one major symptom of burnout were more than twice as likely to have reported a major medical error within the previous three months.⁵² With the latest NHS staff survey confirming 57% of doctors go to work despite not feeling well enough to perform their duties, and 77% report experiencing unrealistic time pressures, the level of risk both to staff and patients within the NHS is high.⁵³ It is therefore sadly not surprising that the number of new clinical negligence claims and reported incidents in the NHS is going up: from 10,684 in 2018/19 to 11,682 in 2019/20 (an increase of 9.3%).⁵⁴

In addition to an increased risk of clinical errors, workforce shortages are also linked to the growing prevalence of moral distress or injury. Moral distress⁵⁵ occurs where institutional and resource constraints create a sense of unease among doctors from being conflicted about the quality of care they can give. Moral injury⁵⁶ can arise where sustained moral distress leads to impaired function or longer-term psychological harm. The impact on doctors' health from moral distress and moral injury can be significant; it is linked to severe mental health conditions such as depression and PTSD.⁵⁷ In a recent survey, the BMA found that nearly eight in 10 doctors felt that the definition of moral distress resonated with their experience at work, while just over half of respondents felt that moral injury resonated with their experience at work.⁵⁸ When asked what factors contribute to moral distress, 'insufficient staff to suitably treat all patients' was the most common response (52.5%).



Shortages lead to burnout and moral injury. When asked what factors contribute to moral distress, a recent BMA survey found 'insufficient staff to suitably treat all patients' was the most common response (52.5%)^f

^f BMA Moral Distress and Moral Injury Survey, June 2021



Chapter 2 – Future shortage estimates



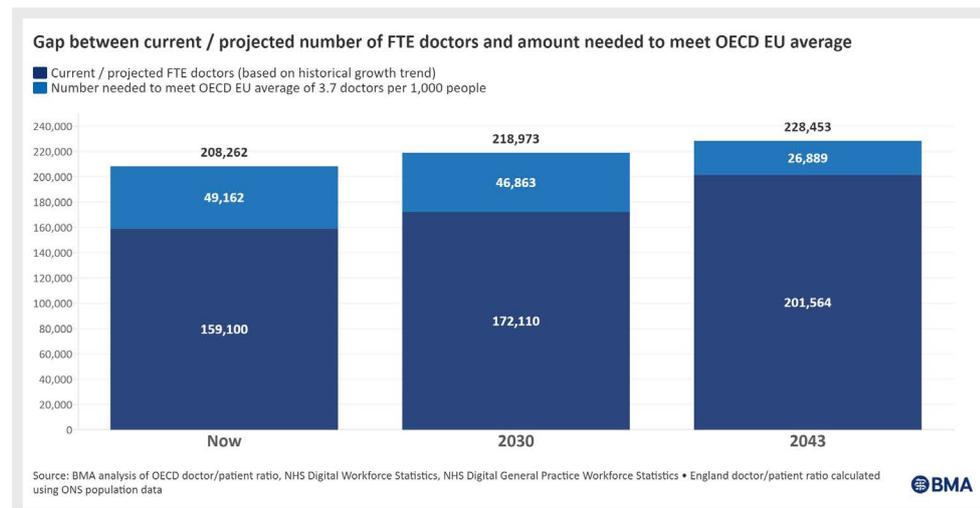
Chapter 2 – Future shortage estimates

Main points:

- As set out in the previous chapter when comparing England with the OECD EU comparator nation average of 3.7 doctors per 1,000 people, we estimate that the medical workforce in England is currently short of **49,162** doctors.
- Without significant intervention to the rate of growth, **we estimate the future medical workforce shortage in 2043 to be between 26,889 (Scenario One) and 83,779 (Scenario Two):**
 - **Scenario One:** To maintain equivalence with the current OECD EU average into the future we would need 228,453 FTE doctors by 2043. At its rate of growth since 2010, without significant intervention, the medical workforce in England will be 201,564 – **26,889** short of this figure
 - **Scenario Two:** Projecting workforce growth according to estimated growth in demand results in a requirement of 285,343 FTE doctors by 2043. At its current rate of growth, the medical workforce in England will be 201,564 – a shortfall of **83,779**.
- As an illustrative example, the lower end of this shortage range, or the difference between our doctor to population ratio and that of comparator countries, could be filled by 2030 through swift expansion of medical school places – to around 20,471 per annum for three consecutive years (2022-25)
- The cost of these additional 34,788 medical school places alone, ie 11,596 extra places each year, would be around **£8 billion** overall or around **£2.7 billion** per year across three consecutive years.

Scenario 1: Doctors required to meet average OECD EU average doctor to population ratio

Figure 3 – Doctors required to meet OECD EU average



According to ONS projections, the population in England is set to reach 61,744,098 in 2043.⁵⁹ This is an increase of 9%. By this point, at least one in four adults will be aged 65 or over.

To maintain equivalence with the *current* OECD EU nation average of 3.7 doctors per 1,000 population, the NHS in England would need to employ 228,453 FTE practising doctors working across primary and secondary care by 2043. If the current rate of growth in the number of



doctors is not significantly altered with major changes to long-term workforce strategy and planning, by 2043 England will have just 201,564 doctors – a deficit of 26,889 against *today's* comparator 3.7 doctor to population ratio. This excludes attrition of existing doctors up until this point and does not account for the fact that the OECD EU average may change over this time period, so the real potential deficit by this stage is likely to be higher. This analysis, although illustrative, strongly indicates that without *significant* intervention to improve the growth rate by 2043, the medical workforce in the NHS will not cope with the compound increase in care that our ageing population will require.

As mentioned on page 13, one in five BMA members also recently indicated they are planning to leave their career after the pandemic.⁶⁰ Although a worst-case scenario, we could therefore lose as many as 31,820 FTE doctors.⁶¹ Given we cannot afford to lose a single doctor, urgent and rapid policy and financial interventions need to happen *now*. Furthermore, the aging population and the increase in patient need means we must eradicate the medical shortfall as soon as possible. On the next page, we set out a suggested medical school expansion scenario that will bridge this gap at the earliest possible opportunity.

*(Palliative care)
'Insufficient medical staff to run a 1 in 4 on call rota safely without me plugging gaps. This extra work is not in my job plan. It is not in my contract. It is unresourced. I have just had three months off with stress'*

Consultant

The illustrative shortfall figures on the previous page reflect the number of doctors required to align England's doctor to population ratio with the current average in comparator OECD EU nations. This has been used as a baseline against which to quantify England's medical workforce deficit, but this is not a fixed value. At the current growth rate, by 2043 – at which point those aged 85 and over will have nearly doubled to three million – the medical workforce in England will only be approaching the level that it should be at *today* to be proportionate with the average doctor to population ratio of comparator OECD EU countries. These figures are intended to be a bare minimum; the medical workforce figure required to adequately service increased demand will likely need to be much higher.

This is an illustrative projection, not a forecast, and it does not account for:

- retirement/early retirement of doctors
- changes to retention rate/attrition
- change to doctors' working hours, eg increases in "Less Than Full Time" working
- the impact of other clinical roles, eg expansion of the nursing workforce, MAPs (medical associate professions), ACPs, clinical pharmacists, MKS first-contact practitioners etc
- not fully known compound increases in patient need caused by the ageing population
- changes to birth rates, which are set to remain stagnate/slightly decrease
- reduction of the current 34,678 nursing vacancies⁶² as promised in the Government's 2019 manifesto⁶³
- improvements in the NHS' IT infrastructure that reduce bureaucracy, speed up processes and procedures and save staff time
- advancements in medical and administrative technology, e.g. interoperable systems, augmented intelligence, digital data-driven population health analytics etc
- changes to the design and delivery of healthcare services and care pathways.

Illustrative and fastest expansion scenario for meeting the OECD EU nation average of 3.7 doctors per 1,000 people

The best strategy for bridging the gap is through the swift expansion of medical school places. The Royal College of Physicians (2018⁶⁴ and 2021⁶⁵), the Royal College of Psychiatrists (2019)⁶⁶ and the BMA (2020)⁶⁷ have previously called for medical school places to be doubled to 15,000 per year within this decade. However, the situation is worse than we previously thought.

As a way to demonstrate the size of the task at hand, rather than allowing the medical workforce to continue struggling on with chronic shortages until 2043, when the deficit to meeting *today's* OECD EU nation average of 3.7 doctors per 1,000 people will still be 26,889 FTE doctors based on current growth rates, the Government could take advantage of record numbers of people applying (28,690) – a 21% increase on the previous year⁶⁸ – and expand medical school places to around 20,471 per annum between 2022-2025 to bridge the gap as soon as 2030.



For example, if we educated:

- the 8,395⁶⁹ FTE medical students that started in 2020/21 and assume they all graduate in 2025/26 (in reality, some will be part-time students)
- the approximately 8,875⁷⁰ that start in 2021/22 and graduate in 2026/27
- 20,471 starting in 2022/23 and graduating in 2027/28
- 20,471 starting 2023/24 and graduating in 2028/29
- 20,471 starting in 2024/25 and graduating in 2029/30

we would have approximately 78,683 FTE extra medical graduates by 2030.⁷¹

Taking into account the number of doctors likely to leave after the pandemic due to workload intensity/possible burnout, attrition is estimated to be potentially as high as 31,820 (see page 13). This gives a net increase of at least 46,863 additional FTE doctors by 2030 (see Figure 3 on page 20). The recommended expansion of medical school places over the three consecutive years between 2022/23 and 2024/25 would therefore bridge the gap to the OECD EU nation average of 3.7 doctors per 1,000 people by 2030.

Practically, expansion of medical school places will require a clear long-term strategy and investment to ensure there is enough teaching space, there are enough educators, there is enough support for students and there are enough clinical placements. This kind of expansion also requires sufficient, long-term investment at all stages of the doctor training and recruitment process. Not least, these medical graduates will also all require places on the compulsory two-year national Foundation Programme. A sizeable proportion of them will then go onto specialty training too, ie to become GPs or consultants, which means more training places, educator capacity and teaching/learning space.

The cost of the additional 34,788 medical school places alone for the expansion scenario given above, ie around 11,596 additional places each year,⁷² using the DHSC 2017 cost estimate of £230,000 per medical student,⁷³ would be at least **£8 billion** overall or around **£2.7 billion** per year across three consecutive years.

In addition to the direct cost of training doctors, expanding the medical workforce requires sufficient expansion of training and university facilities, all of which will require investment. This includes:

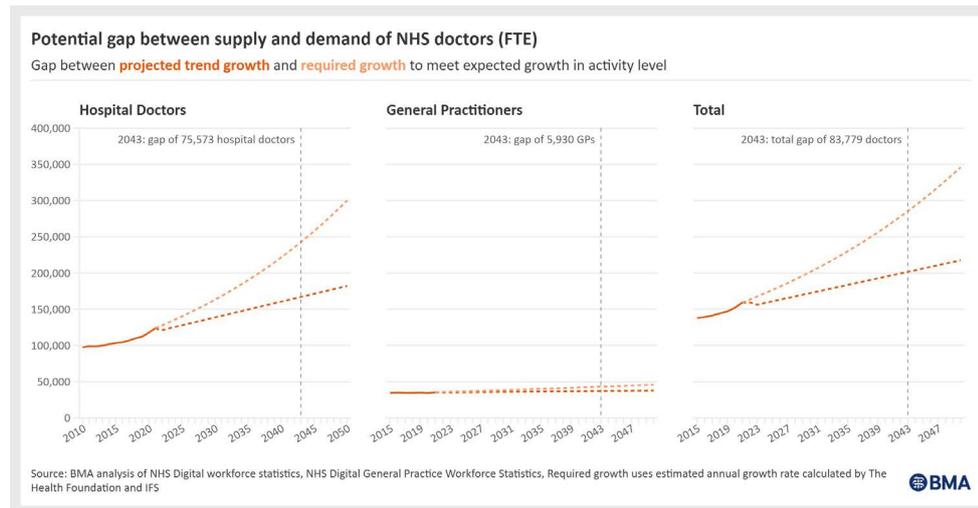
- expanding and building new lecture halls to allow for increasing cohort sizes year on year
- expanding the medical educator/clinical academic workforce
- expanding clinical placement programmes
- expanding student support services and accommodation to allow for the increase in medical students
- ensuring enough learning space exists within NHS provider sites.



Scenario 2: Accounting for future patient need

Rapid expansion of medical school places would stand us in good stead to bridge the gap between our doctor to population ratio and that of OECD EU comparator nations sooner rather than later. However, this would simply align our healthcare services with the **current** mean level of those countries – it would not account for growth in future patient need. To deliver high quality care into the future, which meets the needs of the ageing population while avoiding undue stress and burnout on the workforce, the medical workforce must grow proportionate to the growth in patient need.

Figure 4 – Potential gap between supply and demand



(FY2) 'I'm the only senior house officer for a 60-bed receiving unit out of hours. The specialty registrar is in A&E / on the wards frequently, so I'm left to clerk all patients as well as review deteriorating patients. Patients wait over 10 hours to be clerked'.

Junior doctor

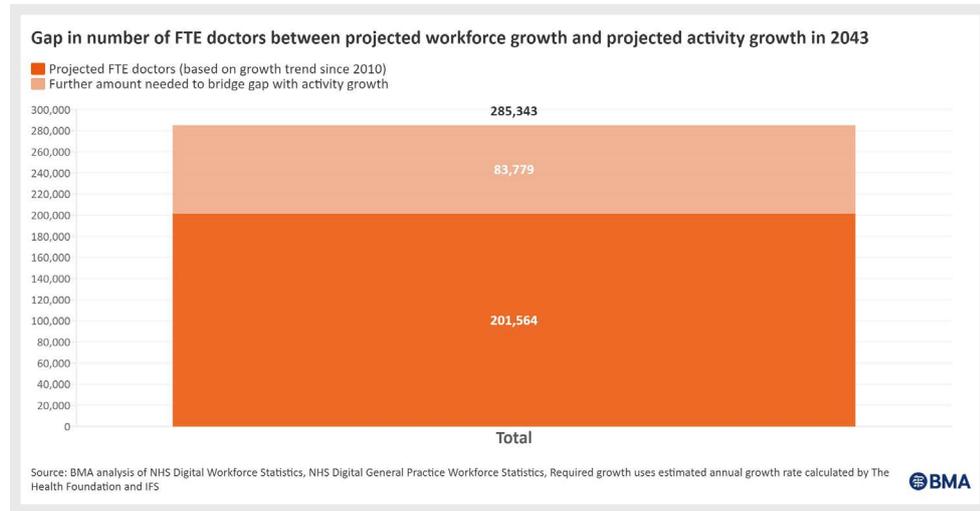
In 2018, the HF (Health Foundation) and the IFS (Institute for Fiscal Studies) produced a model of healthcare spending termed the 'modernised scenario' for the NHS until 2033/34.⁷⁴ It sets out the necessary growth requirements for a health service that 'meets rising expectations for the quality and range of care provided and in which services adopt new technological advances'.⁷⁵ This model sits in contrast to the base case 'status quo scenario' model, in which quality of care will not improve significantly and public satisfaction is unlikely to improve. Delivering the 'modernised scenario' means taking the steps needed to fund and resource the health service to allow it to function efficiently and with a workforce that is expanded accordingly. This will allow staff to deliver a high standard of care without suffering undue stress, burnout or moral injury.

Using implied changes in activity, the HF and the IFS provided estimates for the growth in the workforce needed to keep up with increases in activity. According to their calculated rise in activity growth, the medical workforce likely needed to grow by 3.1% (FTE) in hospital and community settings and 0.9% (FTE) in general practice each year until 2033/34 (for full breakdown see Appendix C on page 50).

If we assume the average annual growth rate would need to remain at a similar level for the next decade too, and extrapolate growth until then, in 2043 – at which point at least one in four adults will be over 65, and those aged 85 and over will have doubled to three million – we would need 285,343 FTE doctors for the NHS workforce to have grown in line with projected activity. Instead, without significant intervention to alter the current rate of growth, we will have 201,564 FTE doctors at this time. This leaves an estimated gap of **83,779 FTE doctors**.



Figure 5 – Potential supply and demand gap in 2043



(Emergency medicine) '8 out of 18 registrar posts unfilled. Vacancies staffed by locums, SHOs or just left empty. Our managers are trying to impose an additional evenings work on the current registrars to increase staffing levels – making it less likely they will retain the staff they already have and harder to recruit'.

Junior doctor

The FTE secondary care medical workforce has grown by an average of 2.34% per year since 2010, while the FTE primary care medical workforce has grown by an average of 0.4% per year since 2015.⁷⁶ Scaling these up to 3.1% and 0.9% respectively is not an unfeasible level of growth to achieve in order to ensure future demand can be met. However, it will require appropriate financial investment alongside the commitment, enshrined in law (see Appendix B for our case for a statutory NHS workforce assessment duty), to produce collaborative, strategic workforce planning and projections from 2021.



Chapter 3 – The medical workforce in 2021



Chapter 3 – The medical workforce in 2021

Primary care: NHS general practitioners

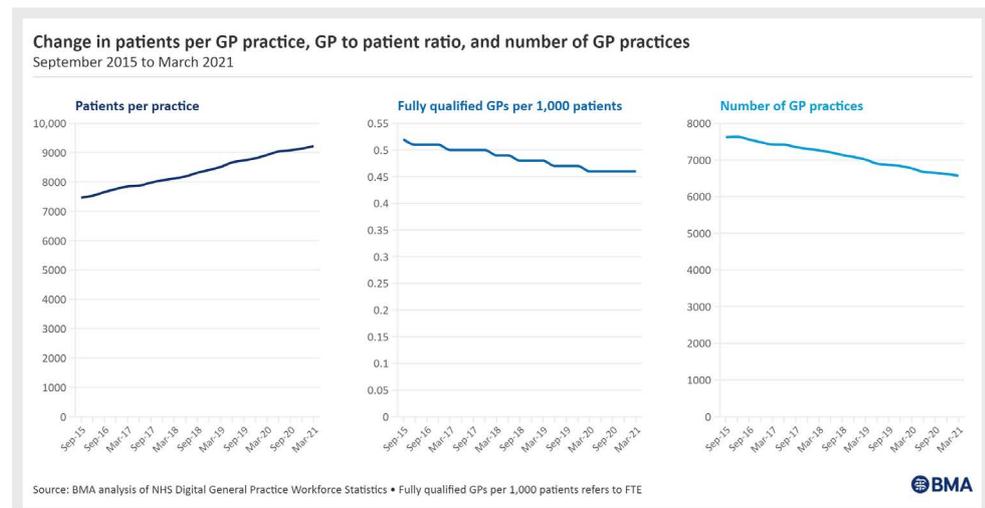
Main points:

- Compared to September 2015, there are:
 - 17,003 FTE GP partners – ↓ **4,685 (22%)**
 - 11,093 FTE salaried and sessional (locum) GPs – ↑ **3,379 (24%)**
 - 7,177 FTE GP trainees – ↑ 2,151 (43%)
- GPs in non-practice-based settings are not currently captured in official workforce statistics
 - this urgently needs to be rectified so that their activity can be understood too
- There are just **0.46 fully qualified GPs per 1,000 patients** in England – down from 0.52 in 2015
 - The number of patients per GP practice is **22% higher** than it was in 2015.

General Practice is the first port of call for most patients when accessing medical advice or treatment. As of March 2021, there are 137,290 FTE staff working in general practice settings across England⁷⁷ – an increase of 13,699 (11%) since September 2015, when the current NWRS (National Workforce Reporting System) was introduced for use by GP practices. In total, there are 102,017 FTE general practice staff who are not GPs or GPs in training – a 12,914 (15%) increase since September 2015. The remaining 35,273 are qualified FTE GPs (partners, salaried, locum and GP retainers) and GP trainees (registrars).

The number of patients per GP practice is 22% higher than it was in 2015, but the GP workforce has not expanded with this rise in patient need. As a result of this stasis, there are now just 0.46 fully qualified GPs per 1,000 patients⁷⁸ in England – down from 0.52 in 2015.

Figure 6 – Changes in General Practice: patients, GPs (FTE) and practices



Gaps in official General Practice workforce data reporting

We do not currently know how many GPs are working in non-practice-based settings. This includes NHS 111 services, GP out of hours services, urgent care centres in hospital departments and other setting where GPs are located. This situation needs to be rectified as part of regular workforce monitoring, national workforce assessment and patient demand modelling.

Trends in NHS GPs: 2009 to present

Main points:

- We have **1,307 (4.4%)** fewer fully qualified FTE GPs than we did in September 2015
- A career in general practice is increasingly popular among young doctors
- There is an urgent retention issue with GP partners
- Purely based on data trends alone, the data highlights that fully qualified GPs clearly want to better control their workload and work-life balance (this will also be the case for trainees too, however)
- There is a clear trend towards salaried and sessional GP roles and more portfolio and LTFT (less than full-time) working
 - **3:1** – we needed nearly three salaried and sessional GPs (headcount) to replace the hours lost due to a reduction in GP partner numbers and changing GP working patterns between March 2020 to March 2021.
- We will get around 3,381 additional fully qualified FTE GPs from the Government’s 2020 commitment of an additional 6,000 doctors in General Practice by 2024. This will take us up to 31,456 in total (not factoring in any existing GPs reducing their hours or leaving the profession in that time)
 - this still falls short of the CfWI’s 2014 prediction model of the worst-case scenario for the GP workforce in 2024.

‘Starting early, finishing late, no breaks, no lunch. Advising over the phone rather than seeing patients. Sending patients to A&E rather than sorting them. Referring patients and arranging tests when reviewing them might have been appropriate. Using paramedics and nurses to manage patients instead of GPs’.

GP

We have 1,307 (4.4%) fewer fully qualified FTE GPs than we did in September 2015

Figure 7 – Time series of FTE GPs by role⁷⁹



There has been a 2.5% increase in qualified FTE GPs (partners, salaried, locum and GP retainers) and GP trainees (registrars) – to 35,273 – since September 2015. However, excluding GP trainees,⁸⁰ the overall number of fully qualified FTE GPs (28,096) fell by **1,307 (4.4%)** in that



time. Breaking down the changes in the GP workforce, there are **4,685 (22%)** fewer FTE GP partners and 2,693 (24%) more FTE salaried and sessional (locum) GPs compared to September 2015. There are also 2,151 (43%) more GP trainees (registrars).

While a GP career is more attractive than ever before, we are not currently replacing the hours lost when FTE partners stop working full-time

While the above graphs illustrate growing popularity among young doctors for a career in general practice, the trends also indicate an urgent retention issue for GP partners – and a likely desire from qualified GPs in general to better control their workload and work-life balance. We can clearly see a move towards salaried and sessional GP roles, and more portfolio and LTFT (less than full-time) working.⁸¹ This is most likely to reduce stress and stave off or avoid ill-health and burnout, which we know are problems based on what members have been indicating in our BMA surveys and research (see Appendix A) over a number of years.

A GP recruitment drive by HEE – which started in 2015 after a 10-point GP workforce plan⁸² was agreed by the BMA, HEE, NHS England and the Royal College of GPs⁸³ – has had a clear impact in attracting young doctors and increasing applications to general practice training year on year. There are positive lessons to be learned from this for other shortage specialities.

We currently need to train around three more GPs to replace lost GP partner hours



The overall number of fully qualified **headcount** GPs increased by 1,261 between March 2020 and March 2021. This expansion was seen in the salaried and sessional (locum) GP grades only, which increased by 1,807, while the number of GP partners by headcount simultaneously reduced by 546.

On closer inspection, this only equated to an increase of 111 **FTE** GPs. This was a consequence of changes to working patterns among the GP workforce, which resulted in:

- 546 fewer headcount GP partners – translating into a loss of 907 FTE GP partners
- 1,807 more headcount salaried and sessional GPs – translating into a gain of only 1,018 FTE GPs.

As a result of staff leaving and changes to working patterns, we needed 1,610 individual salaried and sessional GPs (headcount) to make up the hours lost among the GP partner workforce: **a ratio of almost 3:1.**^{84,85}

Applying this to the [Government's 2020 commitment of an additional 6,000 doctors in General Practice by 2024](#), this means this commitment – if delivered – will only result in an additional 3,381⁸⁶ fully qualified FTE GPs, which would take us up to 31,477 in total. Over and above what



we saw over the last year, this does not factor in any existing GPs reducing their hours or leaving the profession in that time. Worryingly, this puts current growth in line with the predicted worst-case scenario in the last public GP workforce assessment done by the CfWI in 2014.⁸⁷

To teach and train more GPs, we need more educators and trainers among the GP population

We also need more GP practices to be able to accommodate undergraduate and postgraduate placements. Academic general practice has long been under-supported with significantly fewer academic GPs as a proportion of the total GP population, as well as in comparative terms to the consultant clinical academic versus consultant population. This also often deters doctors interested in academic activities from a career in primary care. There needs to be specific investment in academic primary care both to ensure recruitment of the future GP workforce and to help retain the existing medical workforce.⁸⁸

(Psychiatry) 'I am the only doctor. For a hospital my size, we are meant to have two and a half consultants and an SAS doctor. We are down 6 nurses. I feel I am not meeting my patients' needs.'
Consultant

Secondary care: NHS hospital and specialist care doctors

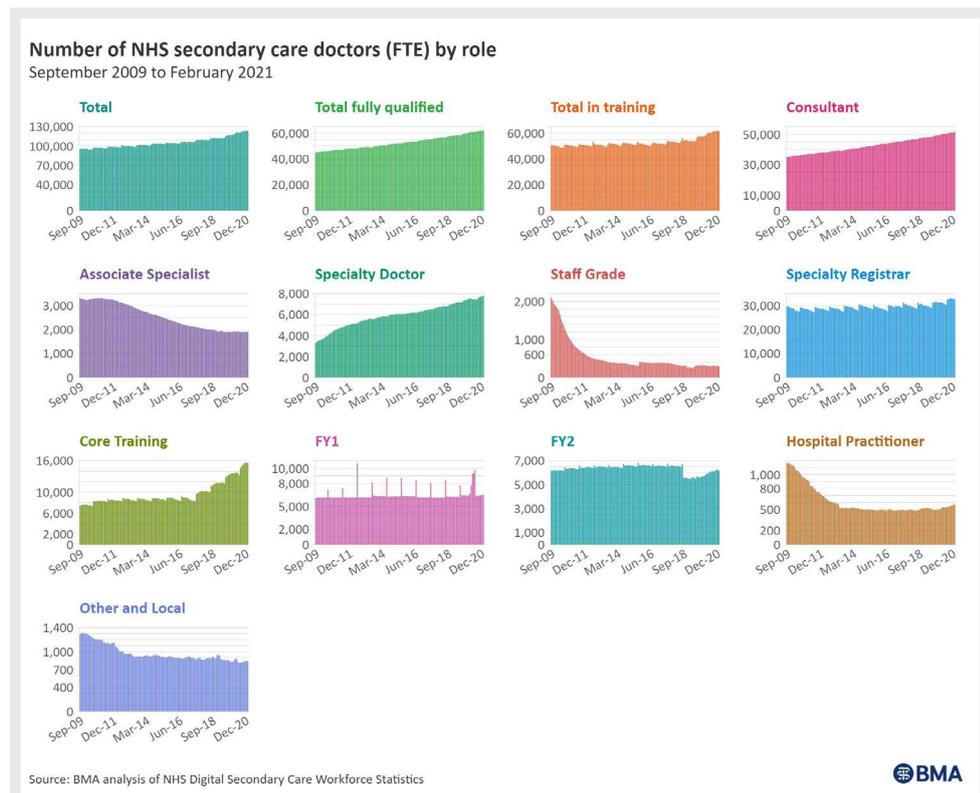
Patients usually attend secondary care – hospitals and specialist care – once they have received a referral from a GP, or if they need to go to A&E or an urgent care centre. 1.18 million FTE staff currently work in secondary care:⁸⁹ of these, 123,813 (FTE) or 10.5% – are doctors. Including doctors, there are 695,189 professionally qualified clinical staff (59% of all NHS posts) in total.

Trends in NHS secondary care doctors: 2009 to present

Main points:

- Since 2010, there has been an average annual increase of **2.34%** in the secondary care medical workforce..
- We do not believe steady average annual growth of the NHS secondary care medical workforce over the last five years is keeping pace with patient need.
- Since 2010, activity in NHS hospital and community services has increased by **26%**.

Figure 8 – Time series of FTE secondary care doctors by role

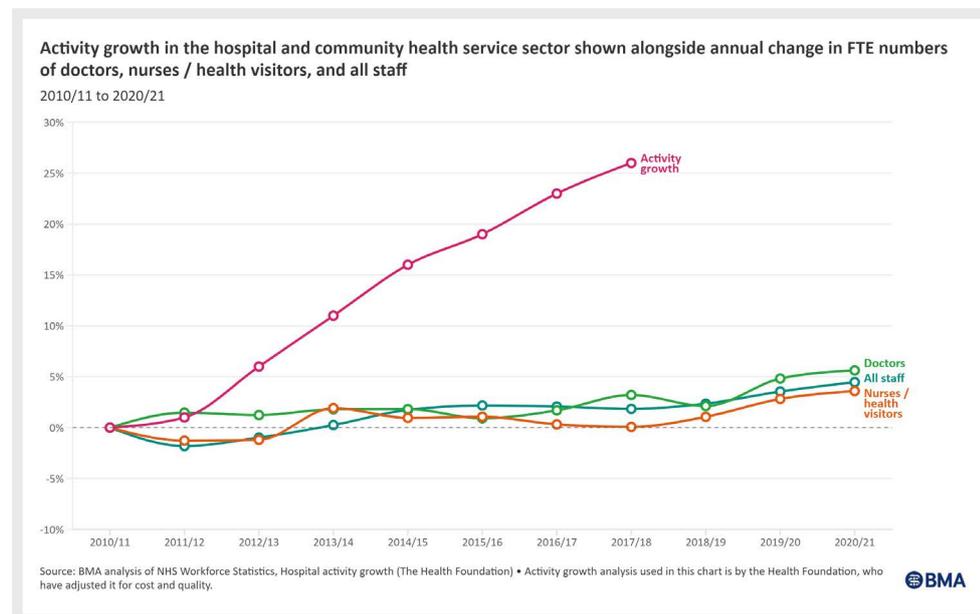


The FTE number of doctors working in secondary care is 18.5% larger than in September 2015.⁹⁰ Since 2010/11, there has been an average increase of around 2.34% per year. Medical staffing numbers therefore show only a modest annual increase year on year, which is far too low to bridge the vast gap between England's doctor to 1,000 population ratio and those of comparator OECD EU nations. For the nursing workforce, growth has been virtually stagnant at less than 1% per year.

Gaps in official workforce reporting on secondary care doctors

Due to the current lack of transparent and verified national and regional workforce planning, the Government has no way of telling whether there are enough doctors within each grade/specialty or if the steady overall annual increase in secondary care doctors is keeping pace with patient need. We strongly suspect it is not given that activity growth is far exceeding workforce growth. Evidence indicates an ever-widening gap between workforce and activity growth, as illustrated below:

Figure 9 – Hospital activity growth versus annual change in FTE staff numbers



Analysis by the Health Foundation⁹¹ has determined that healthcare activity increased by over a quarter (26%) between 2010/11 and 2017/18. This analysis predates COVID-19. Working through the subsequent backlog of care alongside meeting new COVID and non-COVID care demands, will only increase workload. In all likelihood, this will widen the gap further.

Other medical sectors

We have had no official, transparent way of telling whether we have sufficient medical academics, public health doctors or specialist occupational physicians since the 2012 Health and Social Care Act removed workforce planning infrastructure and specific legal duties on ministers and NHS bodies.

The pandemic has also highlighted the vital role that doctors play as medical researchers in protecting the population from future health threats and improving the quality of care and life expectancy across the full range of conditions. The economic and wider benefits of such world-leading activity must also be brought to the fore.



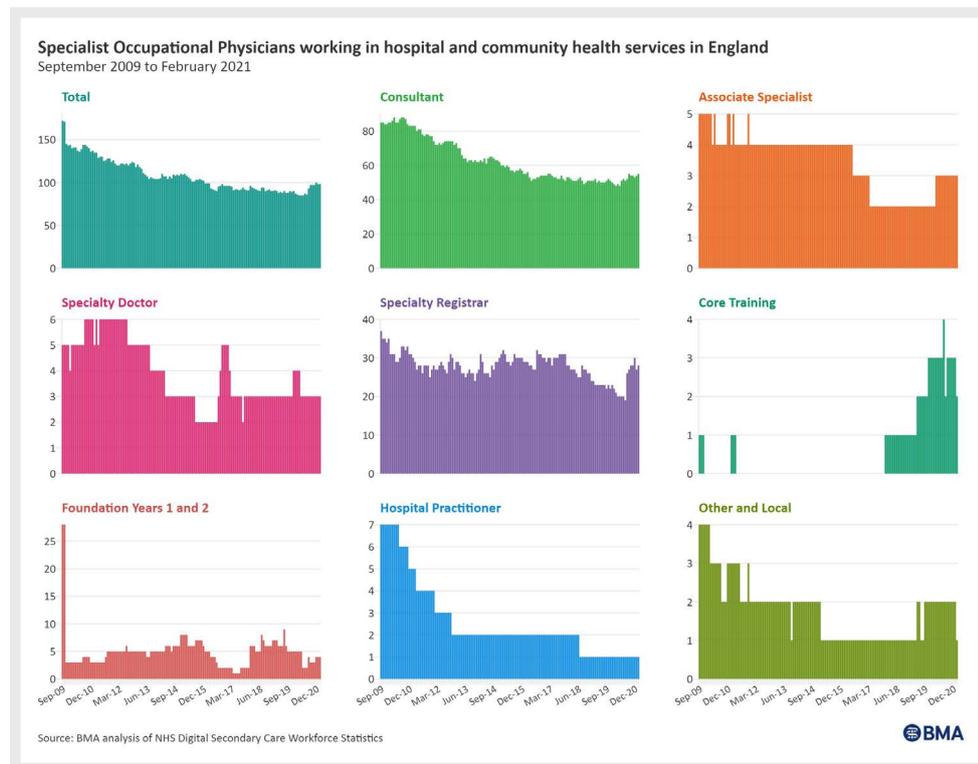
The COVID-19 pandemic has shone a spotlight on the fact we had and still have far too few of these essential medical staff. These vital members of the NHS workforce are needed to:

- best manage regional and national public health crises
- provide the occupational health services that support, protect and preserve the wellbeing of the general public at work, as well as NHS staff and improve retention and deployment
- educate and train medical students, doctors in training and MAPs to the high-quality standard patients, students, doctors and taxpayers expect and deserve.

The following evidence suggests that we do not have enough of any of these doctors.

Medical academics: doctors as educators and researchers

Figure 10 – Time series of Medical Clinical Academics (FTE)



*(Neonatal) 'Poor nursing cover and no medical cover for high dependency unit and special care baby unit on a night shift'.
Junior doctor*

Medical academics, doctors working as educators and researchers, play crucial roles in educating the doctors of the future, discovering new medicines, treatments and medical devices, and in better understanding and working with the populations served by healthcare services.

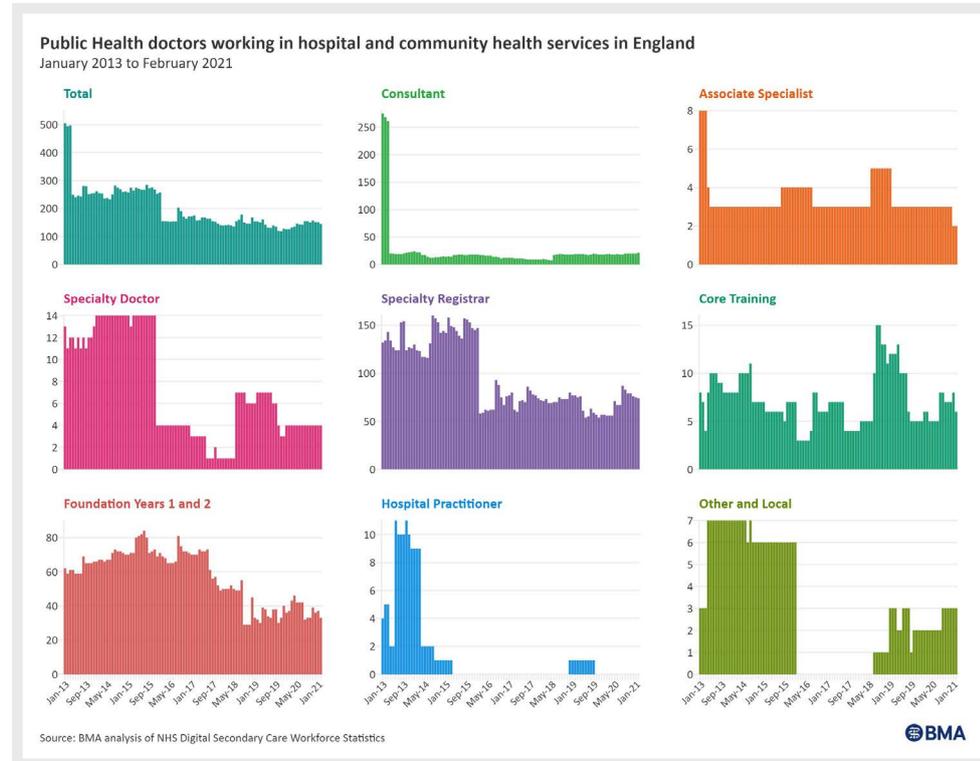
A considerable proportion of the foundation knowledge and clinical skills education occurs in the university setting prior to clinical placements. However, over the last 10 years the senior clinical academic workforce contracted by 27% despite a 25% growth in medical student numbers.⁹² This is not just unsustainable, it needs to be reversed if we are to tackle the current doctor shortage.

We need enough educators to be able to train the next generation of doctors. This is particularly crucial as an expansion in medical students cannot occur, whilst also still maintaining the UK's world-leading research status, without a commensurate expansion in the clinical academic sector.



Public health doctors

Figure 11 – Time series of Public Health doctors (FTE)



'Patients have previously been discharged from a follow-up clinic without consulting clinicians. This was to done to reduce workload but it backfired due to cancer reoccurrences'.
SAS doctor

Public health doctors, those specialists with skills in the three main domains of public health – health protection, health improvement, and healthcare public health – are vital in improving population health and managing regional and national public health crises. They improve the health of the nation and ensure health services respond effectively to needed changes.

Public health is unique as it is a medical specialty with a non-medical route of entry. Partly in recognition of the skills and experience that public health practitioners from other healthcare backgrounds brought to their roles, specialty training and specialist posts were opened up to applicants from beyond the medical profession. Nonetheless, public health needs a core group of medically qualified staff and this has been highlighted by the pandemic.

The ongoing pandemic and the looming threat of further pandemics in the coming years have highlighted the need for a full complement of public health specialists in the medical workforce. For example, consultant epidemiologists provide strategic leadership in the surveillance of infectious diseases to manage and mitigate the impact of future pandemics.

Cutting public health services is also a false economy and impacts significantly on workload in the NHS with both health promotion and health prevention activities improving health and reducing demand on services. There are many wider determinants of health, such as income, housing, air quality and diet that have an impact on the demands being made on health services which can be improved through public health interventions.

After the 2012 Health and Social Care Act reforms,⁹³ the majority of Public Health doctors in England were transferred from NHS organisations into Public Health England and local authority public health departments. This explains the fall in numbers of public health doctors working in hospital and community health services seen in early 2013 when these reforms came into effect, which should not be used to mask the very real drop in the number of public health doctors and specialists.



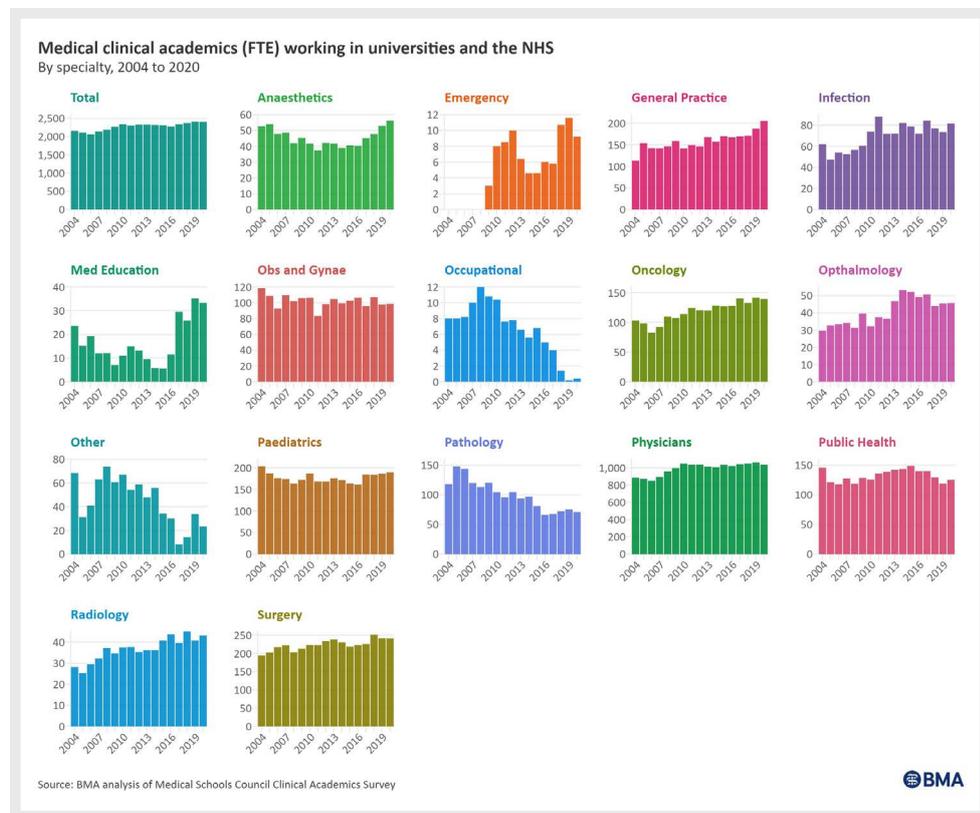
There is a lack of data on the number of public health doctors working in local authorities. However, we know anecdotally that prior to the pandemic vacancies were widespread and often remained unfilled for prolonged periods of time. The current restructure of Public Health England, which further separates different parts of public health, is likely to exacerbate the staffing challenge, as it makes building career pathways across an increasingly fragmented national and local public health system increasingly difficult.

Specialist occupational physicians

Main points:

- The expertise of specialist occupational physicians is required to ensure healthy working environments and staff safety at work. Specialist occupational physicians were also key to re-enabling essential services and industries to function safely during the pandemic.
- There are currently 98 specialist occupational physicians working in NHS hospital and community health services in England, compared to 172 in September 2009 – a decline of nearly **50%**
- the number of occupational medicine consultants has fallen by **34%** in the same period.
- As of November 2020, there were only 501 specialist occupational physicians registered with the Faculty of Occupational Medicine compared to 710 in 2015 – almost **30%** fewer.
- All working people in England should have access to a specialist occupational physician, based on clinical need.

Figure 12 – Time series of Specialist Occupational Physicians (FTE)



The expertise of specialist occupational physicians is required to ensure healthy working environments and staff safety at work. Specialist occupational physicians were also key to enabling essential services and industries to function safely during a pandemic. This is by



providing the prime clinical expertise for occupational health teams, who advise management on fitness for work issues regarding staff deployment and on how to control exposure to hazards such as COVID-19. Specialist occupational health physicians also provide an invaluable role in advising on rehabilitation programmes for staff whose health has been damaged.

The role of specialist occupational physicians includes the following:

1. Providing workplace specific risk assessments using specialist competencies, local knowledge and evidence based precautionary approaches to estimate or rank risks of categories of workers, of specific tasks and environments and of individuals, especially those with increased susceptibility to particular hazards.
2. Advising on risk reduction for generic categories or for individual workers such as regarding work practices, testing, provision of personal protective equipment (filtering facepiece respirators or powered air purifying respirators).
3. Advising on risk mitigation for the business as a whole both at a strategic level and as regards the protection of other people who may be exposed to the workers (customers, or in healthcare settings patients).
4. Assessing and advising regarding the rehabilitation of, and safe return to work of employees recovering from diseases, most recently acute covid-19 and post-acute COVID ("long COVID").
5. Advising on determining the extent to which a disease was contracted at work and burden of COVID at work and related aspects such as medicolegal issues eg "reasonable judgement" on whether "on the balance of probability" COVID was contracted from work and therefore reportable by law.

There are currently 98 specialist occupational **physicians** working in NHS hospital and community health services in England, compared to 172 in September 2009.⁹⁴ This is a decline of nearly half, while the number of occupational medicine **consultants** has fallen by 34%. Numbers have been rising slightly over the last year, since July 2020, but at a slow pace; there has been a 6% overall increase in the number of specialist occupational physicians since July 2020, while the number of occupational medicine consultants specifically has increased by 6.9%.

The distribution of specialist occupational physicians across the country is fairly proportionate to the distribution of secondary care doctors overall, with the percentage of specialist occupational physicians in each region roughly corresponding to the percentage of secondary care doctors. However, at such low numbers, the occupational medicine workforce will not be able to provide adequate occupational health care for NHS staff, which, given the on-going pandemic, is more vital than ever.

The NHS People Plan for 2020/21⁹⁵ prioritises 'looking after our people' – including by piloting an improved occupational health service for staff. For this to be effective in delivering a service fit for purpose, significant investment will be needed to reverse the steady longer term downward trend seen in the occupational medicine workforce since 2009.

Specialist occupational physicians work outside of the NHS as well in both the public and private sectors, playing a vital role in keeping workers healthy and in work. Ensuring adequate numbers of specialist occupational physicians is essential for the health of the wider UK workforce as well as staff working in the NHS. As of November 2020, there were only 501 specialist occupational physicians registered with the Faculty of Occupational Medicine compared to 710 in 2015 – which is nearly a 30% reduction in five years.⁹⁶

Part of the issue is that most specialist occupational physicians in the UK are employed by large occupational health service providers in the private sector, some of whom have contracts to supply specialist occupational physician input to NHS occupational health departments. Because of this, Government is reluctant to finance programmes for specialist occupational physician training. So are most private occupational health service providers, because of the significant costs involved and uncertain return on investment.

Unlike other disciplines, there is no access to specialist occupational physicians through GPs or the NHS. This only occurs through a worker's employer, where the employer pays the occupational health provider for their service. This includes NHS employees.



This system could benefit from being changed so that all working people in the UK have access to a specialist occupational physician, based on clinical need, as they do to specialists in all other disciplines in the NHS.

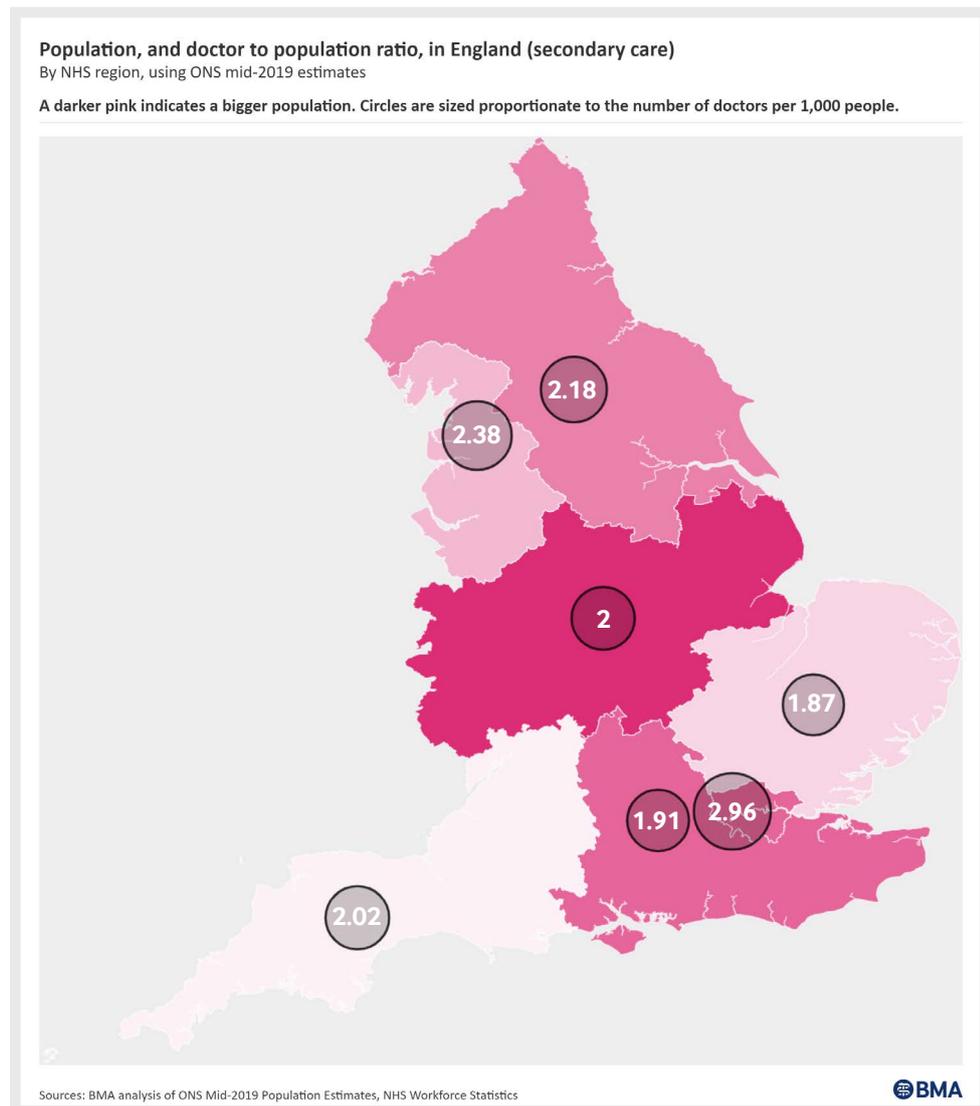
Regional distribution of the medical workforce

Main points:

- The distribution of NHS doctors across the country is currently not proportionate to the population in each NHS region.
- 3.5 million more people live in the Midlands than the North West, but they have 4,000 fewer hospital doctors to treat them.
- **Not a single area in the country meets the OECD average of 3.7 doctors per 1,000 people.**
- There are twice the number of doctors specialising in geriatric medicine in London than in any other NHS region, despite the lowest proportion of over-65s living in London.
- To cope with the 30% growth in the 65s and over by the early 2040s, the national geriatrician workforce should grow by at least a corresponding amount.

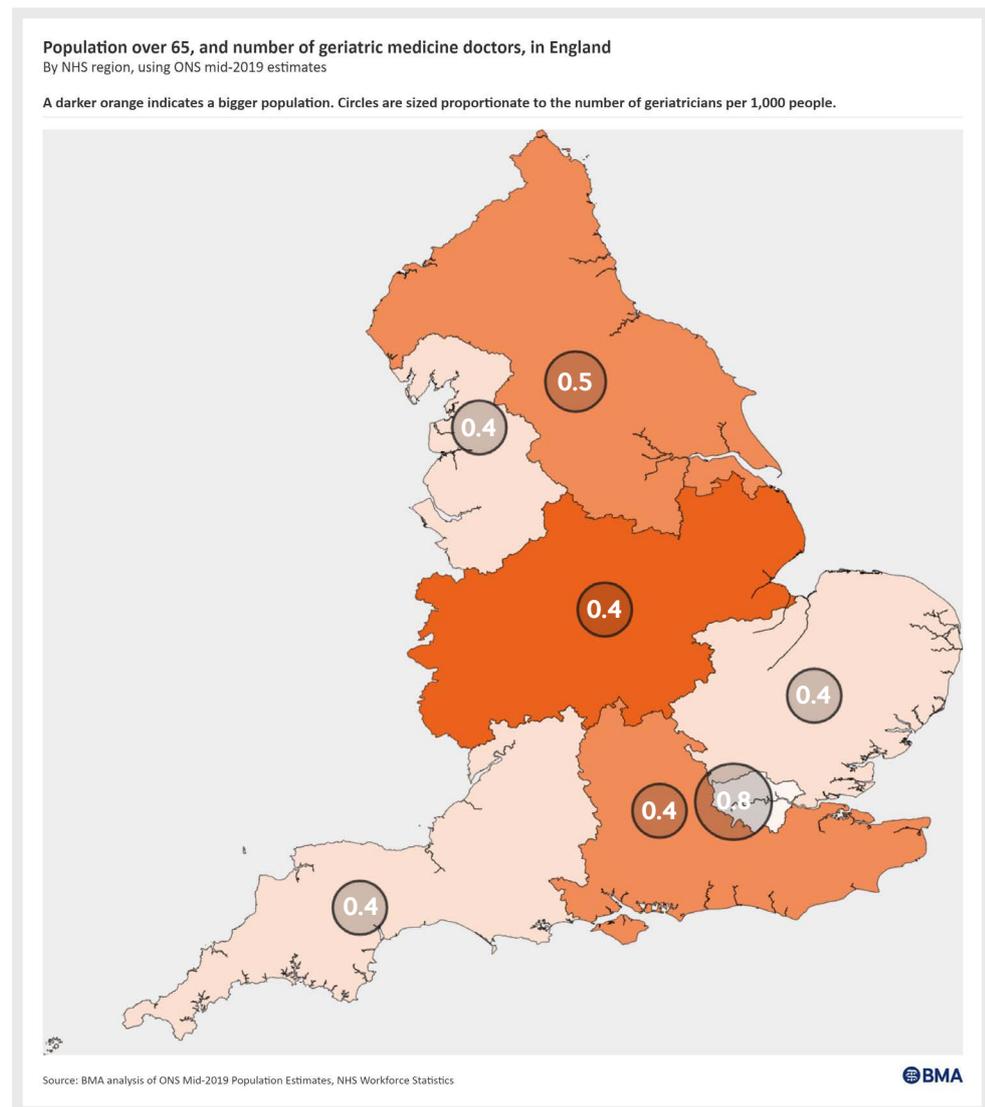
*(General medicine)
‘Unsafe staffing leads to delays in seeing patients, ordering tests and making management plans. I often need to stay well beyond my working hours to ensure everybody is seen and their needs are met’.*
Junior doctor

Figure 13 – Map of population with doctor to person ratio (FTE)



Although some regional variation is unavoidable, the distribution of NHS secondary care doctors across the country is currently not proportionate to the population in each NHS region. Specialist care services are often centralised in large cities, but provide care to a far greater region, requiring a greater number of doctors as a result – so we would expect to see a greater doctor to population ratio in regions that contain major cities, like London and Manchester. However, despite this we still see significant variation in doctor to population ratio. For example, 3.5 million more people live in the Midlands than the North West, but they have 4,000 fewer hospital doctors to treat them. In addition to the uneven distribution of doctors across the country, not a single area in the country meets the OECD average of 3.7 doctors per 1,000 people.

Figure 14 – Map of population over 65 with geriatric medicine doctors (secondary care, FTE)



The same applies to individual demographics. There are twice the number of doctors specialising in geriatric medicine in London than in any other NHS region, despite the lowest proportion of over-65s living in London. Currently, all areas except for London have just 0.4 geriatricians per 1,000 people aged 65 and over.

The population aged 65 and over is set to grow by 30% by the early 2040s. To cope with this the national geriatrician workforce would need to grow by at least a corresponding amount, alongside looking at what an optimal geriatrician/population ratio is so that each region can ensure it has the number of geriatricians it needs to support its older population.



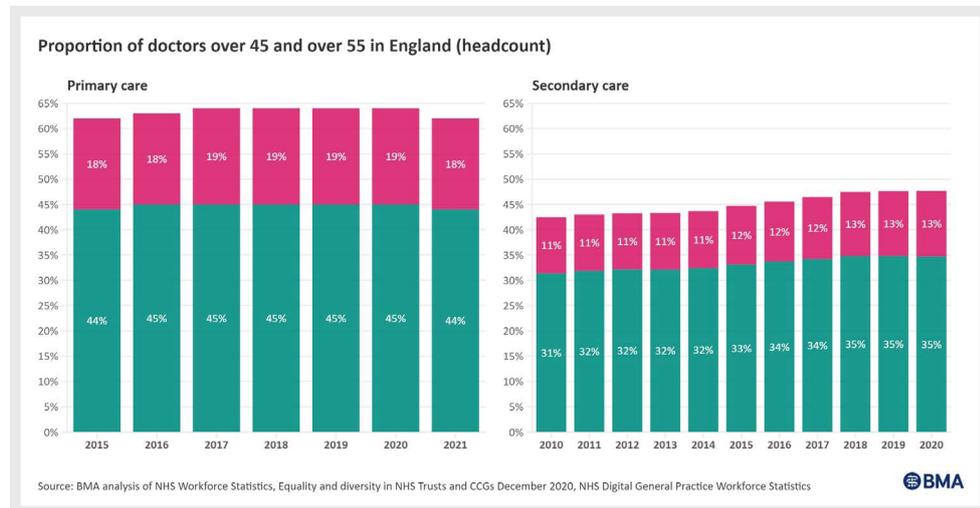
Age profile of the medical workforce

Main points:

- The medical workforce is ageing.
- **13%** of secondary care doctors and **18%** of GPs will be reaching minimum retirement age in the next one to 10 years. This could equate to a combined loss of **25,494** doctors through natural attrition alone.
- With the number of doctors now considering leaving the profession more than doubling over the past year, the NHS also potentially faces a worst-case scenario exodus of 31,820 FTE doctors.

Like the general population, the medical workforce is ageing. A growing proportion of doctors have either already reached the minimum retirement age of 55 years old or are fast approaching it. 35% of the secondary care medical workforce is 45 or over and 13% is over the age of 55. In general practice, 44% of GPs are 45 or over and 18% are 55 or over.

Figure 15 – Doctors over 45 (headcount)



*(Acute medicine)
'28 acute patients,
two junior doctors
and one consultant'.
Consultant*

The 13% of secondary care doctors that are 55 and over and the 18% of GPs that are 55 and over will be reaching state pension age in the next one to 10 years. This means that the secondary care workforce could reduce by 13% over the next decade – a potential loss of 16,818 doctors, and the primary care workforce by 18%, a potential loss of 8,676 GPs. The NHS therefore could lose 25,494 doctors in the next one to 10 years, simply through natural attrition.

The workforce will not solely reduce through natural attrition alone. A growing number of doctors are now considering taking early retirement (a possibility from the age of 55 in most cases) due to the pressures of the pandemic. The BMA's April COVID tracker survey⁹⁷ found that the number of UK doctors now considering early retirement has more than doubled in less than 12 months, with 32% of respondents now considering leaving the NHS early (compared to 14% last June).

As previously mentioned, although a worst-case scenario, this equates to 31,820 FTE doctors potentially leaving the NHS (see page 13).

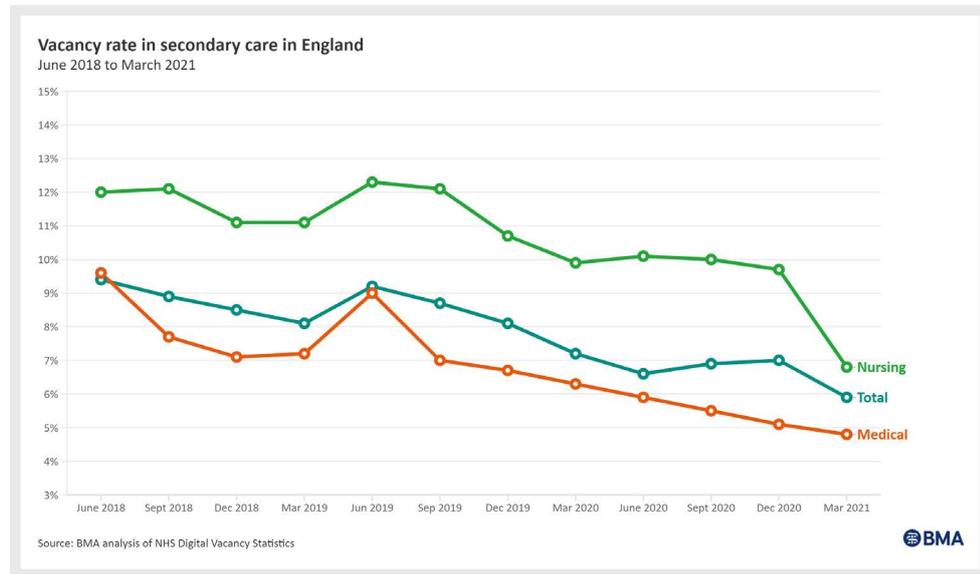


NHS medical vacancies

Main points:

- The current estimated number of FTE medical vacancies in the NHS, which is only officially recorded for secondary care, is **6,634** doctors (**4.8%** of all medical posts)
- If all vacant posts were filled tomorrow, we would still need **42,528** more FTE NHS doctors and doctors in training to meet the OECD country average of 3.7 doctors per 1,000 inhabitants in England.
- The NHS needs a consistent definition of a vacancy for every type of staff group and specialty
- All employers must be compelled to use it so that regional and national vacancy data are accurate and can be meaningfully compared.

Figure 16 – Vacancy rates in secondary care



(FY1) 'The other FY1 that was due to start my rotation with me dropped out. For the first 9-10 weeks of this placement, I was alone doing the work of two foundation doctors. For at least four weeks of this time there was also no middle grade doctors either.'

Junior doctor

The current number of FTE medical vacancies in the NHS, which is only officially recorded for secondary care, is **6,634**⁹⁸ doctors (**4.8%** of all medical posts). As a minimum, they need to be filled swiftly if only to assist our overstretched medical workforce in dealing with the backlog of care.

Even if all vacant posts were filled tomorrow, however, we would still need between **42,528**⁹⁹ (the number of FTE NHS doctors and doctors in training required to meet the current OECD EU country average of 3.7 doctors per 1,000 people in England, set out in Scenario 1), and **77,145**,¹⁰⁰ the number of FTE doctors and doctors in training required to meet forecast future demand (set out in Scenario 2).

Even if all vacant posts were filled tomorrow, however, we would still need between **42,528**,¹⁰¹ the number of FTE NHS doctors and doctors in training required to meet the current OECD EU country average of 3.7 doctors per 1,000 people in England, set out in Scenario 1, and **77,145**,¹⁰² the number of FTE doctors and doctors in training required to meet projected future demand (set out in Scenario 2).

Furthermore, the medical vacancy data published by NHS Digital is not broken down by medical grade. In part, this is likely to be because there is no consistent definition of what a medical vacancy is across the NHS. Having this is vitally important for workforce planning. Without knowing where the shortages exist, ie the staff grade/speciality and the region, it is impossible to ensure sufficient supply or fill existing rota gaps and vacancies. This leaves services dangerously understaffed.

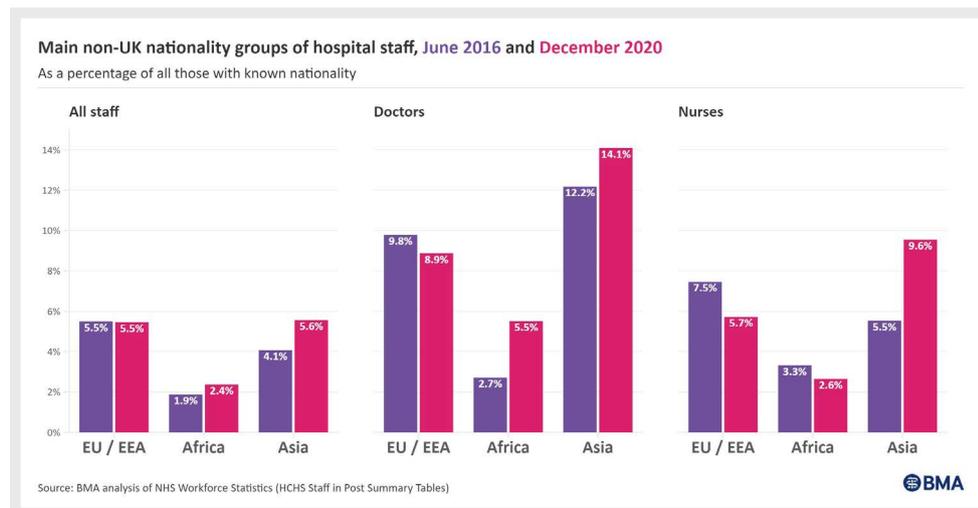


International supply

Main points:

- **One in every three** secondary care doctors in England alone are international medical graduates, while nearly **one in every four** GPs gained their Primary Medical Qualification outside the UK.
- The UK has **one of the highest levels of overseas doctors in the OECD**, employing nearly twice the OECD average of foreign-trained doctors.
- International recruitment has been, and will remain, an essential pipeline for medical staffing in the NHS.
- In non-pandemic times, ethical recruitment of doctors from overseas enables us to partially address shortfalls in homegrown doctors, critical for the delivery of safe patient care.
- International recruitment must not, however, come at the expense of developing countries, especially during global health crises. The BMA therefore supports the Government's ethical recruitment framework that promotes transparency, fairness and sustainable health systems in terms of how we recruit doctors from overseas.

Figure 17 – Nationality of hospital staff (headcount)



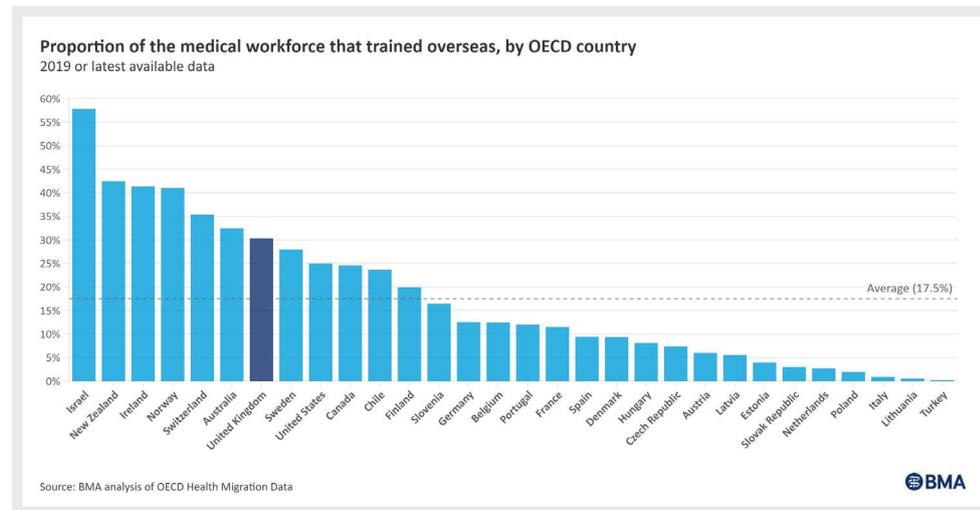
Today one in every three secondary care doctors in England alone are international medical graduates,¹⁰³ while nearly one in every four GPs gained their Primary Medical Qualification outside the UK.¹⁰⁴ The UK has one of the highest levels of overseas doctors in the OECD, employing nearly twice the OECD average of foreign-trained doctors.¹⁰⁵

International recruitment has been, and will remain, an essential pipeline for medical staffing in the NHS. Doctors and medical students come to the UK for its world-class education and training and are part of the diverse fabric that makes up the medical workforce. It is vital that these doctors feel welcome and are supported to settle in the UK. While the NHS will continue to depend on the valuable contributions of its international workforce, we need to ensure we are training more homegrown medics too. Crucially, we are unlikely to close the gap with domestic supply alone – particularly given the length of time it takes to train a doctor.

International recruitment must not come at the expense of developing countries. Overseas supply can only be ethical and successful as part of a long-term workforce strategy. The BMA therefore supports the Government's ethical recruitment framework, which promotes transparency, fairness and sustainable health systems in terms of how we recruit doctors from overseas.¹⁰⁶



Figure 18 – Doctors who trained overseas



The global health professional shortage,¹⁰⁷ which is set to be around 15 million staff by 2030,¹⁰⁸ can also be attributed, in part, to developed nations opting to recruit staff from developing countries rather than train enough from within their native populations. As alluded to, at times of oversupply in certain parts of the world, international recruitment can be a sound strategy. However, during a worldwide shortage, and as we begin to see the true fallout of the pandemic on health outcomes across the world, we have ethical and moral obligations to other countries when recruiting overseas nationals.

Impact of independent sector medical staffing on the NHS

Main points:

- 860 FTE doctors were employed by IHPs in September 2020 compared to 486 FTE doctors in September 2015 – a **77% increase** across five years.
- Workforce planning assessments must acknowledge the fact that many of the doctors doing work in private hospitals are also NHS doctors.
- National workforce planners must ensure sufficient, rather than competing, overall medical supply to both the public and private healthcare sectors.

Some doctors employed by the NHS in England supplement their NHS work by undertaking additional work for IHPs (independent healthcare providers). How much private work is undertaken by doctors is unclear despite attempts to collect this invaluable workforce data. 860 FTE doctors were employed by IHPs in September 2020 compared to 486 FTE doctors in September 2015 – a 77% increase across five years.¹⁰⁹ However, these figures are incomplete; only partial data is collected from IHPs, so this does not represent the entire workforce directly employed or contracted on a sessional basis.

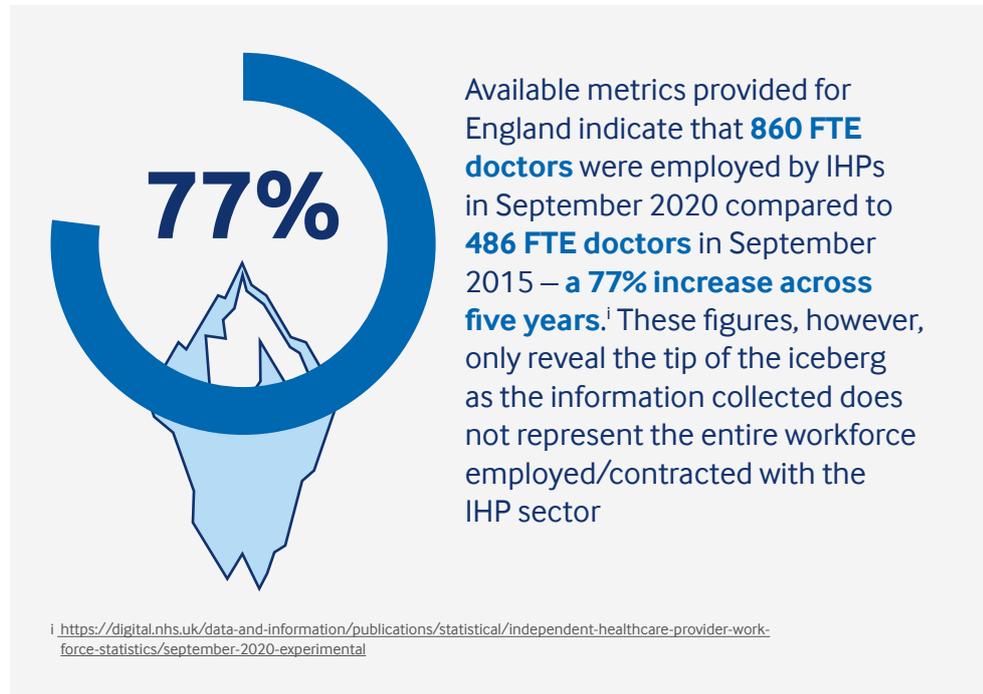
Greater numbers of staff working for IHPs, as well as the ongoing increase in the delivery of NHS services by IHPs, and the sharp increase in patients opting for “self-pay” or insurance plans, may have serious workforce implications for the NHS medical workforce. This is coupled with concerns that the IHP sector in general uses doctors employed by tax-funded NHS bodies, which pay for their training, into their pension funds and cover indemnity costs.

The chronic undersupply of doctors and long waiting lists have also recently resulted in the purchase of capacity and services from IHPs by the NHS. Without greater investment in NHS capacity, the Government will continue to look to IHPs to provide services for NHS patients. This will inevitably expand the private hospital medical labour market, which draws on NHS-trained doctors.



The opening of a US general hospital in London is a case in point. Cleveland Clinic's new hospital has already approved 200 consultants working part-time on fixed salaries.¹¹⁰ The intention to directly employ consultants will only serve to increase the existing pressures facing the restricted pool of doctors.

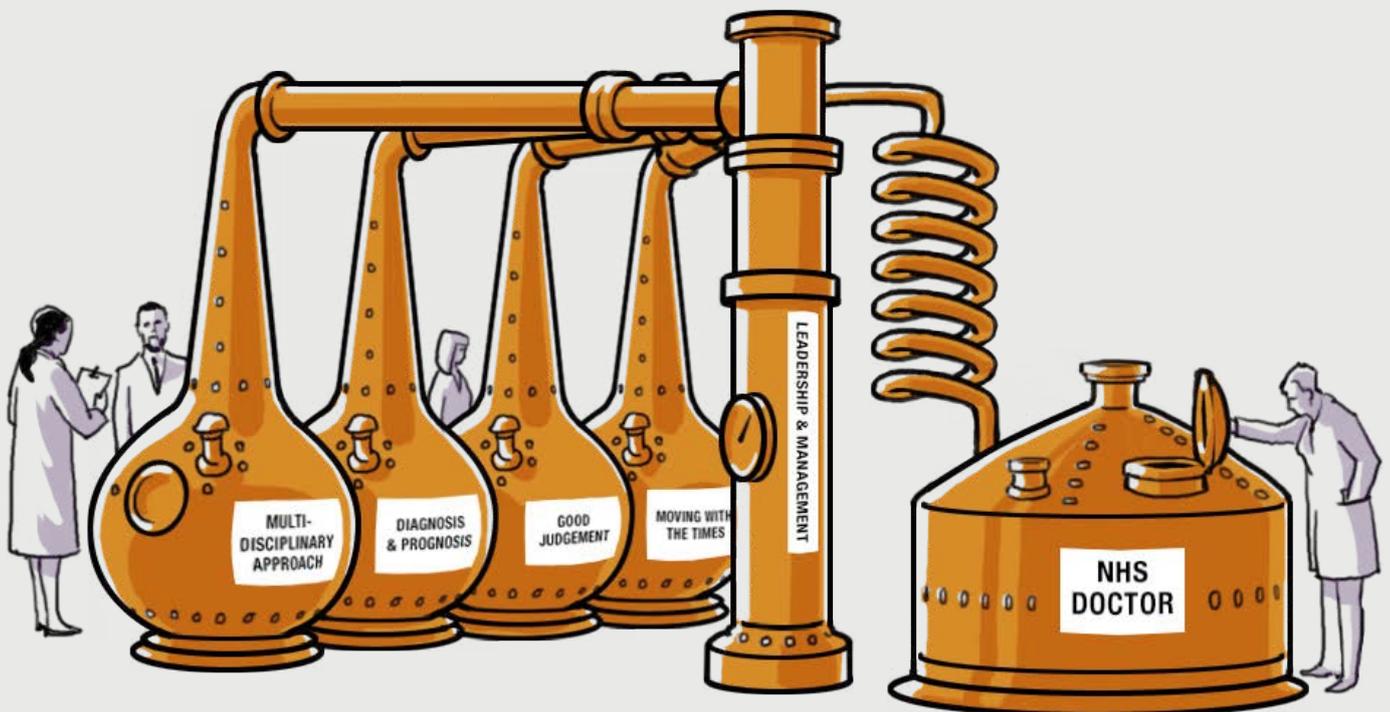
(Anaesthetics)
'No-one available to assist with difficult induction when consultant asked for second pair of hands, which leads to delays. There are delays in emergency cases, as we don't have enough staff to staff our empty theatre.'
Consultant



Given they currently draw largely on the same pool of doctors, workforce planning assessments must acknowledge the fact that many of the doctors working in private hospitals are also NHS doctors. Private medical workforce data must be collected alongside NHS data, and should include an accurate FTE breakdown so that it is possible for national workforce planners to ensure sufficient, rather than competing, overall medical supply to both the public and private healthcare sectors.



Chapter 4 – Why we must have enough medical expertise



Chapter 4 – Why we must have enough medical expertise

Clinical practice is becoming increasingly multi-disciplinary, with a range of skills and professionals involved in patient care. The NHS needs more of all of these different skills, from nurses, to healthcare assistants to doctors to deliver high quality care to the population and manage growing patient need. This section considers the unique skills and attributes that define the role of the doctor in order to fully understand what is lost when there are not enough.

Facilitating a multidisciplinary approach: taking ultimate responsibility

Leadership is central to the role of the doctor and is accompanied by their ability to apply skills and expertise in the context of an increasingly multidisciplinary, team-based approach to health care. New roles for nurses, the introduction of medical associate professionals and the expansion of other health professionals into the care team (for example, increasing clinical pharmacists in primary care), and a growing complexity in respect of technology and the management of care, means teamwork has become essential to patient safety and patient care. This has been compounded by changes to doctors' working hours and a belief -implicit in a range of NHS reforms – that greater efficiencies might be secured through role substitution.

Doctors recognise the limits of their own scope of practice and therefore appreciate the benefits of working and learning in teams. As doctors' roles have developed accordingly there has necessarily been reflection on what this means in terms of the devolution of responsibility. Traditionally ultimate responsibility for the patient and for decisions taken regarding their care rested with the doctor charged with their care. Today, doctors largely remain at the head of the clinical team, but responsibility for the actions of those comprising the team is often found to be diffused further with nurses and other health care professionals now accountable to their own hierarchies and, more significantly, in certain circumstances recognised as assuming the majority of the responsibility for a particular patient's care.

Nevertheless, it remains the case that, fundamental to the role of a doctor, is their capacity to assume ultimate responsibility for a patient's care. A doctor's training, the breadth and depth of their expertise, their ability to deal with uncertainty and manage risk, and the bond of trust so central to the patient-doctor relationship, identifies them as uniquely equipped to take on this obligation. This is at the heart of what it is to be a doctor.

Diagnosis and prognosis

Medical school teaches doctors a breadth, depth and complexity of knowledge in respect of the clinical and basic sciences, as well as elements of the behavioural and social sciences, and establishes them as experts in their understanding and application. Doctors' capacity to interrogate, marshal and employ the scientific evidence base distinguishes them as sources of authoritative insight.

It is the application of this expertise which provides for what is commonly recognised as the hallmark of medical practice: diagnosis. Responsibility for this, which involves responding to the initial presentation of illness, prioritising and synthesising information and making a clinical assessment, largely differentiates doctors from other health professionals. Medical diagnosis informs the course of a patient's treatment, frames the prognosis and determines how their health is managed. This is central to a doctor's role and is the cornerstone to ensuring a patient receives effective care.

It is the patient's faith in a doctor's ability to make a diagnosis, and through careful, compassionate communication to explain its implications and set out a plan of action in response, that rests at the core of the doctor-patient relationship.

(GP specialty trainee) 'Never enough nurses on the wards. This causes delays in the administration of acute medication or lapses in monitoring if additional observations are needed'.

Junior doctor



Dealing with uncertainty and managing complexity

Closely allied to this capacity to make a diagnosis and determine an effective intervention is doctors' ability to operate in circumstances frequently characterised by uncertainty. In their everyday roles doctors must manage complexity and risk. The assimilation of scientific knowledge, the manipulation of data, the understanding of co-morbidities, the recognition of changing circumstances, each require doctors to exercise good judgement in situations beyond the scope of protocols and guidelines. It is doctors' willingness and ability to assume this responsibility, and the expectations made of them in this regard, that underline their real and unique value in contributing to, and leading, patient care.

Research and academic medicine

Doctors also play a crucial role in ensuring the health service moves with the times through research and academic medicine. The products of medical research are new ideas and treatments, best evidence and advanced technologies which bring about improved patient care and reductions in the cost of healthcare. Medical research includes clinical trials, experimental medicine, translational research, epidemiological studies and public health, as well as basic scientific laboratory research aimed at understanding the underlying mechanisms of disease.

Of particular importance is the role of those doctors undertaking academic medicine who work to combine service delivery with research, teaching and/or administration. Clinical academics are uniquely placed to use their expertise to make interconnections between clinical research and clinical practice. Improvements in the quality of healthcare that stem from these roles bring about not only innovation in the delivery of care but also long-term efficiencies for healthcare systems.

Leadership, management and service innovation

Leadership is central to many of the roles already discussed. However, doctors are uniquely placed to take on further responsibilities and play a vital part in the management and leadership of health services. In this way doctors make a valuable contribution in respect of the running of practices or departments, in managerial decisions, in improving and developing new local services, in the wider management and leadership of the organisations they work in, and the NHS generally. Doctors' responsibility for clinical standards, outcomes, effectiveness and audit mean they are relied upon to lead the drive to improve quality and are central to its assurance.

Such leadership is evident across the spectrum of practice: GPs lead improvements in the delivery of primary care, increasing access and shaping local services; public health doctors lead programmes focused on the health of communities; specialist occupational physicians lead occupational health teams; junior doctors and their senior colleagues lead developments in training both locally and at a national level; and consultants, in their everyday posts, as well as in a range of more specific roles, including medical managers and medical directors, take the lead in developing policies and making management decisions within their own departments and hospitals, promoting innovation and excellence. In many of these cases it is by virtue of their longevity in post and their subsequent deep understanding of the needs of the local community, their workplace and their patients, that these doctors offer the necessary knowledge and continuity required to improve services and the care of patients – so it's crucial that we train more now to ensure we have that expertise to draw on when the current guard retires.

(Geriatrics) 'Nursing staffing on wards is short of nine or 10 at a time. This is now the norm'.

Consultant



Conclusion

Since the 2012 Health and Social Care Act became law, there has been no comprehensive health and care workforce planning in England. Regional and national workforce data is inadequate and there is a lack of accountability at Government level. The result of this is that we are not training enough doctors, which means healthcare services are ill-equipped to tackle the backlog of care, are not prepared for future public health crises and are not equipped to meet patient need now or in the future.

Staff retention is poor and is set to get worse without significant intervention. Medical workforce shortages, overworking existing staff, years of demoralising pay erosion and punitive pension taxation rules have created a cliff-edge – and we are now standing on the precipice. As demonstrated by our analysis, England is 25 years behind where comparator OECD EU nations are now. By 2043 we will need between 26,889 and 83,779 additional FTE doctors than what we will have. The rate of growth of the medical workforce is inadequate in closing even the lower of these two estimates. This does not consider natural attrition and early retirements during that time.

Our medical workforce, exhausted and traumatised from the past 16 months of simultaneously dealing with an unprecedented pandemic and rising demand for non-COVID care, not only face the ordeal of coming to work to do the job of more than one person – but can expect medical shortages, overworking, poor conditions and moral injury to persist for the foreseeable future against a context of rising demand and continued staffing shortages.

These are sobering thoughts given that doctors have already been working against the tide for many years. Fully qualified GP numbers have fallen by 4.4% since 2015. Due to changing working patterns and GPs giving up their partnerships, we currently have to train around three GPs just to replace one GP partner when they leave. There are also not anywhere near enough specialist doctors to meet growing patient need. In public health, many years of neglecting the public health medicine workforce - largely due to absent national and regional workforce planning – also left the country extremely vulnerable when COVID-19 hit our shores. The medical educator and research workforce, along with the teaching space they and their students require, will also need considerable expansion.

To fund the additional 34,788 medical school places required to close the UK's current gap with the EU OECD nations by 2030 at least £8 billion is required. With record numbers of people applying to start medical school in recent years, now is the time to make this happen. There is no lack of people wanting to become doctors; we must provide the resources to allow them to do so.

Alongside this expansion, vacancies within the service must urgently be filled. In non-pandemic times, ethical recruitment of doctors from overseas enables us to partially address shortfalls in homegrown doctors stock, and are critical for the delivery of safe patient care. International medical graduates will remain an important part of the medical workforce going forward. International recruitment must not, however, come at the expense of developing countries.

Without intervention now, the implications of an aging population without growth in medical staffing – both to replace those retiring, as well as getting services where they need to be – will be significant.

It is therefore imperative that the new Health and Care Bill includes provision for and mandates regular NHS workforce assessments. This must go hand in hand with greater investment in expanding medical schools places, and investment into growing and retaining the medical workforce more generally.



Appendix A – 2019/20 BMA unsafe staffing levels project doctor feedback

This research was carried out with BMA members in 2019 – pre-pandemic – via an anonymous online portal on the BMA website. We asked:

Please describe your most recent example of unsafe working. How did this impact on you, your medical and clinical colleagues and your patients?

GPs

- ‘I work out of hours at weekends. Medical staffing has been reduced to 50% of normal weekday service and stretched over a larger area. It is very unsafe’.
- ‘Starting early, finishing late, no breaks, no lunch. Advising over the phone rather than seeing patients. Sending patients to A&E rather than sorting them. Referring patients and arranging tests when reviewing them might have been appropriate. Using paramedics and nurses to manage patients instead of GPs’.

SAS doctors

- ‘Consultants cover clinics at multiple hospitals, so they not available to deal with problems. Cancer patients experience delays in treatment as a result. I’ve been told I’ve done inadequate audit this year because I spend so long chasing up work that hasn’t been done by overstretched consultants’.
- ‘Patients have previously been discharged from a follow-up clinic without consulting clinicians. This was to done to reduce workload but it backfired due to cancer reoccurrences’.

Consultants

- (Palliative care) ‘Insufficient medical staff to run a 1 in 4 on call rota safely without me plugging gaps. This extra work is not in my job plan. It is not in my contract. It is unresourced. I have just had three months off with stress’.
- (Psychiatry) ‘I am the only doctor. For a hospital my size, we are meant to have two and a half consultants and an SAS doctor. We are down 6 nurses. I feel I am not meeting my patients’ needs’.
- (Acute medicine) ‘28 acute patients, two junior doctors and one consultant’.
- (Anaesthetics) ‘No-one available to assist with difficult induction when consultant asked for second pair of hands, which leads to delays. There are delays in emergency cases, as we don’t have enough staff to staff our empty theatre’.
- (Geriatrics) ‘Nursing staffing on wards is short of nine or 10 at a time. This is now the norm’.

Junior doctors

- (FY2) ‘I’m the only senior house officer for a 60-bed receiving unit out of hours. The specialty registrar is in A&E/on the wards frequently, so I’m left to clerk all patients as well as review deteriorating patients. Patients wait over 10 hours to be clerked’.
- (Emergency medicine) ‘8 out of 18 registrar posts unfilled. Vacancies staffed by locums, SHOs or just left empty. Our managers are trying to impose an additional evenings work on the current registrars to increase staffing levels – making it less likely they will retain the staff they already have and harder to recruit’.
- (Neonatal) ‘Poor nursing cover and no medical cover for high dependency unit and special care baby unit on a night shift’.
- (General medicine) ‘Unsafe staffing leads to delays in seeing patients, ordering tests and making management plans. I often need to stay well beyond my working hours to ensure everybody is seen and their needs are met’.
- (FY1) ‘The other FY1 that was due to start my rotation with me dropped out. For the first 9-10 weeks of this placement, I was alone doing the work of two foundation doctors. For at least four weeks of this time there was also no middle grade doctors either’.
- (GP specialty trainee) ‘Never enough nurses on the wards. This causes delays in the administration of acute medication or lapses in monitoring if additional observations are needed’.



Appendix B – The case for a statutory NHS workforce assessment duty

The NHS has been without comprehensive national and regional workforce projections and planning since the introduction of the Health and Social Care Act 2012. This has led to vast staffing shortages – that we know about – and inadequate growth across the workforce year on year. There is gathering momentum behind a clear rationale to introduce new legislation to rectify this situation from across the NHS family.

The case for staffing legislation

- More doctors, nurses and other health care professionals are urgently needed to ensure a safe service for patients and the doctors and staff who care for them. The BMA has long called for regular national and regional workforce assessment and additional medical school and foundation programme places^{111,112} based on royal college workforce and NHS Digital vacancy¹¹³ data. The RCP¹¹⁴ and the RCN¹¹⁵ have also independently done the same in the past.
- A lot of the answers to reducing and, ultimately, eradicating unsafe staffing for the benefit of patients and the NHS workforce lie in listening to, understanding and acting upon the concerns of doctors and other clinical and non-clinical staff.
- Nevertheless, before the pandemic arrived in the UK, instances where patient safety was compromised by low staffing levels could go unreported where staff did not believe their concerns would be taken seriously, acted upon appropriately or they expected to be hushed or vilified by management for raising concerns.
- Doctors also perceive a lack of support from management. All too often their concerns either fall on deaf ears or, when escalated by medical leaders or heard sympathetically by non-clinical leaders, they are still rejected because resources simply do not exist to improve working conditions and patient care.
- This causes high levels of stress, anxiety and moral injury¹¹⁶ for staff; particularly when they are acutely aware that patient safety is at risk or being compromised. Such strain can have a devastating impact on their mental health too.
- Doctors report not being able to take time off for important life events; simply to rest and recharge or even to recover properly from periods of ill-health or injury. This was largely due to existing long-term vacancies in their place of work, some the result of other colleagues being on long-term sick leave already, and insufficient availability of, or resources for, locum cover.
- Doctors are also petrified of making mistakes, harming patients, losing their livelihoods and even being criminalised for simply trying to do their best in impossible circumstances. [The 2018 Dr Bawa-Garba case](#) focused attention on the problem with individual doctors, or indeed any other clinician, taking the blame for system failures. Doctors tell us that this makes them fearful in their clinical practice.
- Once filtered down from health departments, national commissioners and then local commissioners, when the resources received are insufficient, employers often cannot support their workforce to provide the best quality care possible. This leads to moral injury when staff cannot do everything possible for their patients.
- Pre-pandemic, management were perceived to be operating under the belief that escalation to local and national commissioners, and those responsible for compliance with existing laws, will not change anything either.

There are insufficient medical staff to run a one in four on-call rota safely without me plugging gaps. This extra work is not in my job plan. It is not in my contract. It is unresourced. I have just had three months off with stress

Consultant



Registrars are working up to 96 hours per week with no off-day after 48 hours on-call

Junior doctor

- Poor working conditions have a significant and negative impact on an employer’s ability to market themselves to prospective new staff as an attractive employer when seeking to fill vacancies too.
- The culture within providers is often perceived as toxic. Those managing our health and care services are under just as much pressure as anyone, but they are often seen by staff as part of the problem.
- Service provision demands can come across as unempathetic and insensitive to the emotional and physical demands placed on people working on the front line. It is vital that staff are responsibly supported by employers to process and release the emotional burden they absorb.
- Law is a key component to protect professionals in safety-critical professions, i.e. safe levels of staffing means that staff are not overworked, which would compromise their ability to perform at their best, and quality is not diminished due to there being too few staff to provide optimum care. Some doctors have suggested that health and care services should follow the aviation or haulage industry safety standards, eg [enforce working time restrictions such as patterns of work that ensure adequate rest breaks, provision of information of working patterns, maximum annual working time, total block working time and rest days entitlement](#).
- Once enshrined in law, healthcare workforce assessments will be brought before Parliament by Government/the Secretary of State for Health and Social Care at regular intervals so that they can discuss, debate and make plans, in collaboration with arm’s length bodies, regulators and inspectors, for mitigating patient and staff safety risks and challenges and compelling Treasury investment.

Momentum is building

The AoMRC, BMA and NHS Confederation wrote to the Secretary of State for Health and Social Care in April 2021 seeking ‘a statutory duty for a regular published independent assessment of the health and care workforce’.¹¹⁷

Very similar approaches to health and care workforce assessment statutory duties have been advocated by the Parliamentary Health and Social Care Select Committee,¹¹⁸ and the Health Foundation, Nuffield Trust and King’s Fund¹¹⁹ recently too.

The BMA has also jointly developed the following legislative call with the RCN, the NHS Confederation and NHS Providers and shared it with the Secretary of State for Health and Social Care:

Legislation is urgently required to secure the sustainability of the health and care workforce and ensure it is properly resourced to meet current and future demand.

This will provide clear and enduring confirmation that full accountability for workforce planning will be discharged by Parliament to the Secretary of State for Health and Social Care.

To discharge this accountability, it is critical to understand the health and care staffing needs for the population across England. Without a shared knowledge of what needs to be delivered, we cannot properly hold those responsible for commissioning health and care services to account.



The Secretary of State for Health and Social Care must, therefore, undertake detailed assessments and analysis of future workforce supply and demand requirements for all health and care services across England and bring this before Parliament.

This workforce assessment must be:

- 1. Based on the projected health and care needs of the population across England for the following one to five years, five to 10 years and 10-20 years.*
- 2. Undertaken at least every 2 years in response to changing population needs.*
- 3. Developed in collaboration with key stakeholders across the sector, including employers, providers, trade unions and royal colleges.*
- 4. A full account of workforce intelligence, evidence and plans gathered from providers and partners within integrated care systems.*
- 5. Independently assessed and verified prior to publication.*
- 6. Fully available in the public domain in an open and transparent manner.*

These detailed workforce assessments are core to understanding the changing health and care needs of the population and for effective workforce supply planning. Along with the Secretary of State for Health and Social Care's accountability, duties for responsible NHS bodies must now be set out in primary legislation too.



Appendix C – Required growth in NHS staff groups

This table is taken from the IFS and the HF's [work on the 'modernised scenario'](#) for the NHS. The future shortage estimates in Chapter 2 are based on the required annual growth for HCCHS doctors and GPs as laid out below.

	2018-19	2023-24	2028-29	2033-34	Annual growth	Extra FTEs, 2018-19 to 2033-34	% change
Hospital and Community Health Services total, including:	1,069,400	1,248,500	1,459,600	1,708,600	3.2%	639,200	60%
Professionally qualified clinical staff, including:	577,000	673,200	786,300	919,700	3.2%	342,700	59%
HCCHS doctors	112,000	130,100	151,200	175,900	3.1%	63,900	57%
Nurses and health visitors	283,500	331,200	387,500	454,200	3.2%	170,700	60%
Support to clinical staff	320,300	374,400	438,200	513,800	3.2%	193,500	60%
NHS infrastructure support	167,500	195,700	228,900	268,000	3.2%	100,400	60%
Primary care total, including:	127,700	133,700	140,100	146,700	0.9%	19,000	15%
GPs	35,600	37,300	39,000	40,900	0.9%	5,300	15%
Nurses in GP practices	16,000	16,800	17,600	18,400	0.9%	2,400	15%

Note: Columns do not sum to totals as only selected staff groups are shown.



Appendix D – Methodology

Headcount/FTE

NHS Digital publishes workforce data as both headcount and FTE (full time equivalent). Headcount reflects the actual number of doctors, while FTE is a calculation that refers to the proportion of full-time contracted hours that the post holder is contracted to work, eg 1 would indicate they work a full set of hours, 0.5 that they worked half time. When looking at overall numbers we therefore find FTE to be a more accurate reflection of the number of doctors than headcount. This is because FTE reflects the true number of clinical hours: the FTE number tells you how many doctors there are if each of those doctors worked full-time hours, thereby evening out the differences in working hours that make headcount potentially misleading. All workforce data in this report is FTE unless otherwise stated. 'Full-time' here is taken to be 37.5 hours in accordance with the FTE definition used by NHS Digital. This calculation is for illustrative purposes only, as we recognise employed doctor contracts can be 40 hours. Where it makes sense to have used headcount instead of FTE, or where FTE data is unavailable, we have made this clear.

Demographic data

This report uses demographic data throughout, all of which is taken from the Office for National Statistics.

A note on consistency and timescales when working with multiple datasets

As with most government data sources, the datasets used in this report are rarely consistent with one another in format, timescale, scope or definition. Datasets are launched at different points in time, with subtly or even significantly different terms of reference. In addition, collection format and methodology can also be changed or altered for each data set at different points, making what came before it incomparable even to itself, let alone to a different data source with yet a different history. Data sets rarely match each other perfectly, so it can be difficult to draw a complete and clear picture.

We recognise the necessity of having a complete picture of the medical workforce when attempting to quantify shortages, and this report endeavours to offer that by joining together datasets that are often kept separate due to the difficulties outlined above. This method of aggregation is not perfect and can result in inconsistencies. Where these occur, we have noted and explained them.

Most notably, the timescales used in this report differ for primary and secondary care. This is because NHS Digital's [Secondary Care Workforce Statistics](#) publication has existed in its current form without significant alteration to scope or method of collection since 2010. NHS Digital's [Primary Care Workforce Statistics](#) publication, on the other hand, has only existed in its current form since 2015. The survey format that existed prior to this has now been archived, and is not comparable with the figures from 2015 onwards. As a result of this, the time series for secondary care in this report begin in 2010, while those for primary care begin in 2015. Any analysis in this report that aggregates the two, such as the combined projections for future workforce growth in Figure 2, therefore also begin in 2015.

The backlog of care

The BMA's estimates of the current backlogs in elective care and outpatient attendances have been calculated using NHS Digital's monthly [Provisional Monthly Hospital Episode Statistics for Admitted Patient Care, Outpatient and Accident and Emergency data](#) publications. We have used this data to compare activity during the pandemic – specifically from April 2020 onwards – with activity in previous, pre-pandemic years. For the elective care backlog, we have calculated the month-by-month difference between day-case and ordinary elective performance data (from the [Hospital Episode Statistics Monthly Activity Report dashboard](#)) from April 2020 onwards compared to the previous year (2019/20) – the cumulative total of these monthly differences is our estimated total backlog. Our estimate of the backlog in outpatient attendances has been calculated using NHS Digital's breakdown of admitted patient care and outpatients by treatment speciality, comparing monthly performance from



April 2020 onwards with data from 2018/19 and 2019/20 and, again, calculating a cumulative total of the pandemic difference for each month to generate a total estimated backlog. This estimate is subject to gaps in the data published by NHS Digital and does not include statistics for treatments added to the data collection since April 2020, to ensure comparability with previous years.

Chapter 1:

This chapter attempts to quantify the medical workforce shortage in the English NHS at the present time alongside implications on time and safety. The figures produced are estimations only, intended to illustrate the scale of the issue. They are not intended as rigorous or absolute definitions of the problem. Equally, the projections in this chapter – and throughout this report – are not forecasts and should not be interpreted as such.

Size of the medical workforce deficit:

The lack of any publicly available workforce planning assessments that join up workforce, health activity forecasting and demographic projections make quantifying the medical workforce shortage a difficult task. In the absence of an official baseline against which to quantify the gap, our analysis takes the average doctor to population ratio (doctors per 1,000 people) in those OECD EU countries for which data is available as its baseline. This is not a perfect measure, but in absence of an official baseline it does provide one way to quantify the shortage. It should be noted that not every EU nation is the member of the OECD, and not every EU nation that is a member of the OECD makes this data public. Our baseline of 3.7 doctors per 1,000 people in OECD EU nations against which we compare England has been calculated using the average number of doctors per 1,000 people of the following nations:

Austria
Belgium
Czech Republic
Denmark
France
Germany
Hungary
Ireland
Italy
Luxembourg
Poland
Slovak Republic
Spain
Sweden
Estonia
Slovenia
Latvia
Lithuania
Iceland
Norway
Switzerland

These data were taken directly from the OECD. We calculated the ratio for England (as OECD only supply this figure for the United Kingdom, not its constituent countries) using NHS Digital General Practice and Secondary Care workforce statistics and the latest available ONS population estimates (2018).

Projected future growth of the medical workforce:

This section uses a projection of the growth trend of the medical workforce to quantify the number of years it will take, at its rate of growth since the relevant datasets began (see above statement on data consistency), for the English NHS to reach the required number of doctors per 1,000 patients to meet the current OECD EU average of 3.7.



The projected future growth of the medical workforce was calculated using the annual growth trend since 2010 for secondary care, and since 2015 for primary care, which were then aggregated to produce the total projection. Note that the combined projection is the sum of the two individually projected series (primary care and secondary care), and not a post-aggregation projection. As the two aggregated series have different starting points, the 'Total' line on Figure 2 begins at 2015 (the later of the two dates).

These projections have been calculated based on their existing historical values (since 2010 for secondary care and since 2015 for primary care) using the AAA version of the Exponential Smoothing (ETS) algorithm, the predicted values of which is a continuation of the historical monthly values for the specified target dates.

Time and safety implications:

This section illustrates the tangible impact that these workforce shortages, which we have quantified illustratively as per the above, are having on the lives of doctors and patients. The average number of FTE roles that each doctor is presently doing has been calculated by dividing the number of FTE doctors we determine that we need today (to meet the OECD EU doctor to population average ratio) by the number of FTE doctors we actually have. We have then extrapolated from this how many extra hours doctors are being required to put in, which we have set against the Working Time Regulations to demonstrate how shortages are forcing doctors into overworking patterns with safety implications for patients and themselves.

Chapter 2:

This chapter attempts to set a range for the medical workforce shortage in the English NHS in the future by offering two potential scenarios through which the shortage may be estimated. As with the previous chapter, the figures produced are estimates only and are intended to illustrate the scale of the issue. They are not intended as rigorous or absolute definitions of the problem, and the projections in this chapter are not forecasts and should not be interpreted as such.

Scenario One

Scenario One again uses the average OECD EU doctor to population ratio to quantify the gap, in 2030 and 2043, between the number of FTE doctors indicated by the projected growth trend (methodology outlined on previous page) and the number of FTE doctors that would be needed in each year to match that OECD doctor to population ratio. This is by default adjusted for anticipated population growth given that the analysis uses ONS population projections to calculate the number of doctors needed in each year.

The quantification of this gap is intended as an illustrative example of what the deficit might be if no significant change is made the growth rate of the medical workforce.

Illustrative and fastest suggested expansion scenario for meeting the OECD EU nation average of 3.7 doctors per 1000 people (by 2030)

The scenario set out for the expansion of medical school places is intended to illustrate the scale of expansion that would be required in order to bridge this gap in the near future. This analysis attempts to account for attrition by subtracting from it an extrapolation of BMA survey data, which indicates that one in five BMA members intend to leave their career after the pandemic, as a proxy for a more reliable indication of attrition rates. We recognise this may not scale up to the entire workforce, and again is intended for illustrative purposes only.

The cost of the additional 34,788 medical school places for this illustrative expansion scenario was calculated using the [DHSC 2017 cost estimate](#) of £230,000 per medical student.

Scenario Two

Scenario Two tries to offer a more realistic quantification of the likely size of the medical workforce shortages in the future, by demonstrating the gap between the projected growth trend and the level of growth that would be required to meet expected growth in activity level including growing patient demand.



To do this, our analysis has borrowed from, and is grateful for, the 2018 work of the Health Foundation (HF) and the Institute for Fiscal Studies (IFS) in modelling a 'modernised scenario' for the NHS. Their analysis sets out the expected necessary growth requirements for the workforce to ensure it grows proportionate to rising demand and expectations, including the needs of a growing and ageing population. Using implied changes in activity, the HF and the IFS provided estimates for the growth in the workforce needed to keep up with increases in activity. It should be noted that the IFS and the HF did their analysis in 2018: changes will have occurred since then, including inflation, and our analysis does not account for these. Again, it is intended purely as an illustrative estimation.

According to the estimated rise in activity growth that they provide, the medical workforce likely needs to grow by 3.1% (FTE) in hospital and community settings and 0.9% (FTE) in general practice each year until 2033/34 (for full breakdown see Appendix C on page 50). Our analysis scales up the primary and secondary care medical workforce by these amounts, and then quantifies the gap between this amount and the projected trend based on historical growth (as outlined in Chapter 1 methodology).

The annual growth rate of the secondary and primary care medical workforces have been calculated using the first data release of each year. This is January for secondary care and March for primary care. The average annual growth rate has then been calculated by taking an average of these annual increases.

Chapter 3: GP replacement ratio

The 3:1 ratio for the number of incoming GPs needed to replace changes in hours refers to the period between March 2020 and March 2021 only. This figure was attained using the following steps:

- 37.5 hours per week – NHS Digital definition of an FTE qualified GP
- 34,012.5 – number of weekly hours lost from GP partner headcount (546)/FTE (907) attrition
- 4,162.5 hours – extra weekly hours delivered by overall increase of 111 FTE qualified GPs
- 38,175 – total weekly hours delivered by the 1,807 headcount increase in salaried/sessional GPs
- 21.13 – average number of weekly practice-based hours delivered per additional 1,807 salaried/sessional GP (38,175 overall weekly hours/1,807 headcount increase in salaried/sessional GPs)
- 1,610 (headcount salaried/sessional GPs needed to replace 546 headcount/907 FTE fewer GP partners) – 34,012.5 (number of weekly hours lost from GP partner attrition)/21.13 (average number of weekly hours delivered per additional (headcount) 1,807 salaried/sessional GP)
- $1,610 / 546 = 2.95$ headcount salaried/sessional GPs needed to replace the outgoing GP partner headcount (546) hours lost (34,012.5 / 907 FTE GP partners).

Nationality of NHS staff

All data for the nationality of NHS staff is headcount, not FTE.

Nationality of NHS hospital staff refers to those staff for whom a nationality is known. The nationality field available within the systems upon which these figures are based (the Electronic Staff Record) contains self-reported information from individual employees. Nationally thousands of NHS staff records do not contain useful data with people choosing not to specify their nationality or not asked to. In addition, as nationality is self-reported the value entered by an individual may reflect their cultural heritage rather than their country of birth. As such, these figures should be treated with a degree of caution.

No data is collected on the nationality of GPs but NHS Digital General Practice Workforce statistics include data on the country where GPs in England gained their primary medical qualification. General Practice figures contain estimates for practices that did not provide fully valid records.



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- 85 $34,012.5$ (number of weekly hours lost from GP partner attrition)/ 21.13 (average number of hours per the additional 1,807 salaried/sessional GP) = $1,610$ (salaried/sessional GPs needed to replace 546 GP partners)
- 86 21.13 (average weekly hours per new salaried/sessional GP) x 52 (weeks in the year) = $1,098.76$ (yearly hours) x 6000 (additional number of GPs committed to by Government) = $6,592,560$ (total number of yearly hours delivered by the 6000 GPs)/52 (weeks in the year) = $126,780$ (weekly hours delivered by additional 6000 GPs)/37.5 (weekly FTE hours) = $3,380.8$ (FTE fully qualified GP growth)
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- 100 The 83,779 FTE posts required to ensure the doctors workforce is able to meet future demand (taking into account the 6,634 current vacancies).
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