

The state of medical education and practice in the UK

The workforce report

2019



Working with doctors Working for patients

General
Medical
Council



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Overview

This report contains mid-year 2012 to 2019 workforce data from the UK medical registers. It also includes results from specifically commissioned surveys, mostly undertaken this summer, to inform emerging workforce strategies. We hope this new information and our findings will be helpful, as work continues to finalise the strategies with costings and specific actions.

Key findings

- The workforce is increasingly international and diverse. For the first time, more non-UK medical graduates took up a licence to practise than UK medical graduates. And, UK medical graduates were more ethnically diverse than ever before.
- There are significant threats to retaining existing doctors. We are struggling to retain substantial numbers of doctors who, in the face of pressures, are reducing their hours or intending to leave UK practice. This is especially serious for certain groups of doctors, such as GPs and international medical graduates (IMGs) in specialty and associate specialist (SAS) and locally employed (LE) roles.
- Wellbeing is key to improving retention of doctors and quality of patient care. Better planned and resourced medical leadership can spread the positive, inclusive and supportive cultures that are evident in many places across the UK.
- A different mix of specialties is required for the future workforce. Meeting future patient demand requires more expert generalists, as well as more specialists identified in national workforce plans as being in increasing demand, such as psychiatrists and radiologists. Greater flexibility in training and job design is also needed. Our data shows the system is starting to respond to these needs. For example, this year there's been a sharp increase – of 6% – of doctors on GP training programmes.

The data

The workforce: the total number of licensed doctors

The number of licensed doctors rose by 4% in England, 2.3% in Northern Ireland, 1.7% in Scotland and 1.5% in Wales. And for the first time, the number of doctors licensed to practise in the UK is over a quarter of a million in 2019.

But reductions in hours and increasing demand mean that this workforce is insufficient. If measures aren't taken to reduce pressures on the system and improve doctors' wellbeing, the data suggests that there could be a continuing decline in hours worked, which could further exacerbate the issue.

Diversity of the workforce

The data shows increasing diversity in the workforce. Independent research, commissioned as part of our *Supporting a profession under pressure* programme, shows that workplaces must be supportive, inclusive and well-led, for the benefit of all doctors.

Age

Overall, the age mix within the workforce has remained fairly constant, but the increasing number of doctors over 50 and nearing retirement in some specialities is worrying.

- In 2019, 73% of public health specialists are 50 or over, compared to 65% in 2012. Among anaesthetics and intensive care specialists, the increase in this demographic is from 36% to 42%.
- Encouragingly, in contrast, the proportion of GPs over 50 has declined from 41% to 37%.

Gender

Women and men continue to choose different specialties and career paths, so trends seen within these demographics will impact the future workforce. There is also the effect of older generations with more males now retiring, so gender balance is becoming more equal.

There are 20% more female doctors in 2019 than there were in 2012, and female doctors now make up 48% of the workforce. Both Scotland (53% female) and Northern Ireland (51%) have a greater proportion of female doctors in 2019 than England (48%) and Wales (46%).

The shift in gender balance isn't because the profession is becoming less attractive to males. Instead, it reflects that older generations, made up of a higher proportion of males, are retiring.

- Since 2017, the number of male doctors joining the register has risen by a third. Half of the males joining the register are IMGs, reflecting the increase in the number of IMGs joining, a large proportion of which are men.
- The proportion of UK graduates joining the register who are women has actually declined from 58% in 2012 to 54% in 2019.

Ethnicity

53% of licensed doctors identify as white, compared with 86% of people in the UK population. It's vital to support this ethnically diverse workforce – with strong workplace leadership and induction for those joining from overseas, including our free *Welcome to UK practice* workshops.

The increasing ethnic diversity of doctors joining the workforce is partly driven by the increase in IMGs. It's also due to a rising number of UK medical graduates who identify as BME joining the register – 17% in 2012 to 23% in 2019.

Ethnic diversity varies between countries:

- 40% identify as BME in England
- 30% identify as BME in Wales
- 17% identify as BME in Scotland
- 8% identify as BME in Northern Ireland.

The supply of new doctors

There are early signs of the supply of new doctors increasing, but we must sustain and enhance this. One of the ways we can do this is by enabling non-UK graduates to register and gain employment quickly and efficiently. In the longer term, we'll continue to work with others to make sure UK medical education and training meet the demands envisaged by each of the four countries' workforce strategies. These aims must be complemented by continued support for doctors once in employment, to retain them for the longest possible time.

Early signs of response from UK medical training

The workforce strategies in each UK country focus on integrating health, community and social care. For the longer term, we need more doctors with the right balance of expert generalists and particular specialists. The system appears to be responding to the need for certain specialists, and this momentum must be maintained.

For example, from 2018 to 2019, there has been:

- a 6% increase in those on GP training programmes – a much sharper increase than in recent years
- a 4% increase in those training in emergency medicine and 7% increase in those training as radiologists
- a small increase (2%) in doctors in psychiatry training programmes, after years of stagnation and decline.

We're also working with the UK's healthcare systems to quality assure new medical schools and make sure they're established as soon as possible to increase the pipeline of future doctors.

The supply of IMGs is increasing

The level of funded vacancies and the adverse impacts of workload and time pressures on doctors mean we also need to maximise the flow of new non-UK doctors. And in recent years, there have been some positive signs:

- a dramatic increase in IMG doctors – the number joining each year doubled between 2017 and 2019
- more doctors are joining the workforce from outside the UK than were UK-trained in 2019 – a trend we've never seen before.

It's crucial that this valuable cohort of doctors are supported in their new roles and that they are working within effective clinical governance systems.

Many new IMG doctors initially start practising as SAS and LE doctors. These roles are important, and our survey tells us that more needs to be

done to demonstrate the value of these doctors, and to ensure that they have access to training and development. Attention also needs to be paid to making it easier for IMG doctors to join the GP and Specialist registers. We are doing all we can to make routes onto the GP and Specialist registers for non-UK graduates efficient, but we urgently need legislative reform to allow us to go further.

EEA doctors

We have not yet seen any decline in doctors joining from the EEA since the referendum in 2016, but we continue to monitor this group closely and the 2019 edition of *Our data about doctors with a European Qualification* will be published by the end of the year.

Doctors leaving

Despite an increase in those joining the register, our figures also highlight areas of concern in the number of doctors leaving. The data highlights particular groups of doctors we should focus on retaining.

- The proportion of over-55 doctors with a UK primary medical qualification (PMQ) who are retiring early has risen. The number giving up their right to practise – leaving the register before 2009 and relinquishing their licence thereafter – is now about three times the level it was in 2000.
- Large numbers of IMG doctors under 55 also leave, particularly those in their 30s. 7,000 relinquished their licences between 2012 and 2014 – more than the number of UK-trained graduates who left, despite them being a much bigger component of the workforce. There are many reasons for this, such as visas

expiring or the end of fixed-term training arrangements. But, improved retention of this group may be possible and would be of great benefit. Workplace and cultural issues are especially important. Independent research that we commissioned¹ shows many of these doctors are in 'outsider' groups and lack peer support.

- Between 2012 and 2014, SAS and LE doctors were twice as likely to have relinquished their licence and not returned by 2019 (90% of all doctors who leave and return eventually do so within five years). This is partly because there is a higher number of IMGs in this group, and younger IMGs are more likely to leave the profession. Emerging findings from our survey of SAS and LE doctors, which will be published later this year, show that many feel burnt out, and some feel bullied and undermined. There are also a number who are concerned the lack of training opportunities.
- About a third of doctors with a UK PMQ who leave permanently, go abroad. Multiple factors will be behind this but tackling some of the workplace issues may reduce the substantial number who leave.

Intentions to change hours worked or leave the profession

Worrying data continues to emerge about doctors' wellbeing, and the implications this can have on patient care and on doctors in the long-term. For example, in our barometer survey of 3,500 licensed doctors across the UK, half of all GP respondents and 26% of doctors overall said they work beyond their rostered hours at least weekly and feel they cannot cope on a weekly basis.

Doctors' responses to these increasing workloads and pressures include reducing hours and, ultimately, ultimately, leaving the profession. This has significant consequences for the wider system. There are many opportunities for change within workplaces, culture and leadership. We'll explore these further in *The state of medical education and practice in the UK: 2019*.

Working hours

The barometer survey shows that in the 12 months to the summer of this year:

- a third of doctors have refused requests to take on additional workload
- a fifth of doctors – and a third of GPs – have reduced their hours.

Declining hours among GPs is especially concerning, given the emphasis on primary care in all workforce strategies. Our research also shows that significant numbers of doctors (a third of respondents) intend to reduce their hours in clinical practice within the next year. Shorter hours and more flexible working patterns can have an important and positive impact on doctors' welfare and patient safety. While they could create issues for supply in the short-term, there's potential for increased retention if wellbeing is improved.

The challenge for all the workforce and workplace strategies is finding a way to reach a new equilibrium. Working less than full-time and flexible roles, such as locums, should be planned, high-quality and valued parts of the workforce, rather than a last resort when pressures become too much.

Intending to leave the profession

In addition to the third of doctors who intend to reduce their hours over the next year:

- 10% of doctors intend to take a break from practising medicine
- 7% plan on leaving the profession permanently.

40% of those who say their main intention is to leave, for reasons other than retirement, have already taken hard steps to do so. This is 3% of all respondents to the survey. A hard step includes applying for a new role, contacting a recruiter and/or applying for a role outside medicine. These doctors were particularly likely to express that they were dissatisfied, burnt out, had difficulty providing sufficient care, and felt unable to cope with their workload.

Figures on doctors' intentions need to be treated with some caution. If the 3% of respondents who have already taken hard steps to leave actually left, it would be broadly in line with the levels leaving over the last couple of years. We don't know how many of others whose main intention it is to leave will actually do so. There are also others who intend to leave, but it's not their main intention.

Addressing workforce challenges

The data presented in this report highlights certain priorities that are essential to create a well-resourced and sustainable workforce. Specifically, our imperatives in the light of the data presented in this report are:

- Further easing routes on to the GP and specialist registers for non-UK graduates – we’re dealing with applications quickly and efficiently, while maintaining high standards. But we urgently need legislative change to take this further for those who wish to join GP and Specialist registers.
- Examining what’s needed to retain non-UK graduates for longer – relatively large numbers of IMGs leave UK practice in their 30s and 40s. Retaining them for a little longer could make a significant contribution to the workforce.
- Promoting supportive leadership, cultures and workplaces to create environments that doctors want to continue to work in – the data suggests that action in this area will be more beneficial than increasing supply alone.

We have recently published two independent reports: *Fair to refer*¹ by Dr Doyin Atewologun and Roger Kline; and research on medical leadership by Dr Suzanne Shale.² These – and the forthcoming independent review of medical student and doctor wellbeing, co-chaired by Professor Michael West and Dame Denise Coia – all contain important recommendations for creating supportive working and training environments.

We will publish our response to all these recommendations in the new year, and we’ll work with others in the system to achieve the benefits of spreading good practice in this area. It’s critical that we focus on medical leadership, workplace cultures and induction for new doctors and returners.

- Expanding flexibility in training and continuing professional development (CPD) – including building on our pilot of GMC-regulated credentials. This includes emphasising generic professional capabilities (GPCs) in our *Outcomes for graduates*, which come into force next year. This will allow doctors and employers to respond to changing patterns of demand and new models of care more easily.
- Exploring how we can support employers to design jobs that enable flexible career and working patterns – there is strong evidence that many doctors are already reducing their working hours – and more will – in the face of workplace pressures and to improve their work-life balance. We need to make sure that career breaks, locum work and less than full-time working or training are valued and planned for, to result in high-quality and highly productive roles.
- Supporting new models of care – new professional roles and greater multi-professional team working can both improve patient care and increase productivity. We’re particularly pleased to be taking on the regulation of Physician Associates and Anaesthesia Associates.

Medicine remains a popular career and the number of doctors is rising. There's evidence of the healthcare systems around the UK responding to need, with a sharp increase in non-UK doctors joining, as well as increases in GPs and specialties that the national workforce plans emphasise.

The critical challenges now are to accelerate supply, reduce the loss of working hours due to pressures, and retain as many doctors as possible.

We are doing all we can to support the supply of doctors and to make training and continuing professional development as flexible as possible. Legislative change to enhance our ability to do this must be a priority if we are to achieve the aspirations of the national workforce plans.

Increased productivity will be critical in supply meeting demand, as will better care pathways for patients. We'll support new models of care through our role in medical education and training, making sure, with employers and others, that doctors are as prepared and supported as possible for the future.

Effective multi-professional working will add considerably to the flexibility and efficiency of the workforce. We are particularly pleased to take on the regulation of physician associates and anaesthesia associates. This group can make a significant difference by easing the pressures on doctors and hence be good for the NHS, the profession and patients.

Leadership that fosters workplace cultures, which support our increasingly diverse workforce are also of paramount importance to meet the retention challenge.

We hope the data and insight in this report will inform the further development and implementation of countries' workforce plans across the UK. Many of our specific powers and activities will support the aspirations for these plans and in doing so help protect patients and support doctors. We're also committed to working closely with other regulators to put the workforce on a successful trajectory.

Introduction

In *The state of medical education and practice in the UK: 2018 report*,³ we highlighted the acute pressures on the profession and the strategies that doctors are using to cope. We also raised the emerging risks caused by these widespread pressures, to patient safety, doctors' welfare and the longer-term sustainability of the NHS.

Since then, there has been a welcome emphasis on addressing these challenges and investing in the health sector workforce in all four countries of the UK.

Earlier this year, the NHS in England published its *Long Term Plan*⁴ (LTP), while Health Education and Improvement Wales (HEIW) and Social Care Wales launched a consultation on creating an integrated health and social care workforce strategy. This will also be the approach for the Scottish and Northern Ireland strategies.

The Welsh strategy places great emphasis on the wellbeing of the workforce, which is underpinned by the new long term plan *A Healthier Wales*.⁵

And the Department of Health for Northern Ireland continues to progress the implementation of the *Health and Social Care Workforce Strategy 2026: Delivering for Our People*⁶ in the absence of the Northern Ireland Assembly.

To support these efforts, we're publishing this report, which contains mid-year 2012 to 2019 workforce data from the UK medical registers, ahead of *The state of medical education and practice in the UK 2019 report*. It also includes results from specifically commissioned surveys, mostly undertaken this summer, to inform emerging workforce strategies. The annual figures are a snapshot taken in June of each year and most of the survey data reported here is from this summer.

Our initial analysis provides some data and insights on:

- the supply of new doctors
- the retention of existing doctors
- the changing shape of the register in different regions and specialties.

And it includes the contribution that we and others can make to address some of the challenges and opportunities.*

* Many workforce planners will be interested in more detailed figures split by region and area of practice or specialty. While this report demonstrates some of the geographical granularity and detail we can provide, we will be publishing further data online and can respond to bespoke requests for specific data. In addition, some data is incorporated into the GMC Data Explorer tool available on the GMC website, which allows users to cut a broad range of data to suit their needs. You can access it on our website, here: <https://data.gmc-uk.org/gmcdata/home/#/>

The changing workforce

The number of doctors licensed to practise in the UK is the potential number of doctors available to meet demand. The degree to which they do so is of course significantly affected by hours worked. We do not hold reliable data on hours worked, though we do report in the next section on how current pressures on doctors might affect their decision about how many hours they work. Here, we present our data and top-line analysis of licensed doctors who are, therefore, available to work.

Change in the overall number of licensed doctors is the net effect of those taking up a licence for the first time (joiners) and those who leave. So, we comment here on changes to the source of new doctors, trends in the types of doctors who leave the profession, and the subsequent changing shape of the register.

Overall, the number of licensed doctors has continued to rise – by 4% in 2019, surpassing a quarter of a million doctors for the first time. There are also some significant trends in both the types of doctors joining and the types of doctors leaving.

We begin this section by looking at the source of doctors in terms of where they gained their primary medical qualification (PMQ): in the UK, rest of the EEA or rest of the world. There's a sharp increase in the number of doctors joining from outside the EEA, and that the numbers joining from the EEA have not declined since

the EU referendum. For the first time in 2019, most new doctors were from outside the UK. This, together with a rise in the proportion of UK trained doctors who define themselves as black or minority ethnic (BME), is contributing to increasing ethnic diversity in the workforce.

We then look at where doctors are practising – noting the stronger growth in the number of doctors in England (4%) compared to the Northern Ireland, Scotland and Wales (about 2% in each) – and what area of practice they are in (GP, specialist or neither of these). There's note a growth in GPs and strong growth in some specialties, such as psychiatry and emergency medicine. This is a contrast to declines in pathology, public health and occupational medicine.

The final section looks at the rise in the number of doctors on different training programmes. This shows that the system seems to be responding to

areas of concern flagged in national plans, such as GPs (up 6% in 2019), psychiatry and emergency medicine. Whether this is a sufficient start to meet the aspirations of the national workforce strategies remains to be seen and is beyond the analysis possible in this report. But we can

see where the growth is coming from, which may help with planning. For example, there is relatively strong growth in some areas of doctors who are over 40 and hold a non-UK PMQ, albeit from a relatively small base.

The register and how it has changed

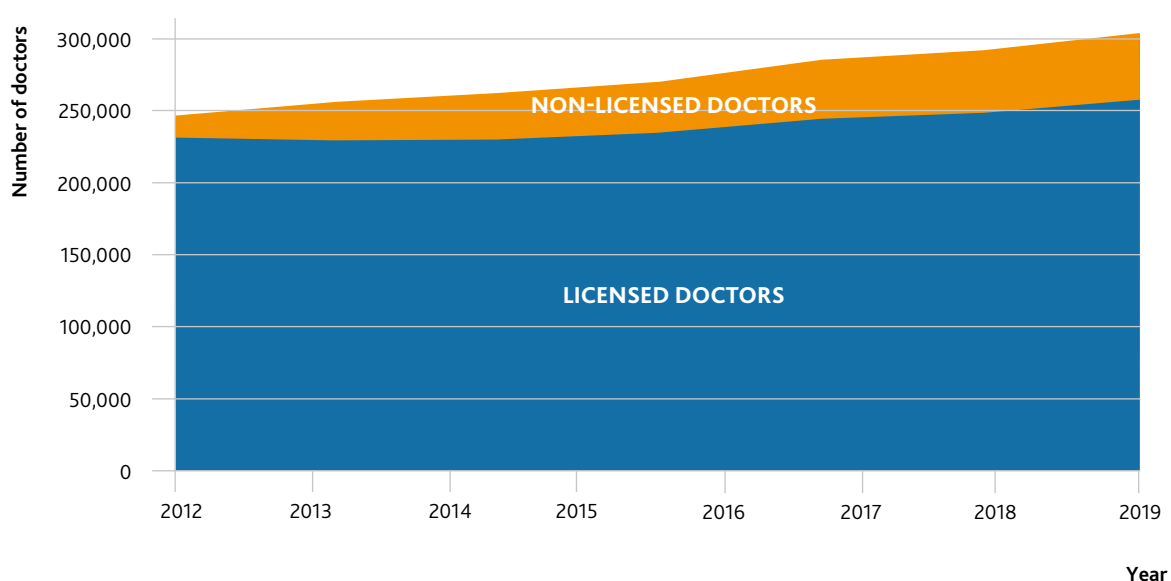
The number of licensed doctors continues to grow faster than the population

Figure 1 shows the growing number of doctors in the UK. From 2012 to 2019, the number of licensed doctors grew by more than 8% and in 2018 to 2019 we saw the largest year-on-year increase of 4%.

The Office for National Statistics projections show that the UK population will grow by 5.5%

from 2016 to 2026,⁷ but the growth in licensed doctors from 2016 to 2019 is already at 8.2%. While this is a positive sign, it should be viewed alongside other data to gain a full understanding of what this means. For example, a large proportion of respondents to a survey we commissioned for this report said they have reduced their working hours. Plus, we should take into account the impact of growing demand on health services as the population ages, patient expectations increase, and healthcare needs become more complex.

Figure 1: Number of licensed and non-licensed doctors on the medical register, from 2012 to 2019



Female doctors make up a greater proportion of licensed doctors than ever before

The number of licensed female doctors has grown by 20% since 2012 (see Figure 2). In 2019, women make up 48% of all licenced doctors.

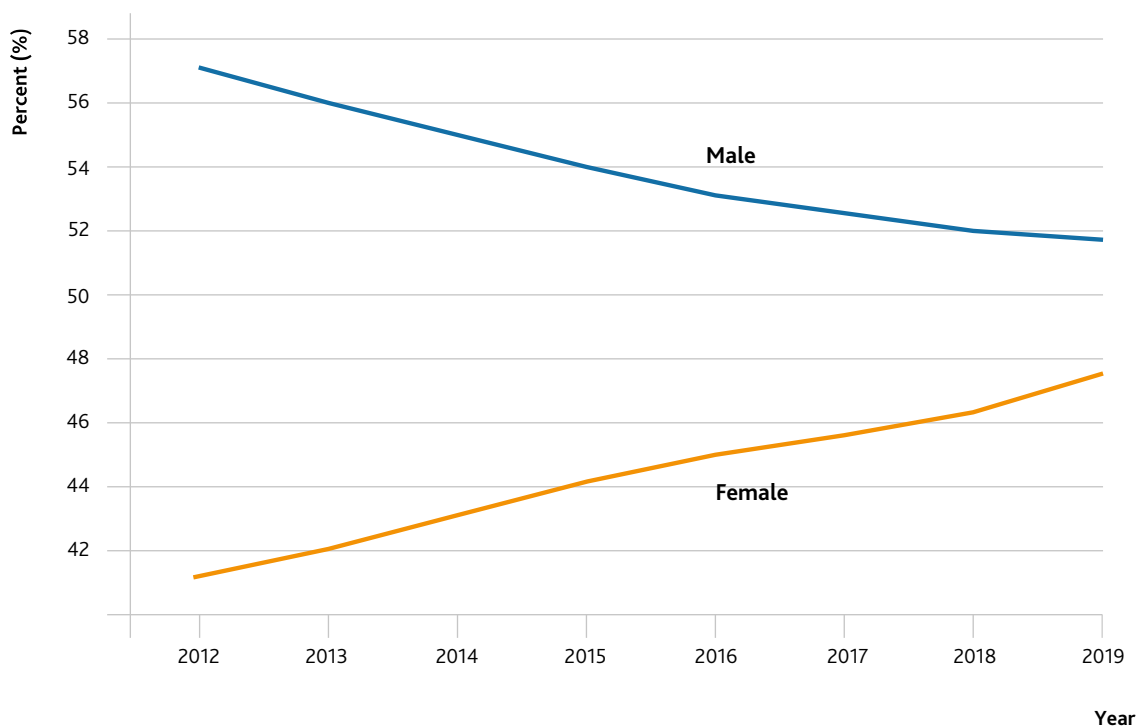
The year-on-year increases in licensed female doctors are greater than for male doctors. However, the difference between those rates has been narrowing since 2014, and from 2018 to 2019 we did not see any dramatic shift in the medical register’s gender balance. Instead, the proportion of licensed doctors who were female in 2019 was only 0.2% higher than in 2018.

Large increases in male doctors taking up a licence is masked by retirement rates

The increase in the proportion of licensed doctors who are female is because female doctors taking up licences, together with older, predominantly male, doctors retiring.

This pattern masks another story: from 2018 to 2019 the number of male doctors taking up a licence, grew by more than a fifth, following a considerable 14% growth in the previous year. Almost half of these male doctors who joined from 2017 to 2019 were European Economic Area (EEA) graduates or international medical graduates (IMGs). And most were not, initially at least, joining the UK workforce as either a specialist or a GP.

Figure 2: Proportions of licensed doctors by gender, from 2012 to 2019



So, while the total number of licensed male doctors slightly reduced, there is a high degree of flux within that group. Later in this report, we analyse doctors who leave in more detail.

The number of licensed EEA doctors fell between 2014 and 2016, but has increased slightly since the EU referendum

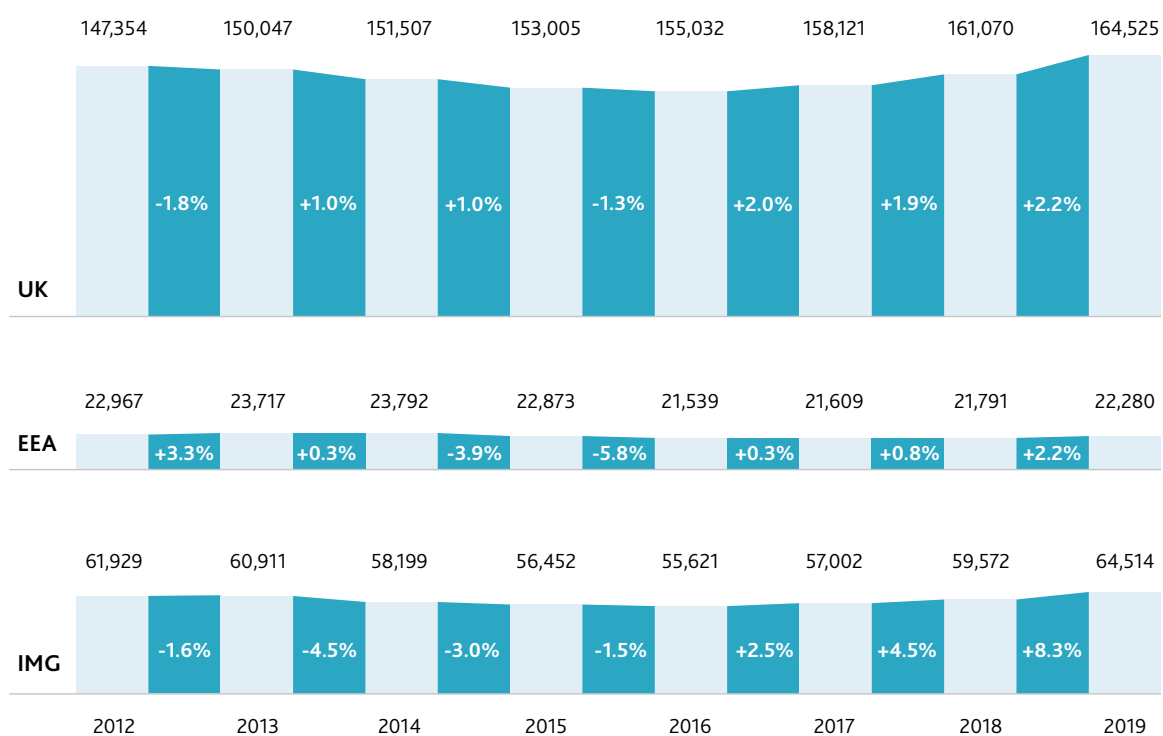
The number of EEA doctors working in the UK fell by a small amount from 2012 to 2019. This is largely due to decreases in 2014 to 2016, when we saw a 9% fall – partly due to a new requirement introduced in June 2014 for EEA graduates to show proof of their English language capability before they gain a licence to practise.

Interestingly, since then – and following the EU referendum result – we’ve seen increases in the

number of licensed EEA doctors, with a 0.8% rise from 2017 to 2018 and a more notable 2.2% rise from 2018 to 2019 (see Figure 3). This increase in EEA doctors since the referendum is seen in all four UK countries.

It’s important to note that Parliament has passed legislation to continue the automatic recognition of EEA doctors’ qualifications during any transitional period that might occur in the event of a no-deal Brexit. One risk associated with a no-deal Brexit is a number of the 2,500 EEA doctors on UK training programmes leaving because UK training is no longer recognised in their countries. We continue to monitor the number and make up of EEA qualified doctors licensed to practise in the UK and we’ll publish a 2019 update to our series of reports^{8,9} about this group of doctors.

Figure 3: Numbers of licensed doctors by PMQ from 2012 to 2019, with year-on-year percentage growth



After a period of decline, the number of licensed IMG doctors is growing at a rapidly increasing rate

From 2012 to 2016, we saw a 10% decline in the number of licensed IMG doctors. But there was a complete reversal of this between 2016 and 2019, when there was an increase of 16%. This was particularly evident between 2018 and 2019 when the number of licensed IMG doctors grew by 8.3% in a single year.

There are many push and pull factors that influence doctors' decisions to move countries. Further study could explore the impact of policy changes, such as the recent relaxation of visa rules or macro-economic effects.

Non-UK graduates account for over half of all new doctors

The UK healthcare system continues to benefit from experienced EEA and IMG doctors joining from overseas. More than half (55%) of doctors who joined the workforce between June 30th 2018 and June 30th 2019 had qualified outside the UK (Figure 4). This is an increase from the 44% joining between the June 30th snapshot dates in 2012 and 2013.

The overall increase in the relative proportion of non-UK graduates joining is primarily driven by an increase of IMGs joining the workforce for the first time, from 2016 to 2019. Between 30th June 2018 and 2019, the number of IMG doctors joining was three times greater than from 30th June 2012 to 2013.

IMG doctors make up a larger proportion of specialty and associate specialist (SAS) and

locally employed (LE) doctors than other register groups – 56% of SAS and LE doctors compared with 25% of specialists and 16% of GPs.

In the last year, we've seen especially large increases in those joining the register with medical qualifications from Africa and the Middle East, but the majority of IMG joiners still come from South Asia.

Increases in the number of IMG doctors as a whole may be related to the removal of a cap in June 2018,¹⁰ which had limited the recruitment of doctors from outside the EU. At the same time, we have seen more doctors taking part in the Medical Training Initiative, which is a programme where overseas doctors come to the UK for a set period of time to work and learn about the UK's healthcare system before returning to their home country. However, we believe this is a more minor driver behind the dramatic increase than the cap removal.

More doctors are joining from Eastern and Central Europe and the Baltic countries than from the rest of the EEA

The trend of increasing numbers of doctors joining from Central and Eastern Europe and the Baltic countries continues in 2019. The numbers joining from Northwest Europe have remained the same in the last year, after a prolonged period of steady decline. Southern European EEA doctors have joined in slightly greater numbers in 2019, which is a contrast to the decreases since 2014. However, as noted earlier, we can see no evidence yet that the EU referendum has affected the overall numbers of licensed EEA graduate doctors.

Figure 4: Number of new joiners by PMQ, from 2013 to 2019

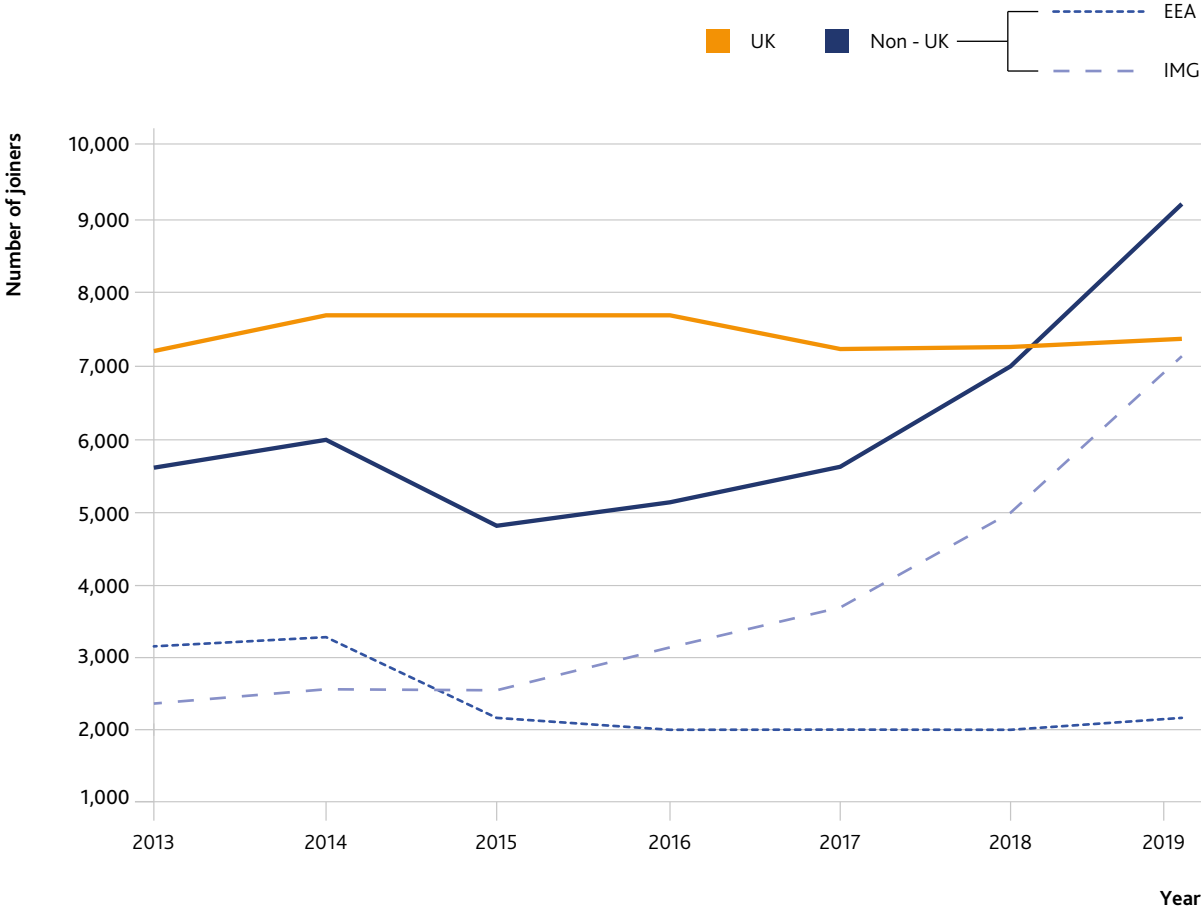
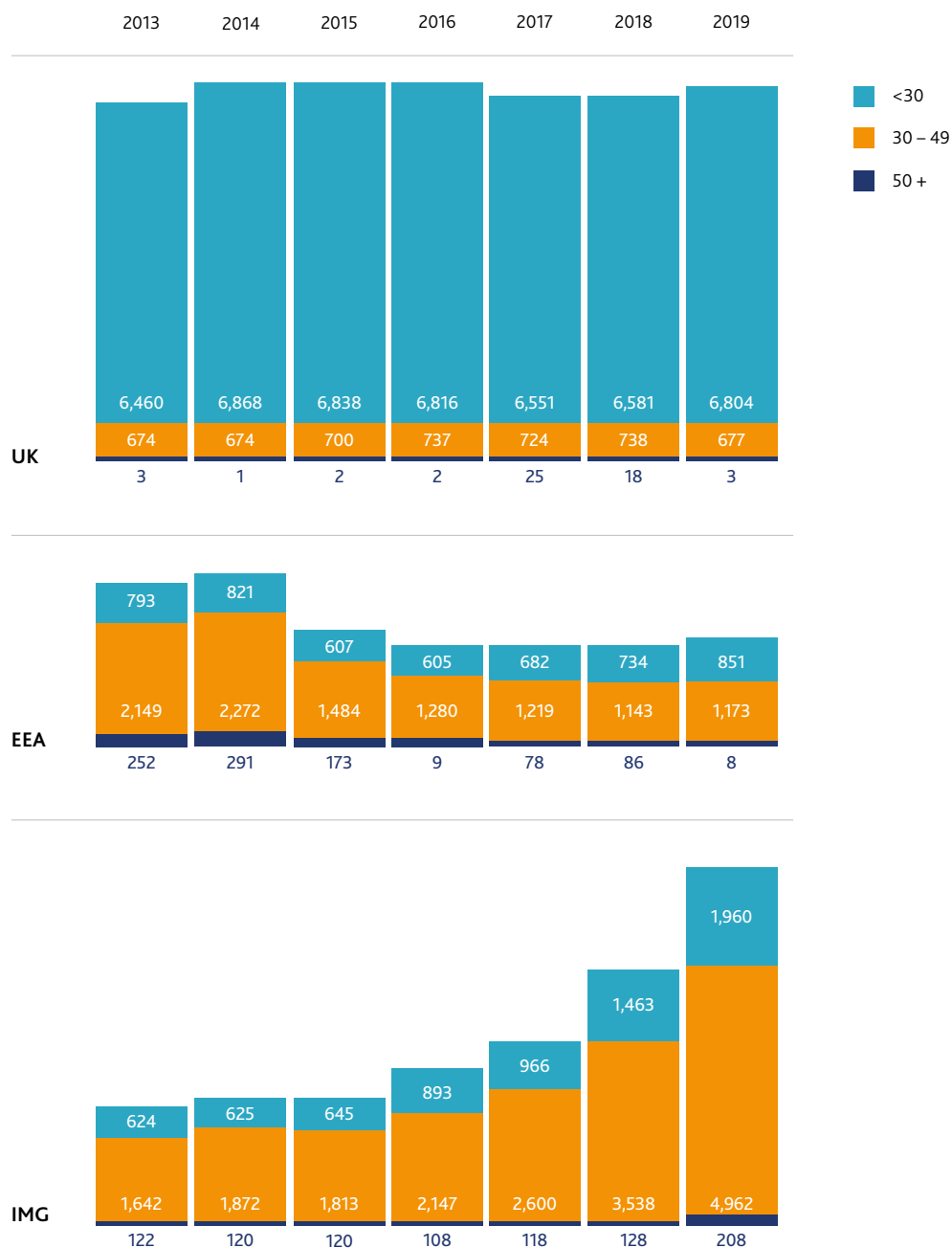


Figure 5: Doctors taking up a licence for the first time by where they gained their PMQ, from 2013 to 2019



There is increasing ethnic diversity among the doctors joining the UK workforce

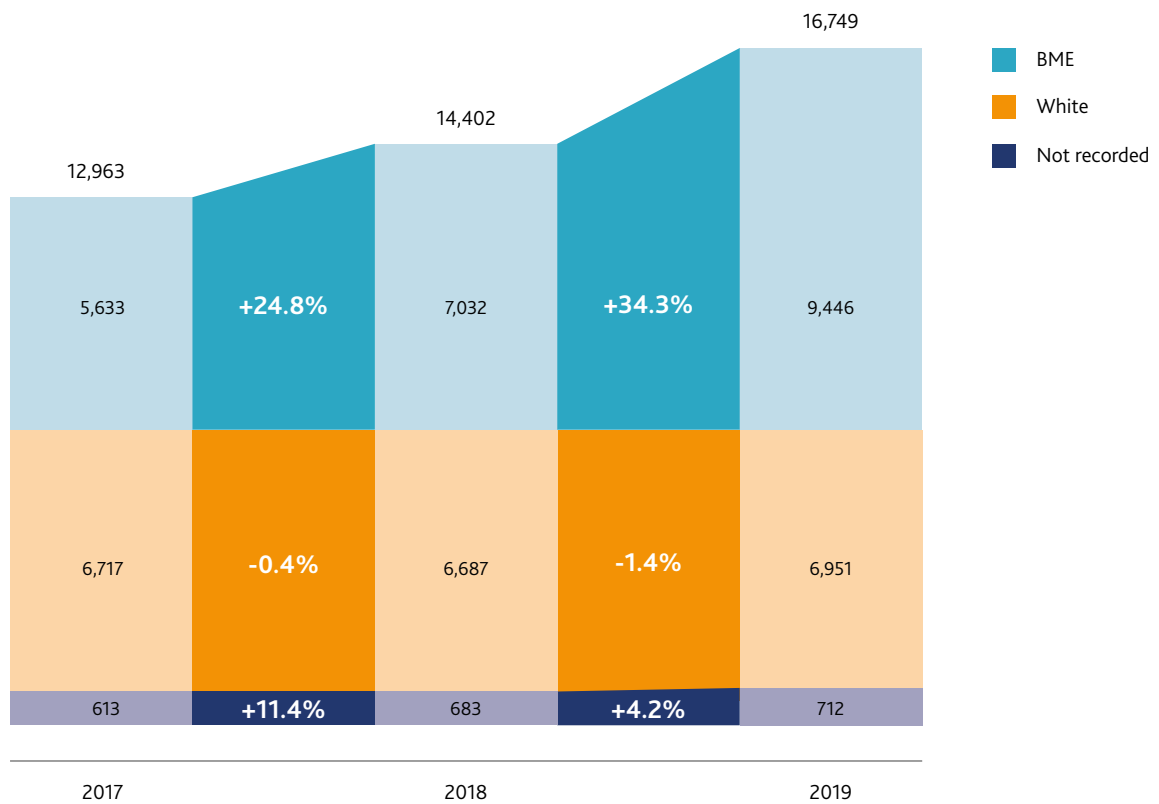
Since 2017, we've collected data on the ethnicity of just over 95% of doctors taking up a licence. Figure 6 shows the dramatic year-on-year growth in the number of BME doctors joining or returning to the workforce.

Comparing 2017 to 2019, the proportion of those joining who are BME has increased from 43% to 56%. The proportion of doctors who are black or black British and Asian or Asian British have each

increased by almost 5%. It's important to note that this is predominantly driven by increases in non-UK trained BME doctors. This group grew from a quarter of all new joiners in 2017 to 40% in 2019, overtaking UK trained white doctors. However, there has also been an increase in the ethnic diversity of UK trained doctors each year.

The proportion of licensed doctors who identify as white in 2019 was 53%. The UK medical workforce is more ethnically diverse than the UK population, among whom 86% identified themselves as white in the 2011 census.¹¹

Figure 6: Doctors taking up a licence to practise by ethnicity, from 2017 to 2019



Areas of practice

GP numbers continue to grow, but at a slower rate than specialists

Figure 7 shows that in 2012 to 2019, the number of licensed GPs has grown by 6%, less than half the growth in the number of licensed specialists (14%).

The growth in the number of licensed GPs has mostly been a result of large increases (8%) in UK trained GPs, with growth in IMG GPs being roughly the same from a much smaller base. The number of EEA GPs has fallen significantly – by 10% – though EEA GPs are a relatively small proportion of the total (5% in 2019).

By contrast, all PMQ groups licensed on the Specialist Register have grown since 2012. And IMG lead them with 20% growth. In the same period, UK trained specialists grew in number by 14% and EEA specialists by 7%.

Trends in the numbers of specialists vary by speciality

The 14% growth from 2012 to 2019 in the number of licensed doctors on the Specialist Register contains within it a variety of patterns among the different specialties (Figure 8).

Figure 7: Number of licensed doctors by whether they are on the GP or Specialist Register, or are in training, from 2012 to 2019

	2012		2019
	Number of doctors	% change	Number of doctors
GP	57,736	+6%	61,015
Specialist	68,019	+14%	77,683
GP and specialist	1,293	-5%	1,231
SAS and LE	46,514	+7%	49,798
Neither register and in training	58,688	+5%	61,592

Emergency medicine is showing strong growth

We see very strong growth in the number of emergency medicine doctors, with a 5% increase from last year and an almost 20% increase over the past five years. This is most likely a result of curriculum changes over the period for this relatively new specialty, meaning the numbers of training opportunities and the types of doctor attracted to them will have substantially changed since 2012.

The number of psychiatrists beginning to recover

Psychiatry, a large specialty, had previously been in decline. But small increases in numbers in recent years mean that there has been a 1.5% increase in the last five years. This is especially encouraging given the wide expectation that mental health issues will need more support in future.

Occupational medicine and public health medicine specialist numbers continue to decline

Continuing a trend observed in recent years, the number of occupational medicine and public health specialists continued to decline in 2019. In addition, an increasing proportion of these cohorts is aged 60 or over. Between 2012 and 2019, the proportion of public health and occupational medicine specialists aged 60 and over increased from 17% to 24% and from 24% to 32% respectively.

The number of occupational medicine doctors who are younger than 40 has decreased markedly, with a 71% reduction between 2012 and 2019. There were also a third fewer doctors

training for this specialty over the same period. Further work is needed to better understand why the number of trainees for this specialty continues to shrink – especially because of the important role these specialists play in supporting other doctors and health professionals.

Although we see a considerable decline in public health specialists overall, the figures for those under 40 have undergone substantial growth. There were 60% more in 2019 than in 2012 – partly due to the number of doctors training in that specialty increasing by a fifth in the last five years.

The shrinkage of the public health specialty is in the context of a possibly decreasing demand for doctors in this area. Roles traditionally taken up by doctors in public health are increasingly being filled by non-medical staff. Hence, a reduction in this area is not necessarily a cause for concern.

IMGs have grown by a quarter among SAS and LE doctors over the past five years

The number of IMG doctors taking up a licence but not joining the specialist or GP registers and therefore most likely in SAS and LE doctor roles (or waiting for visas and/or their first job) has accelerated in the past three years. From 2016 to 2017, there was a 4.2% increase and 2018 to 2019 saw a 13.3% rise. Viewed over five years, this equates to a 25% increase in IMG doctors in this group. This rapidly accelerating growth has further cemented IMGs as the main proportion of SAS and LE doctors.

Figure 8: Number of licensed doctors on the Specialist Register by specialty group, from 2012 to 2019

	2012		2019
	Number of doctors	% change	Number of doctors
Medicine	16,626	+25%	20,707
Surgery	12,479	+13%	14,056
Anaesthetics and intensive care medicine	9,408	+11%	10,431
Psychiatry	8,137	+1%	8,211
Radiology	5,180	+16%	6,000
Paediatrics	4,823	+24%	5,984
Obstetrics and gynaecology	3,598	+13%	4,072
Pathology	3,113	-3%	3,021
Ophthalmology	2,048	+15%	2,350
Emergency medicine	1,676	+39%	2,328
Public health	1,331	-22%	1,032
Occupational medicine	708	-21%	562
Other or multiple specialty groups	185	-14%	160

Geographic distribution of doctors in the UK

The data we presented in the last section focussed on the UK-level data we hold. Our online data breaks this information down to country levels and, on request, we can sub-divide it into regional and sub-regional levels to help inform more local workforce debates.

Here, we summarise some of that data. This data summary is best read in conjunction with online data, which provides further information. Note the basis we use for locating doctors outlined below.

Locating a doctor in the absence of scope of practice data

We use a combination of data sources to estimate a doctor's main work location. Employment contracts are highly reliable and define location for most doctors, but they aren't always available. In these cases, we consider any records of a doctor being on a GMC-recognised training course.

For doctors without either of those sources, we use the doctors' designated body. This is the institution a doctor connects to for revalidation, which is essential for maintaining a valid licence to practise.

There are a small number of types of designated body that are not appropriate to use as a proxy for a doctor's work location, such as the offices of a locum agency. In these relatively rare circumstances, we use the address a doctor gave during registration and revalidation. If we can collect full scope of practice data in the future, we will be able to improve the accuracy of our location data, and put into context the things doctors tell us in relation to the type of environment they are working.

Figure 9: Doctors per 1,000 people* in each UK country, from 2017 to 2019

		2017	2018	2019
England	Licensed doctors	194,096	199,150	206,195
	Population	55,619,400	55,977,000	56,357,466
	Licensed doctors per 1,000 people	3.49	3.56	3.66
Scotland	Licensed doctors	20,202	20,428	20,778
	Population	5,424,800	5,438,000	5,470,324
	Licensed doctors per 1,000 people	3.72	3.76	3.80
Wales	Licensed doctors	9,879	10,092	10,242
	Population	3,125,200	3,139,000	3,151,569
	Licensed doctors per 1,000 people	3.16	3.22	3.25
Northern Ireland	Licensed doctors	6,278	6,390	6,544
	Population	1,870,800	1,882,000	1,888,062
	Licensed doctors per 1,000 people	3.36	3.40	3.47
Total	Licensed doctors	236,732	242,433	251,319
	Population	66,040,200	66,436,000	66,867,421
	Licensed doctors per 1,000 people	3.58	3.65	3.76

* all population estimates are from the Office for National Statistics^{11, 12, 13, 14, 15, 16}

The number of licensed doctors per population has increased in all UK countries

Figure 9 shows that each country has seen a very gradual increase in the number of licensed doctors per 1,000 people since 2017. This reflects that the number of licensed doctors is growing faster than the population.

The distribution of licensed doctors across the four UK countries has been consistent over the last five years

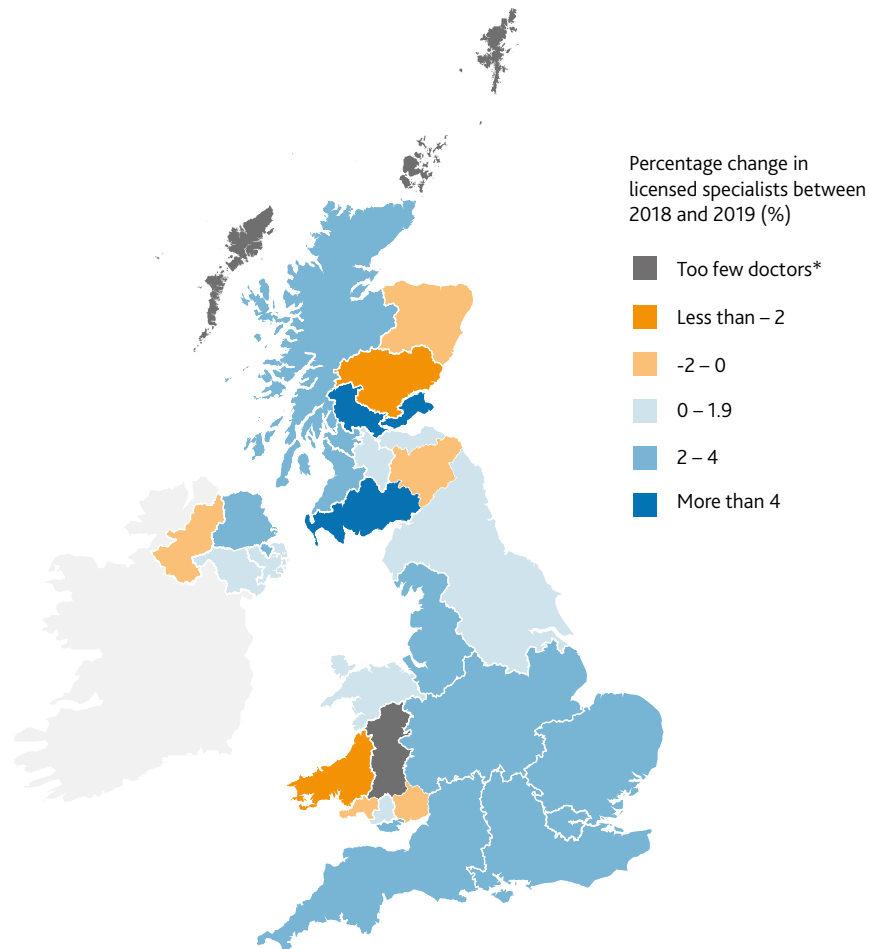
The total number of licensed doctors in Northern Ireland, Scotland and Wales all grew by around 2% in the last year, with the largest increase in Northern Ireland (2.4%). The number of licensed doctors in England increased by 3.5%. These changes have not had a meaningful impact on the split of licensed doctors by UK country, as the broad patterns have been the same for the last five years. We consistently observe that around 82% of all licensed doctors mainly practise in England, with 8% in Scotland, 4% in Wales and 3% in Northern Ireland.

Changes to the workforce can be observed at a finer resolution than before

For the first time this year, we present counts and percentage changes of licensed doctors for Northern Ireland, Scotland and Wales at regional levels. The regions in Northern Ireland are Health and Social Care Trusts.¹⁷ Their equivalents in Scotland are NHS Scotland Health Boards¹⁸ and Wales has NHS Wales University Health Boards.¹⁹ We've also updated the regions we report on in England to align with the breakdowns adopted earlier this year by the NHS in England.²⁰

It is important to reiterate that the figures reported in the following sections are the numbers of licensed doctors and do not reflect the full-time equivalent hours being worked by doctors. It is instead a snapshot of the potentially available workforce.

Figure 10: Licensed specialists in regions, from 2018 to 2019



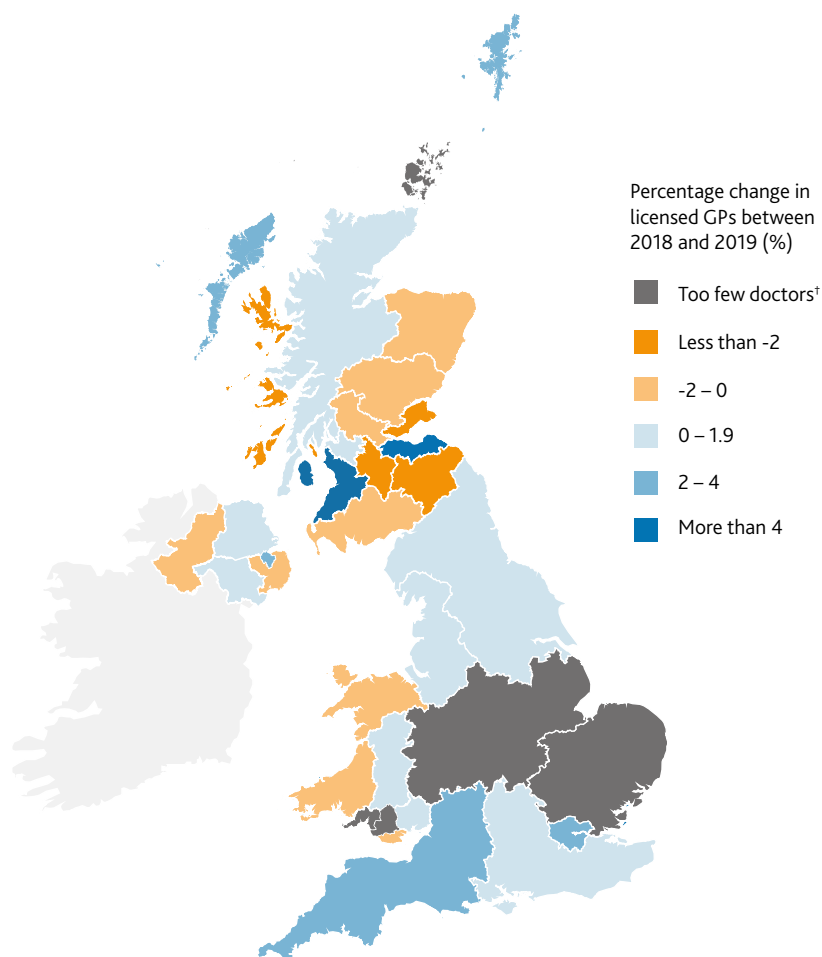
Specialists

Figure 10 shows that the largest reductions in numbers of licensed specialists between 2018 and 2019 were in Hywel Dda University Health Board and Tayside NHS Scotland Health Board, which were -4% and -2% respectively. However, Wales and Scotland both saw increases in specialist numbers overall (1% and 2%).

Northern Ireland had increases in most regions and there was a fairly consistent 3% rise in the number of licensed specialists across the English regions, which is slightly below the 4% growth in the total number of all licensed doctors in the UK.

* Percentages suppressed for instances where there were fewer than 50 licensed specialists in either 2018 and 2019

Figure 11: Licensed GPs in regions, from 2018 to 2019*



GPs

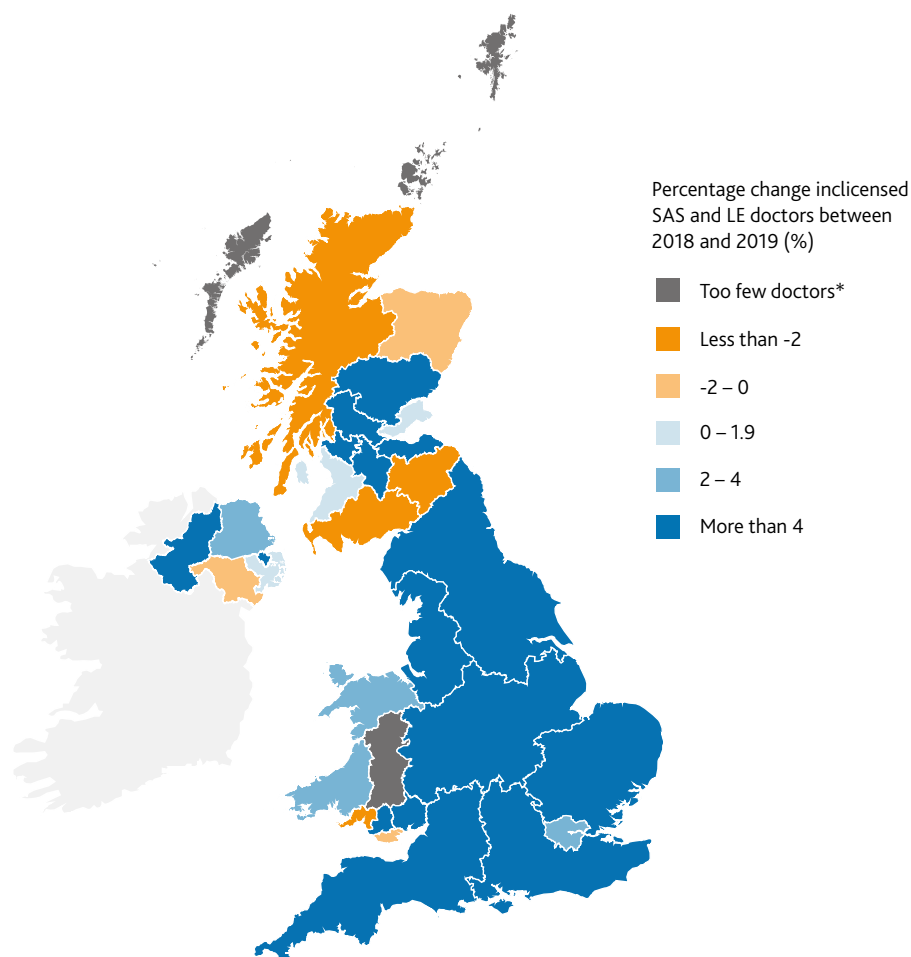
Figure 11 shows the small changes in licensed GPs in regions between 2018 and 2019. In general, most regions had a small increase but workforce planners in Scotland may want to look further into the reductions in the Borders and Fife NHS Scotland Health Boards (-6% and -5% respectively).

It should be noted that in April 2019 there was a shift in the boundaries of the Cwm Taf and Abertawe Bro Morgannwg health board regions, which led to the locations of GPs in those areas becoming incomparable. On the same date, the East and Midlands regions in England became their own entities²¹ after previously being combined and having a shared regional team as the main employer of their GPs. These regions have been omitted from Figure 11.

* April 2019 saw a shift in the boundaries of the Abertawe Bro Morgannwg and Cwm Taf university health boards, as well as the merge of NHSE Midlands and East of England regions that made comparison of licensed GP numbers impracticable

† Percentages suppressed for instances where there were fewer than 50 licensed specialists in either 2018 and 2019

Figure 12: Licensed SAS and LE doctors in regions from 2018 to 2019



SAS and LE doctors

We see greater and more varied change in the SAS and LE doctor population at the sub-national level compared to the GP register. While there are several regions in Scotland with a percentage reduction, regions that started with greater numbers of SAS and LE doctors in 2018 then saw bigger increases – Greater Glasgow and Clyde had an 8% increase and Lothian 6%. This meant that Scotland overall had a 5% increase.

In England, there was strong growth of more than 4% in the SAS and LE population in all but one England region, between 2018 and 2019. This strongly influenced the overall growth in SAS and LE doctors in the UK (9%), as about four-fifths are practising in England. This UK-wide growth was far higher than the 1% growth in GPs and 3% growth in specialists.

* Percentages suppressed for instances where there were fewer than 50 licensed SAS and LE doctors in either 2018 and 2019.

The supply of UK-trained doctors

There were 42,190 medical students in the 2017/18 academic year. Since 2012, females have consistently made up more than half (55%) of all medical students. Most medical students (80%) are based in England, which broadly aligns with the relative population of England within the UK (84%).²² Almost a quarter (23%) of all medical students are at institutions in London, which is a greater proportion than the population of London relative to the UK (14%).²³

For the first time this year, we have switched the source of our data on medical students to the Higher Education Statistics Agency (HESA) database. This offers the potential for us to better understand the full career path of a UK graduate, from medical school to leaving the profession.

Research in this area^{24,25} shows that there are several typical career pathways that doctors follow. Building this into how we regulate doctors could lead to more tailored support and guidance for the profession.

Movement away from medical school

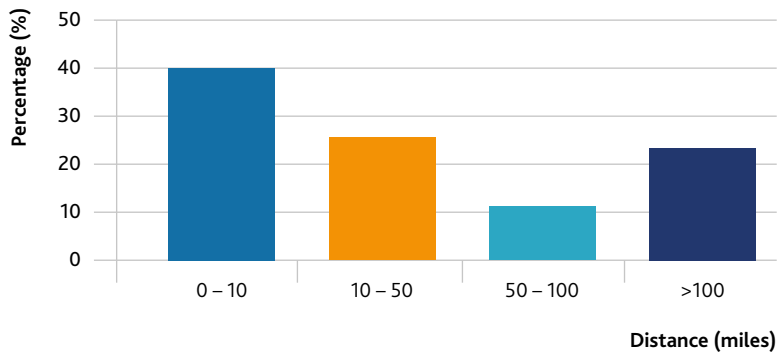
The movement of trainees after medical school training is an important consideration when making decisions about investing in medical schools and when considering the future medical workforce of a region.

Here, we look at doctors who gained their UK PMQ between 2012 and 2018 and then analyse the distance between their medical school and

where they are currently based. This data is available in more detail on GMC Data Explorer on our website.²⁶

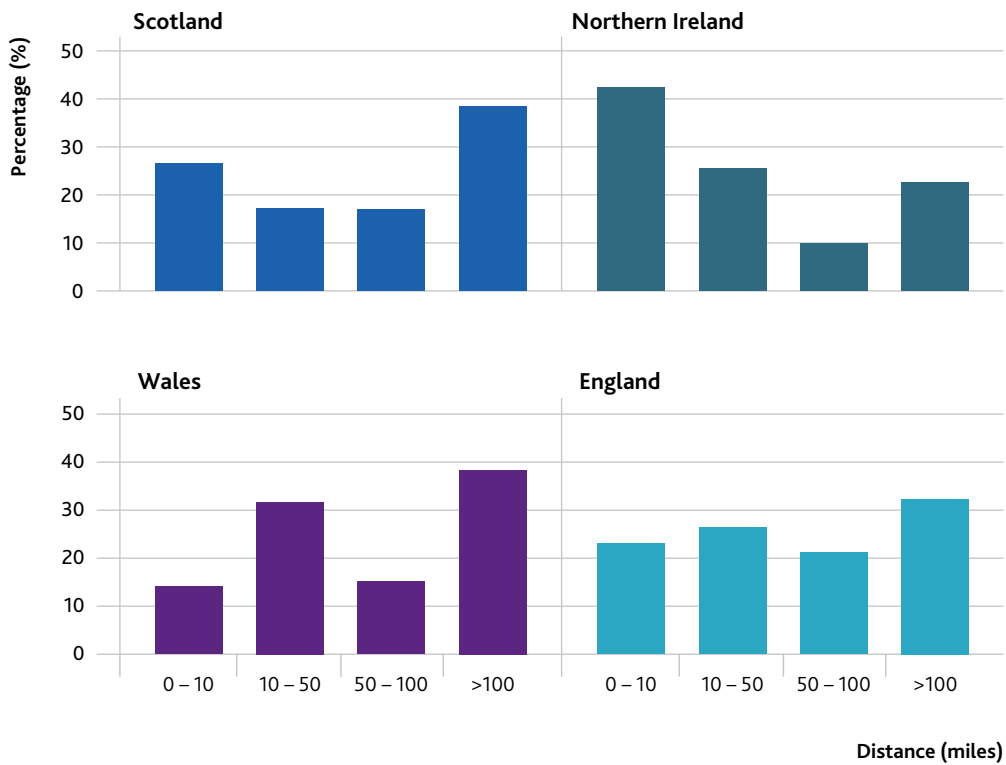
Figure 13 shows that in the UK quite a high proportion of medical students practise within ten miles of where they studied (23%). But, a third of graduates move more than a hundred miles, although this differs between UK countries.

Figure 13: Distance moved from medical school, all UK graduates



Scotland and Wales have higher percentages of doctors who move over 100 miles away from their medical school, with 39% of doctors in this category compared to 31% in England and 22% in Northern Ireland.

Figure 14: Distances moved from medical school, by UK country



Doctors in training

A welcome increase in doctors entering GP and emergency medicine training and the number of psychiatry trainees starts to recover

From 2012 to 2019, the number of doctors in training rose by 5%, with a dramatic 4% increase seen in the last year. A large proportion of the extra doctors in training are in two of the largest programmes – foundation and core specialty training. These both grew by 2% from 2018 to 2019. While there was considerable variation among the other specialty programmes, all except pathology saw their numbers rise in the last year.

Encouragingly, programmes for specialties that have been publicly prioritised in the *NHS Long Term Plan for England*⁴ and *A Healthier Wales*,⁵ such as general practice, emergency medicine, radiology and psychiatry, all grew in the last year.

General practice

The number of doctors in GP training increased by over 6% in the last year, which is a far larger year-on-year increase than in the preceding six years. Northern Ireland had a stand-out increase of 13% in the number of GP trainees between 2018 and 2019.

GP trainees are older on average than other trainees. In 2015, 7.6% of GP trainees were aged 40 or over. By 2019, this group had greatly increased in size from 797 to 1,298 doctors, and

rose to 11% of all general practice trainees in 2019. During the same period, the proportion of all trainees that were 40 or over grew from 6 to 7%.

Over the last three years, the number of IMG GP trainees has increased by almost two thirds. IMGs now represent 23% of all GP trainees, up from 16% three years ago. In the last year, we also saw considerable growth in the number of male GP trainees.

Combining the factors listed above, the last year has seen a 50% increase in the number of male IMGs who are over 40 and in GP training. While male and female UK PMQ groups are still dominant among GPs in training, it's interesting that male IMGs who are over 40 are disproportionately attracted to GP training.

Psychiatrists

Growth in psychiatry specialists of 1% between 2012 and 2019 has been below that of the UK population, despite the increasing need among the public for mental health support and the emphasis on this in recent national strategies. The slow increase in psychiatrists on the UK register has not been helped by a marked 16% decline in psychiatry trainees between 2012 and 2015. However, we can take some comfort from the 4% increase in psychiatry trainees from 2015 to 2019.

Figure 15: Doctors in training by programme specialty group, limited to the twelve largest specialty programmes,* from 2012 to 2019

	2012		2019
	Number of doctors	% change	Number of doctors
Foundation	15,028	-1%	14,876
General practice	10,029	+17.4%	11,774
Core elements of specialty training	8,710	-6%	8,188
Medicine	6,497	+8.5%	7,049
Surgery	4,371	-2.6%	4,257
Paediatrics & child health	3,629	+6.2%	3,853
Anaesthetics	2,844	-4.4%	2,718
Obstetrics & gynaecology	2,311	-2.7%	2,248
Radiology	1,501	+24.5%	1,868
Psychiatry	1,370	-10%	1,233
Pathology	774	-15.9%	651

* Data for all specialty groups are available on GMC Data Explorer – <https://data.gmc-uk.org/gmcdata/home/#/>

Radiology

Figure 15 shows that radiology has experienced the most dramatic growth (24.5%) among the ten largest specialty training programmes, between 2012 and 2019. It's interesting to note that this is heavily driven by a 23.7% growth from 2015 to 2019. There have been technological innovations in recent years that have expanded the use of radiology techniques to new areas, meaning a greater demand for radiologists than was the case in the past. This growth has been so marked that the Royal College of Radiologists' *UK workforce census 2018* report highlighted a shortfall in the number of trained radiologists and warned of the escalating sums being spent on outsourcing scans.²⁷

Emergency medicine

In 2012, emergency medicine was smaller than all the other specialty training programmes shown in Figure 15. But it has seen dramatic growth over the past five years and had more trainees than psychiatry in 2019. The number of emergency medicine trainees doubled between 2014 and 2015 due to a change to the programme, but recent years have seen more moderate growth.

Increases in doctors aged over 40 and with a non-UK PMQ

Over the past five years, we've seen a 22% increase in the number of licensed doctors aged 40 and over who are in training, and not on the specialist or GP registers. The increase of doctors under 40 is 5% over the past five years. But it's important to note that doctors under 40 still make up 93% of the doctors who are in training and on neither register.

In the last year, there has been a 15% increase in the number of doctors who are in training and on neither register and who hold either an EEA or IMG PMQ. Whereas the number of UK qualified doctors in training who are on neither register has increased by only 2%.

The experience of a workforce under pressure

During June and July 2019, 3,876 doctors completed *The state of medical education and practice* barometer survey, which we commissioned and was undertaken by an independent organisation - IFF Research. The survey contained questions about doctors' satisfaction of their role, the environment they work in and their career intentions.

The survey found that while doctors still find their job rewarding, they continue to be under high pressure. Doctors work in a climate of long hours and stretched resources, which can have negative effects on patients, as well as doctors themselves.

The survey results, weighted to be representative of the doctor population, indicated that doctors will exhaust alternatives before deciding to leave the profession altogether. While few doctors were taking steps to leave the profession at the time of the survey, a large proportion had reduced their hours over the last year or were planning to do so within the next 12 months.

GPs are more likely to feel dissatisfied, to have already reduced or plan to reduce their hours, and to be thinking about leaving the profession.

Some systemic failure is also evident, with unnecessary referrals, for example, contributing extra workload. Finding time for knowledge sharing, mentoring and reflective practice is also a struggle for many doctors and our report *The state of medical education and practice: 2019*, will investigate these specific themes later in the year.

Here we report on the overarching questions about doctors' workload and the resulting impacts for the workforce in terms of doctors' steps to reduce hours or to leave the profession.

Workload pressure

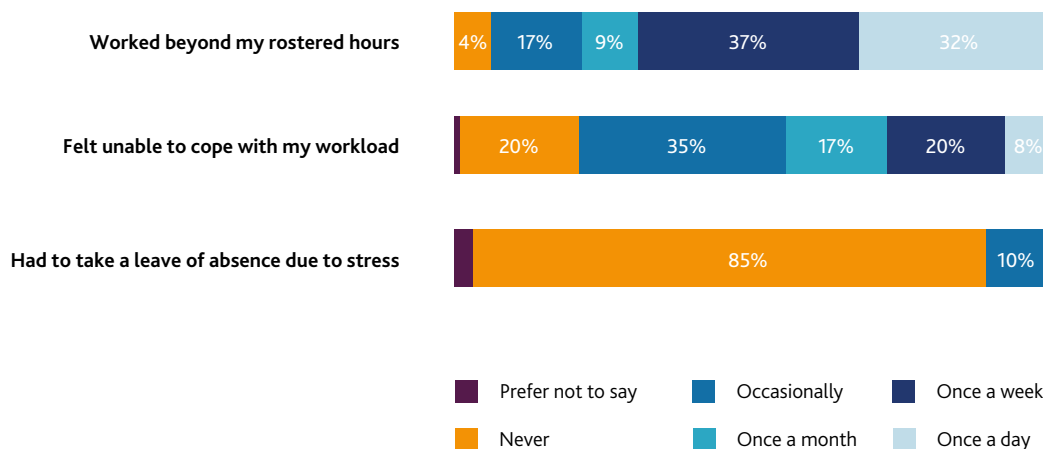
Two thirds of doctors work over their rostered hours weekly

The barometer survey asked doctors how often they had experienced various causes or effects of pressure over the last year. A large majority of respondents said they have worked beyond their rostered hours. Over two thirds of doctors (68%) said they worked beyond their rostered hours on a weekly basis, meaning at least once a week or at least once a day. Within that group, almost a third of doctors (32%) worked beyond their rostered hours once a day or more.

Working beyond rostered hours is so widespread that only 4% of doctors said they had not done so in the last year. It should be noted that the extent to which 'beyond rostered hours' equates to more than full-time or contracted hours will vary – but this is a sign of working beyond hours initially planned by the employer.

Doctors who work less than full-time (LTFT) are more likely to work beyond their rostered hours weekly than doctors who work full-time (76%). But the difference is relatively small and it is true of about two thirds already working full-time (65%). The difference is more pronounced when looking at the proportions of doctors who work beyond their rostered hours most frequently: 44% of LTFT doctors work beyond their rostered hours daily compared to 27% of full-time doctors. Nevertheless, this means more than one in four doctors who work full-time are working beyond rostered hours every day. For GPs working full-time, this rises to 68%. More GPs work LTFT than other doctors (49% compared to 23% of doctors overall) and 64% of these LTFT GPs work beyond their rostered hours.

Figure 16: Responses of all 3,876 barometer survey participants to the question: How frequently, if at all, over the last year have you experienced the following?



Over a quarter of doctors feel unable to cope with their workload once a week and one in eight have taken a leave of absence due to stress in the last year

Over a quarter of doctors (28%) said they had felt unable to cope with their workload at least once a week over the last year (Figure 16). Despite the prevalence of working beyond rostered hours, 55% of doctors said they never or only occasionally felt unable to cope.

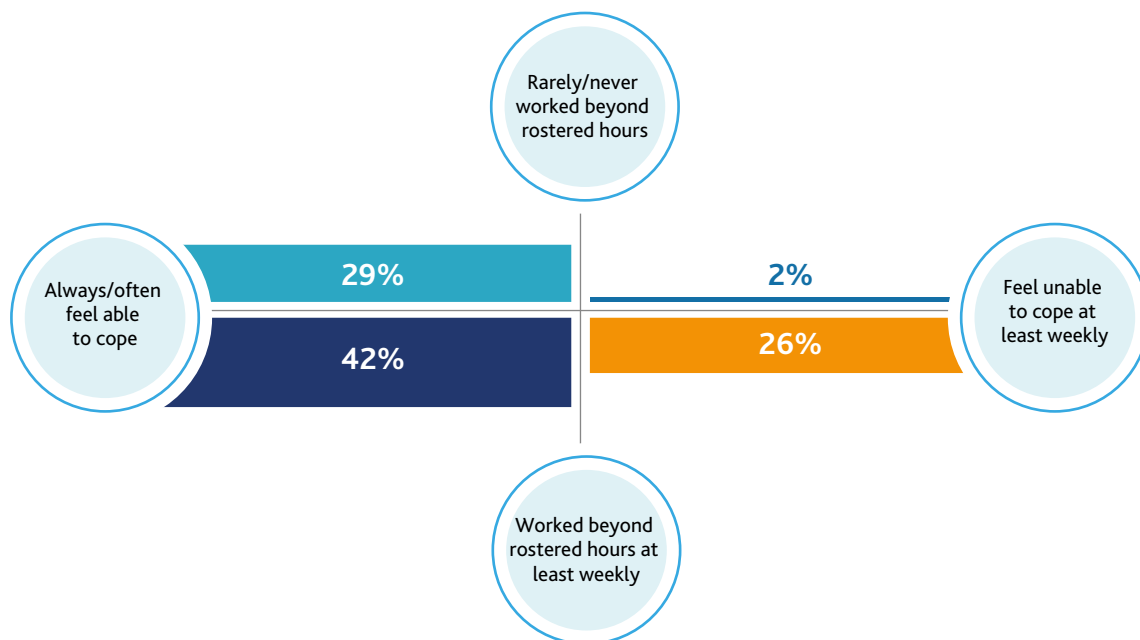
12% of doctors said they had to take a leave of absence due to stress in the last year. One in ten (10%) had taken a leave of absence occasionally, and the remaining 2% had to take one once a

month or more frequently. These figures are broadly consistent with the survey findings presented in last year’s *The state of medical education and practice in the UK: 2018*.

Figure 17 shows that nearly three in ten of the doctors surveyed (29%) do not work beyond their rostered hours on a weekly basis and feel broadly able to cope with their workload. A further four in ten reported that they are similarly able to cope with their workload despite working longer hours – perhaps indicating that working additional hours has become normalised for them.

However, this leaves over a quarter of doctors who work beyond their rostered hours and feel unable to cope on a weekly basis.

Figure 17: Groups of all 3,876 barometer survey respondents by ability to cope and working beyond rostered hours



Doctors in training and those working in SAS and LE roles are more likely not to work beyond rostered hours and to feel they can cope

The cohorts with the highest proportion of doctors who rarely or never work beyond their rostered hours and always or usually feel able to cope are doctors in training and those working in SAS or LE roles, with 43% and 49% respectively. Only 16% of doctors in training and 15% of SAS and LE doctors are working beyond their rostered hours and feel unable to cope, compared to 50% of GPs and 22% of specialists.

We will explore the relationship between workload and the ability to cope further in *The state of medical education and practice in the UK: 2019*, with a specific focus on new data on burn-out rates for different types of doctors.

Half of GPs feel unable to cope and work beyond their rostered hours

Only 9% of GPs always or usually feel able to cope while rarely or never working beyond their rostered hours, compared with 29% of doctors overall shown in the top-left corner of Figure 17. Conversely, half of GPs (50%) often feel unable to cope and often work beyond their rostered hours, compared with 26% of doctors overall, shown in the bottom-right of Figure 17.

Workforce impacts

Some doctors refused to take on additional workload because of pressure

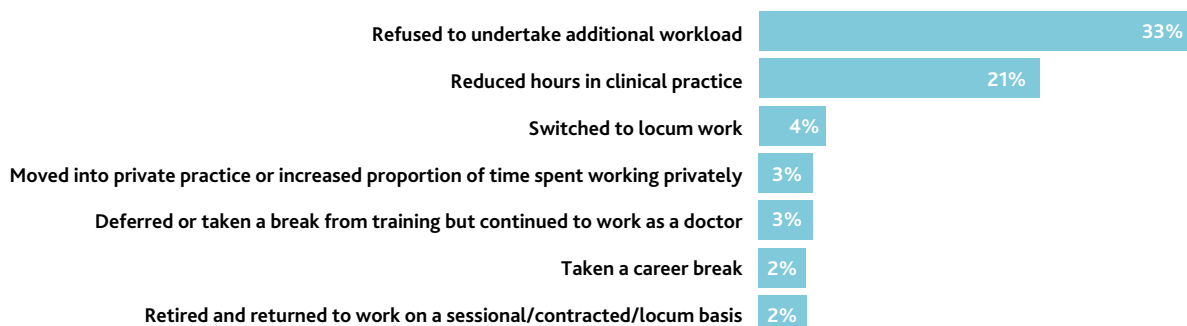
Doctors were asked what actions, if any, they had taken over the last year to adjust their work as a result of workload and capacity pressure (Figure 18). The most commonly reported action was refusing to take on additional workload, with a third of respondents (33%) saying they had done so. However, some of these doctors might have already been doing more than their contracted workload and refused to take on further additional workload. Requests to take on additional workload that cannot be met are, nevertheless, another indicator of system pressure. Specialists made up the highest proportion (43%) of registration types that refused to undertake additional workload.

A fifth of doctors – and over a third of GPs – reduced hours in clinical practice in the last year

The other action commonly reported was reducing hours in clinical practice, with a fifth of doctors (21%) having taken this action. The proportion of GPs who reduced clinical hours was markedly higher at 36%. As well as these activities, significant minorities made various career changes in the last year, such as:

- shifting to more private practice work
- taking a break from training
- retiring and returning to contracted or locum work.

Figure 18: Adjustments to working patterns as a result of workload pressures among all 3,876 respondents to the barometer survey



Most doctors want to make a change in the next year and for many this involves reducing their hours in clinical practice

71% of doctors surveyed said they were likely to make a career change in the next year. Reducing hours in clinical practice was the most common change they said they were likely to make, with a third of respondents saying they were likely to do so. This presents a significant challenge for the workforce.

The four main categories of change are:

- reducing hours in clinical practice (32%) – this includes reducing contracted hours (17%); moving to a role with less clinical workload (9%); and going part-time (6%)
- changing role (16%) – this includes moving to private practice or increasing proportion of time spent working privately (6%); switching to locum work (6%); and deferring or taking a break from training but continuing to work as a doctor (4%)

- taking a break outside the profession (10%) – including retiring and returning to work on a sessional/contracted/locum basis (4%); moving to practise abroad on a temporary basis (3%); taking a career break (2%); and deferring or taking a break from training and not working as a doctor during this time (1%)
- leaving the UK medical profession permanently (7%) – this includes leaving for any reason including retirement (4%); and moving to practise abroad on a permanent basis (3%)

Increasing numbers of doctors in training are taking a break

We know from our published analysis²⁸ that doctors in training increasingly take breaks take breaks from training to manage to manage their own health and wellbeing. This is due to dissatisfaction with their training environment or because of uncertainty about their specialty choice and career direction.

Steps towards leaving the medical profession

Doctors tend to take actions to adjust their work before considering leaving the profession

Doctors looking to leave the profession reported that they had already taken other actions to adjust their work. 64% of doctors who said they are likely to leave the profession had adjusted their work in the last year, including a third of doctors who reduced their hours in the last 12 months. Only a fifth of all doctors had reduced their hours in the previous year.

Some doctors who intended to leave the profession in the next year reported having already taken a 'hard step' towards leaving. This includes: applying for or attending training to prepare for a new role; contacting a recruiter; or applying for a role outside medicine. 80% of those taking these hard steps had already made changes to their working lives, including 44% who reduced their hours in the last 12 months.

It's difficult to establish from the data currently available to what extent reducing hours is an effective way to prolong a medical career, as opposed to being a marker that someone will soon leave.

Relatively few doctors have taken hard steps toward leaving the profession

Among the 17% of all doctors surveyed who said they were very likely or fairly likely to leave the profession for reasons other than retirement, the most common steps taken were discussing with others or doing research.

Only 38% of doctors who said they were likely to leave had taken what might be considered a hard step toward doing so. It's important to note that this 38% of doctors likely to leave represents 3% of all the doctors surveyed.

Taking hard steps toward leaving the profession is strongly associated with dissatisfaction and burnout, which we will expand on in our forthcoming report, *The state of medical education and practice in the UK: 2019*. The doctors who reported taking hard steps toward leaving also tended to report finding it difficult to provide sufficient care and feeling unable to cope with workload. Of the doctors who were already taking hard steps to leave:

- 68% felt dissatisfied, compared with 30% of doctors overall
- 52% gave a negative answer to six or seven burnout questions, compared with 16% of doctors overall
- 70% found it difficult to provide sufficient care, compared with 34% of doctors overall
- 52% said they feel unable to cope with their workload on a weekly basis, compared with 28% of doctors overall.

Reasons for career changes

Patient care concerns and demanding roles drive doctors to leave

Doctors were asked to identify the reasons for the career changes they were likely to make. Retirement – not including temporary breaks, retiring and returning, or permanently moving abroad to practise – was the main reason for leaving the medical profession completely, with 58% of doctors reporting they were likely to leave for this reason.

Other reasons doctors gave for leaving the profession included barriers to patient care in the system and excessive demands of their role. Both were cited by over two thirds of these doctors, with 69% of doctors reporting barriers to patient care in the system and 67% saying there were excessive demands on their role.

Nearly a third (31%) of respondents who said they were likely to leave the medical profession to retire said barriers to patient care in the system were also a reason, and 35% cited excessive demands of their role. These reasons were mixed with more general reasons for retirement, such as more leisure time, which was a driver for 43% of doctors who are likely to retire.

63% of doctors who said they were likely to make a career change (other than retiring) identified the excessive demands of their role and/or barriers to patient care in the system as reasons. These changes include: leaving, changing their type of work, reducing or increasing hours, taking a break, or moving abroad temporarily or permanently.

Pull factors such as spending more time with family or increasing pay also important

Figure 20 summarises the most important reasons for different career changes. It is significant, though unsurprising, that in addition to the push-factors described above, pull factors such as spending more time with family or increasing pay were important in many plans to change career.

Spending more time with family was not only a motivation for planning to reduce contracted hours, but also a motivation for half of doctors planning to switch to locum roles. This suggests that some of these career moves are rooted in achieving more flexibility in hours, rather than just as a reaction to the pressures in current doctors' roles. The other main motivation is to increase pay and in fact may involve increasing hours.

Increasing pay was the main reason given by doctors for switching to locum work (55%) and increasing contracted hours (46%). It was also the second most significant driver for doctors moving to private practice or increasing time spent working privately (57%).

It is often assumed that by far the main motivation for doctors increasing their time working privately is for financial reward. But it is striking that nearly three quarters of those planning to do this were implicitly saying their motivation was to be able to offer better patient care.

Figure 19: Reasons for career changes among all 3,876 barometer survey respondents and the proportions giving each of the two leading reasons for doing so

	Change	% of respondents	Reason 1	Reason 2
Reduce	Go part-time	6	My current role/s demand too much of me 62%	I will be able to spend more time with my family 60%
	Reduce contracted hours	17	My current role/s demand too much of me 56%	I will be able to spend more time with my family 50%
	Move to role with less clinical workload	9	My current role/s demand too much of me 57%	The current system presents too many barriers to patient care 47%
Change	Switch to locum work	6	I want to increase my pay 55%	I will be able to spend more time with my family 50%
	Move to private practice or increase time spent working privately	6	The current system presents too many barriers to patient care 71%	I want to increase my pay 57%
Increase	Increase contracted hours	5	I want to increase my pay 46%	I would like a new challenge 29%

Focus on doctors leaving the profession

Understanding which doctors leave, and why they leave, is of great importance to us, particularly so we can develop appropriate strategies to increase retention of the workforce. We have therefore carried a special analysis focusing on what we can determine about doctors who have left the profession between 1997 and 2018. This section gives a detailed examination of the groups of doctors who have left, including those who leave but later return and those who leave permanently.

We define a 'leaver' as a doctor who has given up their right to practise. Before the introduction of licensing in 2009, that would mean leaving the register. Whereas, for those leaving after 2009, it means giving up their licence.

We acknowledge that doctors who do not hold a licence may still be making valuable contributions

to the healthcare system in roles that do not require clinical practice, such as medicolegal positions and involvement in tribunals. However, our focus here is on the workforce that is potentially available for clinical practice, for which the definition described above is applied.

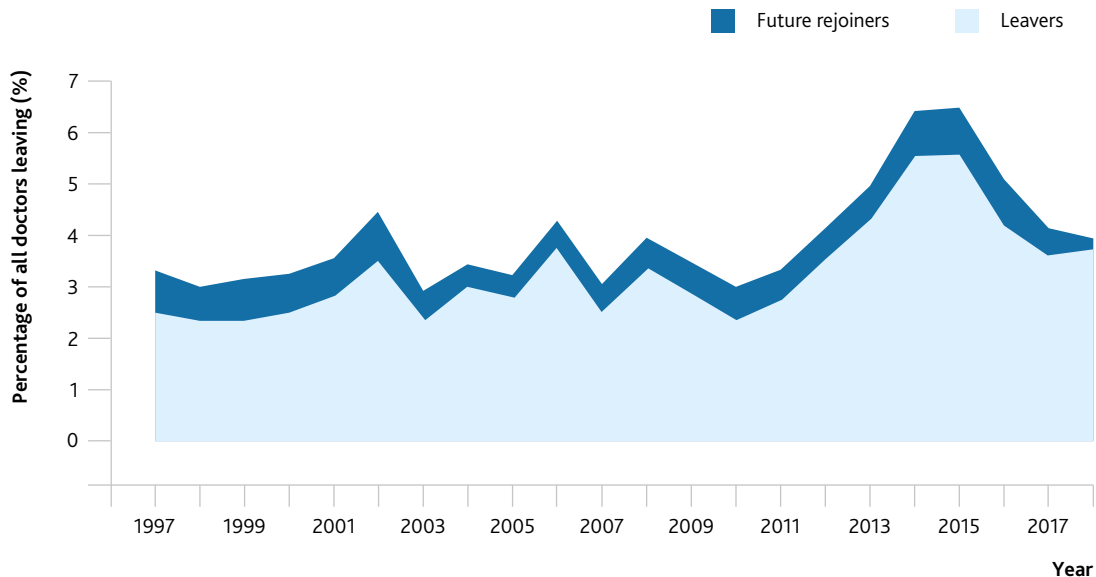
The scale of doctors leaving the profession

Figure 20 shows the proportion of doctors who have given up their right to practise each year from 1997 to 2018. The split shows whether they returned to practise in the future.

On average, 4% of doctors leave each year and do not return. This figure is broadly similar to the 3.2% of doctors that the European Commission

estimate will leave the profession each year up to 2020 throughout Europe.²⁹ It is also broadly in line with the 3% of respondents to the barometer survey who said they intended to leave the profession in the next year and had already taken a 'hard step' towards doing so. Though of course this doesn't account for those who intend to leave but have not yet taken a hard step to leave.

Figure 20: The proportion of doctors leaving the register each year, from 1997 to 2018

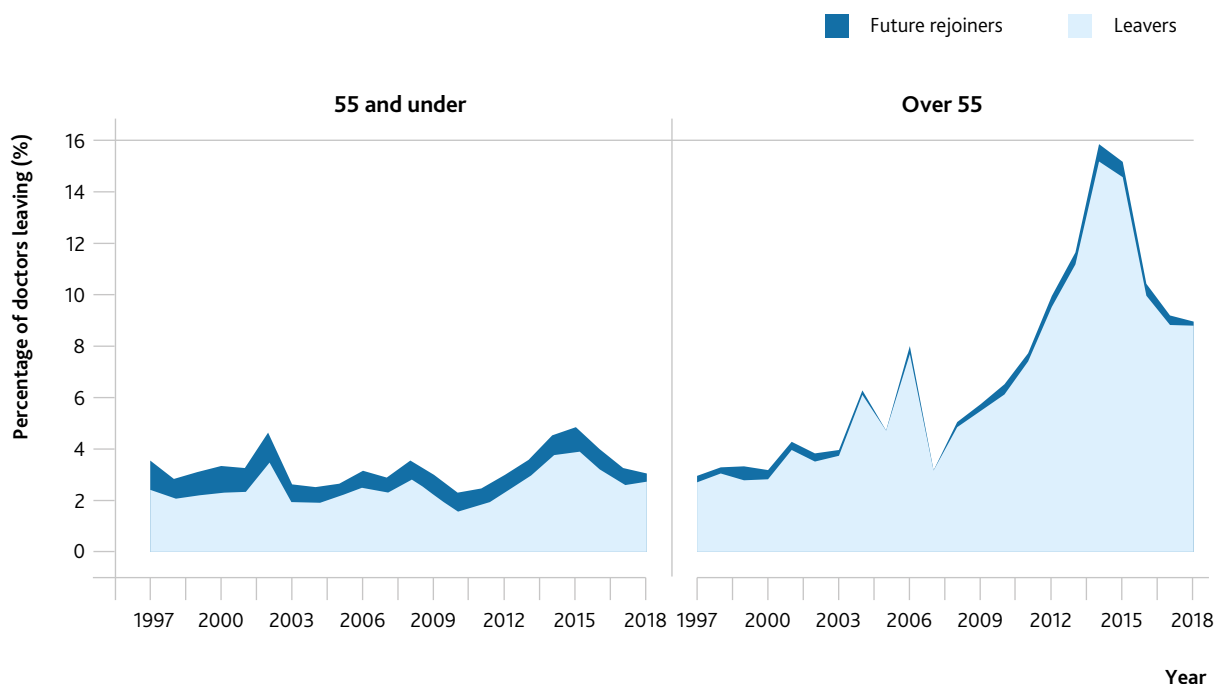


It's important to note that we saw a large spike of doctors leaving in 2009, which is directly linked to the introduction of licensing and the requirement for doctors over the age of 65 to pay our annual retention fee. For this reason, 2009 has been removed from all analysis.

In 2012, it became mandatory for doctors to revalidate their licence every five years and have a connection to a UK designated body. During the subsequent years up to 2017, as their first revalidation date approached, many doctors gave up their right to practise, for reasons such as they were not working in the UK and didn't need a licence to practise in the UK. The effect of this can be seen in the ridge on Figure 20, starting in 2012 and ending in 2017.

Despite the ridge from 2012 to 2017, the proportion of doctors over 55 who are leaving UK practice is clearly increasing over time (Figure 21). In 1997, 2.8% of doctors over 55 left the profession, whereas in 2018 this rose to 8.8%. Doctors aged 55 and under who leave return in the future more often, compared with doctors over 55. The increase in the overall proportion of younger doctors leaving each year does not seem to have dramatically changed over time. There is only a 0.5% increase in the total proportion leaving between 2011 and 2018.

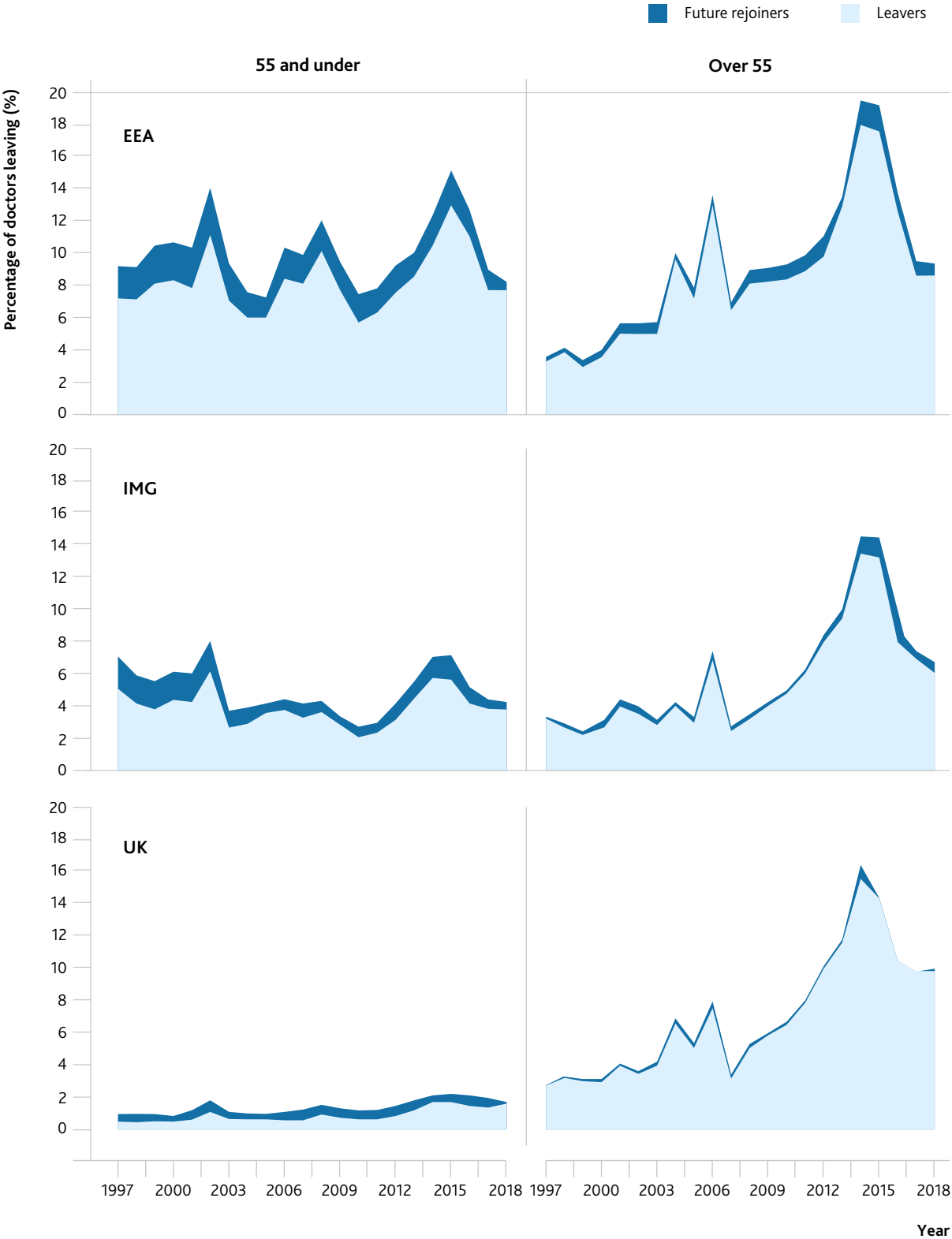
Figure 21: The proportion of doctors leaving the register each year, 1997 to 2018, by whether 55 and under or over 55 years of age



There are considerable differences in the proportion of doctors who leave depending on where they gained their primary medical qualification (Figure 22). Doctors who graduated in the European Economic Area (EEA) make up a consistently higher proportion of doctors who leave UK practice across the age groups. International medical graduates make up lower proportions of doctors leaving than EEA graduates, but higher than UK graduates.

The increasing proportion of doctors over 55 who are leaving over time is present all over the world. UK graduates under 55 have by far the smallest proportion of their cohort leaving UK practice - they make up roughly half of all licensed doctors. The increase in the proportion in this cohort who left and had not returned by April 2019 from 0.6% in 2010 to 1.7% in 2014 is concerning, given that most doctors who are going to return do so within five years.

Figure 22: The proportion of doctors leaving the register each year, from 1997 to 2018, by whether 55 and under or over 55 years of age



Doctors who leave but later return

The majority of breaks from UK practice last less than five years

Of all the doctors who have held the right to practise in the UK since 1997, only 7% have ever taken a break – of any length – before later returning.

Within that group, half of their breaks lasted 18 months or less and the vast majority (87.5%) of breaks lasted no longer than five years (Figure 23). Therefore, it may be reasonable to surmise that a doctor who has not returned within five years is not likely to ever return.

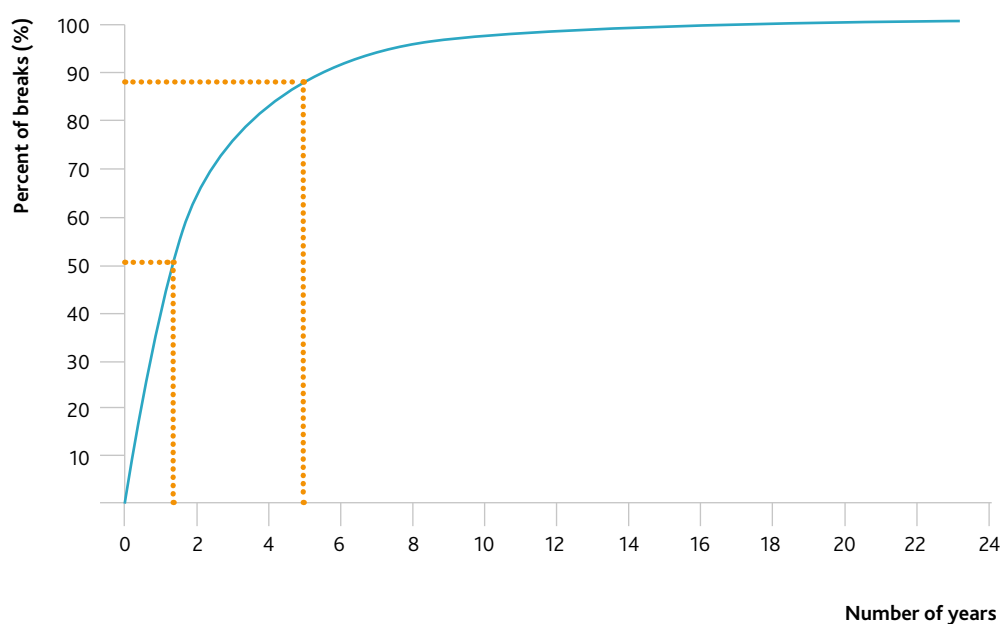
90% of the doctors who have taken breaks in practice did so aged 55 or under. There are differences in the breaks that doctors who gained their PMQ in different parts of the world

take. From 1997 to 2018, UK graduates' breaks were shorter than those taken by IMGs and EEA graduates. 65% of breaks taken by UK graduates lasted 18 months or less, compared to 50% for IMGs and 44% for EEA graduates.

Our data on which doctors were in training is only reliable from 2012. Therefore, the analysis presented below looks into the 33,778 doctors who left in 2012, 2013 or 2014, and who had not returned by April 2019.

The broad patterns and trends we see from 2012 to 2018 are very similar to those from 2012 to 2014. However, in this analysis, we've not included doctors who left after 2014 because, based on historic data, it's likely that many will return to UK practice within five years, that is between 2020 and 2023.

Figure 23: Lengths of breaks in practice, 1997-2018



Certain groups of doctors more likely to return after leaving

On average, between 2012 and 2014, 14% of the doctors who left each year returned at some point in the future. We see that doctors with certain characteristics return after giving up their right to practise at higher rates than others. Specifically, there is a clear decline in the rate returning with age. And doctors in training who are not on the GP or Specialist Register have a rate of returning (56%) that's more than triple that of any other register type. While the difference between the genders is small, women return at a higher rate (16%) than men (13%).

When specialists leave, 11% return. This figure is 8% for GPs and 15% for SAS and LE doctors. These are considerably lower rates than for doctors in training, but there is substantial variation by specialty (Figure 24). For example, occupational medicine has the lowest rate of return (8%), and also has one of the highest proportion of doctors who leave and do not return (6%), highlighting it as a specialty with retention problems. Whereas emergency medicine has a rate of returning more than

double that (15%), and half the proportion of doctors leaving per year (3%). Emergency medicine is a specialty with a markedly different pattern of doctors leaving compared with occupational medicine. More emergency medicine doctors take a break and return to practice while more occupational medicine doctors leave permanently.

From 2012 to 2014, on average each year, 0.7% of doctors left the profession and had returned before April 2019. This equates to 5,500 doctors.

UK graduates who are under 30, in training, and not on the GP or Specialist Registers, represented 12.4% of all the doctors that took a break between the start of 2012 and the end of 2014. This group is known to take breaks from their training programmes,³⁰ but they tend not to give up their right to practise and they do not, therefore, account for the largest proportion of all the breaks taken. IMG SAS and LE doctors over 30 feature more prominently in this category, accounting for 23% of all breaks taken. More broadly, we see that 80% of those taking a break were 30 or over.

Figure 24: Proportions of doctors leaving and the proportions of those that leave but later return, by specialty



Doctors who leave and do not return

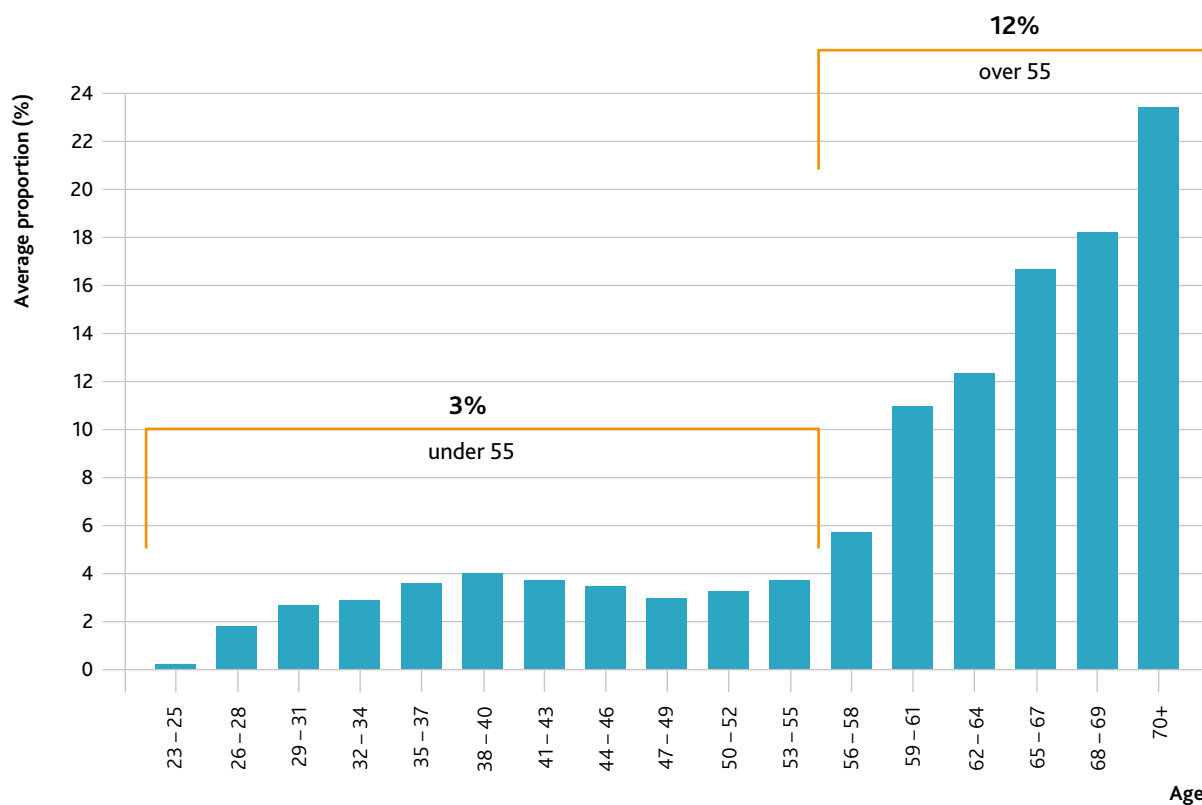
There are certain cohorts of doctors who have the highest proportions of leaving and not returning. These groups are:

- older doctors (unsurprisingly as many will retire at the usual retirement age), and those in their thirties and forties
- EEA graduates or IMGs (who as we show elsewhere are particularly likely to move abroad, a high proportion probably back to their country of origin)
- SAS and LE doctors.

The relationship between age and leaving is not entirely straightforward

Figure 25 shows the average proportion of doctors to leave per year by age groups of three. It's expected that the older ages would have a higher proportion leaving, especially around retirement ages. We do see that pattern, but we also see an extended ridge for doctors in their thirties and forties that might not be expected.

Figure 25: Average proportion of doctors leaving, by age



Doctors who first qualified outside the UK have higher proportions of leavers, especially among younger age groups

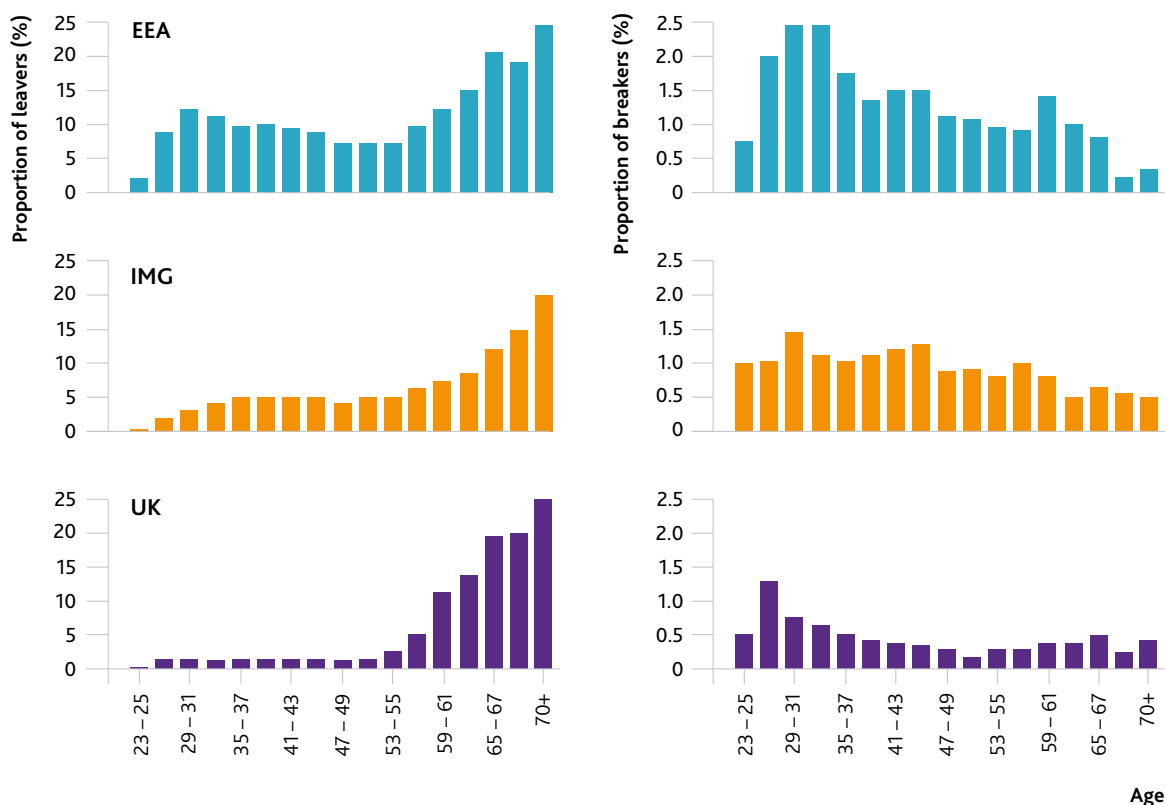
The proportion of doctors with a UK PMQ who left each year was, on average, just over 3%. While IMGs were close to 6% and EEAs were almost 10% – that is, one in ten EEA graduate doctors left each year. This shows the greater mobility of EEA doctors to move out of the UK.

Figure 26 shows that this difference in mobility is particularly notable among younger doctors. The ridge for doctors in their 30s and 40s is particularly high for EEA graduates and IMGs. One explanation for this may be that these overseas doctors are coming to this country at a

particular stage of their career to get specialist training or experience before returning to their country of origin.

A higher proportion of EEA graduates and IMGs do not return to UK practice compared with UK graduates who take a break and return, as shown in Figure 26. Of doctors aged 55 and under, between 2012 and 2014, 2,063 UK graduates took a break in their practice and later returned. Only 554 of these doctors took a break which lasted longer than two years. However, 6,484 EEA graduates and 7,165 IMGs in that age group left UK practice and have not since returned. This shows that we lose many more overseas graduates than overseas countries temporarily gain in UK graduates taking a break from UK practice.

Figure 26: Proportions of doctors taking breaks or leaving the profession, by age and PMQ



A concerning number of doctors aged 30 to 39 leave each year

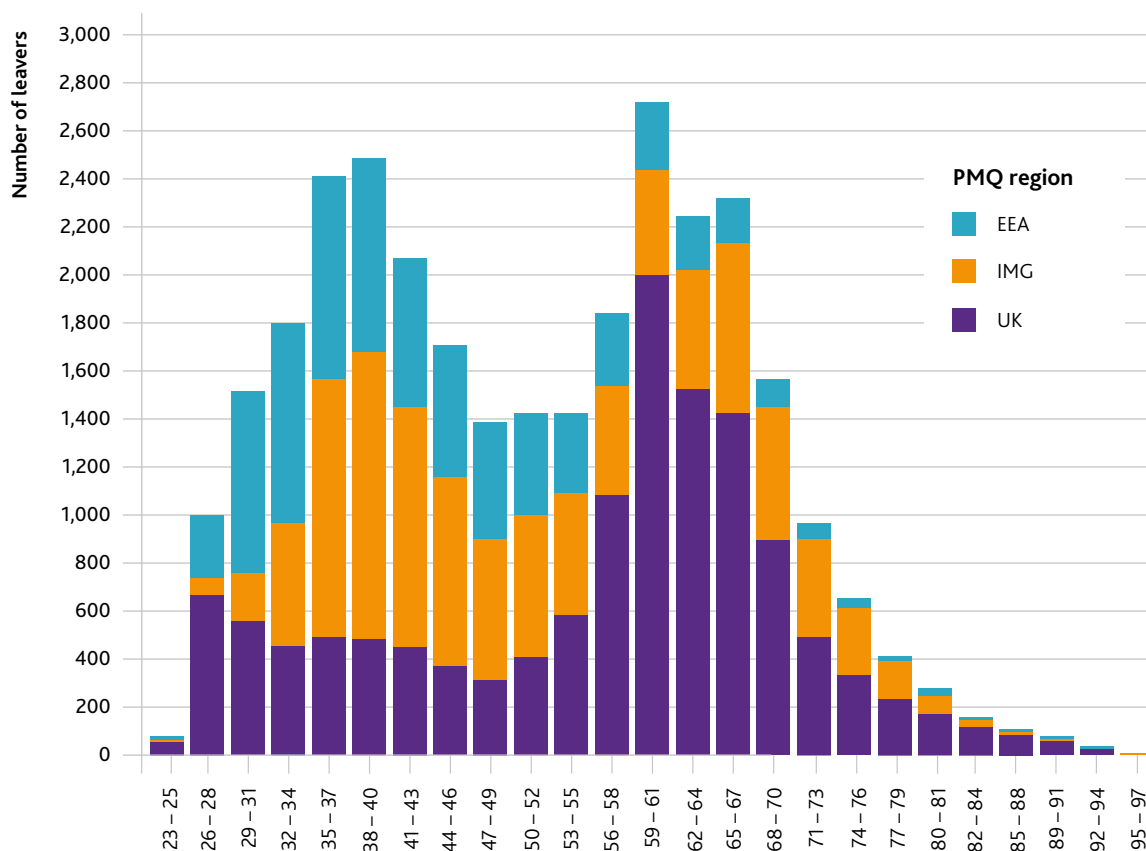
In 2019, doctors aged 30 to 39 accounted for a third of all licensed doctors. By comparison, less than a fifth were in the 50 to 59 age bracket. Therefore, the small proportions shown in Figure 25 for the 30 to 39 age group represent a much larger number of doctors leaving between 2012 and 2014 (7,686) than the 50 to 59 age group (5,963) shown in Figure 27.

The number of doctors aged 30 to 39 who left is closer to the 8,413 leavers who were aged 60 to 69, which incorporates the most common retirement ages. For the number of leavers aged

30 to 39 to be only 9% smaller than the number of 60 to 69-year-olds shows that the UK system can be characterised as one that fails to hold on to its doctors.

The high number of doctors leaving in their thirties and forties is largely made up of doctors who graduated overseas. Three quarters of EEA doctors who left were under 50. That figure is 56% for IMGs and 30% for UK graduates. We have previously identified that the majority of EEA graduates and IMGs leave UK practice to go overseas.* By looking at only those doctors who have not returned to UK practice we can quantify, for the first time, the extent to which this happens.

Figure 27: Age and PMQ of doctors leaving between 2012 and 2014 who had not returned by April 2019



* The State of Medical Education and Practice: 2018³ (page 62)

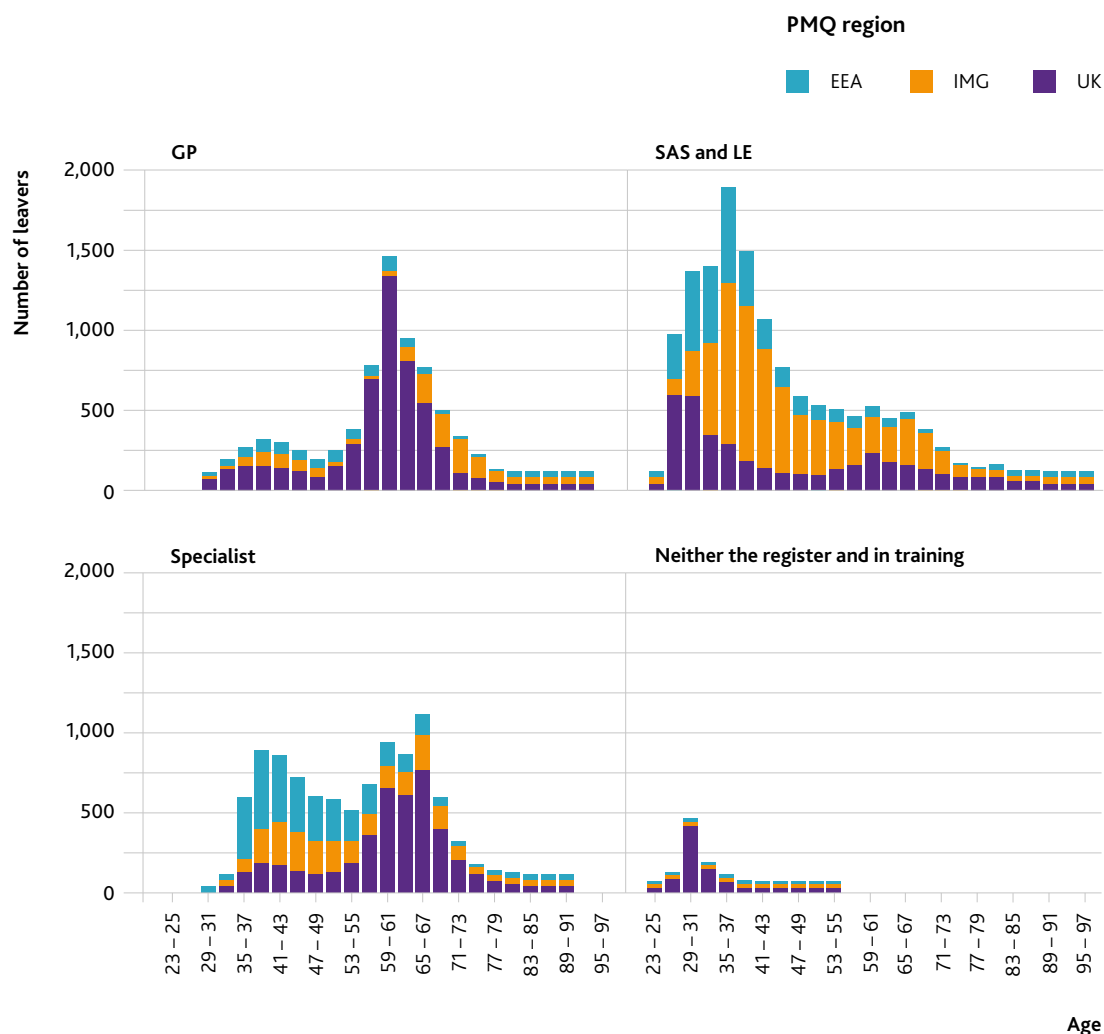
SAS and LE doctors are more likely to leave and not return, especially those who are IMGs

From 2012 to 2014, SAS and LE doctors had the greatest proportion (8.6%) of their number leave and not return by April 2019. The GP and Specialist registers had very similar proportions (around 4%), but doctors on neither register who were training had the smallest proportion (just 0.5%). This suggests that there is a greater flux of doctors who are SAS and LE doctors.

Close to half (45%) of all doctors who left between 2012 and 2014 were SAS and LE doctors and half of those were IMGs (Figure 28). Therefore, just over a fifth of all doctors who left were IMG SAS and LE doctors, when this group typically accounted for just a tenth of licensed doctors in the same period.

We are actively looking to better understand this issue, so we commissioned a survey of SAS and LE doctors earlier this year and we will publish the findings in the coming months. Our early results indicate that this group is the most likely

Figure 28: Age, PMQ and register types of doctors leaving between 2012 and 2014, who had not returned by April 2019



to experience bullying or a lack of access to training. We urgently need to understand if, and how, these experiences relate to doctors leaving the profession.

Figure 28 also shows that GPs follow a more traditional pattern of leaving, with the majority (71%) leaving around retirement at ages over 55. Despite this, between 2012 and 2014, the 29% of GPs aged 55 and under who left still represents 2,140 doctors.

Most GPs who left were UK graduates, reflecting that 78% of the GP workforce was UK-qualified. However, of the IMG GPs who leave, we see that they typically leave in their 70s, much later than the majority of their UK-qualified counterparts, who leave around 55 to 67 years of age.

Figure 28 shows that from 2012 to 2014, half of doctors on the Specialist register who left and hadn't returned by April 2019 were 55 and under. In raw numbers, this translates to 5,240 doctors aged 55 and under who left, and 5,232 doctors aged over 55 who left. EEA graduates make up half of this group of younger leavers, with IMGs and UK graduates each making up around 25%. Over two thirds of specialists aged over 55 who leave are UK graduates.

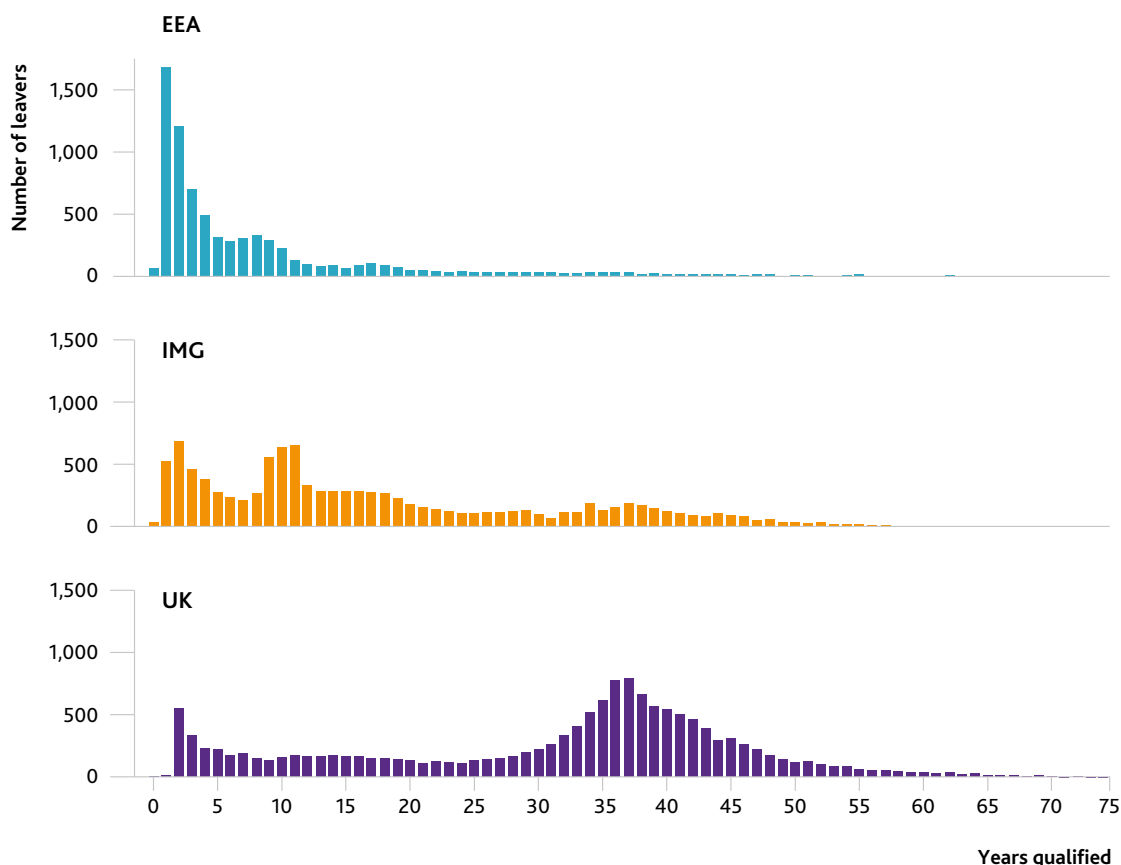
The doctors in training who left but had not returned by April 2019, as expected, were largely UK graduates (82%). Trying to understand why these 2,774 doctors left, and working on strategies to support and retain these types of doctors, is one potential way to boost future workforce numbers. A particularly high number of these doctors in training (1,379) were in the 26 to 28 age group.

Doctors trained outside the UK are more likely to leave after a shorter period of practising

We see a markedly greater proportion of EEA doctors leaving after five years or less compared with UK-trained graduates (Figure 29). This is further evidence of the greater mobility of EEA doctors. Similarly, the years of UK experience amassed by IMGs before leaving was typically lower than UK doctors, with a less pronounced – but still visible – peak before the five years of experience mark. This may be a signal that IMG and EEA doctors leave after only a brief stay, so encouraging them to stay is another potential strategy to boost workforce numbers.

By only looking at those doctors who left between 2012 and 2014, and who had not returned to practice by April 2019, we are not including UK-trained doctors who commonly take a sabbatical from training but continue in, or return to, UK practice. Despite this, the chart still shows a larger number of UK graduates leaving after two or three years we see among more experienced doctors. It's concerning that these numbers are similar to the numbers leaving after 35 years of service.

Figure 29: Length of service in the UK for doctors leaving between 2012 and 2014, who had not returned by April 2019, by PMQ



We see no evidence of UK trained female doctors leaving at younger ages, although their retirement age tends to be younger

For doctors who graduated in the UK, there is no difference in the proportion of male and female doctors leaving in the 25 to 49 age group. From 2012 to 2014, 1.3% of both male and female doctors in this age group had left UK practice and not returned by April 2019. However, the average age of female doctors retiring between 2012 and 2018 was 62, compared with an average age of 65 for male doctors.

Doctors are leaving the profession earlier and younger

When giving up a right to practise is viewed in its own right – regardless of later returning – doctors appear to be leaving UK practice at younger ages. From 2014 to 2016, there was a drop from 50 to 46 in the average age of doctors who had given up their right to practise. The average age then held at 46 through to 2019.

The trend for doctors leaving earlier and younger is especially prominent among SAS and LE doctors whose average age of leaving the register

dropped from 46 to 39 between 2014 and 2018. This was even more notable among UK trained and LE doctors, whose average age of leaving fell from 49 to 37. By comparison, the average age of leaving was generally the same for all other register types during the same period.

The average number of years between a doctor entering and leaving UK practice for SAS and LE doctors dropped from 14 in 2014 to eight in 2018. For UK trained SAS and LE doctors, who make up almost a third of the group, the years between entering and leaving UK practice has dropped from 23 to 12 years on average, including both those who return and those who leave permanently.

As we have included all doctors who left, the figures reported here may include a minority who leave but later return. However, as we reported above, only 15% of the SAS and LE doctors group to leave between 2012 and 2014 had returned within five years.

Doctors are retiring at younger ages

Since 2012, we've given doctors the option to declare why they're giving up their right to practise. This relatively new source of data has shown us that doctors are retiring at a younger age. The average age of a doctor saying they are giving up their licence due to retirement dropped from 65 to 63 in 2016. We've seen particularly large increases in the proportion of doctors retiring from the 55 to 59 age group.

GPs cite retirement as a reason for leaving more than doctors on the Specialist register

62% of GPs leave the profession due to retirement, which is higher than doctors on the Specialist register. For GPs over 55, that proportion increases to 84%. They also have the highest average age of leaving (57), and the most years from qualification until giving their right to practise (30 years). The average retirement age for GPs is 63, but for IMG GPs, it's 70.

Certain specialties see more doctors under 55 leave the profession than others

Ophthalmology and emergency medicine have the greatest proportions of doctors leaving the profession under 55. However, emergency medicine has a low overall number of leavers, whereas ophthalmology has a relatively high overall number of leavers.

Most doctors who leave cite going overseas as their reason for leaving

We've asked for doctors' reasons for giving up their right to practise since 2012, and in this time four fifths of doctors who left the profession have done so. The most common reason, given by over half of these doctors, is going overseas. This is followed by retirement, which is given as a reason by 29% of doctors.

Out of all the doctors who give a reason for leaving, 46% are doctors under 55 who are choosing to go overseas, and 27% are older doctors who are retiring.

When split by PMQreason, given by over half of these doctors, we see that just over 45% of UK graduates' reasons for leaving relate to retirement. It may be somewhat surprising that over a third of UK graduates who leave are going overseas.

When split by register type (Figure 31), we see that trainees and SAS and LE doctors mostly cite moving overseas, while GPs are the standout group among those citing retirement.

Northern Ireland loses fewer young EEA doctors and more EEA doctors make it to retirement there

A small proportion of EEA doctors aged 55 or under leave Northern Ireland in a typical year (4.3%) compared to England, which loses 6.3% on average. We also see that, compared with other countries, a greater proportion of the doctors citing retirement in Northern Ireland are from EEA.

Of all EEA doctors who chose retirement between 2012 and 2014 and hadn't returned by April 2019, 92% in Northern Ireland qualified in the Republic of Ireland. This figure is 60% for England, 67% for Scotland and 64% for Wales.

Figure 30: Percentage of 'Overseas' and 'Retirement' reasons for leaving, by PMQ

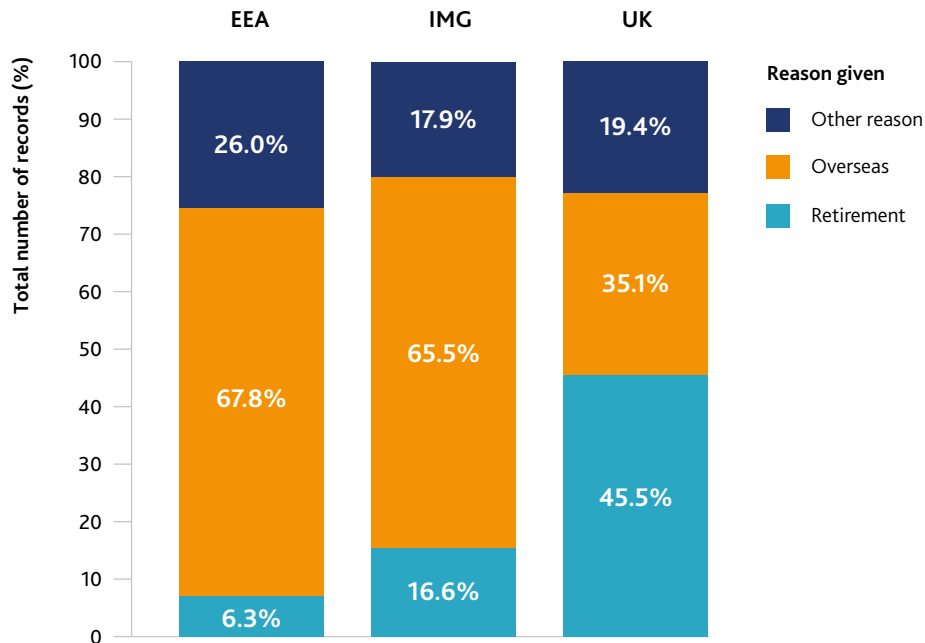
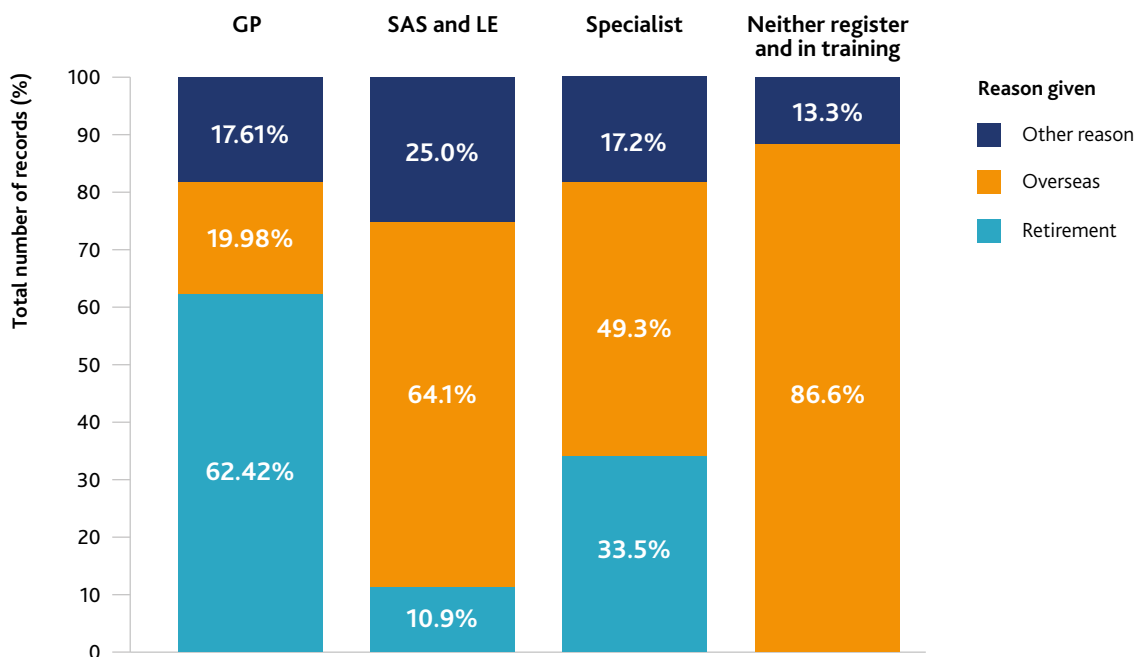


Figure 31: Percentage of 'Overseas' and 'Retirement' reasons for leaving, by register group



Conclusions

In this report, we present data on the UK workforce and highlight issues and opportunities for the healthcare system, including us, to address. As outlined at the start of this report, we've already begun work to better support the UK's medical workforce in a particularly challenging context.

A workforce for the future

Plans for the UK healthcare system emphasise a growing need for more UK trained expert generalists, such as GPs, or experts in certain specialties. We have shown where the system is already responding to these priority areas, but, overall numbers will need to rise further for the four countries of the UK to meet the aspirations of their national healthcare plans.

These strategies are also likely to require a continuation of the large number of doctors from overseas joining our workforce, but we have shown that there could also be substantial benefit in reducing the number of overseas doctors leaving who leave each year, after a short period of working here.

To make sure there's an ongoing and sustainable supply of international doctors entering the UK workforce, we're dealing with applications more efficiently without compromising high standards. But, we urgently need legislative change to make the route to registration easier for those who wish to join the GP or Specialist registers.

As the workforce becomes more international and more diverse, we need to make sure that diversity is embraced by leadership groups. And we need to make sure that, as a system, we offer tailored support to all sections of the workforce.

Supporting today's doctors

The way doctors practise is changing, with more flexible career paths and working patterns becoming more common. The barometer survey shows strong evidence that many doctors are already reducing their working hours – and that many more will – not only to achieve a better work-life balance, but also because of the intensity of workplace pressures.

These findings underline the importance of developing workplace policies to reduce stress and aid retention, which is the focus of a suite

of independent research and reviews we have commissioned recently. From these projects, leadership, workplace cultures and inductions for new doctors and returners emerge as critical themes. These reports also identify examples of good practice and make recommendations to help share these across the UK systems. As a priority, we will respond collaboratively to these recommendations to reduce the risks to patient care and doctor wellbeing that will arise if retention of the current workforce falls.

Preparing doctors for tomorrow

Productivity and better care pathways for patients are critical if the supply of doctors is going to meet patient demand. We will support new models of care through our role in medical education and training. We will work with employers and others to make sure that doctors are as prepared and supported as possible for the roles of the future. Effective implementation to achieve the new outcome requirements for graduates that come into force next year will help.

Effective multi-professional working will add considerably to the flexibility and productivity of the workforce. For this reason, we are particularly pleased to be taking on the regulation of physician associates and anaesthesia associates. There is a considerable amount of work to do to implement this, and we recognise some doctors are concerned about the impact that our regulation of these professions may have

on them. We will work closely with doctors to address these concerns. We firmly believe that medical associate professionals (MAPs), who are appropriately deployed and regulated will make a significant difference in easing the pressures on doctors and hence be good for the NHS, the profession and patients.

We hope the data and insight in this report will inform the further development and implementation of each country's workforce plan. We're also committed to regulatory alignment with others to support employers, medical students, trainees and the profession in the most efficient way possible, and to put the workforce on a successful trajectory. Many of the activities that we've noted in this report will help to meet the aspirations of these plans and, in doing so, will protect patients across the UK for many years to come.

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