



**Clinical
Radiology
Workforce
Census
2023**

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Foreword

Dr Raman Uberoi

As I come to the end of my tenure as Medical Director for Professional Practice at The Royal College of Radiologists, I am compelled to reflect on the transformations witnessed in the field of radiology over the past three years. The pace of innovation has been remarkable, not least with advancements in interventional radiology (IR) and artificial intelligence (AI) transforming the way we deliver our services. These breakthroughs hold tremendous promise for radiology – enhancing diagnostic accuracy, delivering less invasive treatments, streamlining workflows, and ultimately, improving patient outcomes and experience.

However, amidst this excitement lies a significant challenge. This year's workforce census once again paints a stark picture of a widening gap between the capacity of our radiology workforce and the escalating demand for imaging services.

While the number of CT and MRI scans surged by a staggering 11% this year, we are also seeing an increasing range and complexity of IR treatments being provided. The 6.3% growth in the workforce, though encouraging, is insufficient. This shortfall creates a ripple effect, causing delays for patients, reducing capacity to train the next generation of radiologists, and negatively impacting the well-being of our dedicated workforce.

The financial implications are equally concerning. The NHS shouldered a record-breaking cost of £276 million in 2023 for outsourcing, insourcing, and ad-hoc locum staffing, equivalent to the salaries of an additional 1,962 consultant radiologists (to make up the current shortfall) and 1,699 specialty trainee salaries – a clear illustration of the escalating expense associated with managing this excess demand.

To date, there seems to have been a widespread lack of recognition from policymakers of the extent of this challenge, and the impact that the ever-widening gap between capacity and demand will have on the NHS and patients.



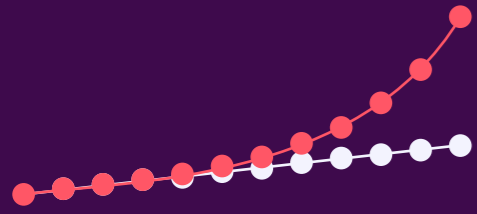
This report should act as a wakeup call – with a 30% shortfall of clinical radiologists, we are in a radiology emergency. We can no longer do more of the same.

In the rapidly changing world of healthcare, radiologists are at the forefront, paving the way for future innovations. This is what makes the specialty so exciting for current and hopeful radiologists across the country. Not only do we play a vital role in patient care, providing critical diagnoses, treatment, and advice to the multidisciplinary team, but we also pioneer change in the delivery of healthcare, from beginning to end. While AI and extended roles may offer some support in meeting rising demand in the face of workforce shortfalls, it is consultant radiologists who will lead, develop, and maintain a high-quality service.

By working collaboratively, we can develop and implement effective policies to ensure a thriving radiology workforce, capable of delivering an expert radiology service for generations to come. I hope that this report acts as a springboard for action.

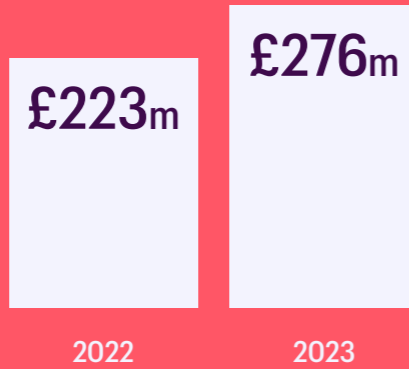
Key statistics

The radiology workforce grew by 6.3% in 2023.



The rate of CT and MRI scans surged by 11% in the same timeframe.

The NHS spent £276m on managing excess reporting demand – the highest ever, and £52m more than in 2022.



2,690 yearly consultant salaries could be funded with the same money spent on managing excess demand, higher than the current shortfall.

100% of clinical directors are concerned about the impact of workforce shortages on workforce morale and burnout.



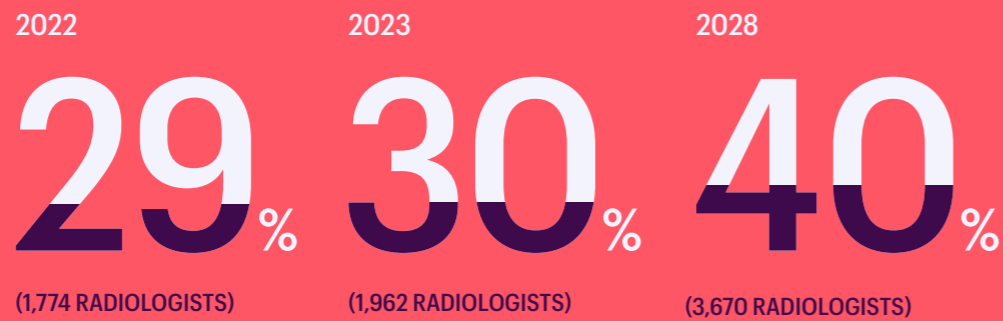
7 out of 10 clinical directors said there were not enough radiologists to deliver safe and effective levels of patient care.



The average (median) age that radiology consultants left the workforce.



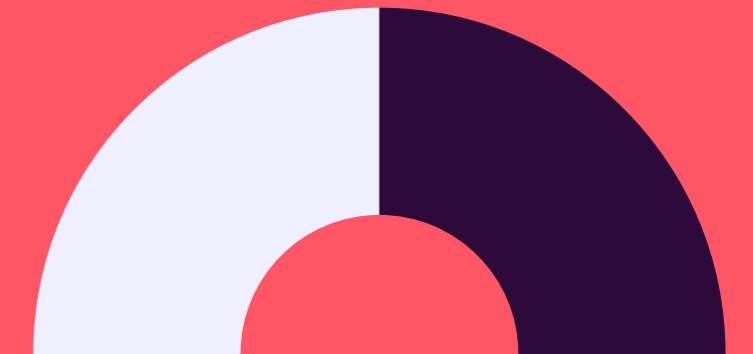
Radiology workforce shortfalls:



97% of clinical directors said that workforce shortages were causing backlogs and delays at their trust/health board.



Only half (48%) of UK trusts and health boards are able to provide an adequate interventional radiology service.



Overview of recommendations

In developing the next iteration of their workforce plans, the NHS and government in each of the four nations should consider the following recommendations*



1 Recruit

- a. The NHS should not only maintain but expand the number of specialty training posts for clinical radiology to keep up with rising demand. To encourage trusts and health boards in taking up these posts, NHS England should fund 100% of the trainees' costs for the first two years, dropping down to the standard 50% statutory education board funding and 50% local hospital/network funding thereafter.
- b. Hospitals, particularly those with the highest shortages of clinical radiologists, should ensure they have a long-term funding plan for radiology training and consultant posts.

2 Train

- a. The government should provide new funding for an expansion of clinical and office space, and PACS access, to accommodate diagnostic and interventional radiology trainees.
- b. Doctors should have funded supporting professional activities (SPA) time to provide formal training. Retired doctors should also be encouraged and enabled to return to support education as well as essential clinical work.
- c. The NHS should explore innovative solutions to expanding training capacity, including through hybrid models, increased use of technology, and sharing training materials across the country.
- d. The NHS should immediately require that every diagnostic reporting and interventional list is considered a radiology training list to expand radiology training opportunities. Workforce planning should account for sufficient direct clinical care (DCC) and procedural time to enable this.

3 Retain

- a. To support retention, trusts and health boards should ensure basic staff wellbeing measures, including but not limited to, up-to-date computer hardware and software, improved internet connectivity, sufficient administrative and clerical staff, support with parking and other transport options, and providing rest space.
- b. As part of Care Quality Commission inspections, trusts should be assessed on staff wellbeing and how well hospitals are treating their employees.
- c. Flexible working patterns should be offered as a default to all existing and new NHS staff.
- d. Trusts and health boards should ensure that all doctors have sufficient SPA time protected in their job plans. This must include those working less than full time (LTFT) and specialty and specialist (SAS) doctors. Future workforce planning should accommodate this.
- e. Exit interviews should be conducted with all doctors leaving the service to understand the reasons for their departure.

* Unless specified, 'the government' refers to the individual government in each UK nation, and 'the NHS' refers to the central NHS body in each country (NHS England, NHS Scotland, NHS Wales and Health and Social Care Northern Ireland).

Introduction to this census



For the 16th year, The Royal College of Radiologists (RCR) proudly presents the annual clinical radiology workforce census, offering a detailed insight into the specialty as of October 2023. For another year, we have achieved a 100% response rate from all 159 acute trusts and health boards. We remain the only Royal College to achieve this and we would like to extend our thanks to all the Clinical Directors who took the time out of their busy schedules to provide this information. This level of engagement ensures the data's accuracy and enables us to speak decisively about the clinical radiology workforce.

We urge the Government, NHS, and trust and health board leaders in each of the four nations to engage with the findings of this report and take meaningful action to grow and support the radiology workforce, today and in the future.

100%

Response rate from all

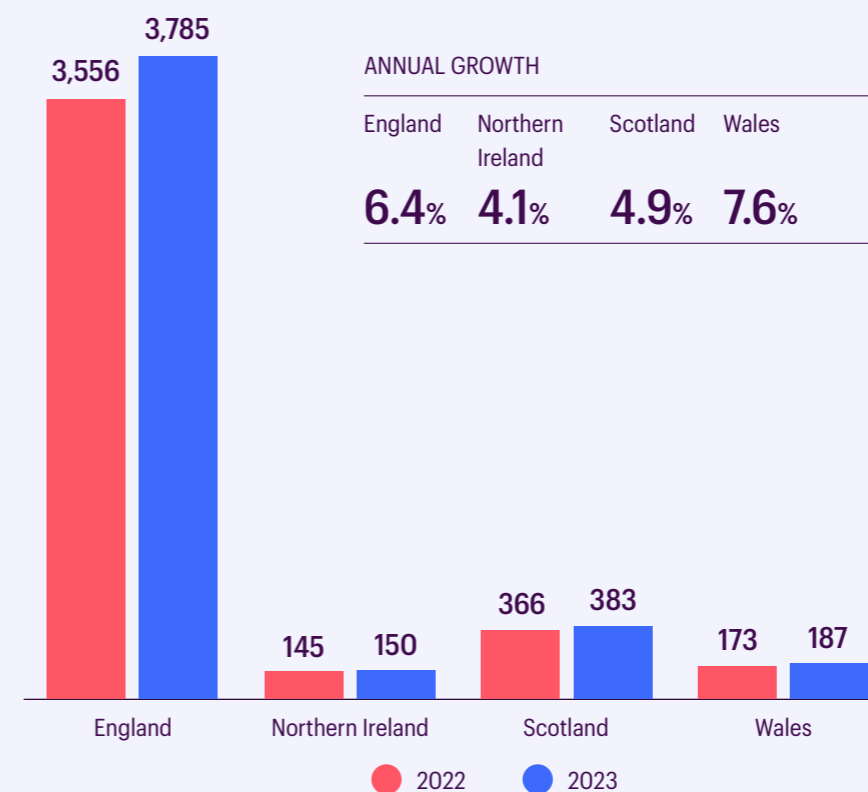
159

Acute trusts and health boards

Snapshot of the radiology workforce



CR CONSULTANTS (WTE) – DEVOLVED NATIONS, 3 YEAR TREND



Shortfalls

The UK has a 30% shortfall of clinical radiologists, meaning we are 1,962 radiologists short of providing an adequate radiology service. This is forecast to rise to 40% by 2028. This means, without meaningful action, we will have a shortfall of 3,670 radiologists.

Workforce growth

As of October 2023, there were 4,624 clinical radiologists (WTE consultant and SAS) working in the UK.

The CR workforce grew by 6.3% in 2023, which was higher than the average annual growth rate of 4.5% over the past five years.

Growth has not been equal among the four nations. While Wales radiology workforce grew by 7.6% and England's by 6.4%, Northern Ireland's grew by 4.1% and Scotland 4.9%.

485 CR consultants joined (or rejoined) the workforce in 2023 – this was a particularly positive year, compared to 341 in 2022. Over the past five years, 64% of new consultants joined following UK specialty training, 4% through CESR, 27% through other global recruitment methods, with the remaining 5% unknown.

Of the consultants joining through global recruitment, nearly three-quarters took up locum posts. Despite being in consultant posts, 77% of the global recruits are not on the GMC specialist register, which means we do not have the same assurance that they have reached the same standard as a UK trained substantive consultant on the specialist register.

Portfolio Pathway (CESR) applications

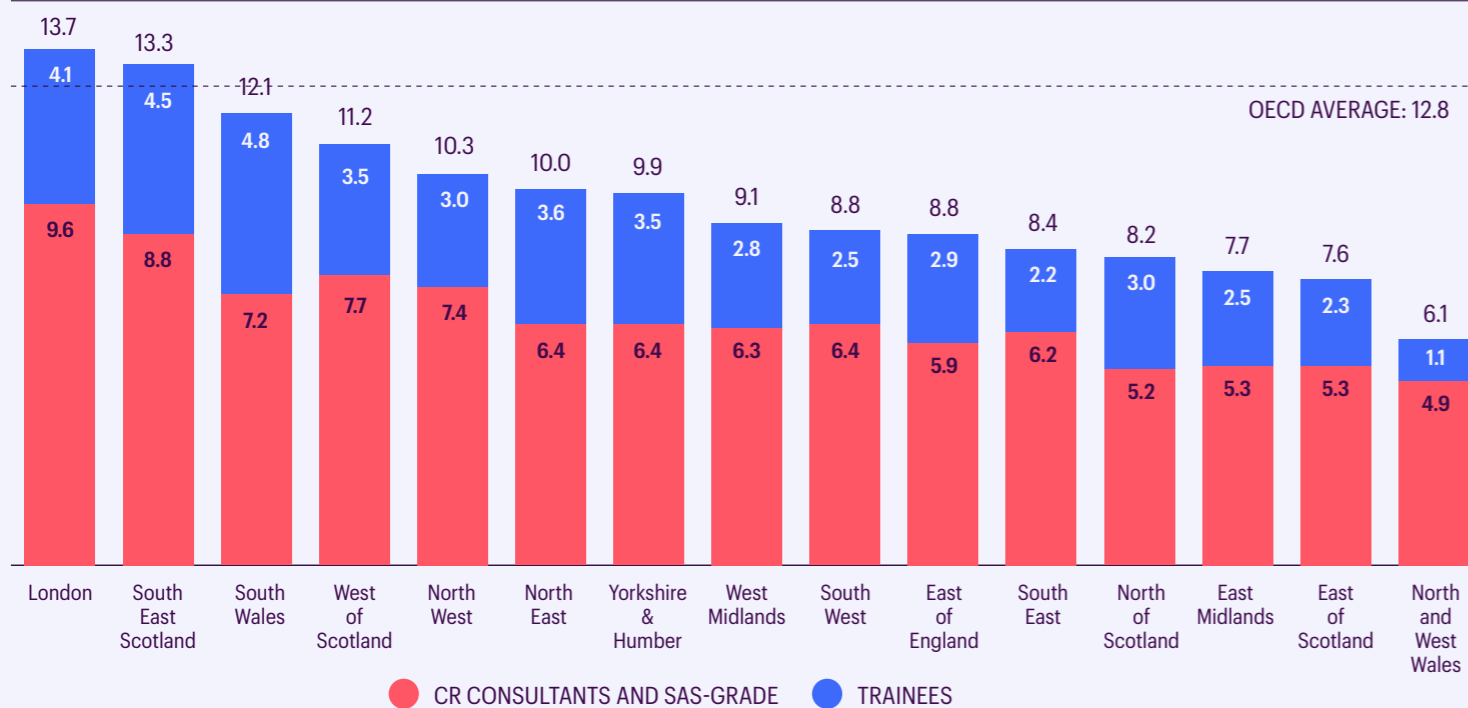
In 2023, there were 82 portfolio completions, compared to 51 in 2022, showing it is an increasingly important source of new consultants.

Regional inequalities

Across the UK, there are 9.9 radiologists (consultants, SAS and trainees) per 100,000 people, compared to the OECD average of 12.8.

This is highest in Northern Ireland and Scotland, where there are 10.5 radiologists per 100,000 people compared to 9.5 in Wales.

RADIOLOGISTS PER 100,000 POPULATION, 2023



Demographics

Women are underrepresented in the clinical radiology consultant workforce, although there is more balance in the SAS workforce.

The average (median) age of a clinical radiology consultant is 47.

GENDER RATIO BY TYPE OF DOCTOR, 2023

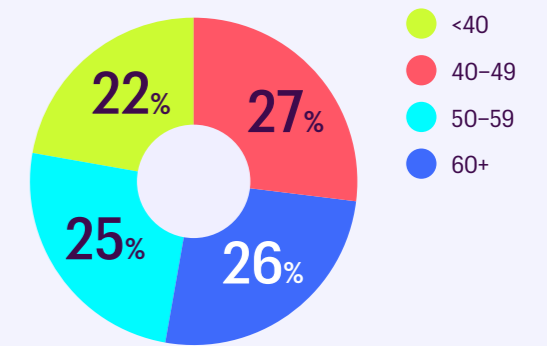


Leavers and retirement

The average (median) age that consultants left the workforce in 2023 was 54.

For those working full-time, this was 45 compared to 59 for those working less than full-time, highlighting the importance of flexible working for retention.

AGE OF CR CONSULTANT (WTE) LEAVERS, 2023



74% of consultants who left the workforce were under the age of 60. Half (49%) of consultants were under the age of 50.

In England there was a 2.6% consultant attrition rate, compared to 2.5% in Wales, 3.8% in Scotland, and 4.6% in Northern Ireland.

International Medical Graduates

A third (34%) of consultants who left the service were IMGs. The average (median) age that IMG consultants left the service was just 46, compared to 59 for UK trained consultants.

Working patterns

Half of full-time consultants are working a 10 PA contract (equivalent to a 40-hour working week, or 37.5 hours in Wales). 10% of consultants are still working a 12 PA contract, with 16% of those over 55 working a 48+ hour week. In recent years, an increasing proportion of full-time consultants are working on 10 PA contracts.

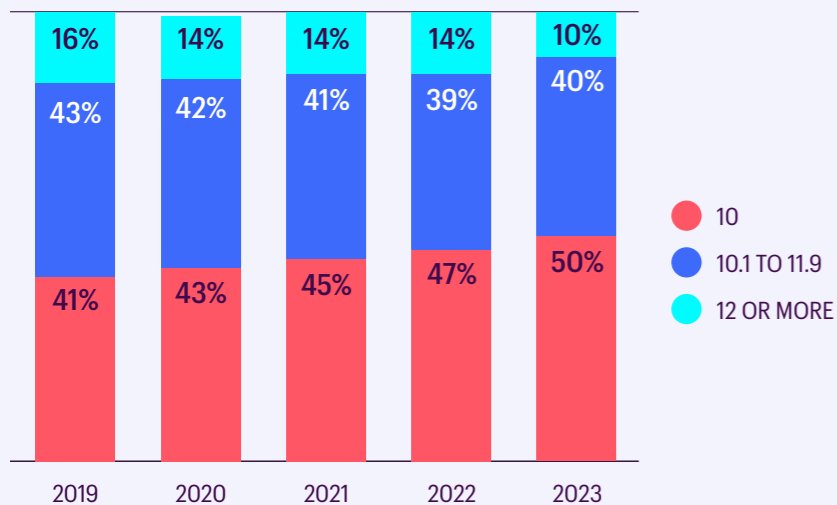
Individuals working too many hours introduces immediate risks, including harming their wellbeing. It may also contribute to earlier retirement rates.

37% of CR consultants are working less than full time (LTFT).

Any remaining, additional capacity that occurs from consultants working LTFT should be factored into workforce planning and used to bolster staffing levels.

On average, those working LTFT are contracted for 7.8 PAs, equivalent to a 31-hour working week. This is likely to encourage retention and the option should be made available to all staff, especially those nearing retirement.

PROGRAMMED ACTIVITIES (TOTAL) FOR FULL-TIME CR CONSULTANTS, PAST FIVE YEARS



Vacancies

There is a total of 507 vacancies (WTE) for CR consultant posts, representing a 10% vacancy rate. The number of consultant posts advertised is significantly lower than the 1,962 radiologists needed to offer an adequate service.

60% of vacancies having been vacant for over 6 months demonstrating the lack of qualified candidates available to apply for these roles. This reinforces the need to train more doctors to meet the rising shortfall. In the short-term, global recruitment should be considered where appropriate.

Composition of the workforce

Trainees

Trainees make up 29% of the clinical radiology workforce. In total, there were 2,049 radiology doctors in training across the UK in October 2023. 377 trainees began training in 2023, compared to 416 in 2022. This is lower since fewer expansion posts were taken up by trusts, primarily due to their inability to fund 50% of the trainee's costs.

Specialty and specialist (SAS) doctors

SAS doctors make up 3% of the radiology consultant workforce, equivalent to 119 doctors (WTE). This is much lower than in other medical specialties – the SAS workforce currently makes up 30% of all licensed doctors and are the fastest growing medical group.¹

91% of SAS radiologists are international medical graduates.

The SAS radiology workforce has grown at an average yearly rate of 14% over the past five years. Whilst seemingly high, it would take more than 20 years of continued growth at this pace for the SAS-workforce to comprise just 20% of the total radiologist workforce.

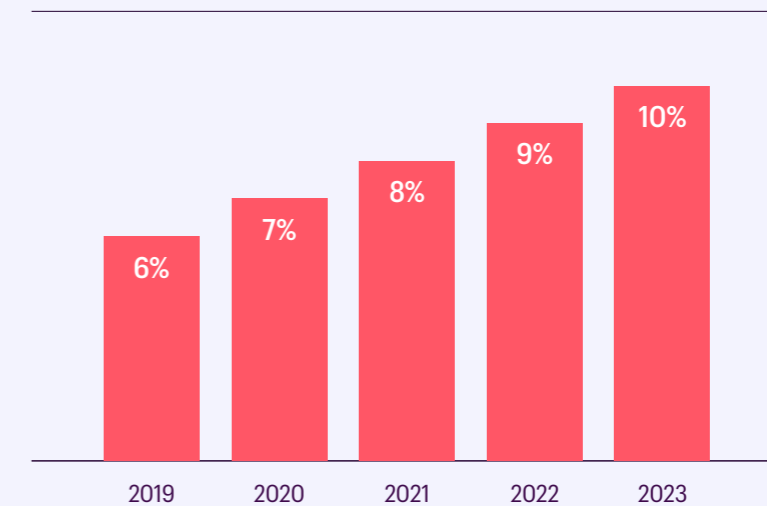
Locums

The number of consultant locums in the CR workforce has risen considerably over the past five years. In 2022, there were 373 locums (WTE) compared to 447 in 2023. Locums now make up 10% of the total consultant workforce.

Due to the large number of unfilled consultant posts, locums are critical for providing capacity and maintaining safe workforce levels. However, there are challenges to their widespread use including high costs and the impact on service development since locums focus solely on direct clinical work. There are also additional risks associated with locums since they are not required to be on the specialist register, and they are not protected by the same terms and conditions as substantive consultants.

4 in 10 locum radiologists are under the age of 40, which may be due to a myriad of reasons including family, pay and working patterns. Certain countries are more reliant on locums than others. In Northern Ireland, locums make up 16% of the workforce and 14% in Scotland, which may threaten the stability of the service and bring about risks since they may not have specialist registration. Bringing these individuals into the mainstream workforce would therefore be of great value.

LOCUMS AS % OF CONSULTANT WORKFORCE – PAST FIVE YEARS

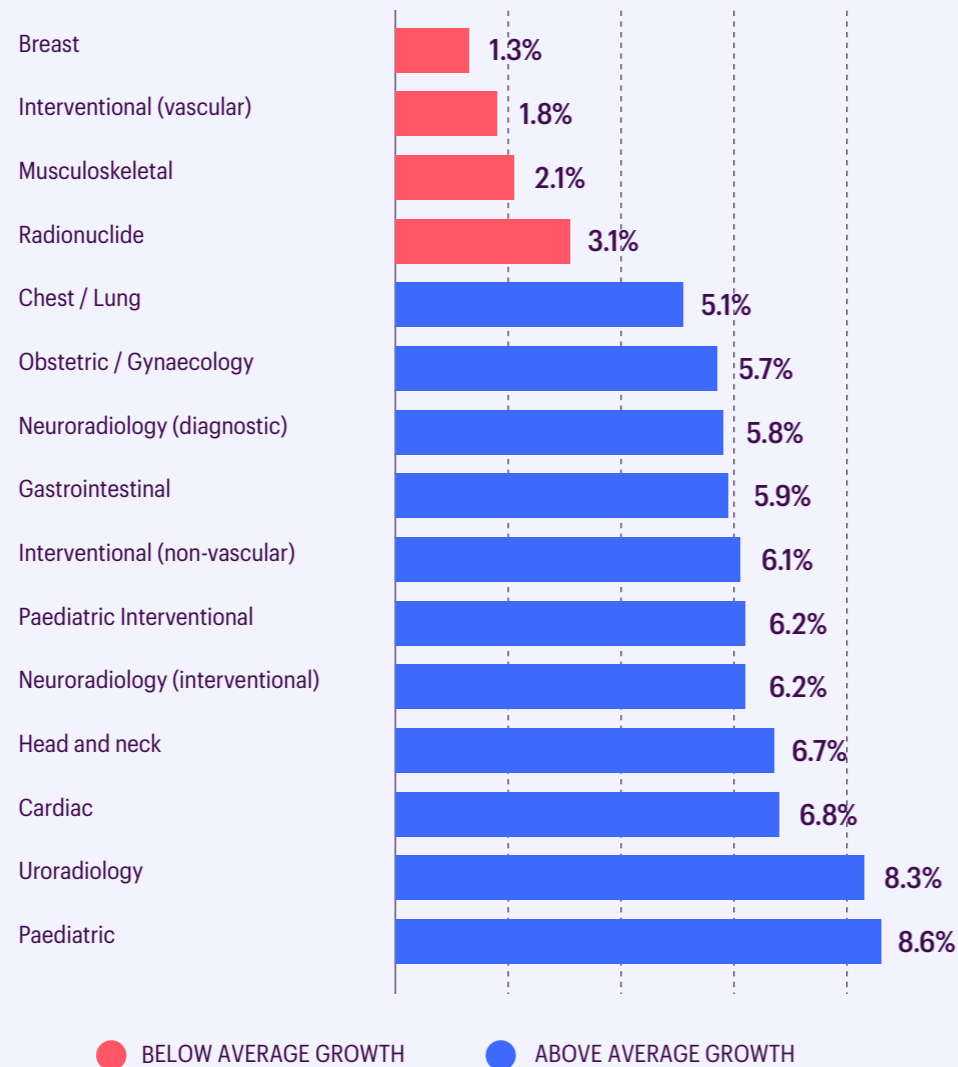


Special interests

Workforce growth has not been equally distributed among the radiology special interests.

Over the past five years, the breast consultant CR workforce has grown by just 1.3% a year, and the vascular interventional radiology workforce by 1.8% each year.

CLINICAL RADIOLOGY CONSULTANTS SPECIAL INTERESTS
– AVERAGE ANNUAL GROWTH (PAST FIVE YEARS)



Reporting demand is growing faster than the workforce



Demand for imaging services is significantly outstripping workforce growth. Over the past five years, the average yearly increase in demand for diagnostic tests was 3%, and 5% specifically for CT and MRI scans.

In 2023, demand for CT and MRI scans grew by 11%.

While workforce growth was stronger this year than in previous years, the 6.3% growth is still substantially lower than the 11% increase in demand for scans that need reporting. As a result, radiologists are unable to report the level of scans within the required timeframes.

A large driver of this demand is pressures on emergency departments, which has led to an increase in demand for imaging in acute settings.² Imaging is increasingly being used to help triage patients which can pull radiologists away from their routine lists. In 2023, a third (32%) of CT and MRI scans were unscheduled, compared to 23% five years ago.³

Acute cases are often complex and require more clinical discussion, especially with other specialties. They can also take more time to acquire and report the scan. This has a knock-on effect on elective cases, delaying their reporting or meaning they are more likely to be outsourced. This also means they are unavailable for trainees to report and learn from, resulting in training gaps.

The expansion of screening programmes and the success of local diagnostic centres has also widened the net of patients requiring imaging services.

Impact of workforce shortages

Patient care

Workforce shortages in every staff group create bottlenecks at each stage of the diagnostic pathway. Patients are now waiting too long at every step of the diagnostic pathway.

In December 2023, nearly one in five patients were waiting more than six weeks for their CT or MRI imaging test – equivalent to nearly 90,000 patients.⁴ Additionally in 2023, nearly three quarters of a million (745,290) patients waited over four weeks to receive the result of their imaging test following the scan.⁵

97% of clinical directors said that workforce shortages were causing backlogs and delays.

Reporting backlogs have a tangible impact on the patient pathway. Without an authoritative imaging report, the multidisciplinary team cannot determine the appropriate next steps. Often, reporting delays mean that results are not available when patients attend outpatient appointments and therefore, their treatment is delayed. This also wastes an outpatient appointment, frustrating both patients and doctors.

A patients' condition frequently deteriorates while they are waiting for treatment. We know that for every four weeks a patient is delayed from starting treatment for certain cancers, their risk of death increases by approximately 10%.⁶

91% of clinical directors said that workforce shortages were impacting patient safety.

Acute and inpatient cases are inevitably prioritised, meaning that outpatient scans regularly go unreported for long periods of time, and those with lower priority conditions may end up waiting months or even years for treatment.



Waiting times for imaging is very long. Urgent scans can wait up to 8 months; routine scan wait times are measured in years.



Morale is at an all-time low due to worst ever backlog.

RCR Insight Panel, Aug 2023

Staff retention and burnout

Workforce shortages mean that reporting requirements are becoming unsustainable. Pressure to report an increasing level of scans, and the feeling of being unable to do ones best for their patients, can cause burnout, which impacts doctors' quality of life and wellbeing.

100% of clinical directors are concerned about the impact of workforce shortages on workforce morale, stress and burnout. Half of clinical directors are highly concerned about staff burnout.

Not only does this have severe consequences for the individual's wellbeing, but it also diminishes productivity, and threatens to worsen shortages, given that unhappy staff will most likely retire early or turn to employment elsewhere. Slow IT systems, a lack of administrative and clerical support, poor support with parking and other transport options, and few workstations are all examples of the poor conditions that NHS radiologists work under.

The impact of burnout on retention is clear. Half (49%) of substantive consultants who left the workforce over the past year were under the age of 50.

Flexible working is a clear way of encouraging staff to stay working for longer.

Average (median) age of substantive consultants leaving:

Full time

45 yrs

Less than full time

59 yrs

Radiologists' working practices change over the course of their career, particularly when nearing retirement. Flexibility in working hours can be a challenge for departments but may help to retain more doctors. However, radiologists have reported being unable to reduce their hours due to a lack of cover. Without action, an increasing number of doctors will leave the NHS workforce, contributing to greater shortfalls, further pressure, and worse patient care.



There have been significant radiology incidents including reporting errors due to work related pressure and burnout on the existing radiology workforce.

Service development

Service development covers a large variety of activities, including leadership, clinical research, embedding technological advances, teaching and education, and quality standards.

Nearly all (99%) of clinical directors are concerned about workforce shortages impeding service development.

Time for supporting professional activities (SPA) is critical to the development of radiology services and doctors should have time protected to undertake these activities. The RCR's clinical radiology job planning guidance recommends that consultants should have a minimum of 1.5 SPAs in their job plan for revalidation.⁷ For other non-clinical work, including teaching, leadership and service development, doctors will need dedicated time on top of the standard 1.5 SPA for revalidation. Many people, including senior consultants, will need more than 2.5 SPA.

Despite this, nearly one in six (17%) consultants had fewer than the minimum 1.5 SPAs in their job plan – this increased to over 1 in 3 (36%) for those working less than full time.

Insufficient SPA time, which is already frequently overridden by time for direct clinical care (DCC), further lowers morale and is hindering the development of the service. Leadership roles, which are vital for the strategic planning and oversight of the department, are no longer taken up since there is no SPA to support it.

It is well known that technological developments such as Artificial Intelligence (AI) have huge potential in radiology.

Just over half (54%) of trusts or health boards are currently using AI tools in clinical use.

However, to fully realise their benefits, staff need the planning time and training to consider their implementation and how best to use it in the service. 64% of trusts or health board leaders said that a lack of staff capacity and/or expertise to train was a significant barrier to adopting and implementing AI.

Expanding SPA time may prove difficult for departments but offers long-term opportunities. Consultants over the age of 60 may be encouraged to stay working for longer by taking on more non-clinical work, including medical education and training with additional dedicated SPA's. In this age bracket, only half (53%) had the minimum recommended 1.5 SPAs. Retired doctors can also be incentivised to return to practice by expanding their non-clinical commitments. Increasing opportunities for non-clinical work is also likely to support retention and morale.

Costs of managing increasing reporting requirements



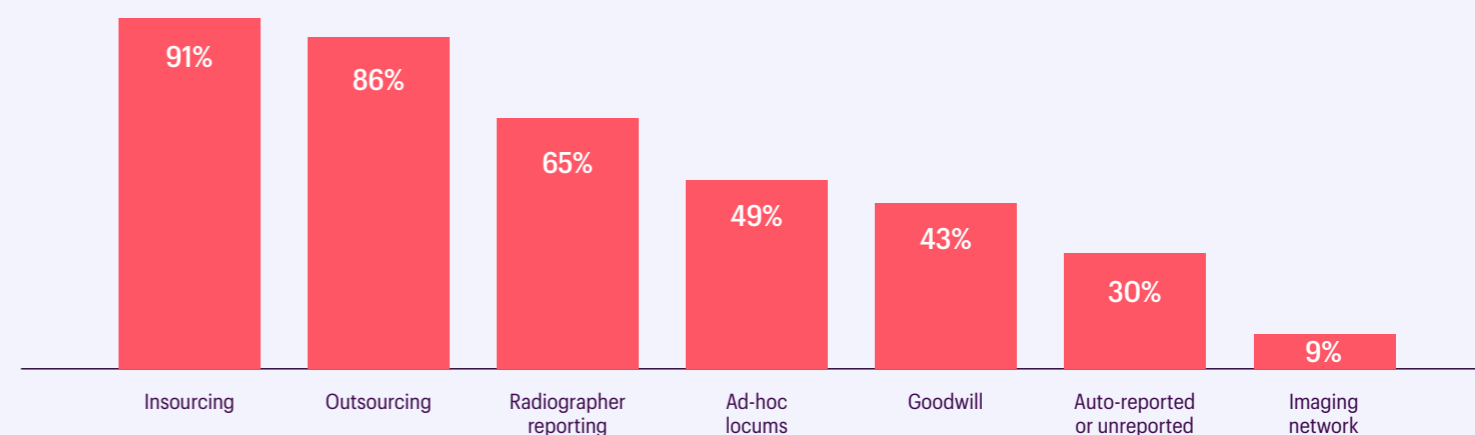
99% of radiology departments were unable to meet their reporting requirements within the department's contracted hours. Just 1 department reported being able to do so.

Over five in six departments outsourced imaging scans to private teleradiology companies. Many radiologists work for outsourcing companies in addition to their NHS work, as private reporting that can be done more flexibly proves to be an attractive offer. However, often this means radiologists are overworked which can contribute to earlier retirement.

9 in 10 departments used insourcing, whereby contracted radiologists are paid to take on additional reporting work. This risks placing further pressure on already overworked staff, and increasing staff burnout. Concerningly, 43% of departments still rely on goodwill (or unpaid overtime) to manage demand. As morale lowers, this is likely to reduce in the future.

Just 9% of departments used an imaging network to manage excess reporting, demonstrating the lack of capacity across the entire country. Many imaging networks will not have reached a level of maturity where they could operate in this way.

METHODS USED TO MANAGE EXCESS REPORTING, 2023

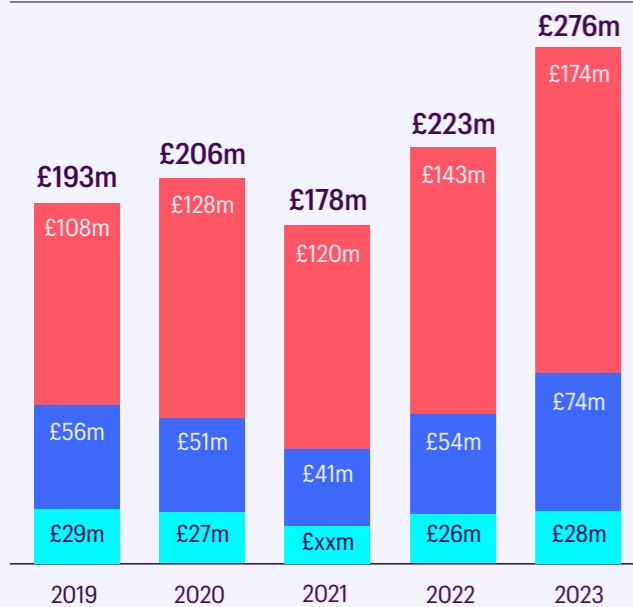


The costs of managing this rising demand continues to grow.

In 2023, the NHS spent £276 million on alternative methods, the highest on record.

If the number of CT and MRI scans continues to rise by 11% each year (the 2023 rate of increase), then by 2028, expenditure will approach half a billion pounds (£459M).

TOTAL EXPENDITURE TO MANAGE EXCESS REPORTING, PAST FIVE YEARS



● OUTSOURCING
● INSOURCING
● AD-HOC LOCUMS



We outsource a large number of CT/MRI scans and radiographs, and the quality of reports is variable. In addition, the turnaround time is not always sufficient [which] impacts on MDT provision and cancer care.

While outsourcing may address the immediate capacity challenge, there is evidence that these practices can contribute to inefficiencies downstream; for example, it is less straightforward for a clinician to have a detailed conversation with the radiologist who reported the scan, should they need to do so. This can mean scans have to be re-reported, therefore duplicating the work. In addition to the unsustainable costs of outsourcing, many of the private companies are also becoming saturated and reaching their reporting capacity.

Departments are often unable to persuade finance directors of the benefits of converting these outsourcing budgets to new training or consultant posts, despite the clear long-term benefits of doing so.⁸

2,690 consultant salaries (or 1,962 consultant and 1,699 specialty trainee salaries) could be funded with the same money spent on managing excess demand, higher than the shortfall.

Training challenges

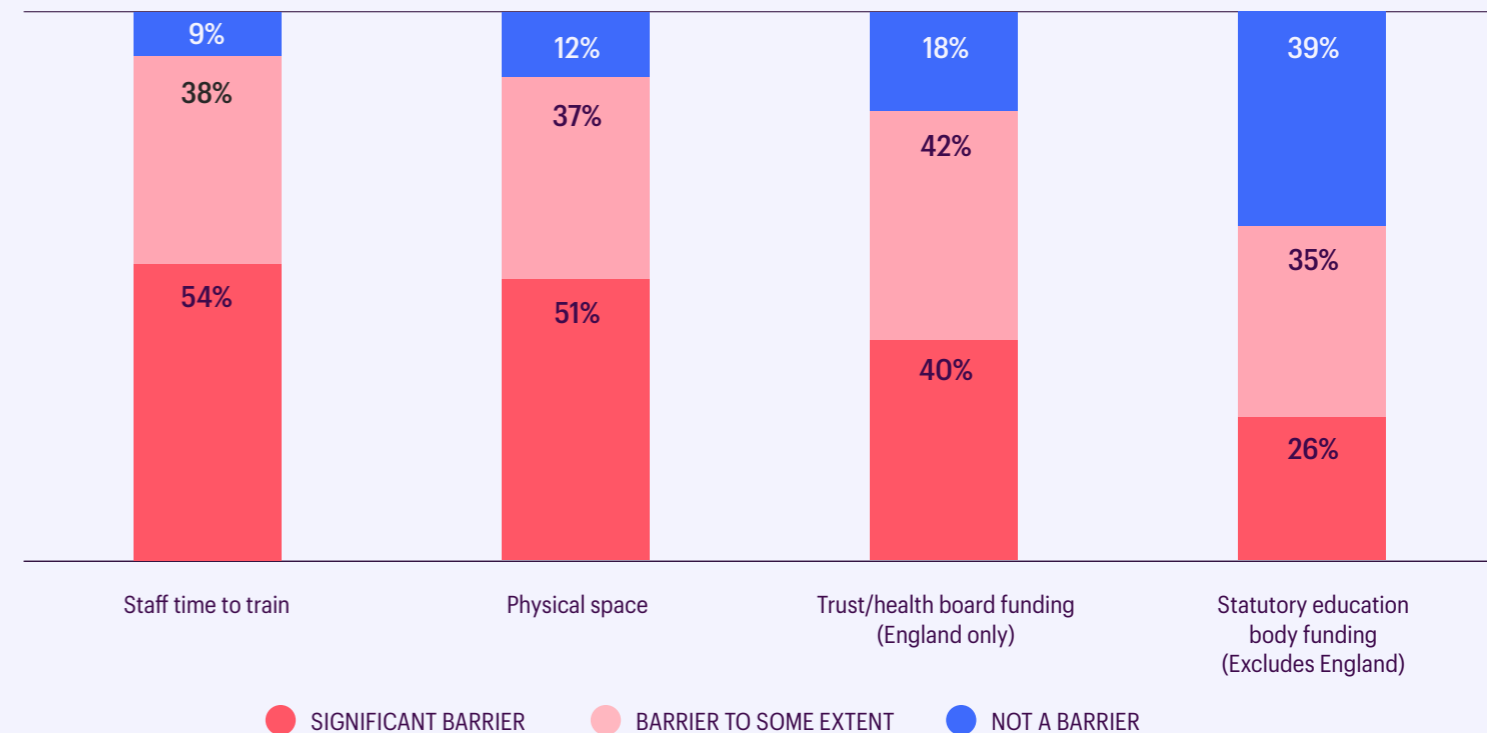
Growing the workforce relies on services being able to train future doctors.

In both 2021 and 2022, NHS England introduced an expansion of 100 clinical radiology training places in response to the rising demand for imaging services, meaning that they would fund 50% of the trainee's costs through the statutory education body, with the other 50% being provided by the local hospital provider.

However, despite the clear need, training programmes were only able to offer 84 of these posts. As a result, in 2023, NHS England reduced the number of expansion posts for 2024 recruitment to 75, of which only 59 have been taken up by training programmes (as of March 2023). Clinical radiology is a highly competitive specialty with over 8 applicants for every 1 training position in 2023, so filling these expansion posts would not be an issue.

Training programmes are increasingly struggling to accommodate new trainees. For the first time, we have collected data from clinical directors on the barriers to expanding training places in their local area.

BARRIERS TO CR SPECIALTY TRAINING (DIAGNOSTIC), 2023





The department is
bursting at the seams!
No place for trainees
to sit or be trained.

Staff time to train

The biggest reported barrier to expanding training places was staff time to train.

Radiology training takes two different forms. There is formal teaching, for which consultants need dedicated SPA time. However, most training is done through learning on the job, whereby a trainee reports a scan, and the consultant will review it, or the trainee will sit beside a consultant while they are reporting. To do this effectively, consultants must work more slowly than if they were reporting on their own, which is particularly the case for more junior trainees. Departments therefore need to factor in this additional time for direct clinical care (DCC) to allow for more training to take place.

Due to extreme workload pressures, consultants find it difficult to prioritise training. Even time technically protected in job plans for education is frequently overridden due to reporting requirements. As more consultants choose to report from home, this also limits capacity to train in person and can negatively impact trainee's experience.

On average, each trust or health board had a total of just three training PAs (programmed activities) across all consultants, equivalent to 12 hours a week. One in three consultants had dedicated training time in their job plans. However, only half of trusts/health boards were able to supply this information and there are challenges around separating SPA and training PAs, so the data is incomplete.

Physical space

Another barrier which prohibits training is office and clinical space. 88% of clinical directors said that physical space was a barrier to radiology training, which increased to 91% for interventional radiology training. Training on the job requires more physical space since they must be sat next to each other.

Funding

Funding for training places is a critical issue, raised frequently by training programme directors.

In Scotland, Wales and Northern Ireland, training posts are 100% centrally funded by the statutory education body (NHS Education for Scotland, Health Education and Improvement Wales, Northern Ireland Medical and Dental Training Agency), with local systems required to cover on call and any additional payments.

In these nations, almost 6 in 10 departments reported difficulties in accessing money from the statutory education body for training places.



We have almost doubled our trainees this year which has been very challenging in terms of the time to spend on training and in terms of space in a very cramped department and number of workstations.



Funding seems
to be a real
challenge.
[The] Trust is
unwilling to
listen to [the]
benefit of training
radiologists.

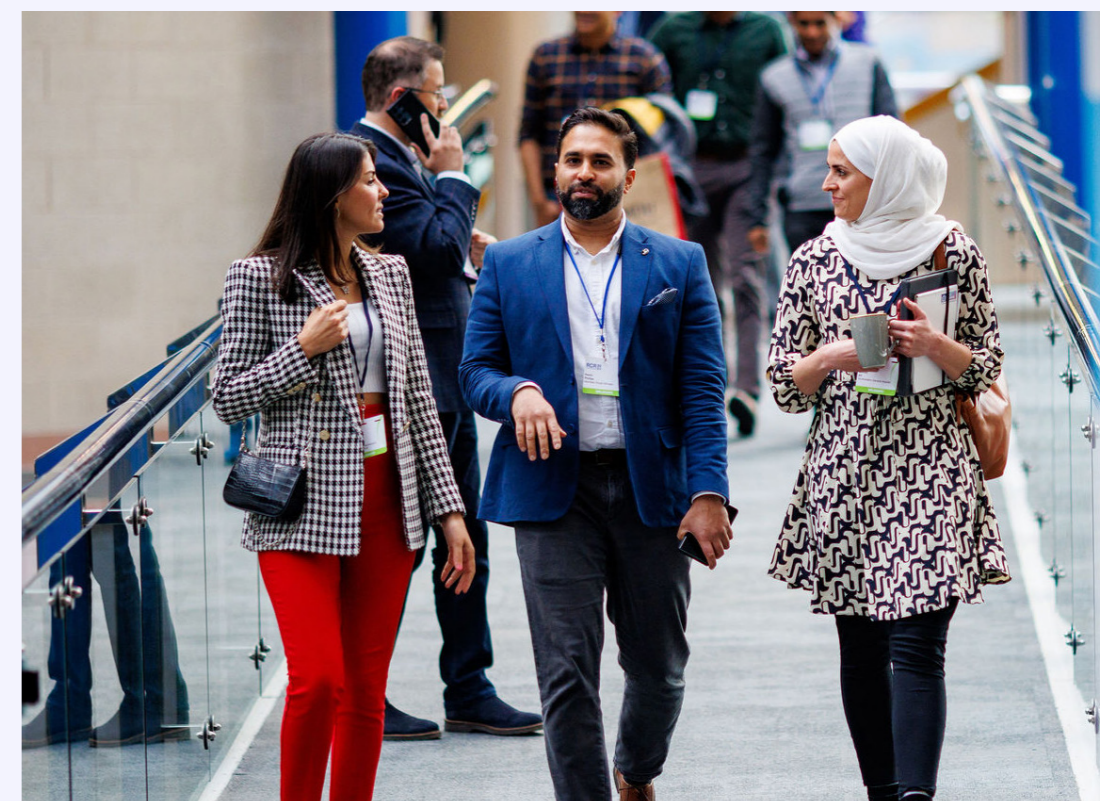
Local funding

In England, NHS England provide 50% of a trainee's costs with the remaining 50% of a training place funded by the local trust. Trusts are facing extreme financial pressures, resulting from high inflation, industrial action, and the impact of backlogs, so securing 50% funding for radiology training places has proven near impossible for some departments.

82% of clinical directors in England said that accessing trust/health board funding for a training post was a barrier. 40% said it was a significant barrier.

First and second year radiology trainees can be perceived to be less useful to departments than trainees in other specialties since they are able to report only relatively low numbers of scans and x-rays independently while they acquire the appropriate skills. This makes it more difficult to persuade finance departments to release funding for training posts since they are not immediately bringing value.

The Royal College of Radiologists have been working with training programme directors to support these conversations with trust leadership and persuade them of the value of taking on radiology trainees, however, further top-down intervention is now required. Investing in training clinical radiologists and clinical oncologists could save the NHS £420 million by 2030.⁸



Local diagnostic centres

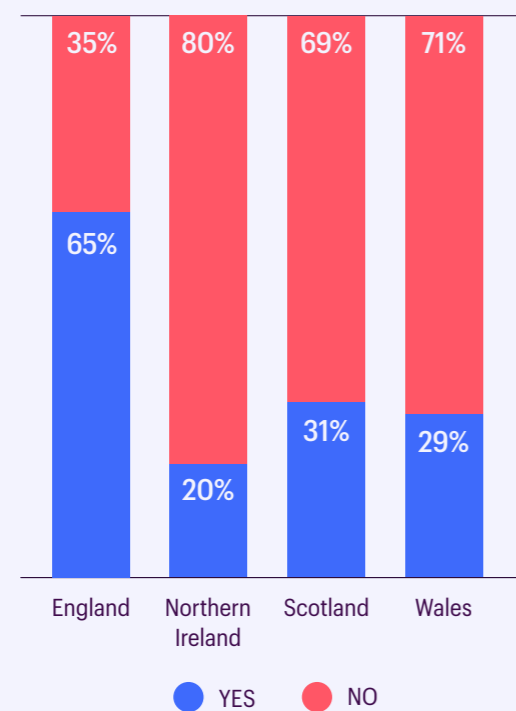


It has increased scanning capacity but not reporting capacity.

Local diagnostic centres (referred to as Community Diagnostic Centres in England) are multi-diagnostic facilities created to bolster local capacity, enhance patient access, experience and outcomes, alleviate hospital burden and address regional disparities in healthcare. They are a central pillar of the Government's ambition to cut NHS waiting lists and speed up access to healthcare.

In the UK, 6 in 10 trusts or health boards work with a local diagnostic centre. England has by far the highest proportion of trusts/health boards working with Community Diagnostic Centres out of the four nations.

DOES YOUR TRUST/HEALTH BOARD WORK WITH A LOCAL DIAGNOSTIC CENTRE?



While local diagnostic centres have increased scanning capacity, there has not been an equivalent expansion or focus on reporting capacity, and they have therefore added to the demands on already limited reporting capacity.

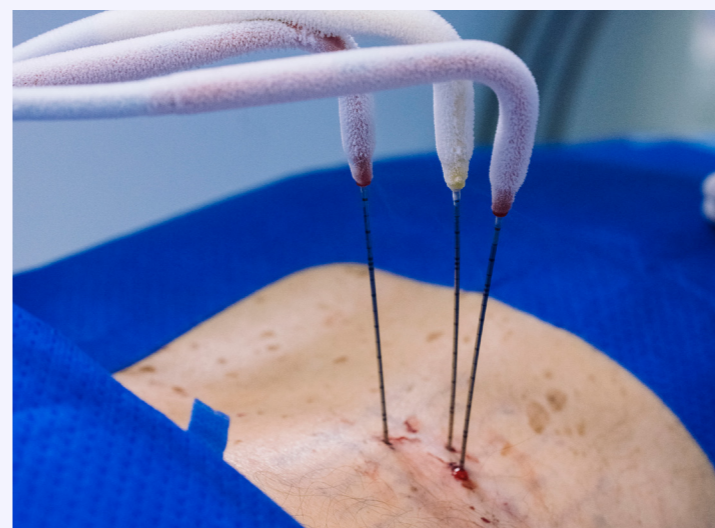
Of the trusts/health boards working with a local diagnostic centre, 82% said that reporting imaging examinations for the local diagnostic centre had increased their workload.

4 in 10 trusts said that working with a local diagnostic centre had increased their workload to an unmanageable extent.

Over half of local diagnostic centres are staffed with solely trust or health board employees, while only 13% are staffed privately, with no requirement of NHS staff's time. Both the medical and non-medical workforce are therefore being stretched across a wider patch. Private providers rarely offer any training opportunities, despite many of their staff having been trained in the NHS.

The workforce needs for local diagnostic centres should be regularly reviewed as the local diagnostic centre programme progresses, ensuring that the workforce is expanded in line with rising demand.

Interventional radiology



Interventional radiologists (IRs) perform a wide range of image guided procedures, using novel and innovative techniques often in emergency settings in adults and children. These procedures not only improve the quality of patient lives, but they are also often lifesaving. They are seen as a preferable alternative to many types of traditional surgery, since they are minimally invasive and can reduce hospital admissions, or a patient's length of stay. Examples include treating patients with active bleeding, sepsis, aneurysms, fibroids, as well as curative and palliative treatments for cancer. A major improvement in patient care has been the development of mechanical thrombectomy for acute stroke, whereby a radiologist removes a blood clot in an artery supplying the brain to restore blood flow which can prevent or reduce disability.

Snapshot of the workforce

There are 787 IR consultants (WTE), with two thirds (510) working in vascular IR.

88% of all IR consultants are men, which has not changed in the past five years.

The workforce has grown by 5.8% in 2023, higher than the average annual growth of 3.6% over the past five years. This high growth is driven by 71 consultants (WTE) joining the IR workforce in 2023, compared to the average yearly rate of 57 for the past five years.

Interventional radiologists make up 17% of the total consultant radiology workforce.

However, despite larger than usual growth, clinical directors report there still being insufficient consultants to operate IR departments effectively due to high, and rising, demand for services. There is an 8% vacancy rate for IR consultant posts, and over half of these have been open for over a year.

The average (median) age that IR consultants, left the service was 56. Nearly three-quarters (72%) were under the age of 60 when they left.

For those working full time, this was considerably younger, demonstrating the benefits of flexible working.





Interventional procedures are delayed due to staff shortages or lack of beds for day case admissions. Due to winter pressures and a lack of beds interventional procedures get cancelled.

There are also stark inequalities in the number of IR consultants per million population by region.

These inequalities affect IR provision, and mean that patients in London and the North West are more likely to have access to an IR procedure than those in the North of Scotland. Given the often-emergency nature of IR procedures, these regional inequalities mean that people living in an area with low numbers of IR's are at risk of being exposed to more invasive treatments or face long delays with worse outcomes.

Only 28% of clinical directors said there were sufficient interventional radiologists to deliver safe and effective patient care.

80% of clinical directors are concerned about workforce shortages causing patients to receive more invasive treatment.

Access to beds and interventional operating theatres

Departments report being unable to perform IR procedures due to a lack of available day or inpatient bed space in their hospital.

One in four IR teams (26%) had no access to either inpatient or day case beds.

Trusts and health boards should expand access to day-case facilities for IR procedures which deliver less invasive care for patients and will speed up the flow of patients being discharged from hospital.

IR CONSULTANTS (WTE) PER MILLION POPULATION, 2023



Interventional radiology services

To be fully effective, IR services should be operating either with a 24/7 1:6 IR rota (six consultants working on the rota), or with formal networked arrangements to transfer patients to another trust or health board with a 24/7 service.

In 2023, only 48% of services had these in place.

In the North of Scotland, and North and West Wales, no trust or health board was operating an adequate IR service. This is also likely to be due to shortages in support staff, including nurses and radiographers, without whom running a 24/7 service is impossible.

Interventional Radiology suites are fundamental to providing an IR service, and their expansion in number will be critical to ensuring departments ability to deliver 24/7 IR services, particularly with the recent increases in stroke thrombectomy.

52%
of trusts or health boards are operating with inadequate IR services.



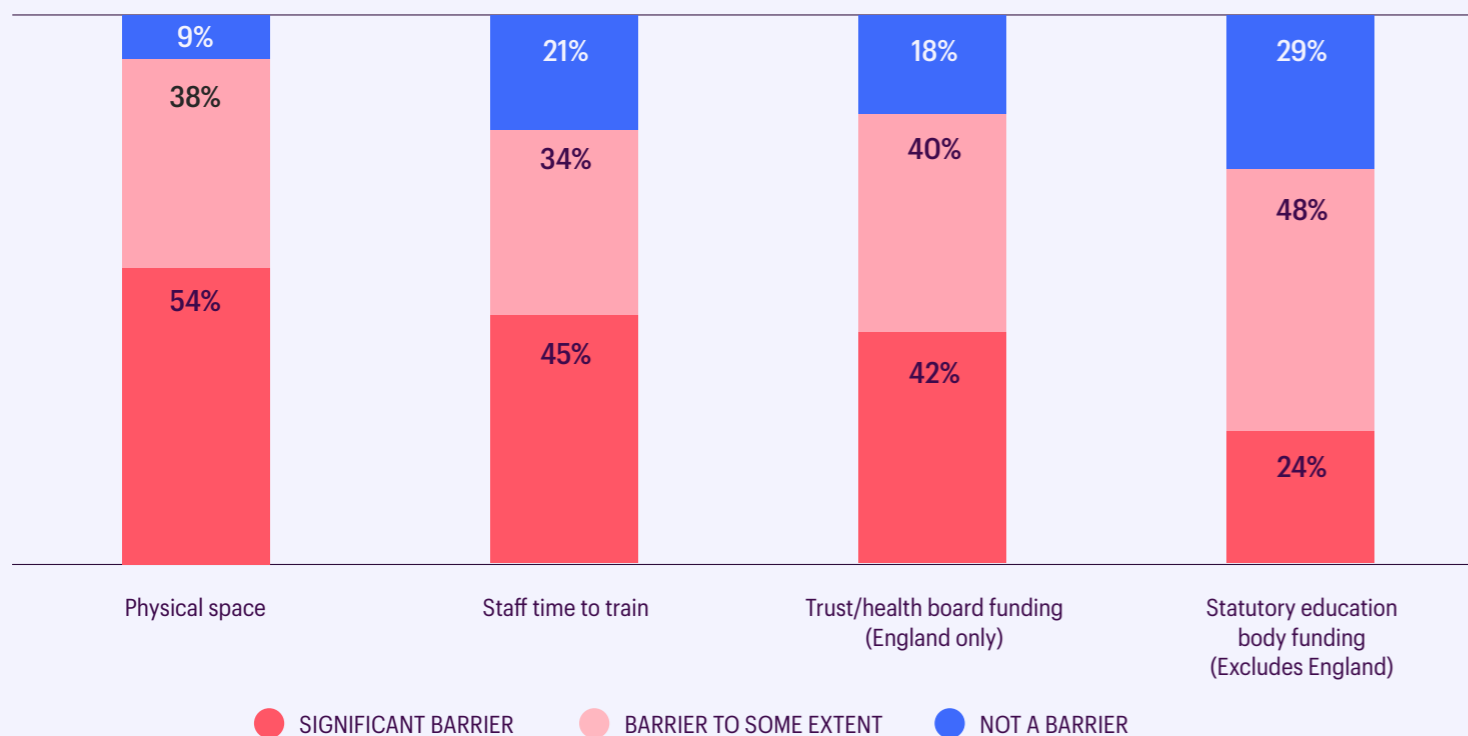
Interventional radiology training challenges

As with diagnostic radiology, the need to grow the IR workforce is clear. However, there are serious challenges to expanding the number of IR trainees.

The biggest reported barrier by far to training new IR consultants was physical space. 91% of clinical directors said this was a challenge. IR is a practical discipline and access to sufficient interventional sessions is essential to enable good hands-on training, in addition to clinic and ward-based experiences.

Accessing funding for IR training posts is more challenging still than for diagnostic radiology. Trainees are appointed in clinical radiology places at ST1 (year one) and receive five years of funding. However, for IR trainees, training programmes must secure additional funding for 'year six', which can limit the availability of IR posts for those that want to go down this route. The RCR have developed a recruitment and training process whereby trainees express their interest in IR at recruitment stage and receive full 6-year funding for their CR post. The first of these trainees will be moving into subspecialty IR training later this year, after which the success of the programme can be fully evaluated.

BARRIERS TO IR TRAINING, 2023



Recommendations

Radiology services are in a state of crisis, and existing policies have failed to fully address burgeoning workforce shortfalls. The UK urgently needs a comprehensive plan to support the radiology workforce.

The Government and NHS in each of the four nations should implement the following in future iterations of their respective workforce plans:

1

Recruit

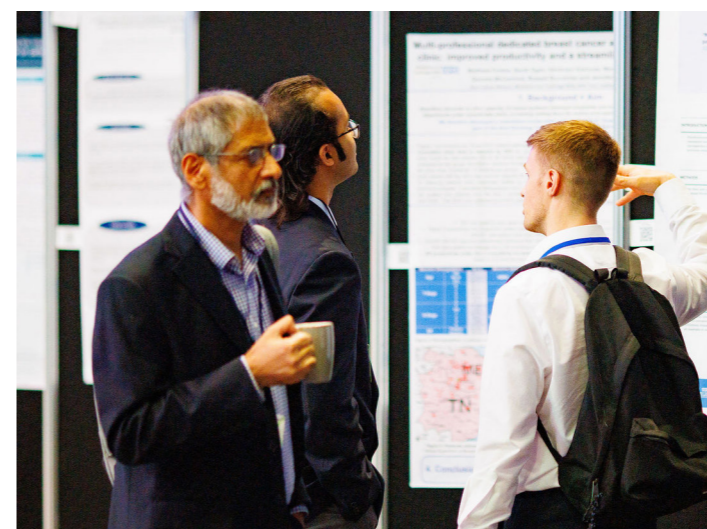
To address long-standing workforce shortages, we need to increase the number of radiologists.

However, there is a 10% vacancy rate in radiology, showing that there are not enough qualified radiologists to fill these posts. Global recruitment is helpful, but we urgently need to train more domestically to grow the pipeline of future consultants.

In 2023, the Government published the long-awaited NHS Long Term Workforce Plan for England, which promised an increase in medical school places.

However, the outcomes are limited without a commensurate increase in specialty training places for students to graduate into. Given the widespread shortages in clinical radiology, and the high competition ratio, expanding training places in this specialty is critical.

However, new radiology training places are not being consistently offered since local systems are unable to provide their part of the costs. In the future, England's funding model should be reformed so that NHS England provides costs for the full training place, as is done in Scotland, Wales and Northern Ireland. This would avoid national initiatives failing to fulfil their ambitions due to local challenges.



Recommendation: The NHS should not only maintain but expand the number of specialty training posts for clinical radiology to keep up with rising demand. To encourage trusts and health boards in taking up these posts, NHS England should fund 100% of the trainees' costs for the first two years, dropping down to the standard 50% statutory education board funding and 50% local hospital/network funding thereafter.

Recommendation: Hospitals, particularly those with the highest shortages of clinical radiologists, should ensure they have a long-term funding plan for radiology training and consultant posts.

2

Train

A lack of capacity to train, in terms of doctor's time, physical space, access to PACS stations, and operating room sessions for interventional radiology, all present challenges. Currently just one in three consultants have dedicated time for teaching, meaning we must consider how we can make training a priority.

Trusts must allocate sufficient time for senior doctors to formally train the consultants of the future and the NHS should encourage retired doctors to return to help with education. We also need to consider new models of training to make the most of the workforce we have today, including by making every list a radiology training list. Workforce planning should accommodate for this since it will take longer for consultants to work through their reporting and interventional lists.

Recommendation: The government should provide new funding for an expansion of clinical and office space, and PACS access, to accommodate diagnostic and interventional radiology trainees.

Recommendation: Doctors should have funded supporting professional activities (SPA) time to provide formal training. Retired doctors should be encouraged and enabled to return to support education as well as essential clinical work.

Recommendation: The NHS should explore innovative solutions to expanding training capacity, including through hybrid models, increased use of technology, and sharing training materials across the country.

Recommendation: The NHS should immediately require that every diagnostic reporting and interventional list is considered a radiology training list to expand radiology training opportunities. Workforce planning should account for sufficient direct clinical care (DCC) and procedural time to enable this.



3

Retain

The NHS and individual employers need to consider how to best support senior doctors to work for longer, as well as improving conditions for those in the early stages of their careers.

Senior consultants have a wealth of experience, a deep knowledge of patient care and institutional mechanisms, and can provide mentorship and training in a way that junior doctors aren't yet able. Ambitions in the workforce plan to grow the number of future doctors will be futile without an equivalent focus on maintaining and supporting the existing expertise.

Offering flexible working and planning on call requirements around the needs of individuals may encourage older doctors to stay on for longer, although this must be done in a way that avoids placing extra pressure on other staff. Similarly, protecting SPA time in job contracts, whereby doctors can spend time on non-clinical work, will support retention and enable service development.

Basic measures such as having up-to-date computer software and hardware, improved network connectivity and sufficient administrative and clerical staff to avoid consultants undertaking administrative tasks would all contribute to workforce retention. We need to start assessing how employers are treating their staff, whether they are making these retention and wellbeing measures available, whether there is a supportive culture, and whether introducing these measures has any tangible impact on staff retention.



Recommendation: To support retention, trusts and health boards should ensure basic staff wellbeing measures, including but not limited to, up-to-date computer hardware and software, improved internet connectivity, sufficient administrative and clerical staff, support with parking and other transport options, and providing rest space.

Recommendation: As part of Care Quality Commission inspections, trusts should be assessed on staff wellbeing and how well hospitals are treating their employees.

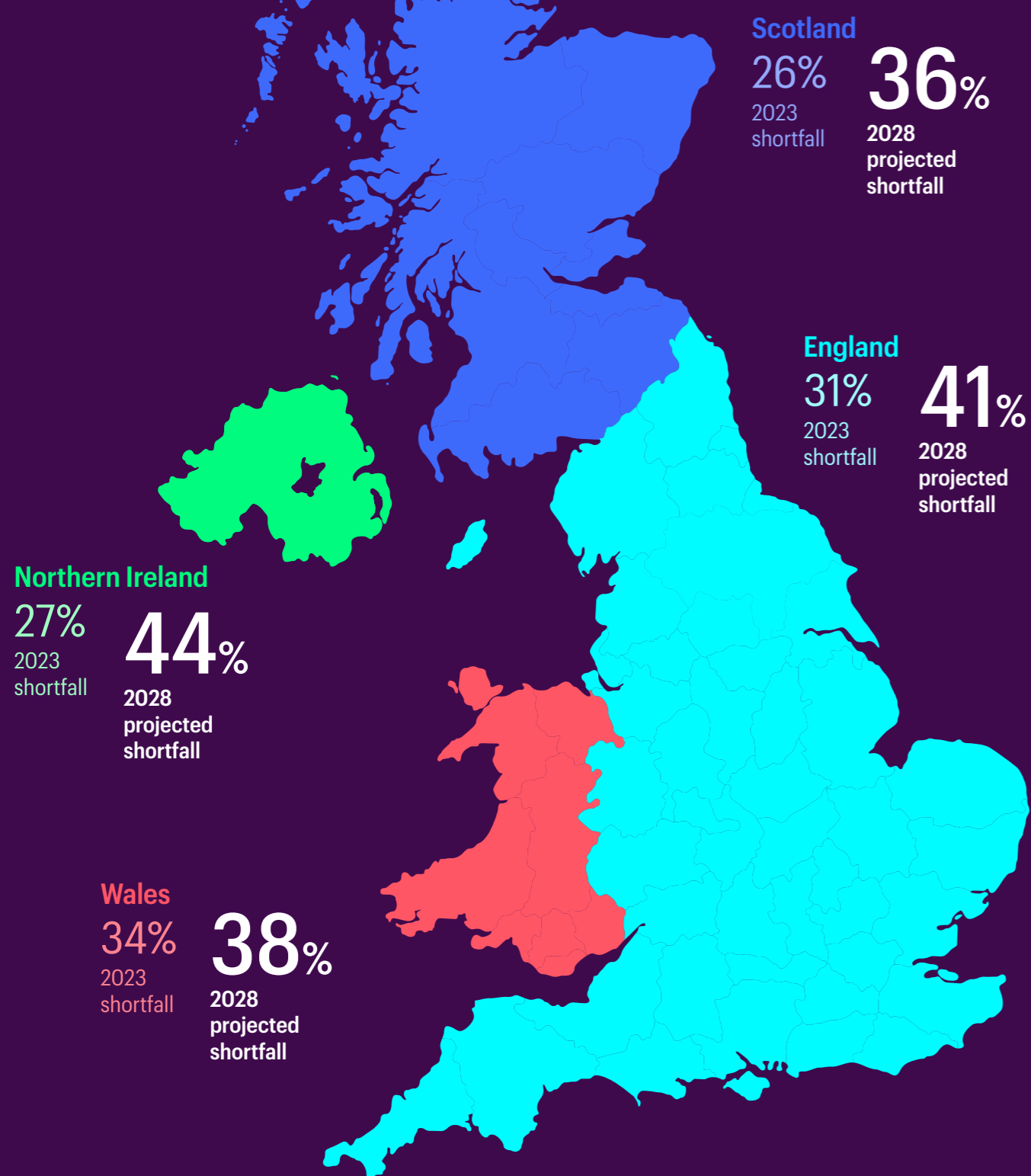
Recommendation: Flexible working patterns should be offered as a default to all existing and new NHS staff.

Recommendation: Trusts and health boards should ensure that all doctors have sufficient SPA time protected in their job plans. This must include those working less than full time (LTFT) and specialty and specialist (SAS) doctors. Future workforce planning should accommodate this.

Recommendation: Exit interviews should be conducted with all doctors leaving the service to understand the reasons for their departure.

The picture across the 4 nations

CR consultant shortfalls



England

England makes up over 80% of the data submitted in the census reports, and therefore the trends closely reflect those highlighted in the UK's summary.

- In England, substantive consultants left the workforce at the lowest age of the four nations – the median age was 53 in England compared to 58 in Northern Ireland, Scotland and Wales.
- The NHS in England spent £236m on managing excess reporting demand. Per head of population, they spent £4.13, higher than the £4.08 UK average.
- 65% of trusts are now working with a Community Diagnostic Centre. 41% said that CDCs had led to an unmanageable increase in workload.

Scotland

- There are significant regional inequalities in the number of clinical radiologists.
- While in South East Scotland, there are 8.8 consultant clinical radiologists per 100,000 of the population, there are only 5.2 in the North of Scotland.
- In South East Scotland, there are 12.7 interventional radiology consultants per million population compared to 2.1 in North Scotland.
- Staff time to train radiologists (both diagnostic and interventional) is a critical issue in Scotland – 95% of clinical directors said this was a barrier. 80% said this was a significant barrier compared to 54% across the UK.
- No trust or health board was able to manage their reporting requirements within staff contracted hours.
- Scotland had the lowest spending per head of population on managing excess reporting demand – £3.49 per head compared to the UK average of £4.08. Scotland has a national insourcing programme, which may drive this lower cost.
- In total, Scotland spent £19 million on outsourcing, insourcing and on locums.

Wales

- Wales has 6.1 radiologists (consultant and SAS) per 100,000 population – the lowest of the four nations. North and West Wales is also the lowest region, with just 4.7 clinical radiologists per 100,000 population compared to 6.8 across the UK.
- 100% of clinical directors in Wales said there were insufficient clinical radiologists to deliver safe and effective levels of patient care, compared to a five-year average of 67%.
- No trust or health board was able to manage their reporting requirements within staff contracted hours.
- The NHS in Wales spent £11m on managing excess reporting demand – £6m of which was spent on outsourcing. Per head of population, they spent £3.65 compared to the £4.08 average.
- 86% of departments offered an inadequate interventional radiology service in Wales, while there are no adequate services in North and West Wales. 43% of services still have no access to day case or inpatient beds, further limiting opportunities to perform IR procedures.

Northern Ireland

- Northern Ireland has 7.9 radiologists (consultant and SAS) per 100,000 population – the highest figure of the UK nations – compared to 6.8 across the UK.
- Four out of the five trusts reported insufficient clinical radiologists to deliver safe and effective levels of patient care.
- No trust or health board was able to manage their reporting requirements within staff contracted hours.
- Northern Ireland spent £9 million on managing excess reporting demand. They had the highest spend per head of population – £4.77 compared to the UK average of £4.08.
- Only one out of five of the trusts was working with a local diagnostic centre.

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