

Clinical radiology UK workforce census 2015 report

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Faculty of Clinical Radiology

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Foreword and acknowledgements

Detailed information on the radiology workforce and workload of imaging departments provides the underpinning evidence enabling The Royal College of Radiologists (RCR) to influence UK healthcare policy. Awareness of the ongoing shortage of radiologists in the face of increasing clinical demands has been established with governments and regulatory bodies based on information collected through the RCR annual workforce censuses. The information also feeds into policy initiatives, for example, on access to imaging services, early diagnosis of cancer and seven-day NHS services. Successful implementation of these initiatives is dependent on the sufficient availability of radiologists.

The format and scope of this report closely follows those published since the first RCR workforce census in 2008. For the 2015 report, information from national sources on imaging examinations is used to highlight the increasing clinical demands made on radiologists. We have also sought to highlight the impact of these demands through information on increased spending on outsourcing of NHS work and out-of-hours services by departments. Another new feature is the profiling of radiologists according to the country where they gained their primary medical qualification. The UK radiology workforce is truly an international one, attracting radiologists from over 60 countries to work in the NHS.

I would like to thank all clinical directors and workforce leads who submitted information for the 2015 census. Once again, a 100% response rate has been achieved, providing the RCR with detailed information covering all NHS radiology departments in the UK. RCR Regional Chairs have been particularly helpful in encouraging departments to submit their census returns. Finally, thank you to Mr Don Liu (RCR Data and Surveys Manager) for helping to conduct the census and analysing and writing up the results.

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1. Main findings from the 2015 census

Insufficient number of radiologists in the UK

The consultant radiology workforce in the UK has increased at an average rate of 3% per annum in the past five years. However, this workforce growth has not kept pace with the increase in clinical demand made on radiology services. England saw a 5% increase in whole-time equivalent (WTE) consultants between 2012 and 2015 yet over the same period the number of computed tomography (CT) scans grew by 29% and magnetic resonance imaging (MRI) scans by 26%. The mismatch between growth in workforce and demand is even more marked in Scotland where the consultant workforce grew by 3% between 2010 and 2015 and the number of CT and MRI scans each increased by 55%. Nearly all radiology departments in the UK stated that they were unable to meet their diagnostic reporting requirements in 2015. This points to an insufficient number of radiologists to meet the ever increasing demand for imaging and diagnostic services. When consultants, trainees and other grades are taken into account, the UK has the second lowest number of radiologists per 100,000 people across all EU countries for which this data is available.¹

Vacant consultant posts becoming the norm in radiology

There is a recruitment crisis in radiology with 9% of consultant posts being vacant in 2015. The five years since 2010 have seen the vacancy rate fluctuate between 7% and 12%, the annual mean being 9%. These figures suggest that a situation has developed whereby one-in-ten consultant radiologist posts in the UK will be vacant consistently for the foreseeable future. Half of all unfilled posts that are advertised result in a failure to appoint because no suitable candidates are identified or simply none apply. Some 41% of unfilled posts have been vacant for a year or longer. There is evidence that some radiology departments have forsaken their recruitment efforts believing that they are unlikely to succeed in appointing a new consultant member of staff.

With this in mind, it is possible that the 2015 vacancy rate may actually be higher than 9% as the number of formally recognised unfilled posts is smaller than the number of new consultants that are required, but not all required roles are being advertised.

Replenishment and sustainability of the consultant workforce

Radiology has the lowest proportion of trainees to consultants when compared to other hospital-based specialties. In radiology, non-consultant grades are mainly trainees (but also include academic and staff grade or equivalent posts). Non-consultant grades make up 31% of the radiology workforce (consultant radiologists make up the remaining 69%). These figures raise questions regarding the future replenishment and sustainability of numbers in the consultant workforce.

Sustainability of future delivery of radiology services

Insufficient numbers of consultants, the recruitment crisis and expected retirement of a large proportion of the existing workforce call into question the sustainability of some radiology services in the near future. A quarter of consultants with a specialty interest in uro-radiology, oncological, breast and radionuclide radiology are expected to retire by 2020. This will impact severely on diagnosis and screening programmes requiring these specialist skills.

Successful international recruitment requires support and funding

Radiology in the UK is provided by an international workforce, with around three-in-ten consultants being international medical graduates (IMGs). Just over 50% of IMGs are from Asia and 31% are from a European country. The proportion of IMGs in the consultant workforce varies by UK country and region. One possible explanation for this variation is the international

recruitment efforts made by radiology departments in each region. Only a third of departments in the UK have tried to recruit from outside of the UK and of these departments just under half were successful in their attempts. Many departments lacked guidance and help to recruit internationally and overcome visa difficulties and other similar hurdles. Some saw the lack of funding to meet the high cost of identifying and attracting international radiologists as being the main barrier.

Increased expenditure on outsourcing to manage workload

Insufficient numbers of radiologists and increasing workload, especially in the form of imaging tests and examinations, have meant that nearly all radiology departments (99%) in the UK were unable to meet their reporting requirements

within contractual hours. This has led to a backlog of patients waiting longer for the results of their X-rays and scans. Around 230,000 patients in England are waiting more than a month for their imaging test results according to a survey carried out by the RCR in February 2016.² Departments are increasingly incurring direct costs in addressing shortfalls in their reporting requirements and to manage backlogs of unreported images. In 2015, 75% of departments outsourced some of their reporting work to commercial companies, and 92% made additional (overtime) payments to radiologists to report outside of contracted hours. In total, spending on these activities has increased by 51% from £58.3 million in 2013–14 to £88.2 million in 2014–15. The latest figure is equivalent to the combined annual salaries of well over 1,000 NHS consultants (based on point 5 of the 2016–17 NHS consultant pay scale for England³).

2. Background and methodology

Background

The RCR first carried out the annual UK radiology workforce census in 2008 and has repeated the exercise each year since. This report contains the results of the 2015 census. The aim is to provide comprehensive information on the NHS radiology workforce. Standardised questions have been used year on year to allow for comparison of information and to identify trends. The comprehensiveness and accuracy of this information is essential in contributing to workforce planning in the NHS. New questions have been introduced since 2008 mainly in the areas of departmental activity and workload. This is because workforce planning is only effective when the process considers both the supply (number of radiologists) and demand (workload).

Methodology

Collection of data and response rate

Clinical directors and workforce leads of all 202 NHS radiology departments in the UK were asked to provide information for the 2015 census. As with previous RCR censuses, a 100% response rate was achieved for 2015.

Census questions

The questions used for the census can be found in Appendix 1. The census focused on two related domains, workforce and workload.

- Workforce – information on the number of consultant radiologists in substantive NHS posts, their demographic details, work roles, professional activities and specialty interests. Details of unfilled consultant posts (that is, vacancies) were also collected. Respondents were asked to provide information to reflect their workforce at the census date of 31 March 2015.

- Workload – information on NHS radiology departments and their reporting requirements, provision of out-of-hours services and time spent on preparing for and attending multidisciplinary team meetings (MDTMs) was collected. A consequence of demand not being met in departments, given the resources available, is outsourcing of some NHS work to commercial organisations. Information on outsourcing expenditure was therefore collected. Respondents were asked to provide information on workload and spending covering the period 1 April 2014 to 31 March 2015.

Presentation of results

Information collected on the workforce was verified against that from previous censuses and the RCR membership database. Where discrepancies and outliers were identified clarification was sought from census respondents. Microsoft Excel was used to enter the quantitative data, collate into tables and produce charts. Free-text comments provided by respondents were analysed and used as supporting information in this report to highlight specific workforce and workload concerns.

The workforce figures in this report are given as headcount, unless otherwise stated. Where WTE figures are used, the calculation conforms to the current NHS convention of excluding programmed activities (PAs) that exceed ten. One of the intentions of the RCR censuses is to identify trends over time. Where appropriate, this report includes information from previous censuses, mainly 2014 and 2010, to allow one- and five-year comparisons to be made with the 2015 information. Information for 2013 is not provided. This is because the timing of the census altered from calendar to financial year.

3. Overview of the UK radiology workforce

Headcount of radiologists

As of 31 March 2015, there were 3,318 consultant radiologists working full or less than full time in an NHS substantive post in the UK. This is an increase of 2% on the 2014 figure. However, not all UK countries/regions experienced an increase in consultant headcount. Scotland, the East Midlands, Yorkshire and the Humber and South Central England saw numbers decline by 1–3%. South East England has seen the number of consultants increase by 50% between 2010 and 2015, from 127 to 190. This increase can be

attributed in part to the reconfiguration of some NHS trusts affecting the collection of data for this region.

The number of radiologists registered in training schemes was 1,323 (an increase on the 1,035 trainees recorded in the 2014 census report). Of these 1,323 trainees, 240 were coming towards the end of training and were awarded their Certificate of Completion of Training (CCT) soon after 31 March 2015.

Table 1. Headcount of radiologists by UK country, 2015

	England	Northern Ireland	Scotland	Wales	UK total
Consultants	2,733	121	304	160	3,318
Trainees	1,120	44	116	43	1,323
Other grades	125	1	15	2	143
Total	3,978	166	435	205	4,784

Table 2. Headcount of consultant radiologists by UK country/region, 2010–2015

	2010 headcount	2014 headcount	2015 headcount	% change 2014–15	% change 2010–15
England – East Midlands	142	170	168	-1%	18%
England – East of England	221	240	247	3%	12%
England – London	470	539	555	3%	18%
England – North East	108	138	146	6%	35%
England – North West	349	374	389	4%	11%
England – South Central	170	214	208	-3%	22%
England – South East	127	165	190	15%	50%
England – South West	240	278	288	4%	20%
England – West Midlands	245	277	278	0%	13%
England – Yorks and Humber	251	268	265	-1%	5%
England – total	2,323	2,663	2,733	3%	18%
Northern Ireland	108	119	121	2%	12%
Scotland	291	307	304	-1%	4%
Wales	147	150	160	7%	9%
United Kingdom – total	2,869	3,239	3,318	2%	16%

Proportion of trainees to consultants

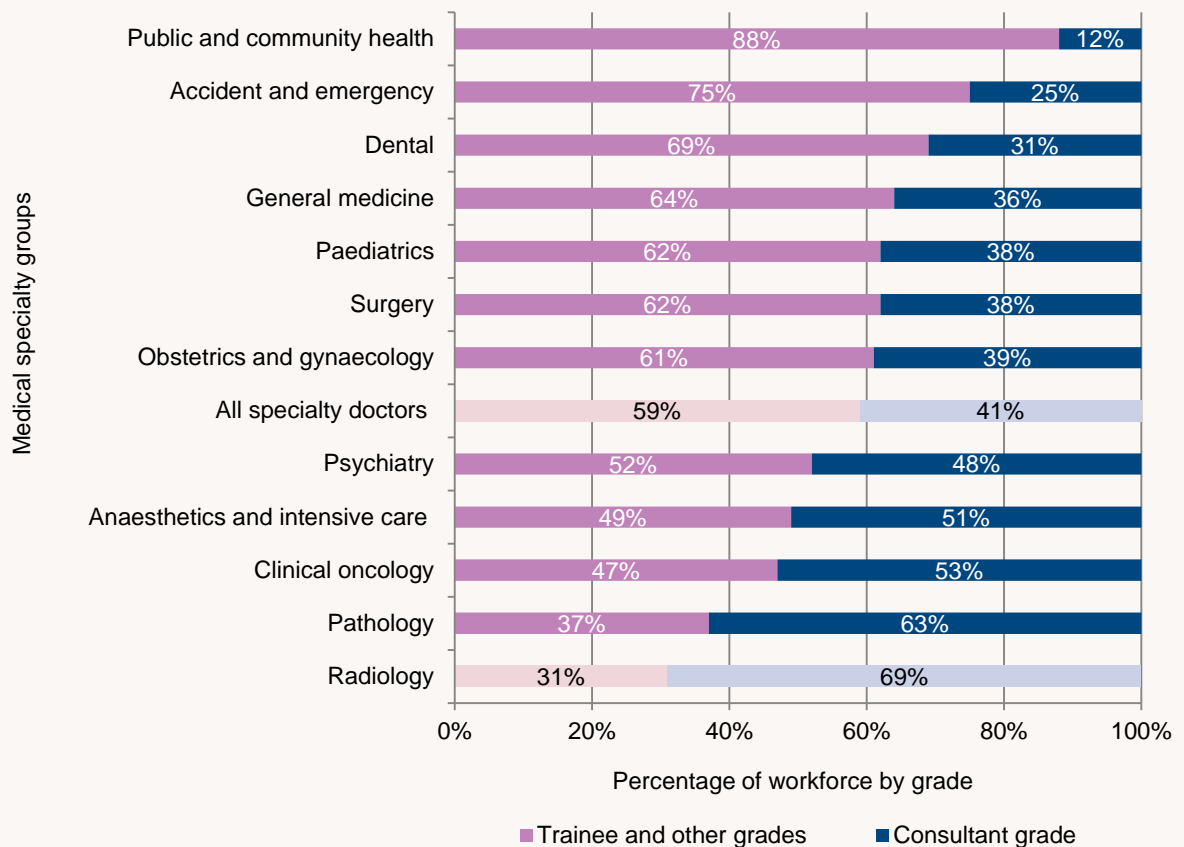
Trainee and other non-consultant grades (including those in academic and staff grade or equivalent posts) made up 31% of the radiology workforce (the remaining 69% are consultants). These figures raise questions

about the future replenishment and sustainability of numbers in the consultant workforce. Data for England from the Health and Social Care Information Centre show that compared to other hospital medical specialty groups, radiology has the lowest proportion of trainees to consultants.⁴

Table 3. Percentage of consultants and non-consultants in the radiology workforce, 2015

	England	Northern Ireland	Scotland	Wales	UK total
% consultants	69%	73%	70%	78%	69%
% trainees and non-consultants	31%	27%	30%	22%	31%

Figure 1. Percentage of consultants and non-consultants (trainees and other grades) in each hospital medical specialty workforce – England, 2015



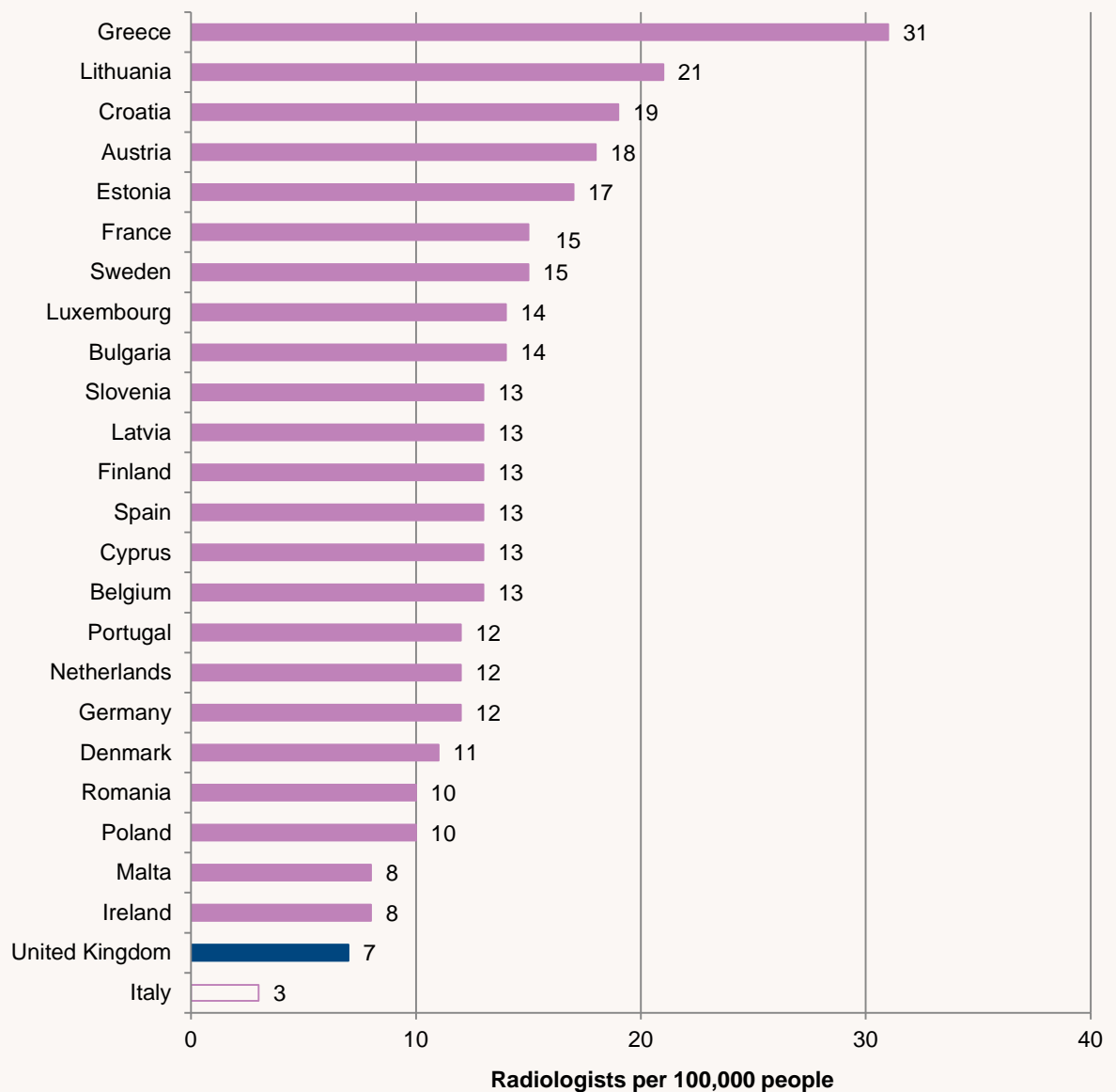
Source: NHS Workforce Statistics. Doctors by grade and specialty – September 2015.⁴
Radiology figures from the RCR census (the NHS statistics shows a breakdown of 30% trainees, 70% consultants).

Comparison with European Union countries

When the headcounts for consultant, trainee and other grades are aggregated there are 4,784 radiologists in the NHS covering a population of 64,596,752 in the UK. This equates to seven radiologists per 100,000 people, which corresponds with the figure quoted by the

European Commission. Aside from Italy (where the figure quoted is believed to be understated), the UK has the lowest number of radiologists per 100,000 people across the 24 out of 28 EU countries for which this information is available.

Figure 2. Radiologists per 100,000 people in EU countries, 2014¹



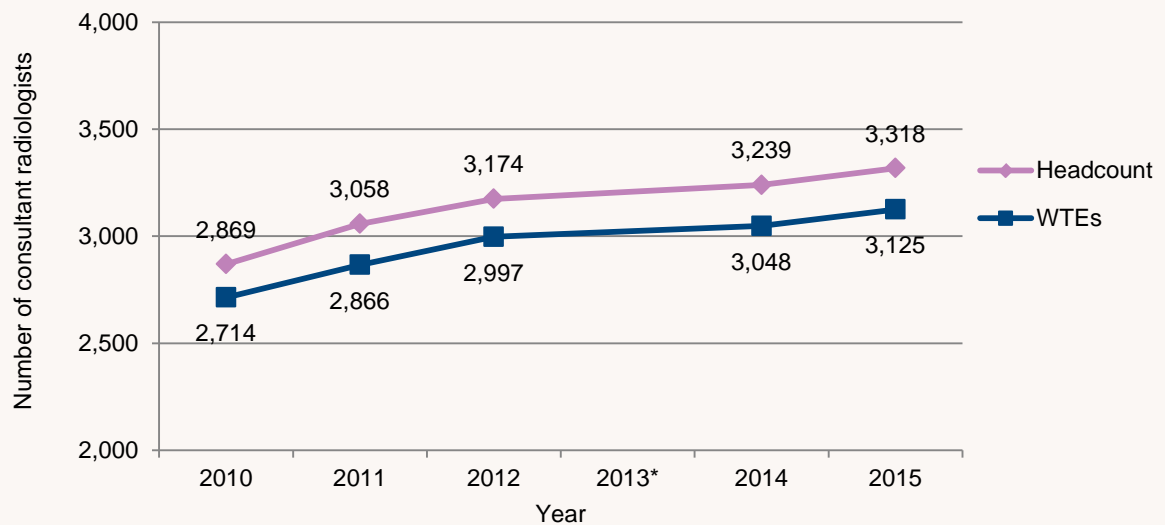
Source: European Commission - Physicians by Medical Specialty.¹ The most recent available data is for 2014.

Whole-time equivalent consultants

In 2015, there were 3,125 WTE consultant radiologists in the UK. Figure 3 and Table 4 show that the overall number has risen by 411 WTEs (a 15% increase) between 2010 and 2015.

However, much of this increase was between 2010 and 2012 when the WTE figure increased by around 5% per annum. Since 2012, annual rates of growth have been much smaller. The change from 3,048 WTE consultants in 2014 to 3,125 in 2015 represents only a 2.5% increase.

Figure 3. UK consultant headcount and WTEs, 2010–2015



*Information for 2013 is not provided due to the timing of the RCR census being altered from calendar to financial year.

Note: WTE calculations take into account those working less than full-time. As expected the number of WTE consultants is lower than its headcount (in 2015, the WTE to headcount ratio was 0.94 to 1.00).

Table 4. WTE consultants by UK country and region, 2010–2015

	2010 WTEs	2014 WTEs	2015 WTEs	% change 2014–15	% change 2010–15
England – East Midlands	139	163	160	-2%	15%
England – East of England	210	225	236	5%	12%
England – London	435	496	509	3%	17%
England – North East	102	130	136	4%	33%
England – North West	328	359	371	3%	13%
England – South Central	161	199	195	-2%	21%
England – South East	120	156	181	16%	51%
England – South West	228	263	272	4%	19%
England – West Midlands	233	261	262	0%	12%
England – Yorks and Humber	239	251	253	1%	6%
England – total	2,195	2,503	2,575	3%	17%
Northern Ireland	101	114	114	0%	13%
Scotland	279	288	288	0%	3%
Wales	140	143	147	3%	5%
United Kingdom – total	2,714	3,048	3,125	3%	15%

The extent of increases, and in some cases decreases, in the number of WTE consultant radiologists do vary across UK countries and regions.

- Between 2014 and 2015, the East Midlands and South Central England saw numbers decline by around 2%. The number of WTEs remained more or less static in the West Midlands, Yorkshire and the Humber, Northern Ireland and Scotland. In South East England there was a 16% increase (some of this increase could be attributed to re-organisation of NHS trusts and boundary changes in compiling information for the census).
- Over a five-year period, from 2010 to 2015, the increase in WTEs in Yorkshire and the Humber, Scotland and Wales was small

(between 3–6%) compared to the rest of the UK. The largest gains can be seen in the North East, South Central and South East regions of England (between 33–51%).

Uncapped WTEs

Where WTE information is shown, the calculation conforms to the current NHS convention of excluding programmed activities (PAs) that exceed ten PAs. The conventional WTE consultant radiologist figure for the UK in 2015 is 3,125. However, 1,695 consultants (51%) work in excess of 10 PAs and if this was taken into account the uncapped WTE figure would be 3,358. The 'excess' worked (the difference between the conventional and uncapped WTE figures) is the equivalent to an additional 233 WTE consultants.

Table 5. Excess WTEs worked by consultant radiologists in UK countries and regions, 2015

	Conventional WTEs	Uncapped WTEs	Excess WTEs worked	% difference
England – East Midlands	160	174	14	9%
England – East of England	236	260	24	10%
England – London	509	525	16	3%
England – North East	136	147	11	8%
England – North West	371	401	29	8%
England – South Central	195	209	14	7%
England – South East	181	193	12	6%
England – South West	272	290	17	6%
England – West Midlands	262	282	20	8%
England – Yorks and Humber	253	277	24	10%
England – total	2,575	2,758	183	7%
Northern Ireland	114	125	11	10%
Scotland	288	315	27	9%
Wales	147	160	12	8%
United Kingdom – total	3,125	3,358	233	7%

WTE consultant radiologists per 100,000 people

The population of the UK has risen by around 0.5 million between 2014 and 2015 according to the

Office of National Statistics (ONS).⁵ The number of WTE consultant radiologists per 100,000 people has remained at 4.8, the same figure as reported for the 2014 census.

Table 6. WTE consultants per 100,000 people by UK country and region, 2015

	Population ^a	WTE per 100,000	% change 2014–15	% change 2010–15
Northern Ireland	1,840,498	6.2	0%	11%
England – London	8,538,689	6.0	2%	7%
Scotland	5,347,600	5.4	0%	0%
England – North West	7,132,991	5.2	2%	11%
England – North East	2,618,710	5.2	4%	30%
England – South West	5,423,303	5.0	2%	14%
Wales	3,092,036	4.8	4%	2%
England – Yorks and Humber	5,360,027	4.7	0%	2%
England – West Midlands	5,713,284	4.6	0%	7%
England – South Central	4,312,675 ^b	4.5	-4%	15%
England – South East	4,561,142 ^b	4.0	14%	43%
England – East of England	6,018,383	3.9	3%	5%
England – East Midlands	4,637,413	3.5	0%	9%
England – overall	54,316,618	4.7	2%	9%
United Kingdom – overall	64,596,752	4.8	0%	9%

a. Office of National Statistics (ONS) population estimates for mid-2014.⁵

b. South East (ONS region) covers both South Central and South East in the census report. South East (ONS region) = 8,873,817; South Central (census region) = 48.6%, South East (census region) = 51.4%.

Workload – imaging tests and examinations

The increase in WTE consultants in recent years has been substantially less than the increase in imaging examinations. In particular, there has been a substantial growth in both CT and MRI scans, and it must be remembered that these advanced medical technologies add to the extent and complexity of diagnostic reporting demands on radiologists.

Many departments are finding it difficult to cope with the increased workload. The following comments were received from clinical directors.

'Using the present demand figures we are only 50% staffed at consultant level and there is a

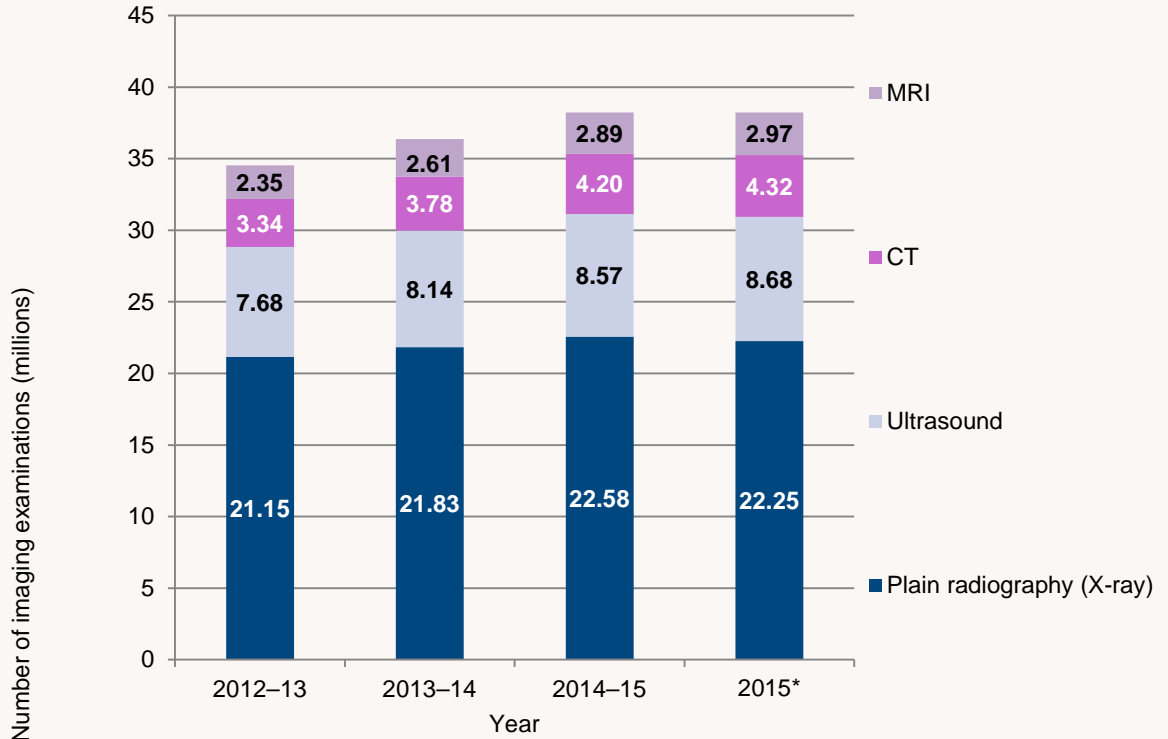
significant shortage of radiographic staff too in a climate of ever increasing demand and increased urgency of reporting.'

'This department is seriously struggling to meet the demands placed upon it. This is having an effect on individuals manifested by an increasing level of sickness.'

'Terrible state of affairs with most time being spent on multidisciplinary team meetings (MDTMs) and not enough people to do the reporting.'

'Increasing demand owing to additional cancer and emergency work. Shorter time-frames require a larger workforce to ensure compliance within targets.'

Figure 4. Number of imaging examinations in England 2012–13 to 2015



Source: NHS England Diagnostic Imaging Dataset (DID) annual statistical releases – available from 2012 onwards.⁶
 *2015 covers calendar year (1 January to 31 December); previous DID annual releases covered financial year (1 April to 31 March).

Figure 5. Percentage growth in the number of WTE consultants and imaging examinations in England from 2012–13 to 2015

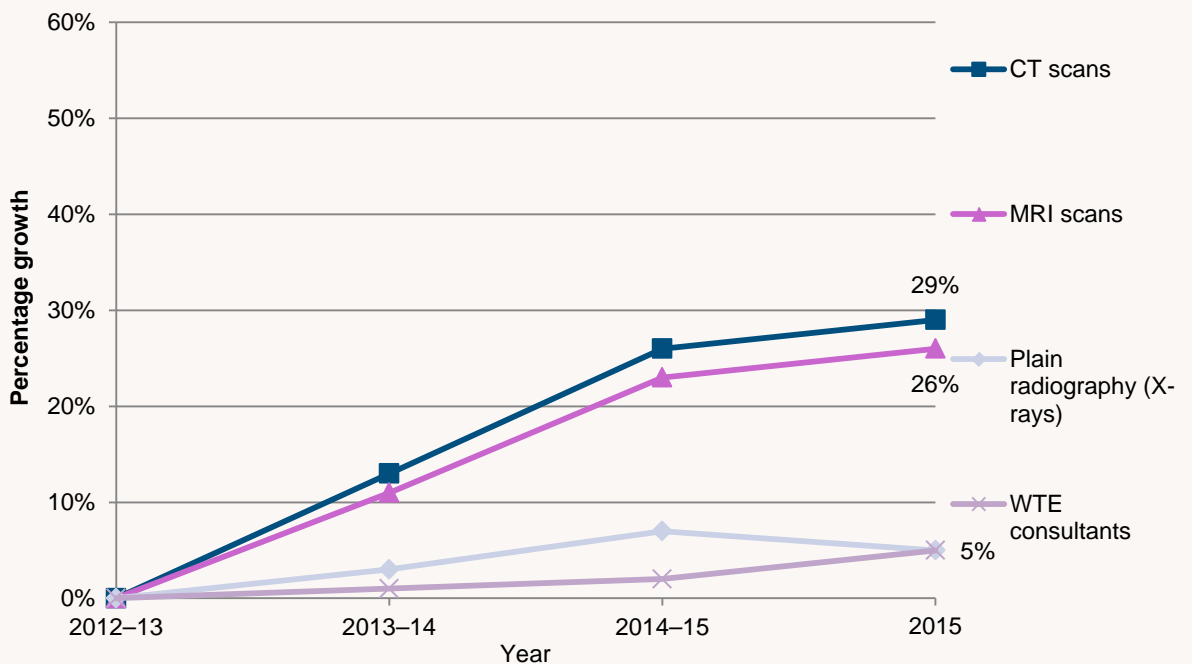
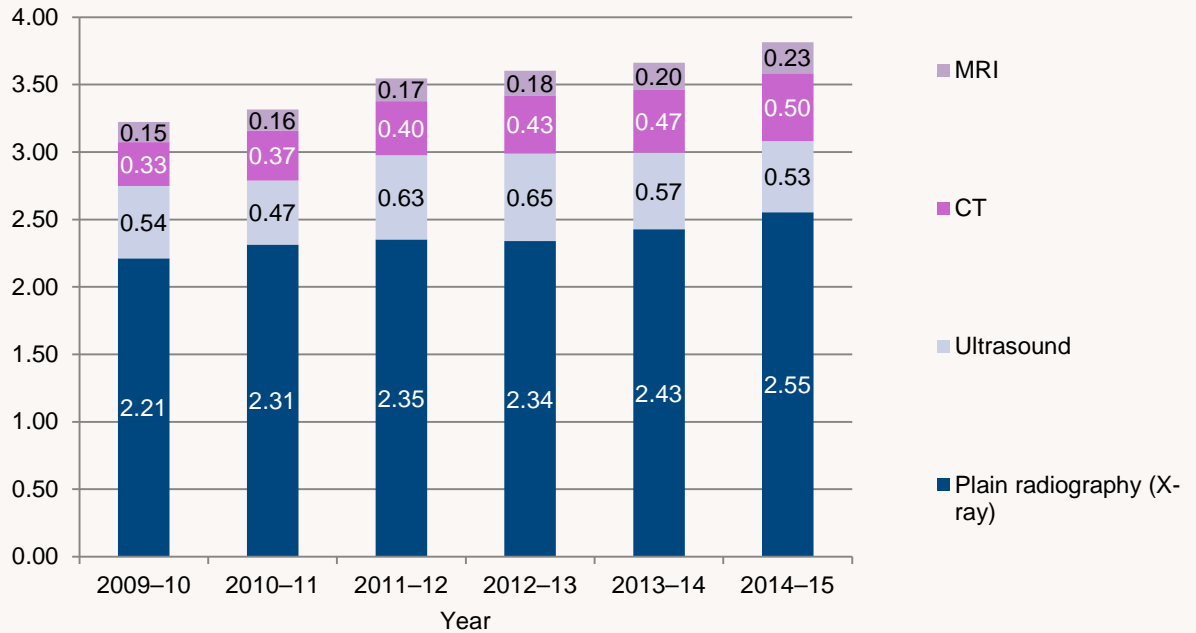
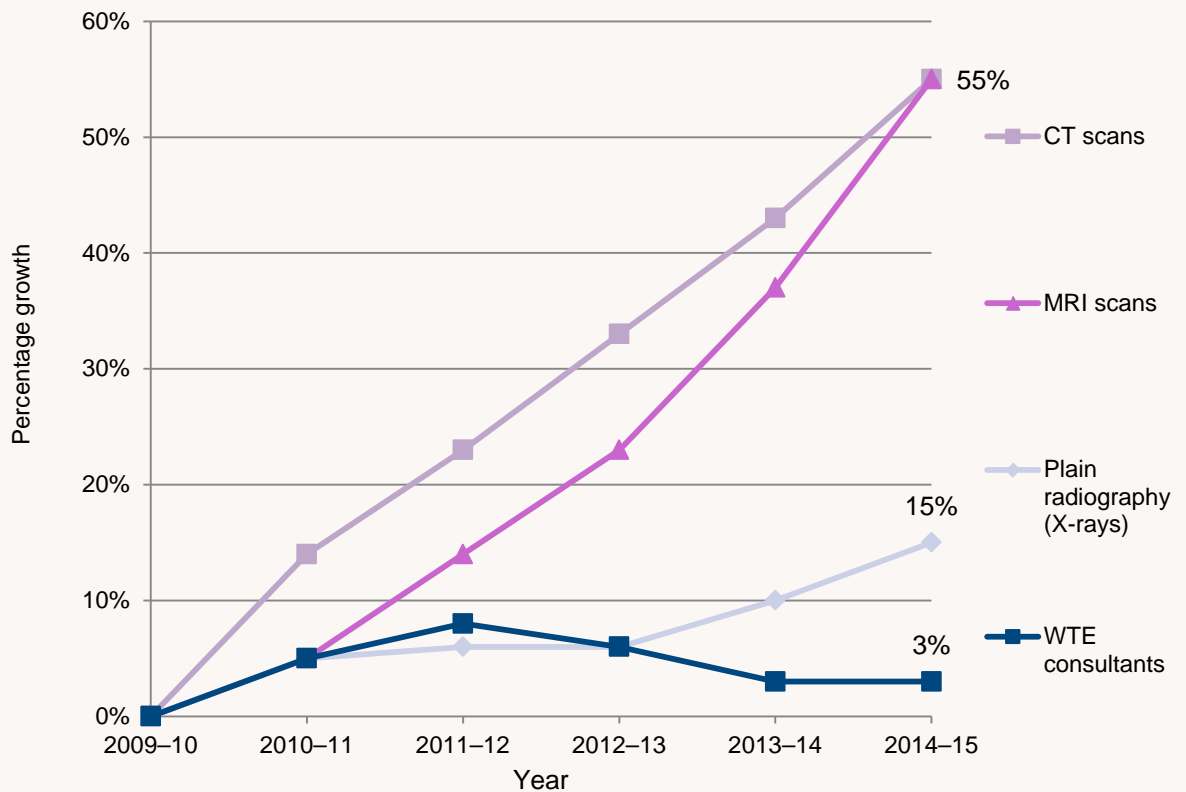


Figure 6. Number of imaging examinations in Scotland, 2009–10 to 2014–15⁷



Source: NHS Scotland Information Services Division.⁷

Figure 7. Percentage growth from 2009–10 until 2014–15 in the number of WTE consultants and imaging examinations in Scotland



4. NHS consultant radiologists

Gender

The number of female consultant radiologists totalled 1,163 in 2015 (a 24% increase since 2010); there are currently 521 female trainees.

Around 35% of consultants in the UK are women. London and South Central England, with

42–44%, has the highest percentage of consultants who are female, compared to Northern Ireland with only 27%. The gender make-up has implications for workforce planning; when examining those working less than full-time in radiology, women are more likely to fall into this category, affecting WTE consultant figures.

Figure 8. Percentage (and headcount) of female and male UK consultant and trainee radiologists, 2015

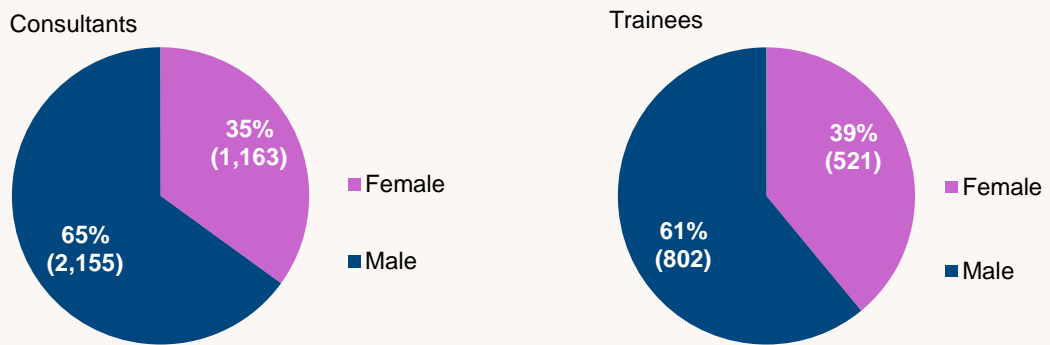


Figure 9. Percentage (and headcount) of female and male UK consultant radiologists, 2010–2015

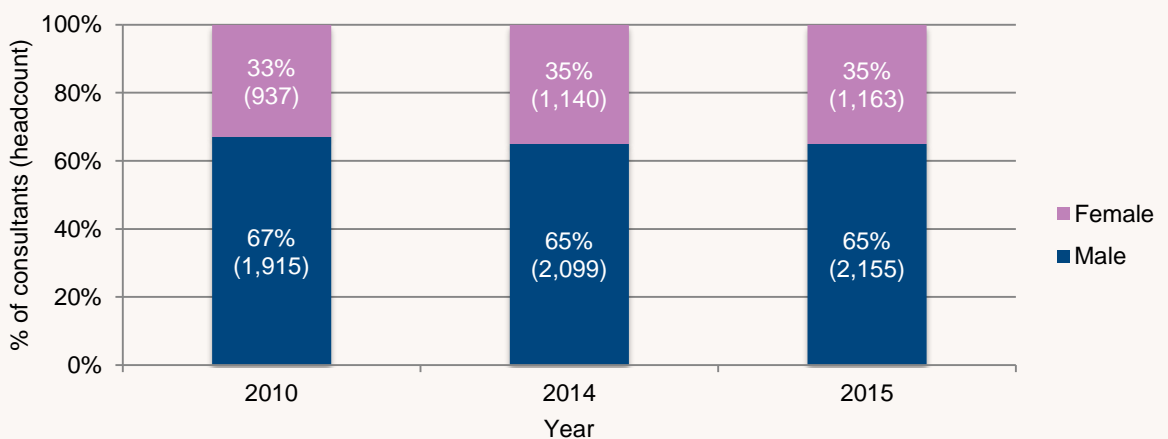
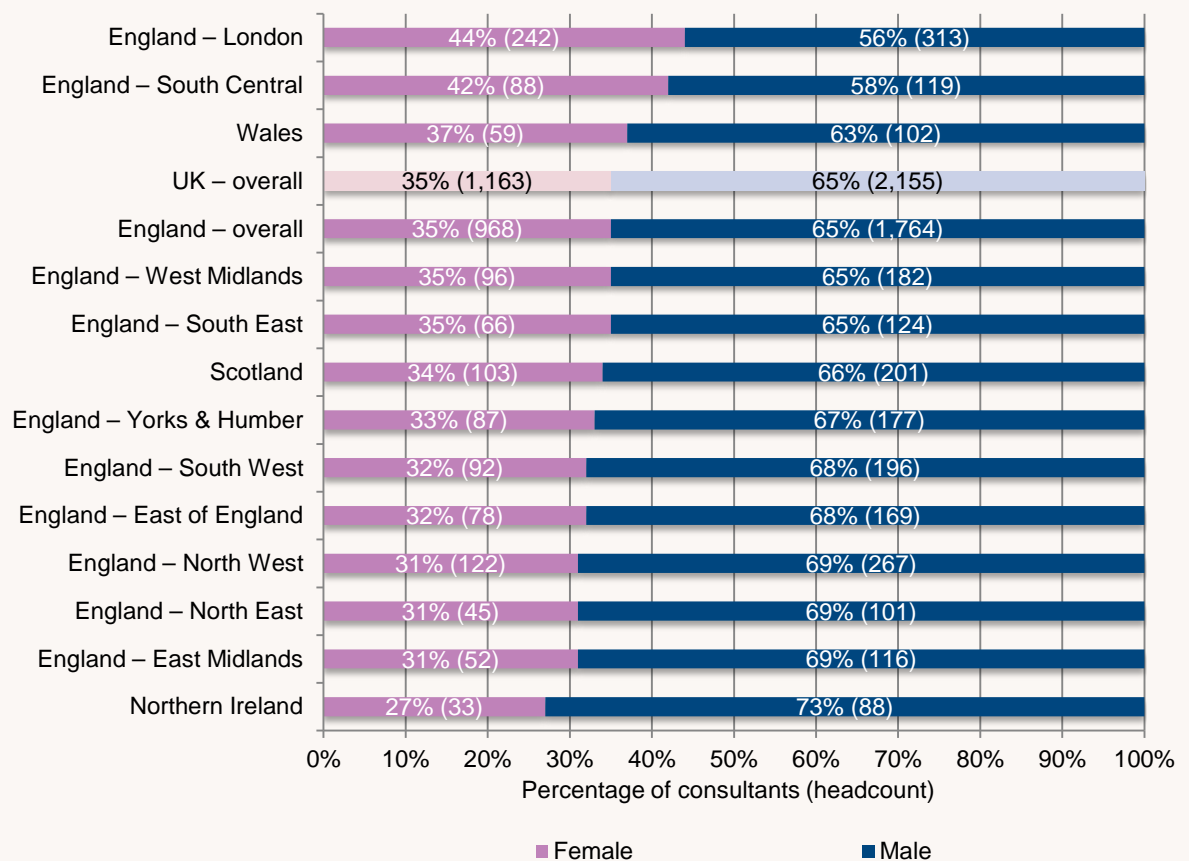


Table 7. Headcount (and percentage) of female and male consultants in each age group, 2015

Age group	Female	Male	Total
30–39	248 (38%)	411 (62%)	659
40–49	527 (39%)	838 (61%)	1,365
50–59	283 (31%)	625 (69%)	908
60 and over	58 (24%)	188 (76%)	246
Not known	47 (34%)	93 (66%)	140
Total	1,163 (35%)	2,155 (65%)	3,318

Figure 10. Percentage of female and male consultants by UK country and region, 2015

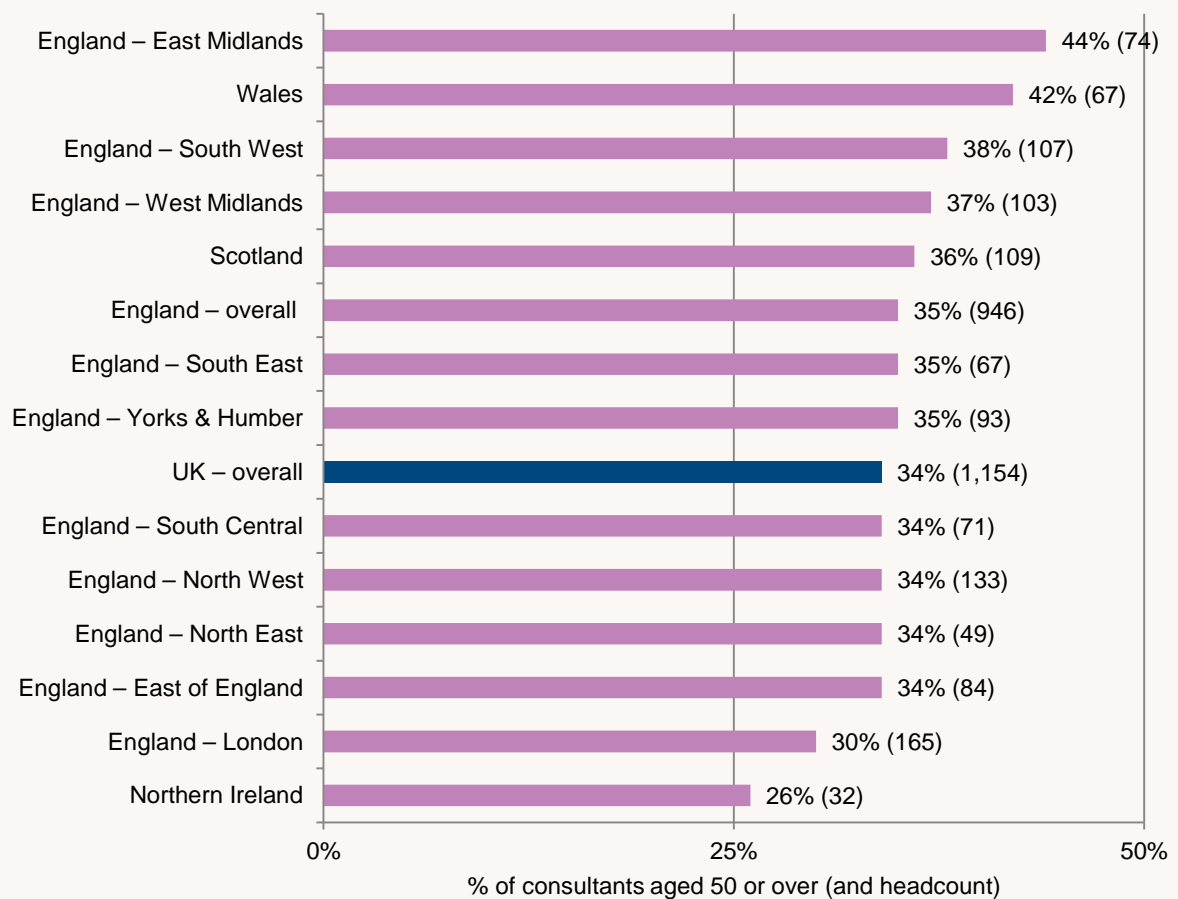
Age

Table 8 shows the age profile of the UK consultant radiology workforce. There have only been small changes in the percentage of consultants making up each age group since 2010. There are, however, notable differences

between UK countries and regions. Those aged 50 or over make up 44% of the consultant workforce in the East Midlands compared to only 26% in Northern Ireland. The age of the workforce has local implications for expected retirement rates and workforce planning.

Table 8. Percentage (and headcount) of consultants in each age group, 2010 to 2015

Age group	2010	2014	2015
30–39	23% (655)	19% (645)	20% (659)
40–49	36% (1,043)	41% (1,340)	41% (1,365)
50–59	29% (835)	28% (910)	27% (908)
60 and over	6% (185)	7% (228)	7% (246)
Not known	6% (151)	5% (116)	5% (140)

Figure 11. Percentage of consultants aged 50 or over by UK country/region, 2015

Country of primary medical qualification

Radiology in the UK is provided by an international workforce. Nearly three-in-ten consultants are international medical graduates (IMGs) from one of 65 countries. Just over 50%

of IMGs gained their primary qualification from a medical school in Asia and 31% from a European country. Figure 13 shows that the proportion of consultants who are IMGs varies by UK country and region. In North East England, 40% of consultants are IMGs compared to only 15% in South West and South Central England.

Figure 12. Country of primary medical qualification for consultant radiologists, 2015

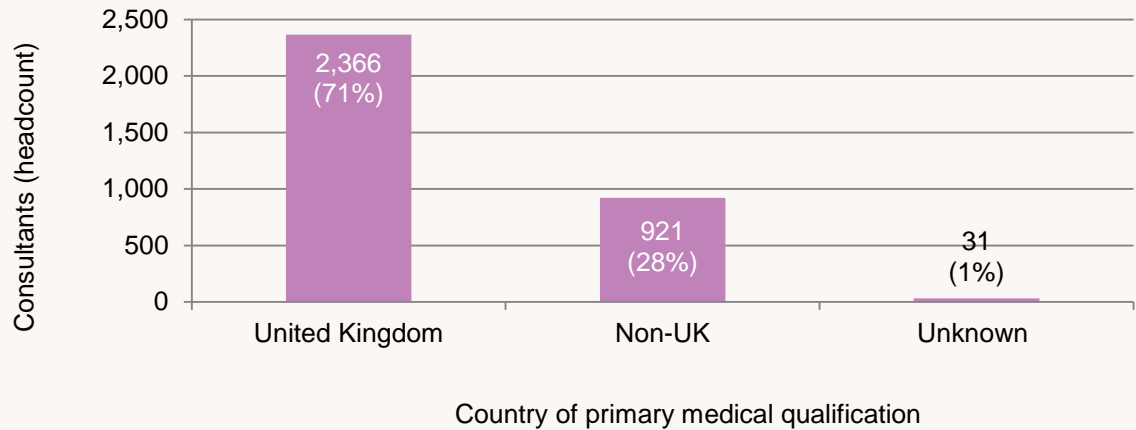


Figure 13. International medical graduates as a percentage of the consultant workforce in each UK country/region, 2015

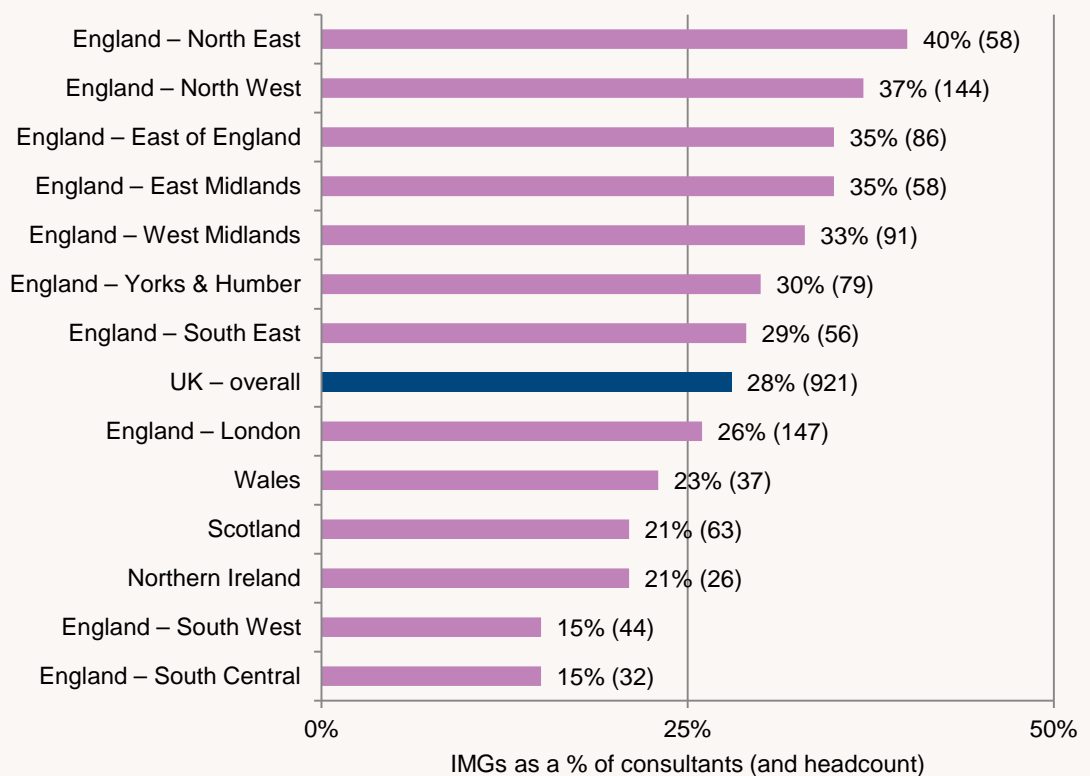


Table 9. International medical graduates working as UK consultants in 2015 – region of country of primary medical qualification

Region of primary medical qualification	Headcount	Percentage of IMGs
Africa	108	12%
Americas	20	2%
Asia	494	54%
Europe	286	31%
Oceania	13	1%
Total	921	100%

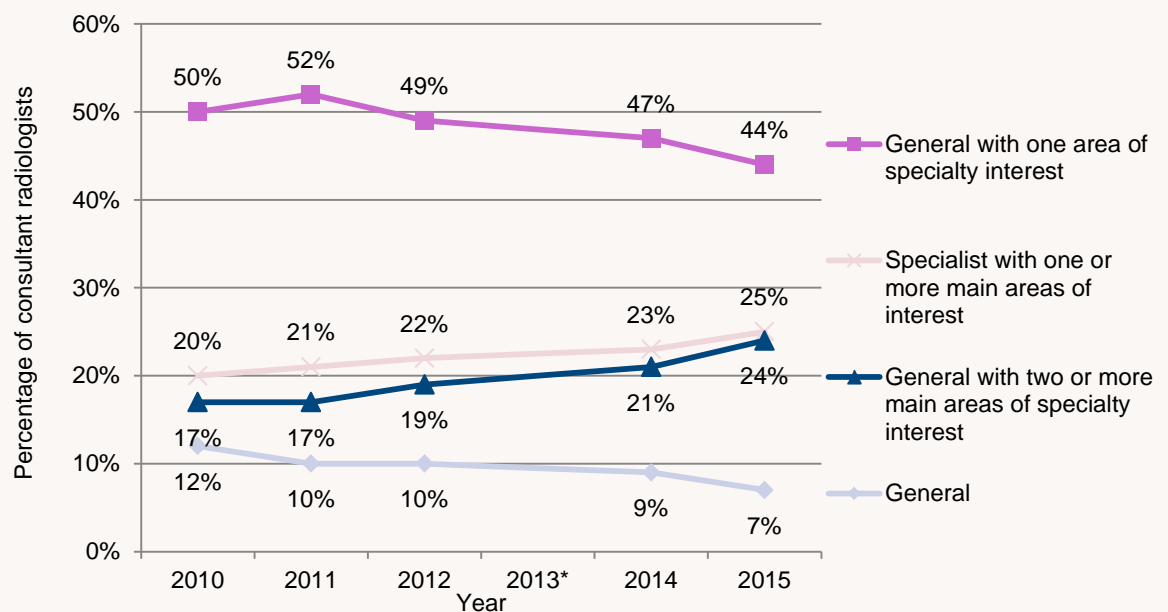
Types of radiologists

General and specialist interests

Respondents to the census were asked to categorise radiologists according to whether they are generalists or specialists, with or without one or more areas of specialty interest. For 2015, the largest category was 'general with one area of specialty interest' accounting for 44% of consultants in the UK. However, this is a decrease on earlier figures going back to 2010.

There has also been a decrease in the percentage of 'general' radiologists, from 12% in 2010 to 7% in 2015. There is an increase in those categorised as specialists or generalists with two or more main areas of specialty interest. These trends point to a shift away from generalists to more specialty interest forms of practice undertaken by consultant radiologists.

Figure 14. Type of radiologists (generalist and specialist) as a percentage of the UK consultant workforce, 2010–2015



*Information for 2013 is not provided due to the timing of the RCR census being altered from calendar to financial year.

Note: Specialist with one or more main areas of interest – for the 2014 and 2015 censuses, data was collected across two categories, 'specialist with one main area of interest' and 'specialist with two or more main areas of interest'.

Table 10. Type of radiologists (general and specialist) by UK country, 2015

	England	Northern Ireland	Scotland	Wales	UK
General	185 (7%)	12 (10%)	38 (13%)	8 (5%)	243 (7%)
General with one area of specialty interest	1,189 (44%)	44 (36%)	155 (51%)	80 (50%)	1,468 (44%)
General with two or more main areas of specialty interest	626 (23%)	42 (35%)	65 (21%)	56 (35%)	789 (24%)
Specialist with one or more main areas of interest	646 (24%)	22 (18%)	43 (14%)	13 (8%)	724 (22%)
Specialist with two or more main areas of interest	82 (3%)	1 (1%)	2 (1%)	3 (2%)	88 (3%)
Total	2,733 (100%)	121 (100%)	304 (100%)	160 (100%)	3,318 (100%)

Place of work (teaching, non-teaching and specialist hospitals)

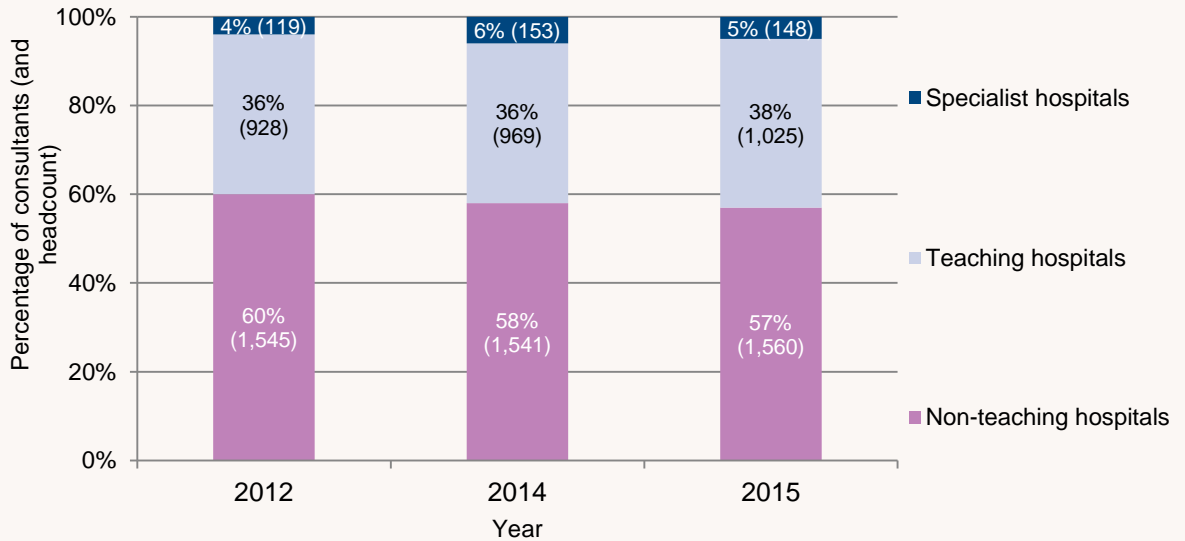
Figure 15 shows the percentage and number of consultant radiologists working in different types of hospitals between 2012 and 2015. Changes have been small but the following trends can be observed. There has been a 10% increase in those working in teaching hospitals and a 24% increase in those working in specialist hospitals. There is an increasing preference among radiologists to focus on specialty practice in one or a few areas of radiology, requiring them to work in specialist or teaching hospitals to ensure sufficient caseloads in their fields.

The gradual increase in radiologists who choose to practise in one or more specialty interest area means that generalists are becoming harder to find and recruit. This is a particular concern for

non-teaching hospitals (including many district general hospitals) where there is a requirement for consultants with general imaging and diagnostic skills. Between the 2012 and 2015 the number of consultants working in non-teaching hospitals increased by only 1%. The following comment from a clinical director on the issue of subspecialist and generalist radiologists was received.

'It has become apparent that diagnostics hold the key to efficient patient flow and therefore there is ongoing investment in these areas and we are going to continue to need more radiologists. The problem is that most trainees seem to be increasingly specialised and prefer the protection (and kudos) that the teaching hospitals provide.'

Figure 15. Percentage (and headcount) of consultants working in non-teaching, teaching and specialist hospitals – England, 2014–15

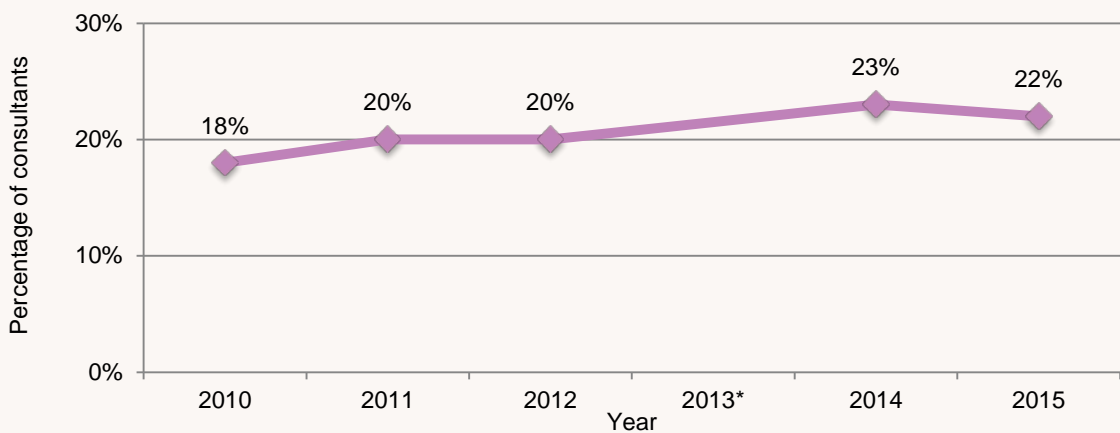


Full-time and less than full-time working

Those radiologists working less than full-time (LTFT), that is, fewer than ten programmed activities per week, make up 22% of the consultant workforce (737 out of 3,318). The extent of LTFT working is stabilising at one-in-five consultant radiologists (the annual mean since

2010 is 21%). There are variations across UK countries and regions. While 30% of consultants work LTFT in London, the figure for the East of England is only 16%. Table 11 shows that, overall, women are much more likely than men to work LTFT. Age is also factor in the likelihood of working LTFT. As male consultants move into their 50s and 60s they are more likely to work LTFT compared to their younger colleagues.

Figure 16. Percentage of UK consultants working LTFT, 2010–2015



*Information for 2013 is not provided due to the timing of the RCR census being altered from calendar to financial year.

Table 11. Percentage of female and male consultants in each age group working full-time and LTFT, 2015

Age group	Female Headcount	% FT	% LTFT	Male Headcount	% FT	% LTFT
30–39	248	64%	36%	411	97%	3%
40–49	527	57%	43%	838	93%	7%
50–59	283	55%	45%	625	86%	14%
60 and over	58	34%	66%	188	54%	46%
All age groups	1,116	57%	43%	2,062	88%	12%

Note: Table excludes those consultants whose ages are not known.

Contracted programmed activities

The census collected information on the number of contracted PAs worked per week for each full-time consultant radiologist, subdivided into direct clinical care (DCC) and supporting professional activity (SPA). The average total number of PAs has remained stable between 2010 and 2015 – the mean is around 10.90 and median 11.00.

When taking into account those who work less than full-time, the number of contracted PAs starts to decline in the 60–64 age group. A large number of consultants have contracted PAs that are beyond the mean and median figures. Table 13 shows that 962 (37%) of full-time consultants work between 11 and 11.99 PAs, and 525 (20%) work 12 or more PAs each week.

Table 12. Mean (and median) contracted programmed activities (PAs) per week for full-time consultant radiologists in the UK, 2010 to 2015

	2010	2014	2015
DCCs	8.64 (8.50)	8.68 (8.50)	8.75 (8.50)
SPAs	2.40 (2.50)	2.22 (2.00)	2.15 (2.00)
Total PAs	11.05 (11.00)	10.90 (11.00)	10.90 (11.00)

Figure 17. Mean number of contracted PAs per week for consultants (full-time and LTFT) by age group, 2015

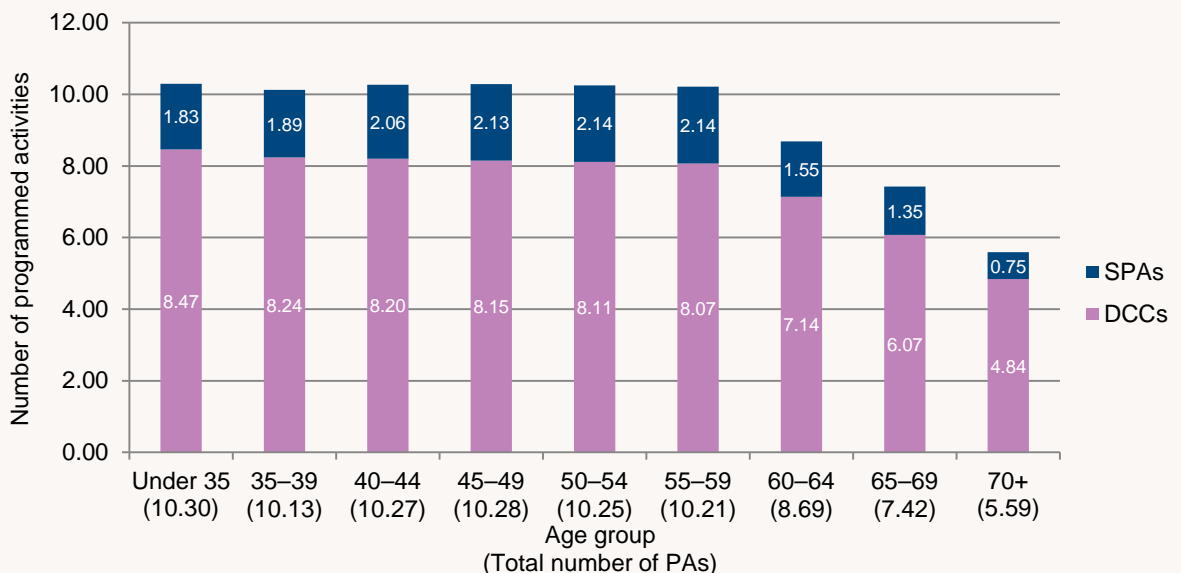


Table 13. Number of full-time consultants with 11.00–11.99 and 12.00 PAs or more (and percentage of full-time consultants within country)

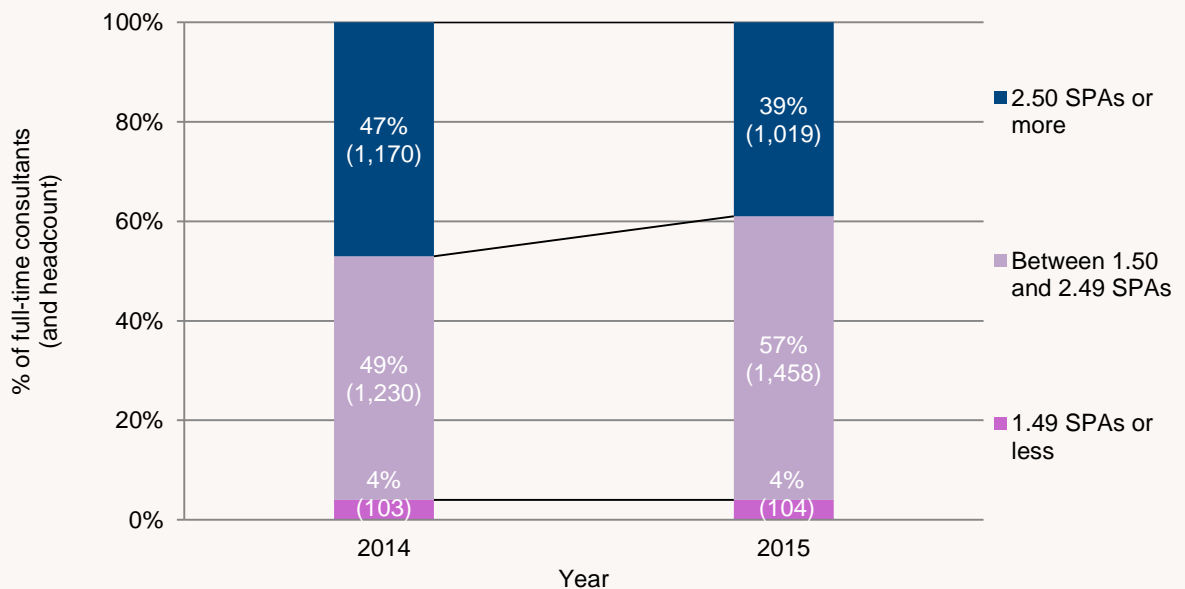
	11–11.99 PAS	12 or more PAs
England	821 (39%)	362 (17%)
Northern Ireland	54 (55%)	22 (22%)
Scotland	45 (18%)	108 (43%)
Wales	42 (37%)	33 (29%)
UK – total	962 (37%)	525 (20%)

Supporting professional activities

The RCR considers 1.5 SPAs as the minimum to enable a consultant to provide evidence for enhanced appraisal and revalidation.⁸ The census shows that nearly all full-time consultants (96%) meet this minimum in their job plan. The minimum would not, however, allow time for other SPA work such as teaching, research, service development, clinical governance and

contribution to management. As such, for the professional development of consultants, the RCR sees 2.5 SPAs as being important for activities not related to direct patient care. The census shows that the percentage of full-time consultants having at least 2.5 SPAs in their job plan is falling, from 47% in 2014 to 39% in 2015.

Figure 18. Percentage (and headcount) of full-time consultants with 1.49 or less, 1.50 to 2.49 and 2.50 or more supporting professional activities (SPAs), 2014 and 2015



Consultant specialty areas of practice

Information on areas of specialty interest is collected through the census. The census allows for more than one specialty interest to be entered against each consultant radiologist. The findings are shown in Table 14. The total sum of responses (3,906) reported against these specialty interest areas exceeds the total

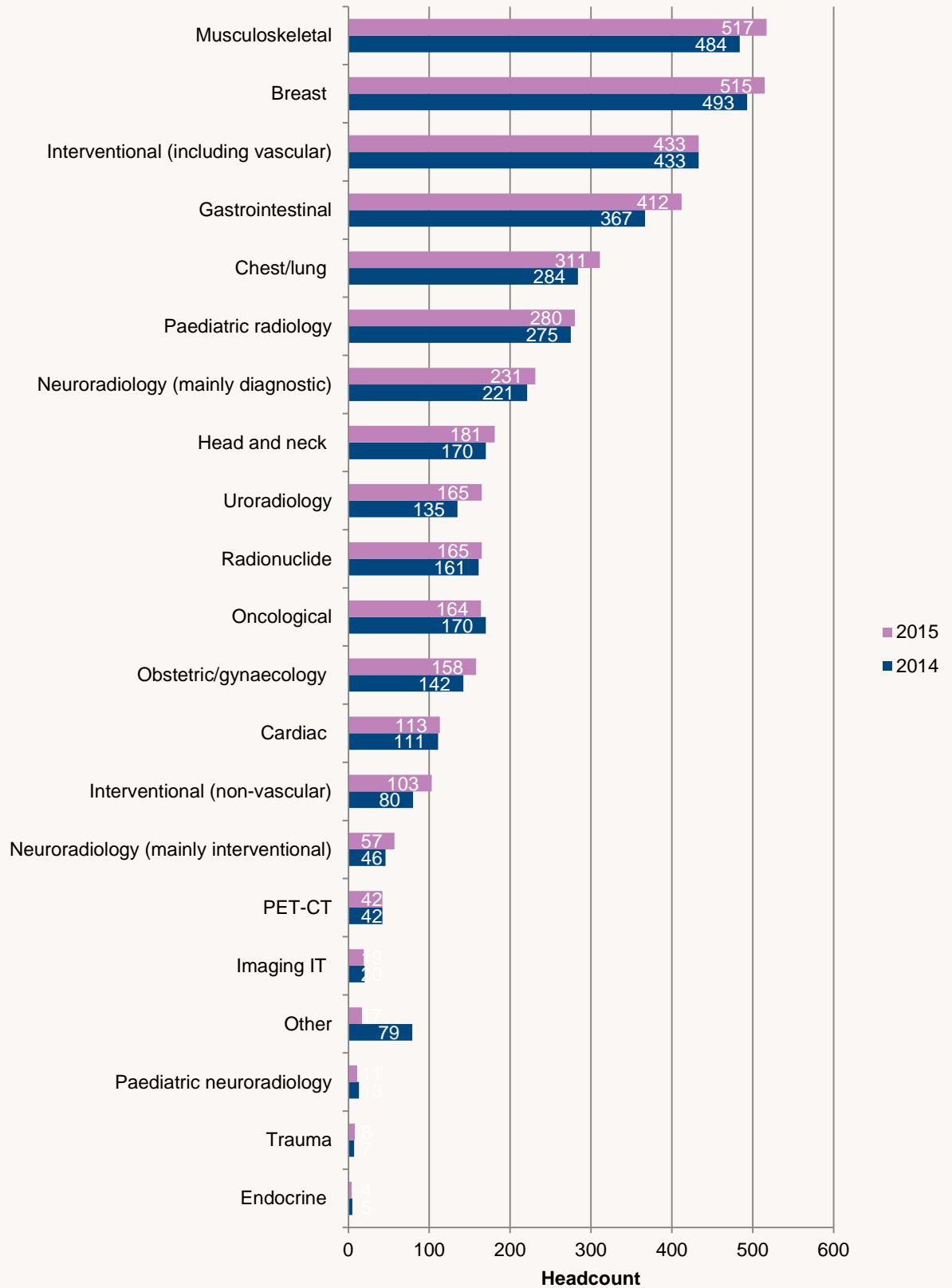
headcount of consultants in the UK (3,318). This is because job plans may encompass more than one specialty interest. Therefore, it should not be interpreted that there are 515 consultants solely specialising in breast radiology, rather there are 515 consultants whose job plans include breast radiology. Figure 19 shows the number of consultants with specialty interest areas in 2014 and 2015.

Table 14. Consultant specialty interests (multi-response) by UK country, 2015

	England	Northern Ireland	Scotland	Wales	UK total	UK 1-year % change (2014–15)	UK 5-year % change (2010–15)
Breast	424	16	54	21	515	4%	30%
Cardiac	98	4	6	5	113	2%	85%
Chest/lung	256	8	30	17	311	10%	50%
Endocrine	4	0	0	0	4	-20%	0%
Gastrointestinal	331	14	37	30	412	12%	54%
Head and neck	142	4	19	16	181	6%	51%
Imaging information technology (IT)	15	2	2	0	19	-5%	-70%
Interventional (including vascular)	360	12	39	22	433	0%	18%
Interventional (non-vascular)	89	4	6	4	103	29%	45%
Musculoskeletal	431	18	35	33	517	7%	46%
Neuroradiology (mainly diagnostic)	177	21	23	10	231	5%	ID*
Neuroradiology (mainly interventional)	48	2	6	1	57	24%	ID*
Obstetric/gynaecology	131	6	12	9	158	11%	68%
Oncological	141	7	7	9	164	-4%	2%
Paediatric neuroradiology	9	0	1	1	11	-15%	-15%
Paediatric radiology	227	15	26	12	280	2%	37%
Positron emission tomography-computed tomography (PET-CT)	30	5	4	3	42	0%	-14%
Radionuclide	137	9	12	7	165	2%	42%
Trauma	6	1	0	1	8	14%	14%
Uroradiology	137	5	12	11	165	22%	62%
Other	16	0	1	0	17	-78%	-50%

*ID – insufficient data, the 2010 census collected data for neuroradiology only and did not distinguish between diagnostic and interventional.

Figure 19. UK consultant specialty interests, 2014 and 2015



5. Consultant workforce attrition

Consultants leaving the NHS

The number of consultants leaving the NHS workforce between 1 April 2014 and 31 March 2015 was 45, a figure similar to that stated in

2014 census report. The main reason for leaving is retirement although there has been a notable increase in those resigning from the NHS between 2013–14 and 2014–15.

Table 15. Number of consultants leaving the NHS radiology workforce and reasons given, 2010–2015

Reason for leaving	2010	2014	2015
Retired from the NHS	42	34	24
Resigned from the NHS	14	4	14
Not known	11	10	7
Total	67	48	45
% of consultant workforce leaving	2.3%	1.5%	1.3%

Retirements

Through the census, 24 consultants were identified as retiring between 1 April 2014 and 31

March 2015. The median and mean ages of retirement were 60 and 61. One-third of those who retired (n=8) were aged under 60.

Table 16. Mean and median ages of consultant radiologists at retirement, 2014 and 2015

	2014	2015
Number retiring	34	24
Mean age	62	61
Median age	61	60
Range (youngest–oldest)	41–73	57–67

Estimated retirement rates – next five years (2015–2020)

The mean and median ages of retirement for both 2014 and 2015 can be used as the basis for estimating future consultant retirement rates. The

following shows an estimated 488 consultants retiring between 2015 and 2020 based on a retirement age of 62, and 669 if retiring at age 60. The figures represent 15% and 20% of the current workforce.

Figure 20. Estimated percentage of consultants (WTEs and headcount) retiring between 2015 and 2020 in each UK country/region

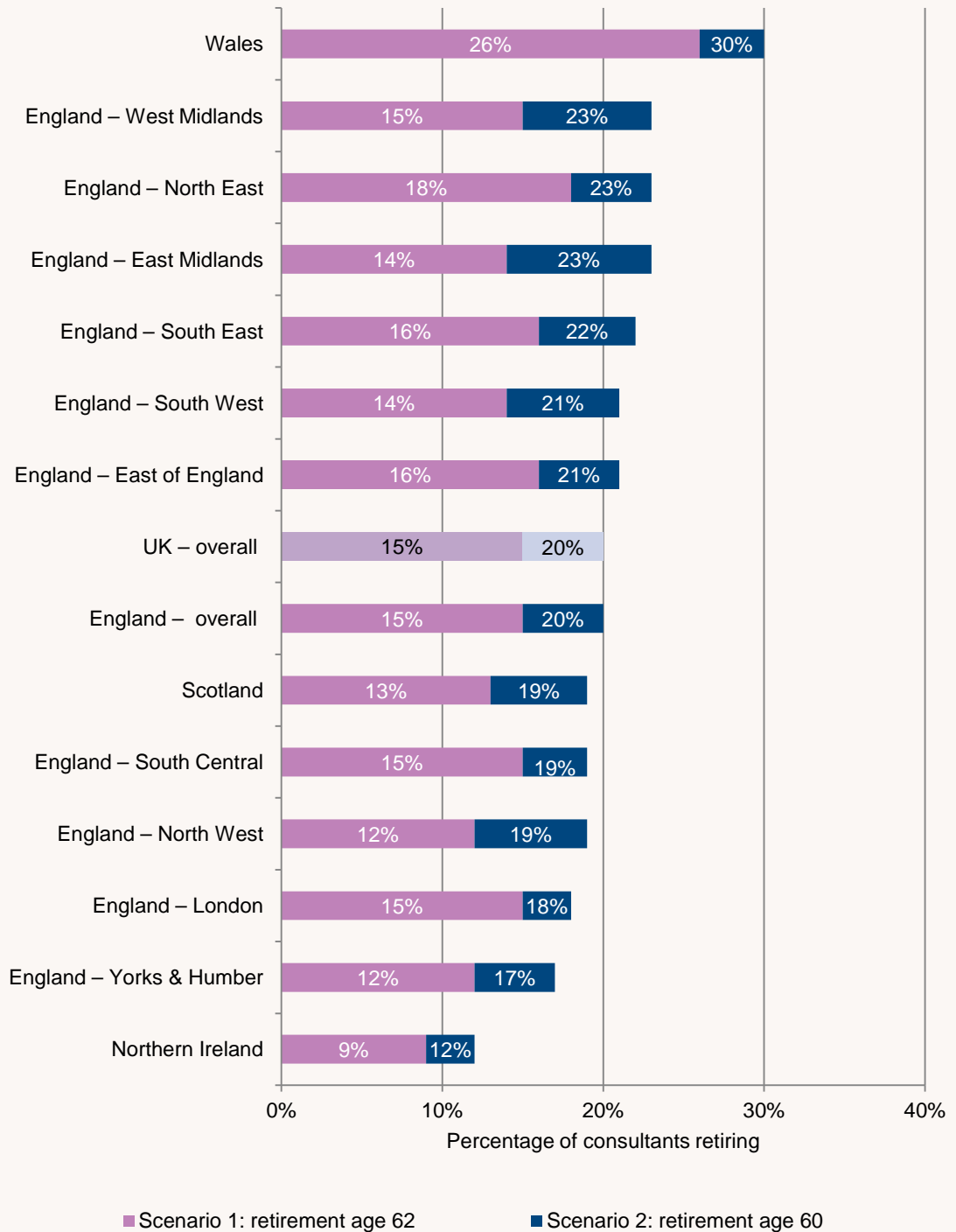


Table 17. Estimated number of consultants expected to retire between 2015 and 2020 in each UK country/region – by headcount and WTEs

	Headcount			WTEs		
	Workforce	Retirement age 62	Retirement age 60	Workforce	Retirement age 62	Retirement age 60
England – East Midlands	168	24	38	160	21	35
England – East of England	247	40	53	236	36	48
England – London	555	82	101	509	67	86
England – North East	146	27	33	136	21	27
England – North West	389	46	72	371	39	64
England – South Central	208	32	39	195	29	35
England – South East	190	31	42	181	29	40
England – South West	288	40	61	272	36	54
England – West Midlands	278	43	63	262	35	53
England – Yorkshire and Humber	265	33	46	253	28	40
England – overall	2,733	398	548	2,575	341	482
Northern Ireland	121	11	15	114	11	15
Scotland	304	38	58	288	35	54
Wales	160	41	48	147	34	40
UK – overall	3,318	488	669	3,125	421	591

Estimated retirement rates – next ten and 15 years (up to 2025 and 2030)

It is estimated that around one-third of the current UK consultant radiology workforce will retire

within the next ten years (2015–2025). Within the next 15 years (2015–2030) around half of the current workforce will retire.

Table 18. Percentage (and headcount) of the current consultant workforce expected to retire in each UK country and region in the next ten and 15 years

	Next ten years: 2015–2025		Next 15 years: 2015–2030	
	Retire age 62	Retire age 60	Retire age 62	Retire age 60
England – East Midlands	39% (66)	44% (74)	52% (87)	59% (99)
England – East of England	28% (69)	34% (84)	43% (106)	50% (124)
England – London	24% (135)	30% (166)	41% (228)	49% (270)
England – North East	29% (43)	34% (49)	47% (69)	53% (77)
England – North West	28% (107)	34% (133)	44% (170)	49% (192)
England – South Central	28% (59)	34% (71)	47% (98)	52% (108)
England – South East	31% (58)	35% (67)	44% (83)	49% (93)
England – South West	31% (90)	37% (107)	49% (142)	56% (162)
England – West Midlands	32% (89)	37% (103)	47% (132)	56% (155)
England – Yorks and Humber	30% (79)	35% (93)	48% (126)	54% (142)
England – overall	29% (795)	35% (947)	45% (1,241)	52% (1,422)
Northern Ireland	21% (25)	26% (32)	43% (52)	50% (60)
Scotland	30% (92)	36% (109)	47% (144)	53% (161)
Wales	38% (61)	43% (68)	53% (85)	58% (92)
UK – overall	29% (973)	35% (1,156)	46% (1,522)	52% (1,735)

Consultants working into their 60s and 70s

In considering the estimated retirement rates, it must be remembered that many consultants continue to work into their 60s and, in a few cases, their 70s. This was the case for 246 consultants (8% of the workforce), as recorded by the 2015 census. Census respondents were also asked to indicate those consultants who

were expected to retire by the end of 2015 and their intentions post-retirement. Responses identified 98 consultants intending to retire by the end of 2015 (mean age of 61), of who nearly two-thirds intended to return to work with reduced programmed activities and work less than full-time.

Figure 21. Percentage (and headcount) of consultants age 60 or above by UK country and region, 2015

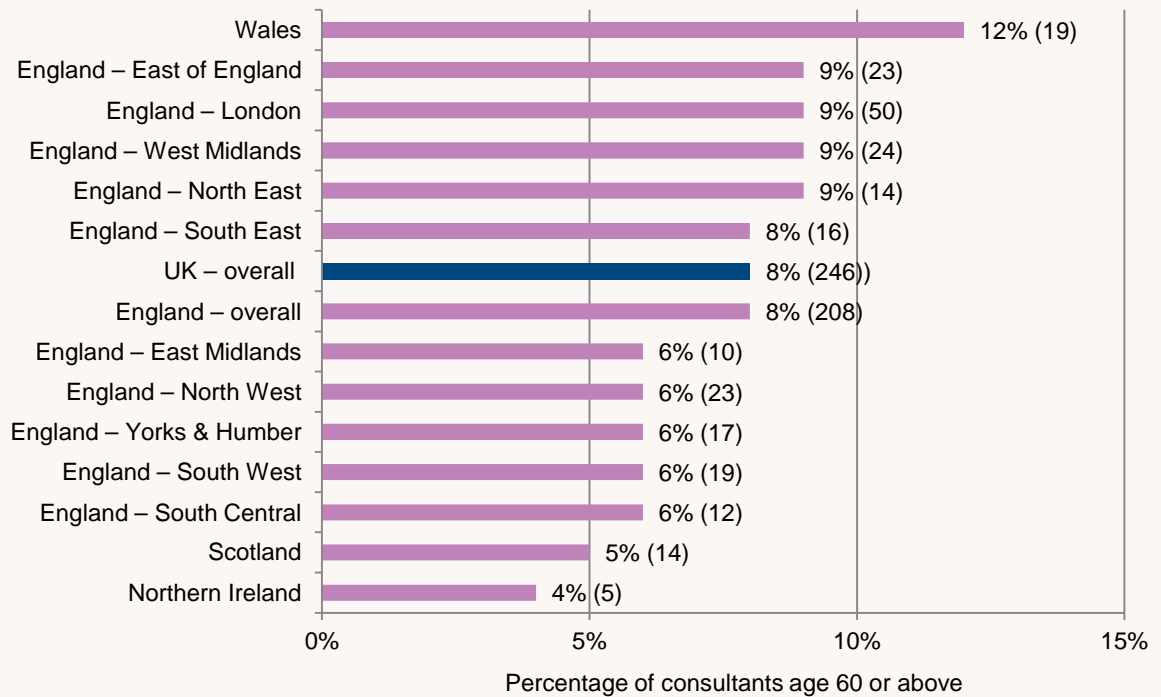
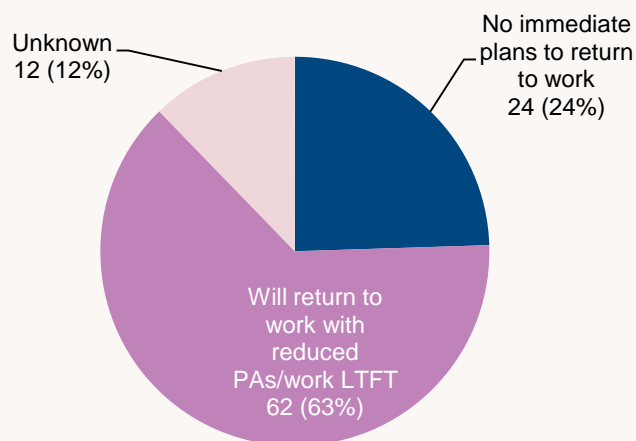


Figure 22. Post-retirement intentions of consultant radiologists identified as expected to retire by the end of 2015



6. Unfilled consultant radiology posts

Consultant vacancy rates

In addition to consultant radiologists in post, the census also asked respondents to provide details of unfilled posts in their departments as of 31 March 2015. It must be noted that, due to the workforce crisis in radiology, some departments may have forsaken their recruitment efforts. Therefore the number of formally recognised unfilled posts is smaller than the actual number of new consultants required in these departments. As explained by one clinical director:

'Jobs are often not advertised unless we have someone interested, in view of the general shortage of radiologists.'

The number of recognised unfilled consultant radiology posts in the UK has declined from 421 in 2014 to 324 in 2015, from 12% to 9% of total consultant posts. Also recorded in the 2015 census were eight vacancies for mixed NHS/academic and staff grade or equivalent

radiologists. The annual mean vacancy rate is 9% (median 8.5%) for the years 2010 to 2015. This is concerning as it suggests a situation has developed whereby around one-in-ten consultant radiology posts in the UK will be vacant consistently for the foreseeable future.

Figure 24 shows the number of unfilled consultant posts by UK country and region. Regions where there is a particular concern include North West England (66 unfilled posts, 15% vacancy rate) and the East Midlands (39 unfilled posts, 19% vacancy rate). In most UK countries and regions there has been a decline in the recorded number of unfilled posts between 2014 and 2015 although, as already explained, this may be due to departments forsaking their recruitment efforts. Table 20 provides information on the type of consultant radiologists (generalists and specialists) being sought and Table 21 shows the specialty interest areas these unfilled posts cover.

Table 19. Number of reported filled and unfilled consultant radiology posts in the UK, 2010–2015

	Total consultant posts	Filled	Unfilled
2010	3,114	2,869	245
2011	3,272	3,058	214
2012	3,457	3,174	283
2013	No data	No data	No data
2014	3,660	3,239	421
2015	3,642	3,318	324

Information for 2013 is not provided due to the timing of the RCR census being altered from calendar to financial year.

Table 20. Type of radiologist being sought for unfilled consultant posts, 2014 and 2015

	2014		2015	
	Unfilled posts	% of unfilled post	Unfilled posts	% of unfilled post
General	88	21%	71	22%
General with one main area of interest	245	58%	163	50%
General with two or more main areas of interest	22	5%	21	6%
Specialist with one main area of interest	55	13%	57	18%
Specialist with two or main areas of interest	11	3%	12	4%

Table 21. Unfilled consultant posts by specialty interest, 2014 and 2015

	2014 Number of unfilled post	Unfilled – % of total specialty posts	2015 Number of unfilled post	Unfilled – % of total specialty posts
Breast	64	11%	44	8%
Cardiac	9	8%	4	3%
Chest/lung	22	7%	19	6%
Endocrine	1	17%	0	0%
Gastrointestinal	30	8%	17	4%
Head and neck	19	10%	17	9%
Imaging IT	0	0%	0	0%
Interventional (including vascular)	42	9%	31	7%
Interventional (non-vascular)	13	14%	8	7%
Musculoskeletal	59	11%	39	7%
Neuroradiology (mainly diagnostic)	16	7%	15	6%
Neuroradiology (mainly interventional)	1	2%	3	5%
Obstetric/gynaecology	11	7%	6	4%
Oncological	19	10%	16	9%
Other	4	5%	5	23%
Paediatric neuroradiology	3	19%	0	0%
Paediatric radiology	32	10%	28	9%
PET-CT	3	7%	3	7%
Radionuclide	5	3%	8	5%
Trauma	2	22%	2	20%
Uroradiology	11	8%	9	5%

Recruiting consultants to fill these posts is problematic and concerning. Clinical directors, through the census, used terms such as dispiriting, difficult and struggle to describe their recent recruitment efforts. Challenges being faced by departments included:

- The lack of suitably trained applicants for advertised posts
- Intense competition from other trusts and health boards for a small pool of potential candidates
- Radiologists finishing training but not applying for consultant posts in the same trust
- Essential services being covered by short-term locums.

The following comments provide insight into the recruitment problem.

'The recruitment crisis is a total car crash happening in slow motion before my eyes. While I am using radiographers for more advanced roles, I still need radiologists especially for MDTMs, interventions, departmental fixers [problem solvers] and complex image analysis. I am using my recently retired, locums and international radiologists. We have big problems.'

'This was a difficult year for the department. A number of staff resigned and it was difficult to recruit to vacant posts. Workload continued to increase despite this and apparently the department was "on the brink" with alternative avenues of service provision being considered. I am sure other departments must be facing the same problems. Consultants are becoming increasingly 'mobile' and with alternative ways of working, for example, teleradiology, some are reducing their NHS hours.'

Figure 23. Consultant vacancy rates, 2010 to 2015

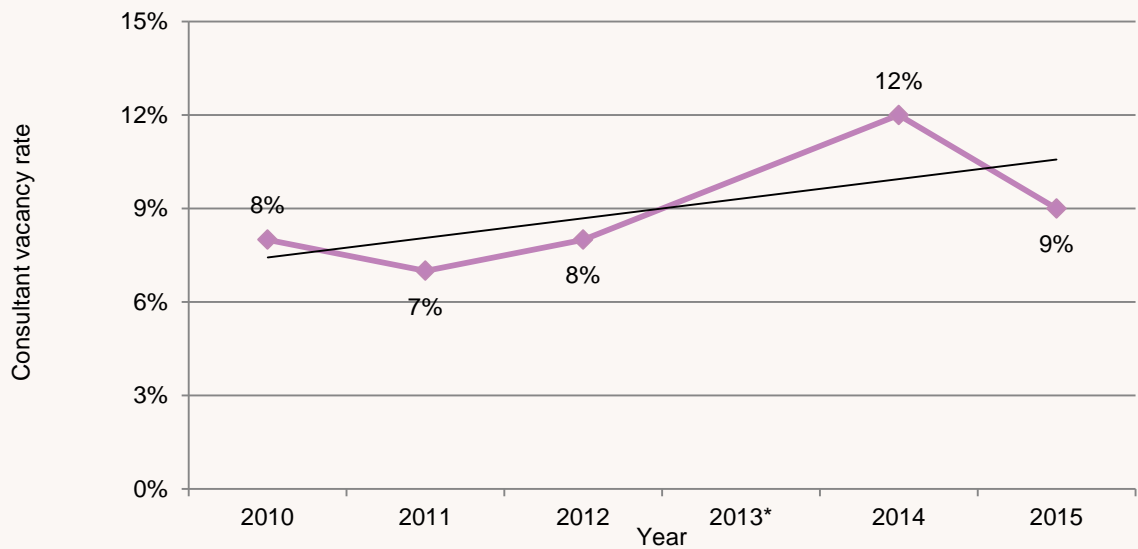


Figure 24. Unfilled consultant posts by UK country and region, 2014 and 2015

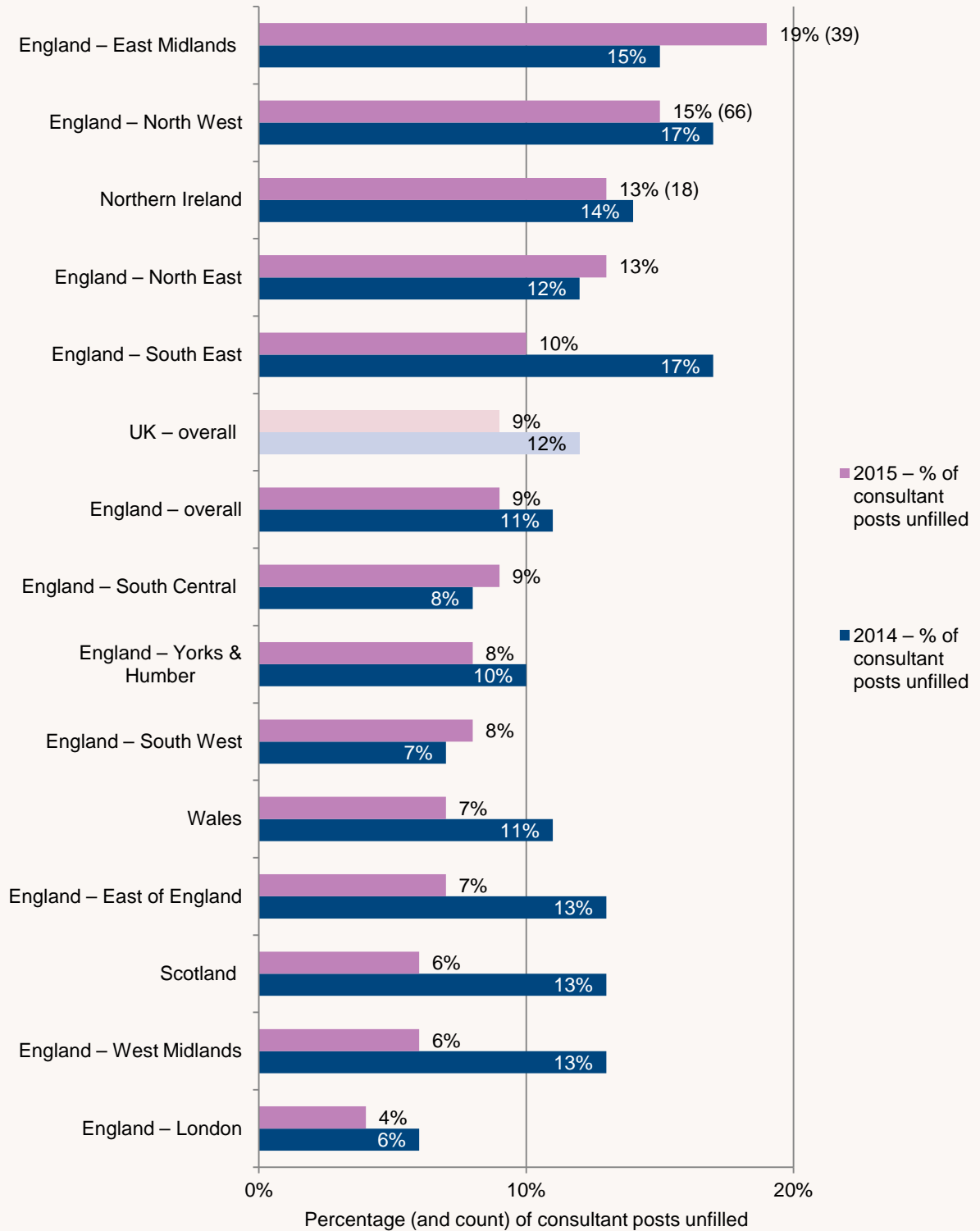
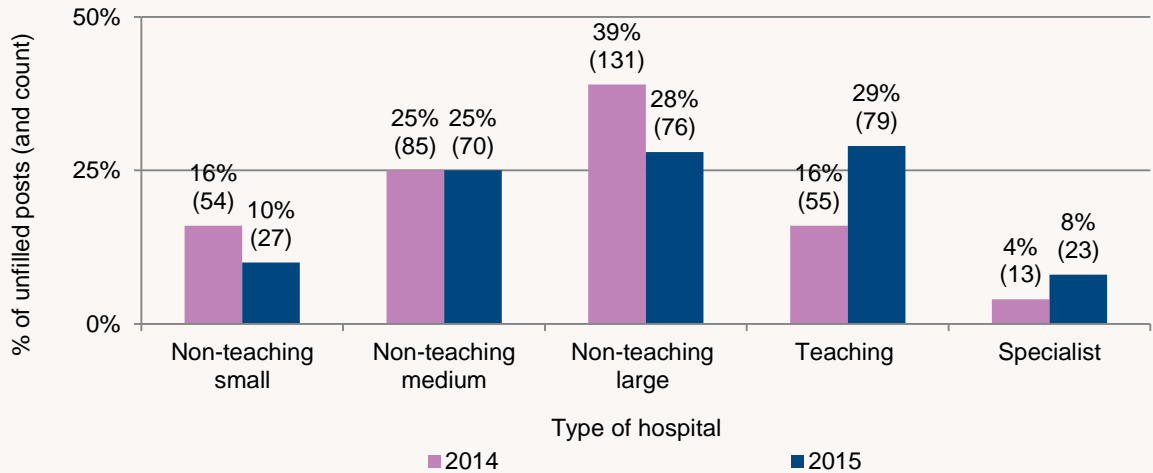


Figure 25. Percentage (and count) of unfilled posts in non-teaching, teaching and specialist hospitals in England, 2014 and 2015



Status of unfilled consultant posts

Of the 324 unfilled posts recorded on 31 March 2015, 51% had been advertised but the recruitment effort resulted in a failure to appoint. This is probably due to candidates taking up

another post, no suitable candidates being identified for interview or appointment or no candidates applying for the post.

Table 22. Status of unfilled consultant posts, 2014 and 2015

	2014 Unfilled posts	% of unfilled post	2015 Unfilled posts	% of unfilled post
Advertised but failed to appoint	174	41%	166	51%
Advertised but not yet interviewed	36	9%	28	9%
Appointed but not yet taken up	84	20%	45	14%
Funded but not yet advertised	82	19%	64	20%
Funded but not yet appointed	45	11%	21	6%

Length of time consultant posts left vacant

The radiologist workforce crisis has meant that many consultant vacancies remain unfilled for considerable periods of time. Figure 26 shows that 46% of the 324 vacancies identified by the census have been unfilled for eight months or

more, 41% for more than one year. Long-term vacancies are particularly problematic in South East England where 81% of vacancies remain unfilled for eight months or more, and South Central England where it is 70%.

Figure 26. Number (and percentage) of unfilled consultant radiologist posts left vacant by time period in the UK, 2015

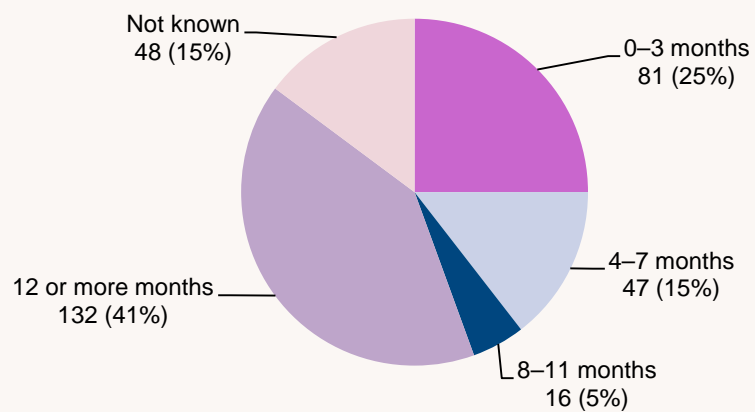
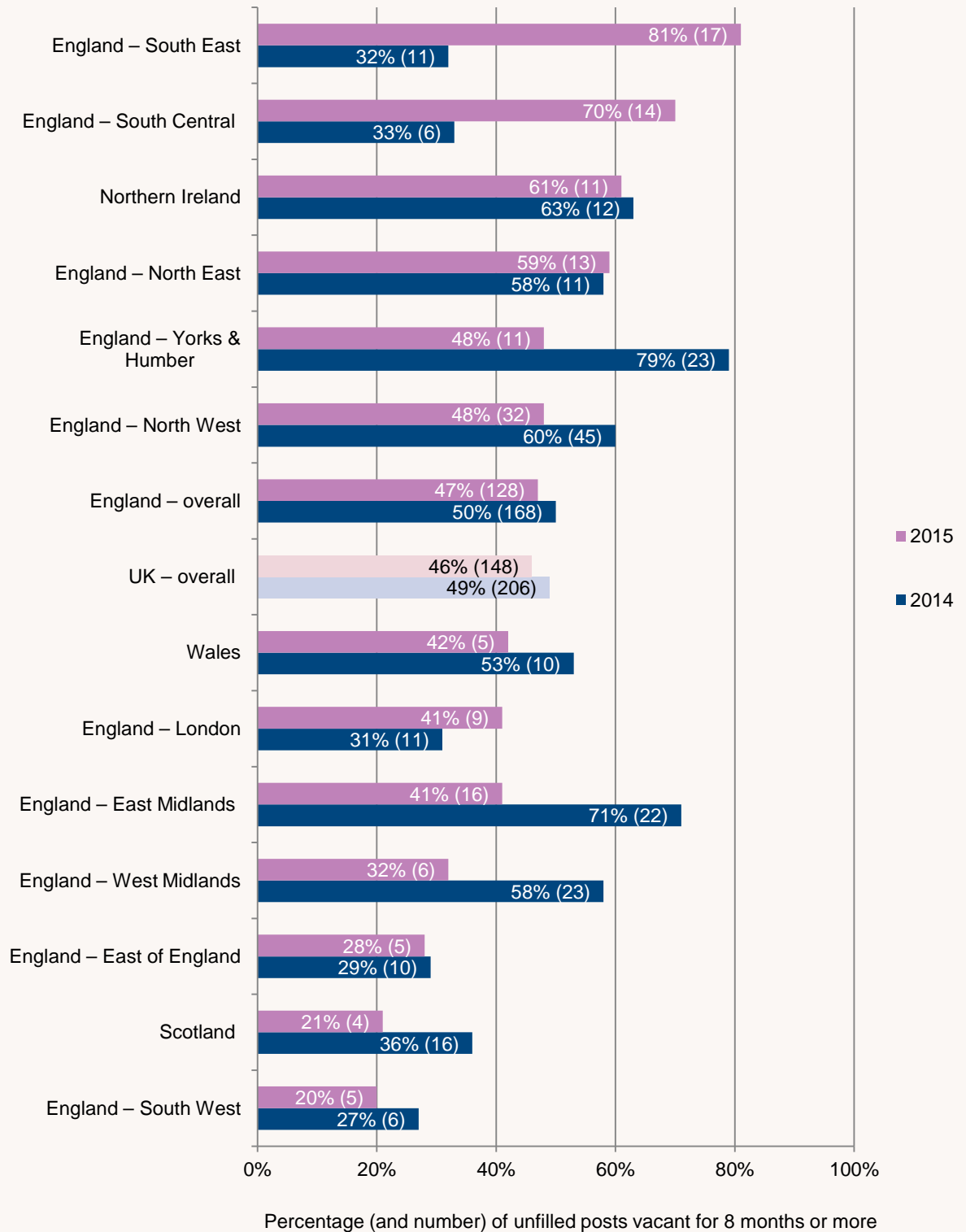


Figure 27. Long-term vacancies – percentage (and number) of unfilled posts vacant for eight months or more by UK country/region, 2014 and 2015



Locums

For the purpose of the census, unfilled posts are defined as having no permanent consultant radiologist in place. As of 31 March 2015, three-in-ten of these posts, were covered by temporary

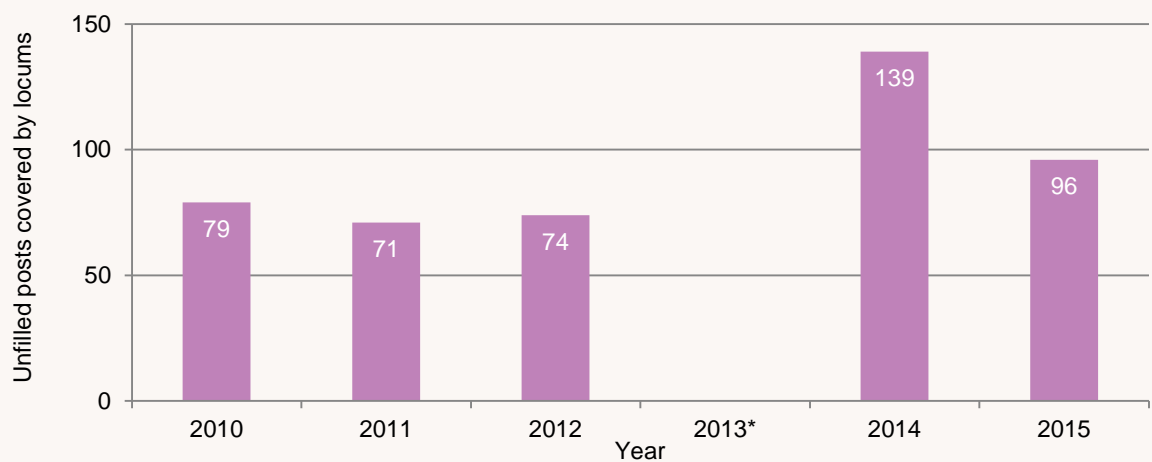
locums. In many cases, locum coverage has been in place for eight months or longer. All this comes at considerable expense to the NHS.

Table 23. Percentage of unfilled consultant posts covered by locums, 2010–2015

	Number of unfilled posts	% of unfilled posts covered by locums
2010	245	32%
2011	214	33%
2012	283	26%
2013	No data	No data
2014	421	33%
2015	324	30%

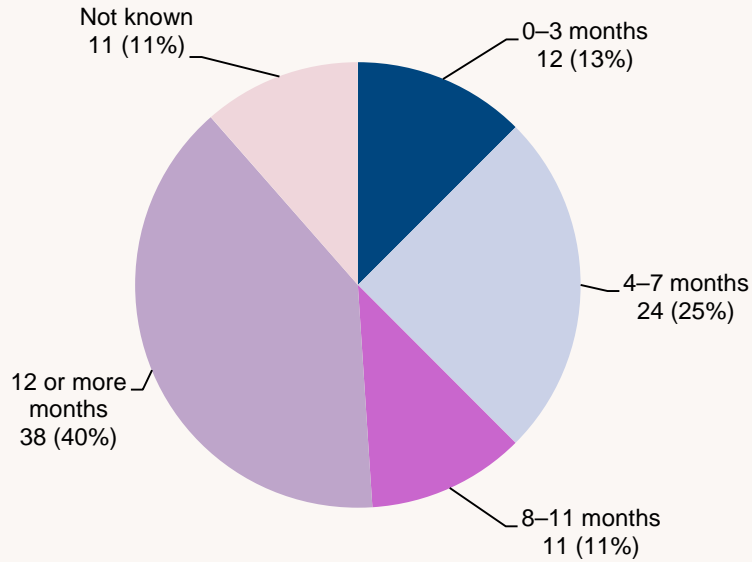
Information for 2013 is not provided due to the timing of the RCR census being altered from calendar to financial year.

Figure 28. Number of unfilled consultant posts covered by locums, 2010 to 2015



*Information for 2013 is not provided due to the timing of the RCR census being altered from calendar to financial year.

Figure 29. Number of unfilled consultant posts filled by locums and length of locum period, 2015



International recruitment

When asked if they have tried to recruit radiologists from outside of the UK during the

period 31 March 2014 to 1 April 2015, 69 out of 202 departments (34%) said yes. Of these 69 departments, just under half were successful in their recruitment efforts.

Figure 30. Percentage (and number) of departments in each UK country and region attempting to recruit radiologists from outside of the UK, 31 March 2014 to 1 April 2015

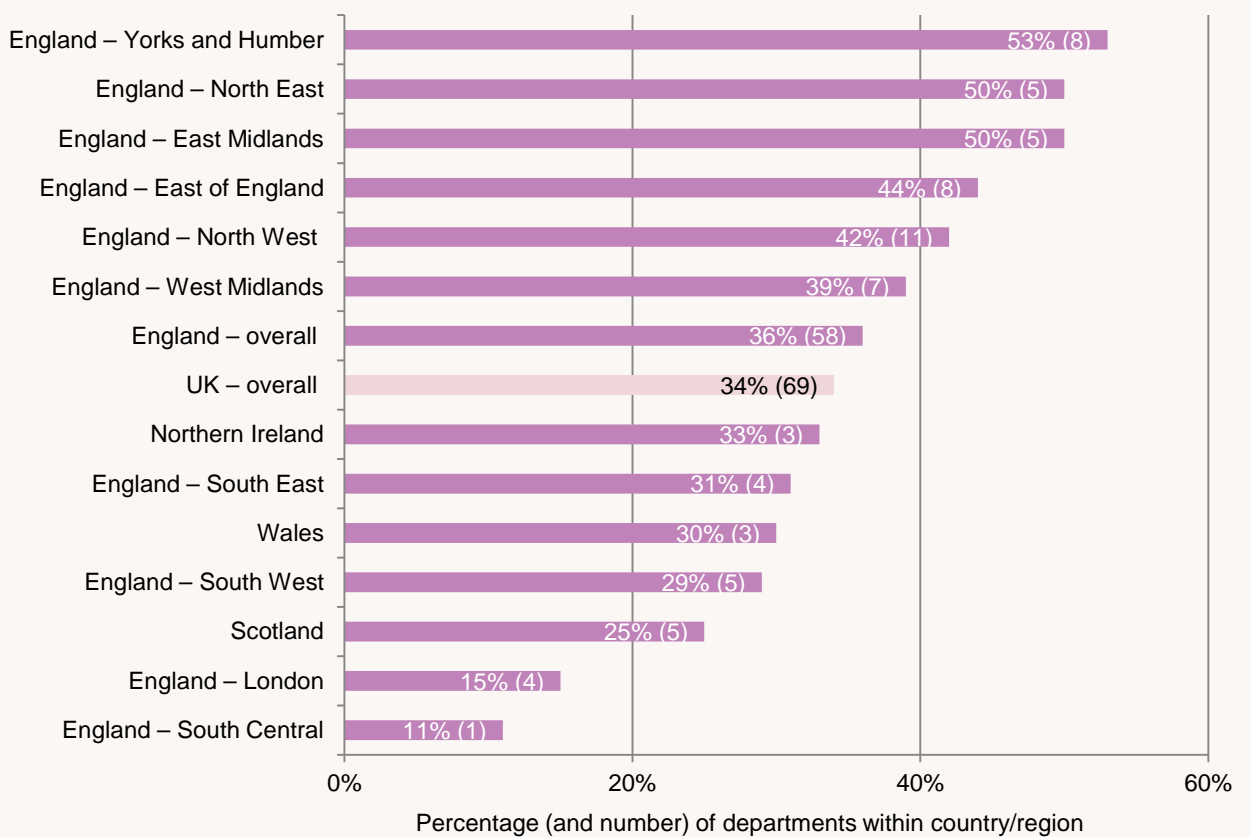
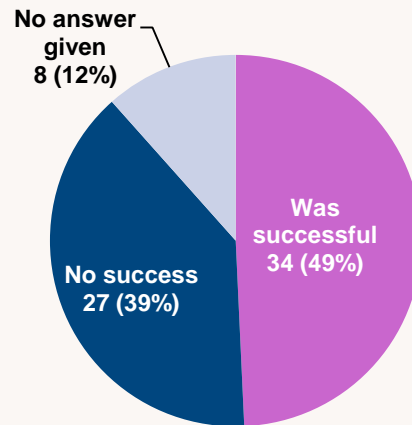


Figure 31. Outcomes of international recruitment efforts by 69 radiology departments



International recruitment difficulties

Departments who have not been successful in or did not get to the final stages of recruiting internationally gave their reasons and the problems they encountered.

- Lack of guidance and help, including funding, for international recruitment.
- The high costs of using recruitment agencies to identify and attract international radiologists.
- International recruitment is seen as a lot of effort for little reward.
- Perceptions and concerns about the quality, suitability, qualifications and/or English-language ability of international radiologists for UK practice.
- Difficulties in assessing the suitability of candidates.
- Visa difficulties and other similar 'hurdles'.
- Perceived lack of interest from suitable candidates.

7. Activities and spending of radiology departments

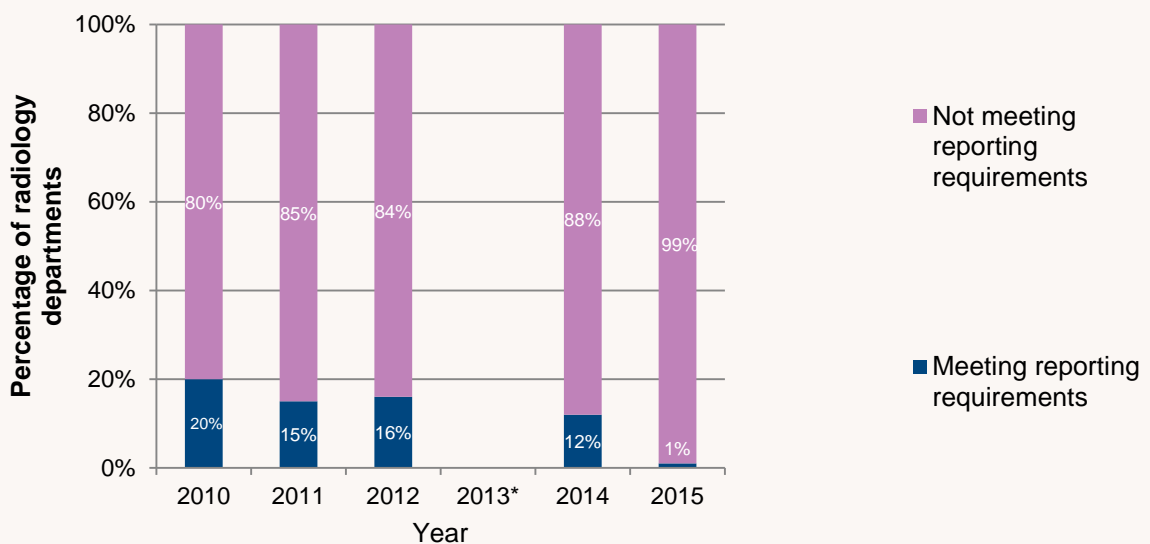
The 202 respondents taking part in the 2015 census completed some or all of the questions focusing on the activities and spending of radiology departments to manage workload.

Methods used in meeting departmental reporting requirements

A significant problem exists in departments meeting their reporting requirements within

contractual hours. Nearly all departments stated that they were unable to meet their requirements for the period 1 April 2014–31 March 2015. This is inevitable given that, in recent years, the increase in workload and number of CT and MRI scans has been at rate that has far outpaced the limited expansion of the consultant radiologist workforce. Figure 32 shows that 20% of departments met their reporting requirements in 2010, whereas for 2015 it was only 1%.

Figure 32. Percentage of UK radiology departments meeting and not meeting their reporting requirements within contractual hours, 2010–2015



*Information for 2013 is not provided due to the timing of the RCR census being altered from calendar to financial year

Departments are increasingly incurring direct costs in addressing shortfalls in their reporting requirements. Figure 33 shows that 92% of departments in 2015 made additional payments to their radiologists to report outside of contracted hours, compared to 62% in 2010. The figure for outsourcing of reporting to an independent sector company was 75% of departments in 2015, compared to only 33% in 2010.

Departments also made use of methods involving no or indirect costs in meeting shortfalls in their reporting requirements (Figure 34). Seven-in-ten departments now rely on the goodwill of radiologists to provide additional, unpaid reporting of images. A similar number of

departments also use radiographers to report on radiology images.

The RCR has surveyed the extent of radiology reporting backlogs in the NHS. Around 230,000 patients in England are waiting more than a month for their imaging test results according to a survey carried out in February 2016.² Several clinical directors mentioned the backlog in comments made through the census.

'We are fortunate to have supportive management. We have a significant backlog of MRI reporting (as this is not formally factored into our job plans in such a way that we can keep up with the demand which has massively increased). We largely manage this in house with locum

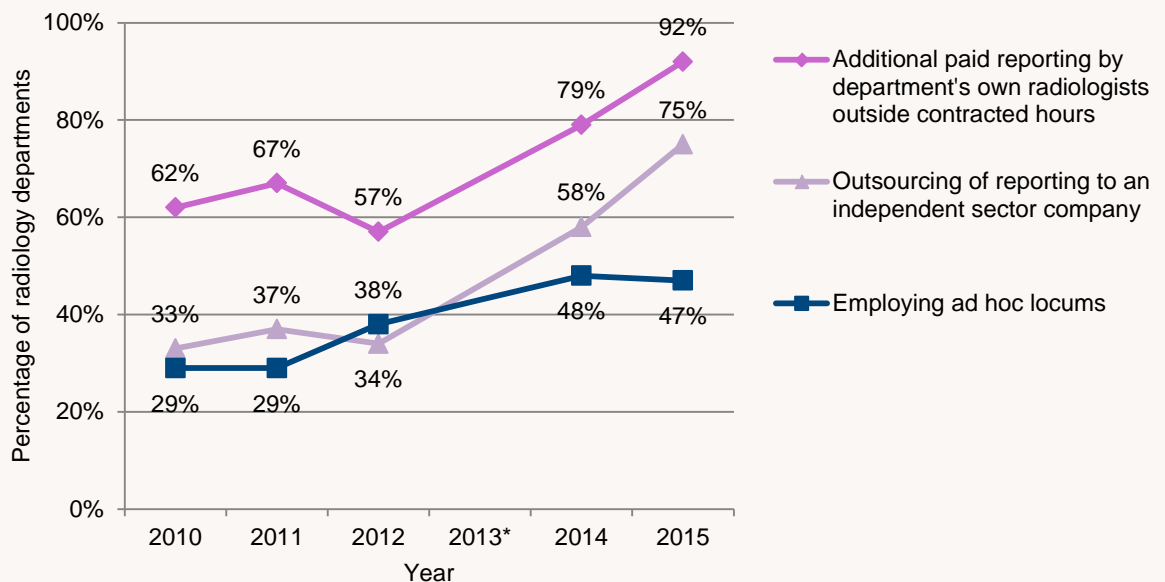
sessions but this is not a robust way of dealing with it. If we don't keep track of it we will have to outsource it. We are now outsourcing Saturday nights on-call to [named company] to allow our trainees to sleep, as we are now much busier out-of-hours than previously. The locum radiologists (largely retired and returned for two to three sessions – mostly an annualised contract) do most of our plain film reporting and we would not survive without them.'

'We are a small trust and struggle to recruit. We cannot cope with the workload so we outsource

to [named company] all the on-call and large tranches of CT and MRI when a backlog builds up. We are under constant pressure. We need three or four new consultants to cope with the demand and for seven-day working.'

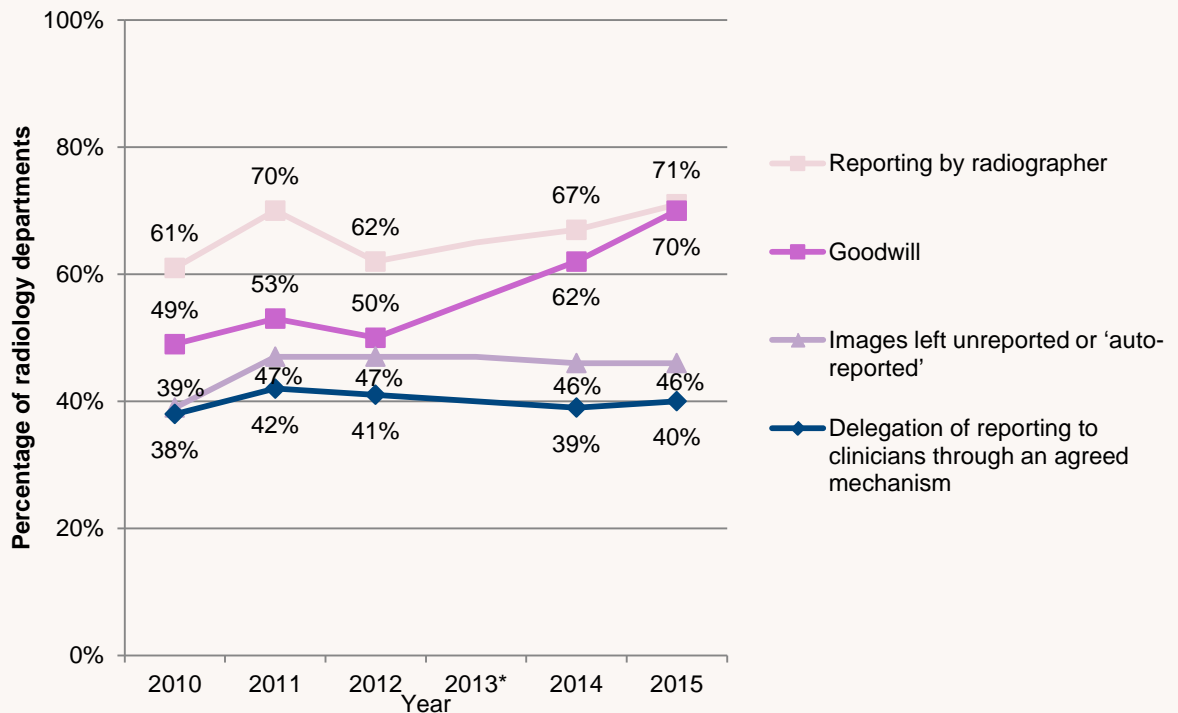
'As is the case throughout the country, we are currently running the department without a full complement of staff. Most consultants are working more than 10 PAs each week with the majority claiming extra pay or time in lieu for coming in at weekends and trying to report to keep on top of the work.'

Figure 33. Percentage of radiology departments employing methods involving direct costs in meeting shortfalls in reporting requirements, 2010–2015



*Information for 2013 is not provided due to the timing of the RCR census being altered from calendar to financial year.

Figure 34. Percentage of radiology departments employing methods involving no or indirect costs in meeting shortfalls in reporting requirements, 2010 to 2015



*Information for 2013 is not provided due to the timing of the RCR census being altered from calendar to financial year.

Spending on outsourcing

Spending on outsourcing – national and average amount per department – has increased. Included in this spending is overnight and daytime outsourcing payments made to teleradiology companies as well as additional payments to radiologists already contracted to the department or trust (called 'insourcing').

For the period 1 April 2014–31 March 2015, total spending by UK radiology departments on outsourcing is estimated to be around £88.2 million. This represents a 51% increase on the estimated £58.5 million for 2013–14. The

average (mean) amount spent per department in the UK was £447,902, an increase from the 2013–14 figure of £334,060. Table 24 provides a breakdown of this spending by UK country and region, showing substantial increases in outsourcing spending in some areas. In North East England, for example, there was a 264% increase between 2013–14 and 2014–15, and 102% increase in the East Midlands. To put this into perspective, the £88.2 million spent on outsourcing in the UK is equivalent to the combined salaries of 1,032 consultants (based on point 5 of the 2016–17 NHS consultant pay scale for England³).

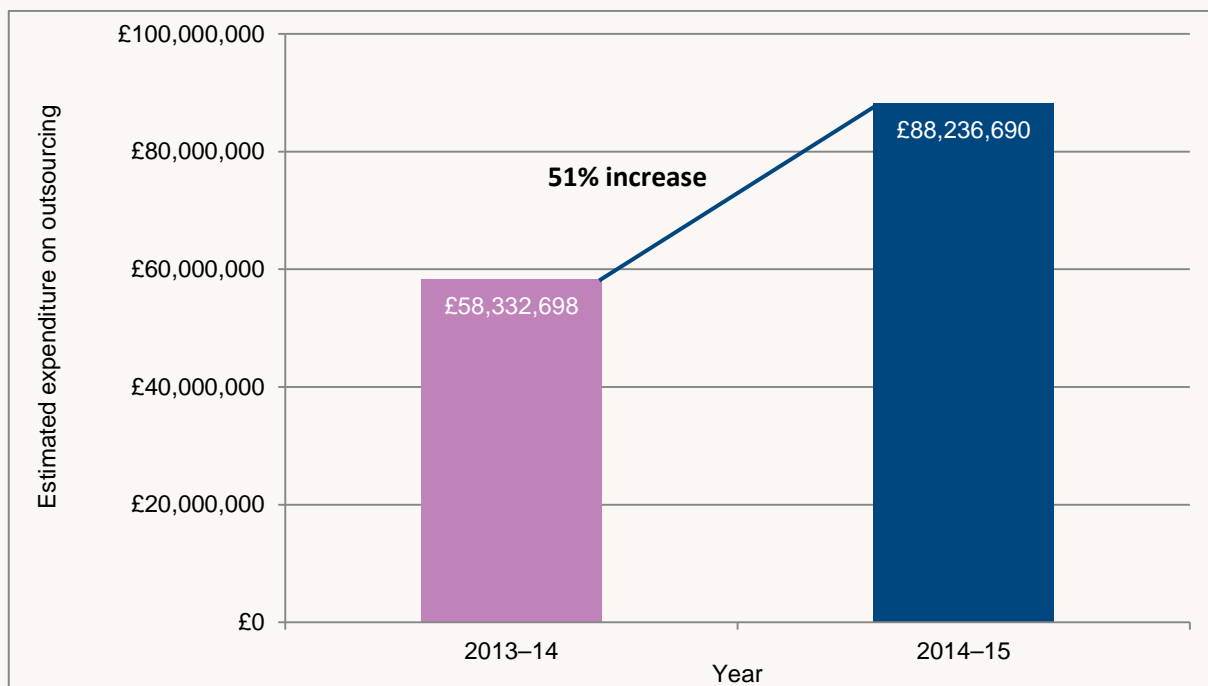
Figure 35. Total spending on outsourcing by UK radiology departments, 2013–14 and 2014–15

Table 24. National and regional spending on outsourcing, 1 April 2014 to 31 March 2015)

	Departments submitting expenditure data	Known expenditure	Mean expenditure	Departments outsourcing	Estimated total expenditure	% increase in estimated total expenditure 2013–14 to 2014–15
England – East Midlands	10	£4,992,963	£499,296	10	£4,992,963	102%
England – East of England	16	£7,986,517	£499,157	18	£8,984,832	55%
England – London	22	£10,108,763	£459,489	26	£11,946,720	99%
England – North East	7	£4,000,000	£571,429	10	£5,714,286	264%
England – North West	25	£13,029,008	£521,160	25	£13,029,008	55%
England – South Central	8	£4,152,283	£519,035	9	£4,671,318	54%
England – South East	11	£6,385,972	£580,543	13	£7,547,058	21%
England – South West	15	£3,277,050	£218,470	17	£3,713,990	15%
England – West Midlands	15	£6,014,340	£400,956	17	£6,816,252	17%
England – Yorks and Humber	11	£4,651,940	£422,904	15	£6,343,555	42%
England – overall	140	£64,598,836	£461,420	160	£73,827,241	57%
Northern Ireland	6	£4,311,384	£718,564	9	£6,467,076	25%
Scotland	11	£3,209,419	£291,765	18	£5,251,777	50%
Wales	9	£2,232,090	£248,010	10	£2,480,100	28%
UK – overall	166	74,351,729	£447,902	197	£88,236,690	51%

Out-of-hours radiology

The census asked departments how many of their consultants provided a general out-of-hours (OOH) radiology service. Information on departmental spending in providing this service was also sought. Across the UK, 75% of radiology consultants regularly provided OOH services, and in some regions (West Midlands, East Midlands and Northern Ireland) the percentage was 85% or higher. These consultants worked in 187 of the 202 departments covered by the census. From this and data collected on spending, it was found that 195 departments provided an OOH service. There is a financial cost to this. Based on information received, it is estimated that the total OOH service cost across the UK was £39.4

million for the period 1 April 2014–31 March 2015. The average spend per department was £202,108.

Of the 187 departments where consultants provided OOH services, 89 (48%) lost some sessions (DCC or SPA) in the average week to compensate consultants for this arrangement. The lost sessions were necessary to allow consultants to rest after working nights or weekends. This impacts on the provision of services during normal working hours as commented by one clinical director.

'With the drive to seven-day working, there has been a gradual extension of routine work at weekends which, by negotiation, has been compensated on a time in lieu basis. This has significantly impacted on weekday working.'

Figure 36. Percentage (and headcount) of consultants in each UK country and region regularly providing out-of-hours general radiology services, 1 April 2014–31 March 2015

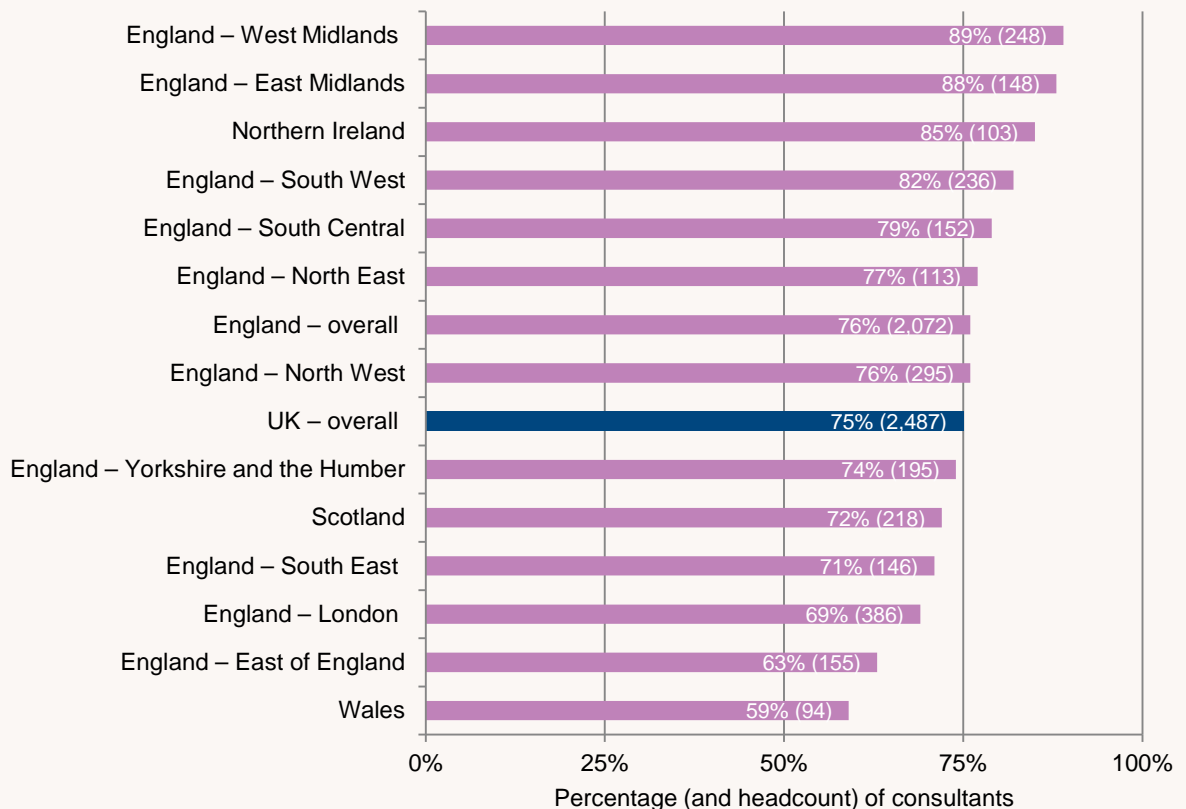


Table 25. National and regional spending on out-of-hours general radiology services, 1 April 2014–31 March 2015

	Departments submitting expenditure data	Known expenditure	Mean expenditure	Departments providing OOH services	Estimated total expenditure
England – East Midlands	9	£1,694,109	£188,234	10	£1,882,343
England – East of England	16	£3,325,706	£207,857	17	£3,533,563
England – London	21	£3,679,582	£175,218	27	£4,730,891
England – North East	6	£1,316,000	£219,333	10	£2,193,333
England – North West	20	£4,834,523	£241,726	24	£5,801,428
England – South Central	8	£1,508,583	£188,573	9	£1,697,156
England – South East	11	£3,099,079	£281,734	13	£3,662,548
England – South West	13	£1,377,226	£105,940	17	£1,800,988
England – West Midlands	13	£3,097,636	£238,280	17	£4,050,755
England – Yorks and Humber	8	£1,696,394	£212,049	15	£3,180,739
England – overall	125	£25,628,838	£205,031	159	£32,599,882
Northern Ireland	4	£1,109,614	£277,404	8	£2,219,228
Scotland	7	£1,833,734	£261,962	18	£4,715,316
Wales	10	£935,584	£93,558	10	£935,584
UK – overall	146	£29,507,770	£202,108	195	£39,411,063

Multidisciplinary team meetings

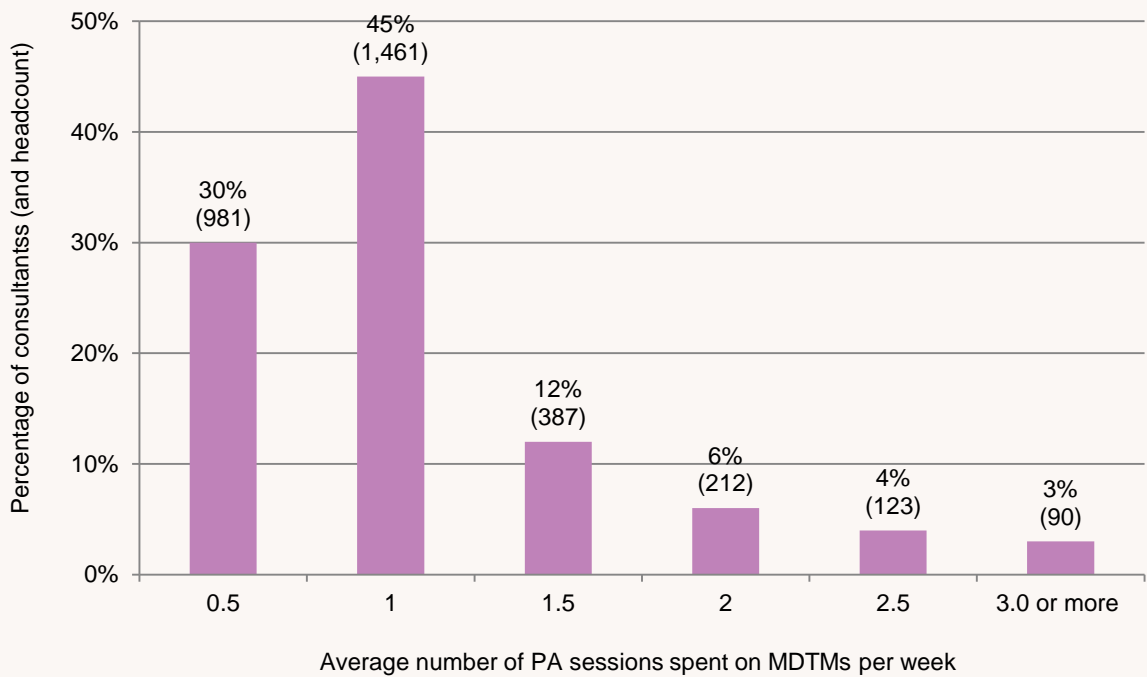
Radiology departments were asked the following question: *In an average week, approximately how much radiologist time in total, measured in programmed activities (PAs), does your department spend preparing for and attending*

multidisciplinary team meetings (MDTMs)? Of the 202 departments in the UK, 197 responded to this question. Consultants working in these departments totalled 3,252. MDTMs took up an average of one PA for each consultant, although for 13% of the workforce two or more PAs were spent on MDTMs.

Table 26. Average number of programmed activities spent by consultants per week on multidisciplinary team meetings, 2015

PAs spent on MDTMs per consultant each week	
Mean	1.1
Median	1.0
Range	0.1–5.0

Figure 37. Average number of sessions spent by radiologists each week on preparing for and attending MDTMs, 2015



References

1. <http://ec.europa.eu/eurostat/web/health/health-care/data/database> (last accessed 25/07/2017)
2. The Royal College of Radiologists. *Diagnostic imaging: our patients are still waiting*. London: The Royal College of Radiologists, 2016.
3. www.bma.org.uk/support-at-work/pay-fees-allowances/pay-scales/consultants-pay-england (last accessed 15/07/2016)
4. www.hscic.gov.uk/catalogue/PUB19470 (last accessed 15/07/2016)
5. www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates (last accessed 15/07/2016)
6. www.england.nhs.uk/statistics/statistical-work-areas/diagnostic-imaging-dataset/ (last accessed 15/07/2016)
7. www.isdscotland.org/Health-Topics/Finance/Costs/Detailed-Tables/Radiology.asp (last accessed 15/07/2016)
8. The Royal College of Radiologists. *A guide to job planning in clinical radiology*. London: The Royal College of Radiologists, 2013.

Appendix 1. 2015 census questions

Section 1: Organisational details

- 1.1 Hospitals
- 1.2 Trust or health board
- 1.3 Census contact
- 1.4 Contact details

Section 2: Permanent staff details

- 2.1 Name (forenames and surname)
- 2.2 Gender
- 2.3 Grade
 - NHS consultant (NHS contract)
 - Academic post (university contract)
 - Mixed NHS/academic – part NHS/research-funded (NHS contract)
 - Staff grade or equivalent
 - Other
- 2.4 Total PAs
 - DCC PAs
 - SPA PAs
 - Training only PAs
- 2.5 Employment type
 - Full-time
 - Part-time
- 2.6 Type of radiologist
 - General
 - General with one main area of interest
 - General with two main areas of interest
 - Specialist with one main area of interest
 - Specialist with two main areas of interest
- 2.7 Area(s) of interest
 - Primary area of interest
 - Secondary area of interest
- 2.8 Employed as a locum
 - Obtained primary medical qualification in the UK (yes/no/unknown)
 - Completed a UK radiology training programme (yes/no/unknown)
 - Previously been in a substantive consultant post (yes/no/unknown)
 - Period employed as locum as of 31 March 2015
 - Expected duration of locum period from 31 March 2015
 - Reason for locum position
- 2.9 Expected to retire by end of 2015
- 2.10 Left since March 2014
 - Reason for leaving

Section 3: Unfilled permanent posts

3.1 Unfilled post status

3.2 Grade

3.3 Total PAs

3.4 Employment type

3.5 Type of radiologist

- Primary and secondary areas of interest

3.6 Locum filled

3.7 Unfilled period (to the nearest month)

3.8 Have you tried to recruit candidates from overseas from 31 March 2014 to 1 April 2015?

- If yes, was this successful?

3.9 Additional comments relating to recruitment

Section 4: Department activity and spending

4.1 For the period 1 April 2014 to 31 March 2015, was the full reporting requirement met by the department's consultant, trainee radiologists and staff grade staff within their contractual hours?

Please indicate how your department addressed any shortfalls in reporting requirements – check all that apply:

- Additional paid reporting by the department's own radiologists outside their contracted hours
- Delegation of reporting to clinicians through an agreed mechanism
- Employing ad-hoc locums
- Goodwill by radiologists
- Images left unreported or auto-reported
- Outsourcing of reporting to an independent sector company
- Reporting by radiographers
- Other (please specify)

4.2 What was the total department spend on outsourcing for period 1 April 2014 to 31 March 2015? (This includes overnight and daytime outsourcing to teleradiology companies, and additional payments to radiologists (and others) already contracted to the trust or health board).

4.3 What was the total department spend to provide out-of-hours radiology for the period 1 April 2014 to 31 March 2015?

4.4 Approximately how many of the consultant clinical radiologists included in your census submission regularly provide a general out-of-hours service? (Headcount).

4.5 In an average week, approximately how many sessions (direct or SPA) are lost due to compensatory arrangements following out of hours working?

4.6 In an average week, approximately how much radiologist time in total (measured in PAs) does your department spend on preparing and attending MDTMs? For example, 12 Consultants spending 1 PA per week = 12.

4.7 How many Administration of Radioactive Substances Advisory Committee (ARSAC) license holders currently work for your institution?

- Number of radiologists
- Number of nuclear medicine physicians

Section 5: Final comments

5.1 Please use the space below to enter any further workforce or workload details you feel are relevant to your census submission but have not already been captured and/or provide general feedback to the College regarding the census.

Appendix 2. 2015 census completions

Thank you to those in radiology departments in the following trusts and health boards for completing the 2015 census.

England – East Midlands

Chesterfield Royal Hospital NHS Foundation Trust
Derby Hospitals NHS Foundation Trust
Kettering General Hospital NHS Foundation Trust
Northampton General Hospital NHS Trust
Nottingham University Hospitals NHS Trust
Sherwood Forest Hospitals NHS Foundation Trust
United Lincolnshire Hospitals NHS Trust
University Hospitals of Leicester NHS Trust

England – East of England

Basildon and Thurrock University Hospital NHS Foundation Trust
Bedford Hospital NHS Trust
Cambridge University Hospitals NHS Foundation Trust
Colchester Hospital University NHS Foundation Trust
East and North Herts NHS Trust
Hinchingsbrooke Health Care NHS Trust
Ipswich Hospital NHS Trust
James Paget University Hospitals NHS Foundation Trust
Luton and Dunstable University Hospital NHS Foundation Trust
Mid-Essex Hospital Services NHS Trust
Norfolk and Norwich University Hospital NHS Foundation Trust
Papworth Hospital NHS Foundation Trust
Peterborough and Stamford Hospitals NHS Foundation Trust
Southend University Hospital NHS Foundation Trust
The Princess Alexandra Hospital NHS Trust
The Queen Elizabeth Hospital King's Lynn NHS Foundation Trust
West Hertfordshire Hospitals NHS Trust
West Suffolk Hospitals NHS Foundation Trust

England – London

Barking Havering and Redbridge Hospitals NHS Trust
Barts Health NHS Trust
Chelsea and Westminster Hospital NHS Foundation Trust
Croydon Health Services NHS Trust
Epsom and St Helier University Hospitals NHS Trust
Great Ormond Street Hospital for Children NHS Foundation Trust
Guy's and St Thomas' NHS Foundation Trust
Homerton University Hospital NHS Foundation Trust
Imperial College Healthcare NHS Trust
King's College Hospital NHS Foundation Trust
Kingston Hospital NHS Foundation Trust
Lewisham and Greenwich NHS Trust
London North West Healthcare NHS Trust
Moorfields Eye Hospital NHS Foundation Trust
North Middlesex University Hospital NHS Trust
Royal Brompton and Harefield NHS Foundation Trust

Royal Free London NHS Foundation Trust
Royal National Orthopaedic Hospital NHS Trust
St George's University Hospitals NHS Foundation Trust
The Hillingdon Hospitals NHS Foundation Trust
The Royal Marsden NHS Foundation Trust
The Whittington Hospital NHS Trust
University College London Hospitals NHS Foundation Trust
West Middlesex University Hospital NHS Trust

England – North East

City Hospitals Sunderland NHS Foundation Trust
County Durham and Darlington NHS Foundation Trust
Gateshead Health NHS Foundation Trust
North Cumbria University Hospitals NHS Trust
North Tees and Hartlepool NHS Foundation Trust
Northumbria Healthcare NHS Foundation Trust
South Tees Hospital NHS Foundation Trust
South Tyneside NHS Foundation Trust
The Newcastle Upon Tyne Hospitals NHS Foundation Trust

England – North West

Aintree University Hospitals NHS Foundation Trust
Alder Hey Children's NHS Foundation Trust
Blackpool Teaching Hospitals NHS Foundation Trust
Bolton NHS Foundation Trust
Central Manchester University Hospitals NHS Foundation Trust
Countess of Chester Hospital NHS Foundation Trust
East Cheshire NHS Trust
East Lancashire Hospitals NHS Trust
Lancashire Teaching Hospitals NHS Foundation Trust
Liverpool Heart and Chest NHS Foundation Trust
Mid-Cheshire Hospitals NHS Foundation Trust
Pennine Acute Hospitals NHS Trust
Royal Liverpool and Broadgreen University Hospitals Trust
Salford Royal NHS Foundation Trust
Southport and Ormskirk Hospital NHS Trust
St Helens and Knowsley Teaching Hospitals NHS Trust
Stockport NHS Foundation Trust
Tameside Hospital NHS Foundation Trust
The Christie Hospital NHS Foundation Trust
The Clatterbridge Cancer Centre NHS Foundation Trust
The Walton Centre NHS Foundation Trust
University Hospital of South Manchester NHS Foundation Trust
University Hospitals of Morecambe Bay NHS Foundation Trust
Warrington and Halton Hospitals NHS Foundation Trust
Wirral University Teaching Hospital NHS Foundation Trust
Wrightington, Wigan and Leigh NHS Foundation Trust

England – South Central

Buckinghamshire Healthcare NHS Trust
Hampshire Hospitals Foundation Trust
Isle of Wight Healthcare NHS Trust
Milton Keynes Hospital NHS Foundation Trust
Oxford University Hospitals NHS Foundation Trust
Portsmouth Hospitals NHS Trust
Royal Berkshire NHS Foundation Trust
University Hospital Southampton NHS Foundation Trust

England – South East

Ashford and St Peter's Hospitals NHS Foundation Trust
Brighton and Sussex University Hospitals
Dartford and Gravesham NHS Trust
East Kent Hospitals University NHS Foundation Trust
East Sussex Healthcare NHS Trust
Frimley Health NHS Foundation Trust
Maidstone and Tunbridge Wells NHS Trust
Medway NHS Foundation Trust
Queen Victoria Hospitals NHS Foundation Trust
Royal Surrey County Hospital NHS Foundation Trust
Surrey and Sussex Healthcare NHS Trust
Western Sussex Hospitals NHS Foundation Trust

England – South West

Dorset County Hospital Foundation Trust
Gloucestershire Hospitals NHS Foundation Trust
Great Western Hospitals NHS Foundation Trust
North Bristol NHS Trust
Northern Devon Healthcare NHS Trust
Plymouth Hospitals NHS Trust
Poole Hospital NHS Foundation Trust
Royal Cornwall Hospitals NHS Trust
Royal Devon and Exeter NHS Foundation Trust
Royal United Hospitals Bath NHS Foundation Trust
Salisbury NHS Foundation Trust
Taunton and Somerset NHS Foundation Trust
The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trusts
Torbay and South Devon NHS Foundation Trust
University Hospitals Bristol NHS Foundation Trust
Weston Area Health NHS Trust
Yeovil District Hospital NHS Foundation Trust

England – West Midlands

Birmingham Children's Hospital NHS Foundation Trust
Birmingham Women's NHS Foundation Trust
Burton Hospitals NHS Foundation Trust
George Eliot Hospital NHS Trust
Heart of England NHS Foundation Trust
Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust
Sandwell and West Birmingham Hospitals NHS Trust
Shrewsbury and Telford Hospital NHS Trust
South Warwickshire NHS Foundation Trust
The Dudley Group of Hospitals NHS Foundation Trust

The Royal Orthopaedic Hospital NHS Foundation Trust
The Royal Wolverhampton Hospitals NHS Trust
University Hospitals Birmingham NHS Foundation Trust
University Hospitals Coventry and Warwickshire NHS Trust
University Hospitals of North Midlands
Walsall Hospitals NHS Trust
Worcestershire Acute Hospitals NHS Trust
Wye Valley NHS Trust

England – Yorkshire and the Humber

Airedale NHS Foundation Trust
Barnsley Hospital NHS Foundation Trust
Bradford Teaching Hospitals NHS Foundation Trust
Calderdale and Huddersfield NHS Foundation Trust
Doncaster and Bassetlaw Hospitals NHS Foundation Trust
Harrogate and District NHS Foundation Trust
Hull and East Yorkshire Hospitals NHS Trust
Leeds Teaching Hospitals NHS Trust
Mid-Yorkshire Hospitals NHS Trust
Northern Lincolnshire and Goole Hospitals NHS Foundation Trust
Sheffield Children's NHS Foundation Trust
Sheffield Teaching Hospitals NHS Foundation Trust
The Rotherham NHS Foundation Trust
York Teaching Hospitals NHS Foundation Trust

Northern Ireland

Belfast Health and Social Care Trust
Northern Health and Social Care Trust
South Eastern Health and Social Care Trust
Southern Health and Social Care Trust
Western Health and Social Care Trust

Scotland

NHS Ayrshire and Arran
NHS Borders
NHS Dumfries and Galloway
NHS Fife
NHS Forth Valley
NHS Grampian
NHS Greater Glasgow and Clyde
NHS Highland
NHS Lanarkshire
NHS Lothian
NHS Tayside
NHS Western Isles

Wales

Abertawe Bro Morgannwg University LHB
Aneurin Bevan LHB
Betsi Cadwaladr University LHB
Cardiff and Vale University LHB
Cwm Taf LHB
Hywel Dda LHB
Velindre NHS Trust

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