



CoR

THE COLLEGE OF
RADIOGRAPHERS

Radiotherapy Radiographic Workforce UK Census 2019

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1 Executive summary

We, the College of Radiographers (CoR), carried out a census of the radiotherapy radiographic workforce in the UK as of the census date 1 November 2019. The objectives were to establish the size, structure, nature and vacancy rate of the workforce. This document presents an analysis of the results and compares them to similar surveys carried out annually from 2010 to 2018 ([see references](#)).

We wish to thank the service leads at the 61 radiotherapy providers who responded to the online questionnaire. The data they supply can provide important evidence to workforce planners, clinical boards, government departments, educators, commissioners and providers of radiotherapy. Due to the significance of the results, every year we aim for a full response from all UK radiotherapy providers. To achieve this year's response rate of 88%, we extended the census deadline, which in turn contributed to a delay in publishing this report.

The following bullet points highlight the main findings:

NHS findings:

- The total NHS radiotherapy radiographic workforce is 3455.9 whole time equivalent (WTE) comprising 3384.2 WTE therapeutic radiographers and 71.7 WTE assistant practitioners and trainee assistant practitioners (APs/TAPs).
- The NHS radiotherapy radiographic workforce grew by 21% between 2012 and 2019.
- The current vacancy rate for the NHS radiotherapy radiographic workforce is 7.1%. This has increased from 6.1% in the 2018 census.
- The current vacancy rate for NHS therapeutic radiographers is 7.0% and the current vacancy rate for associated APs/TAPs is 10.6%.
- The current vacancy rate varies by UK country: England 7%, Northern Ireland 10%, Scotland 3% and Wales 10%.
- Three NHS providers have a vacancy rate of over 20%. They are small to medium-sized providers and so their high vacancy rates do not skew significantly the overall average current vacancy rate.
- The three-month vacancy rate for the NHS radiotherapy radiographic workforce is 4.7%. This is an increase of 2% over the 2018 census three-month vacancy rate of 2.7%.
- 87% of the NHS radiotherapy radiographic workforce is employed in Agenda for Change (AfC) bands 5 to 7.
- The percentage of the NHS radiotherapy radiographic workforce (headcount) on long-term leave is 5.5% (comprising 0.6% on a career break, 2.0% on long-term sickness absence and 2.9% on parental leave).
- 1.3% of the NHS radiotherapy radiographic workforce is due to retire in the coming year and 1.0% in the subsequent year.
- There are 300 therapeutic radiographers (headcount) working in dosimetry in the 57 NHS providers who responded to this question. These figures include both those working within and those working outside the budgetary control of the radiotherapy service manager. In addition, 71 therapeutic radiographers are reported to work in cancer services (such as research) outside the budgetary control of the radiotherapy service manager (and therefore unlikely to be included in figures elsewhere in this report).

Findings including both NHS and non-NHS radiotherapy providers:

- The radiotherapy radiographic workforce turnover is 10.5% by headcount; the highest turnover rates are seen at AfC bands 3, 4, 5 and 6. The most common reasons selected by radiotherapy providers for therapeutic radiographers leaving posts are personal circumstances and promotion in another radiotherapy centre.
- 34% of respondents are employing agency therapeutic radiographers, 81% of whom were trained in the UK.

2 Introduction

This report presents an analysis of an online census of the radiotherapy radiographic workforce in the UK run by the CoR in November 2019. It is intended to update the UK radiotherapy workforce annual surveys from 2010 to 2018 ([see references](#)). The census was targeted at radiotherapy providers in England, Northern Ireland, Scotland and Wales in the NHS and other healthcare sectors. Respondents were asked about the size and nature of their radiotherapy radiographic workforce. The results are deemed to be of interest to the NHS England Radiotherapy Clinical Reference Group and similar groups in the other UK countries, the Radiotherapy Board, NHS Digital, Health Education England, the Migration Advisory Committee and commissioners and providers of radiotherapy.

3 Methodology

The 2019 workforce census captures data about the radiotherapy radiographic workforce in the UK at a census date of 1 November 2019. Data collection was performed between November 2019 and February 2020 by means of a SurveyGizmo® online questionnaire distributed to radiotherapy service managers. This census asked for the total numbers of therapeutic radiographers, APs and TAPs (together referred to as the 'radiotherapy radiographic workforce' in this report) within the budgetary control of the radiotherapy service manager. Radiotherapy helpers and administration staff are not included in the figures.

Respondents were asked:

- Their contact details and job title
- The name of the radiotherapy provider on whose behalf they were responding
- Establishment figures by AfC band – WTE and headcount
- Vacancy WTE figures by AfC band – current and three-month
- Long-term absence headcount figures by AfC band – career break, long-term sickness absence and parental leave
- Headcount expected to retire in the coming year and in the subsequent year by AfC band
- Headcount of leavers in the previous year by AfC band and reasons for leaving
- Job titles in use
- Use of agency staff

- Therapeutic radiographers employed in dosimetry and other cancer services not within the budgetary control of the radiotherapy service manager

This report assumes that numbers reported in AfC band 5 and above refer to therapeutic radiographers, and numbers reported in AfC band 4 and below refer to APs and TAPs.

This report excludes the physics and engineering radiotherapy workforce and clinical oncologists. Enquiries about the physics and engineering workforce in radiotherapy should be directed to the Institute of Physics and Engineering in Medicine. Enquiries about the clinical oncology workforce should be directed to the Royal College of Radiologists.

Links to the full set of questions for the 2019 census and a spreadsheet with a breakdown of the figures in this report by radiotherapy provider can be found in the [Downloads section](#) of this report.

Of the 62 NHS providers of radiotherapy services in the UK, 58 submitted data to the CoR census. In addition, three of the seven private (non-NHS) providers of radiotherapy services responded, giving an 88% response rate overall.

Radiotherapy services provided at Colchester Hospital and Ipswich Hospital are counted as two separate services in this edition of the census. Although the two trusts have merged to form East Suffolk and North Essex NHS Foundation Trusts, separate responses were received from Colchester and Ipswich and so are reported as two separate radiotherapy services for the purposes of this census. Similarly, HCA International provided one response from the three branches of their radiotherapy provision; these are counted as one respondent and two non-respondents.

Where data is not available from a provider for a question, the figures from the previous census date of 1 November 2018 are used where available. The number of respondents whose data is being used in each question is shown by the 'n' figure below tables and graphs. This 'n' figure is the number of respondents to the question in the current census edition plus the number of non-respondents whose data from the previous census is being used.

Figure 1 shows the distribution of the 61 respondents in terms of the size of their radiotherapy radiographic workforce WTE. All three of the non-NHS respondents have fewer than 20 radiotherapy radiographic workers WTE.

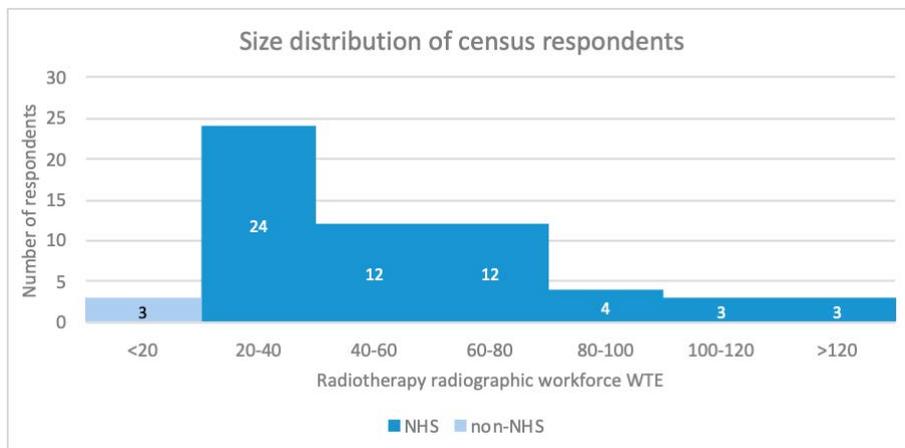


Figure 1 Radiotherapy radiographic workforce WTE size distribution of census respondents (n=61)

4 NHS radiotherapy radiographic workforce data

4.1 NHS workforce by country

Table 1 shows the total NHS WTE of 3455.9 broken down by country. The headcount, vacancies and vacancy rate are also displayed.

Country	Workforce	WTE	Headcount	Vacant WTE	Vacancy rate
England	Therapeutic radiographers	2801.0	3006	200.7	7.1%
	APs/TAPs	69.7	78	6.2	8.9%
England Total		2870.7	3084	207.0	7.2%
Northern Ireland	Therapeutic radiographers	126.6	137	12.6	10.0%
	APs/TAPs	0.0	0	0.0	0.0%
Northern Ireland Total		126.6	137	12.6	10.0%
Scotland	Therapeutic radiographers	280.3	310	8.4	3.0%
	APs/TAPs	1.0	1	0.4	40.0%
Scotland Total		281.3	311	8.8	3.1%
Wales	Therapeutic radiographers	176.3	196	16.8	9.5%
	APs/TAPs	1.0	1	1.0	100%
Wales Total		177.3	197	17.8	10.0%
UK NHS	Therapeutic radiographers	3384.2	3649	238.6	7.0%
	APs/TAPs	71.7	80	7.6	10.6%
UK NHS Total		3455.9	3729	246.2	7.1%

Table 1 NHS radiotherapy radiographic workforce establishment WTE, headcount, vacant WTE and vacancy rate by UK country (n=62)

Note: APs/TAPs = assistant practitioners / trainee assistant practitioners (AfC band 4 and band 3).

4.2 NHS vacancy rate distribution

Figure 2 shows the distribution of NHS provider current vacancy rates. Three NHS providers have current vacancy rates above 20%. They are small to medium-sized providers (<40.0 WTE establishment) and so their high vacancy rates do not skew significantly the overall mean current vacancy rate of all NHS providers: 7.1%. (For comparison, the median value is 6.6%, which illustrates that the mean value has not been affected significantly by the outliers.)

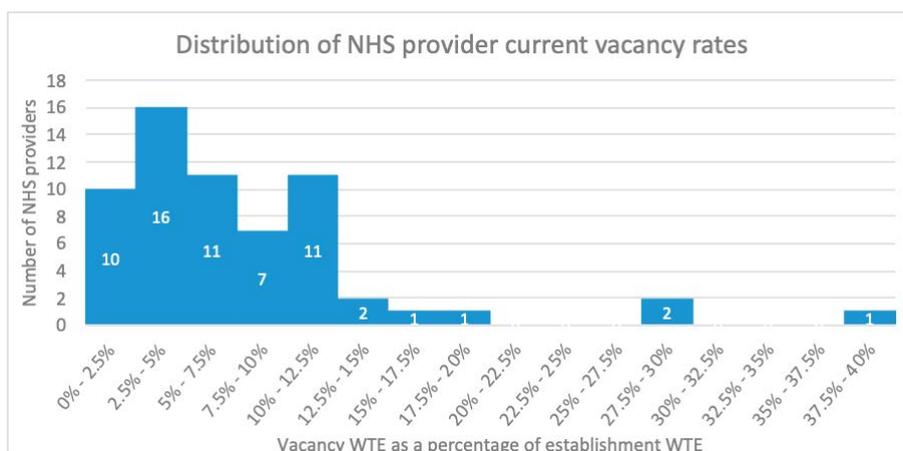


Figure 2 Distribution of NHS provider current vacancy rates (n=62)

Respondents to the census also reported the number of posts which had been vacant for three months. The results show a three-month mean vacancy rate of 4.7% for the NHS radiotherapy radiographic workforce. This is an increase of 2% from the 2018 census three-month vacancy rate of 2.7%.

4.3 NHS workforce by Agenda for Change (AfC) band

Table 2 and figure 3 illustrate that 87% of the NHS radiotherapy radiographic workforce is in AfC bands 5 to 7.

Workforce	WTE by AfC band										Total
	3	4	5	6	7	8a	8b	8c	8d	9	
NHS radiotherapy radiographic workforce	24.4	47.2	892.2	1214.2	898.9	269.5	81.8	26.6	1	0	3455.9

Table 2 NHS radiotherapy radiographic workforce WTE by AfC band (n=62)

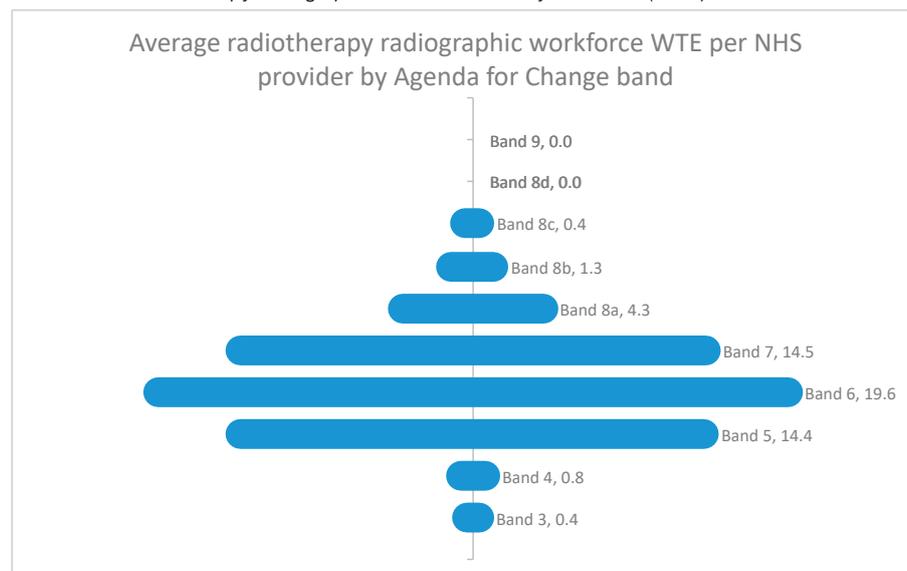


Figure 3 Average radiotherapy radiographic workforce establishment WTE per NHS provider by AfC band (n=62)

4.4 NHS reasons for long-term absence

The census asked about reasons for long-term absence: 22 post holders by headcount are on a career break (0.6%), 72 are on long-term sickness absence (2.0%) and 102 are on parental leave (2.9%).

Reason for absence	Headcount	Percentage of establishment headcount
Career break	22	0.6%
Long-term sickness absence	72	2.0%
Parental leave	102	2.9%

Table 3 NHS long-term absence by headcount and percentage of establishment headcount (n=58)

4.5 NHS future expectations – retirement

Radiotherapy providers were asked the number of radiotherapy radiographic workforce posts with the post holder due to retire between 1 November 2019 and 31 October 2020. They were also asked the number of radiotherapy radiographic workforce posts with the post holder due to retire between 1 November 2020 and 31 October 2021. Figure 4 presents the results from NHS respondents.

For the 58 NHS respondents to this question, 1.3% of their radiotherapy radiographic workforce by headcount are due to retire in the coming year and 1.0% in the subsequent year.



Figure 4 NHS predicted retirements (headcount) in the next two years by AfC band (n=58)

4.6 NHS therapeutic radiographers employed in dosimetry

As of the census date, there are 300 therapeutic radiographers (headcount) working in dosimetry in the 57 NHS providers who responded to this question. This is an average of 5.3 therapeutic radiographers working in dosimetry in each NHS radiotherapy provider. These figures include both those working within and those working outside the budgetary control of the radiotherapy service manager. They may not, therefore, be included in the figures given elsewhere in this report.

4.7 NHS therapeutic radiographers outside budgetary control of the radiotherapy service manager

The 57 NHS providers responding to this question reported that 71 therapeutic radiographers (headcount) work in cancer services in the UK outside the budgetary control of the radiotherapy service manager. This is an average of 1.2 therapeutic radiographers per NHS radiotherapy provider.

These figures include therapeutic radiographers working in research, for example, at a radiotherapy provider, but exclude those working in dosimetry (which was covered in the previous section of this report). As they are outside the budgetary control of the radiotherapy service manager, they are unlikely to be included in the figures given elsewhere in this report

5 Radiotherapy radiographic workforce in non-NHS radiotherapy providers

There are currently seven non-NHS providers of radiotherapy in the UK, of whom three submitted data to the CoR census. Three of the non-NHS providers of radiotherapy come under the HCA Healthcare UK umbrella; they are counted separately for the purposes of this census as an individual response was received to the 2019 census from one of their three branches.

Due to the data missing from four of the seven non-NHS providers, no attempt is made this year to provide an overall picture of the radiotherapy radiographic workforce in the non-NHS sector. The establishment (WTE and headcount) and vacancy (WTE) figures provided by the three non-NHS respondents are given in the [data spreadsheet](#) that accompanies this report.

6 Trends

Figure 5 shows that the NHS radiotherapy radiographic workforce in the UK grew by 21% between 2012 and 2019.

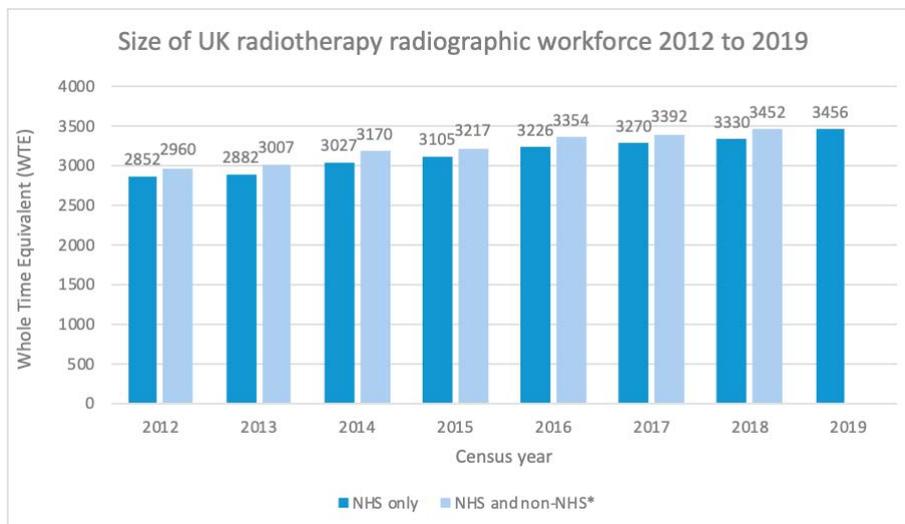


Figure 5 Size of the UK radiotherapy radiographic workforce WTE 2012 to 2019

Figure 6 shows that the current vacancy rate within the NHS radiotherapy radiographic workforce grew by 1% between the 2018 and 2019 censuses: from 6.1% in 2018 to 7.1% in 2019.

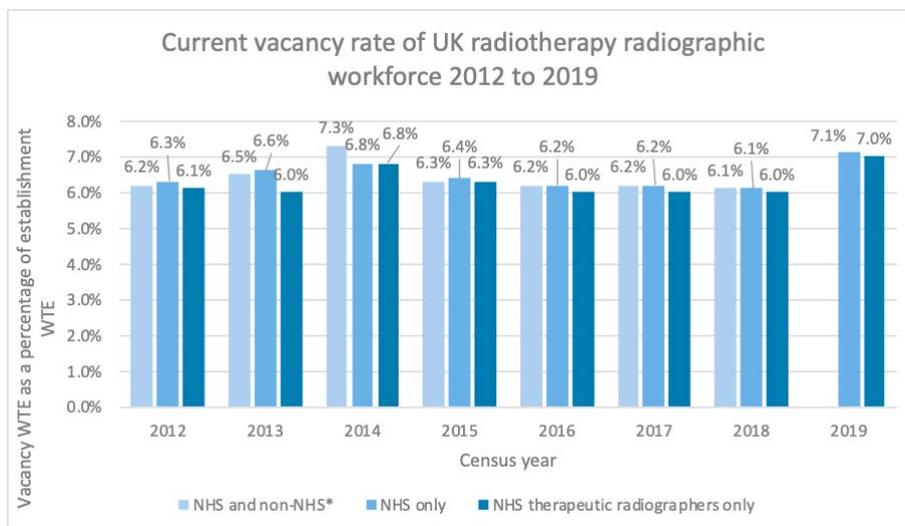


Figure 6 Current vacancy rate of UK radiotherapy radiographic workforce 2012 to 2019

* Note on figures 5 and 6: There is insufficient data in the 2019 census responses to populate the combined NHS and non-NHS components of these graphs.

7 Protected titles

The two protected titles within the radiotherapy radiographic workforce are 'therapeutic radiographer' and 'radiographer'. (See the [Health and Care Professions Council website](#) for more information about protected titles.)

Figure 7 shows which titles are currently in use in both the NHS and non-NHS respondents.

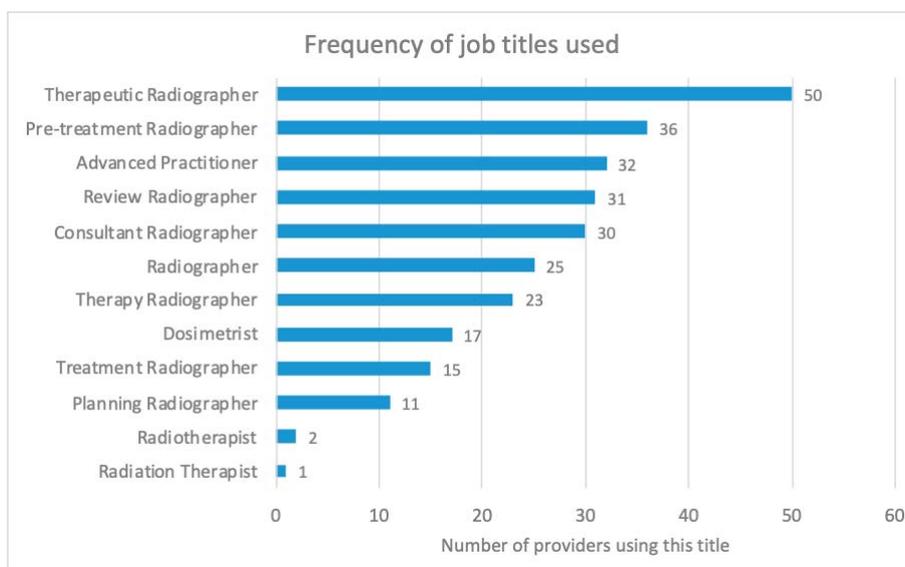


Figure 7 Frequency of job titles used in the UK radiotherapy radiographic workforce (n=61)

8 Leavers

Respondents were asked for the number of radiotherapy radiographic workforce posts where the post holder has left since the last census date (1 November 2018). These responses are used to calculate percentage turnover, defined as:

$$\text{Turnover} = 100 \times \frac{\text{Number of leavers in previous 12 month period (headcount)}}{\text{Establishment headcount}}$$

The average turnover for the 61 respondents to this question is 10.5%. Figure 8 breaks this down by AfC band; the highest turnover rates are seen at AfC bands 3, 4, 5 and 6.

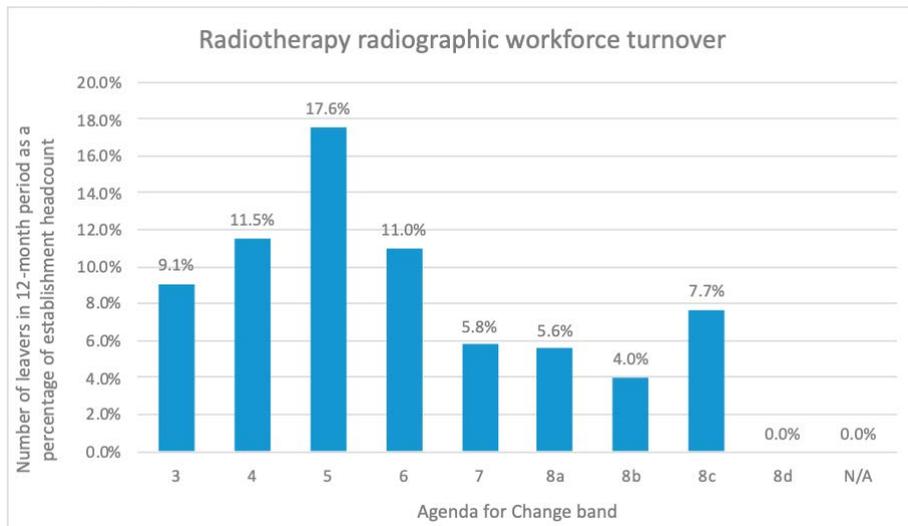


Figure 8 Radiotherapy radiographic workforce turnover by AfC band (n=61)

Figure 9 illustrates that the most common reasons selected by radiotherapy providers for therapeutic radiographers leaving posts are personal circumstances and promotion in another radiotherapy centre.

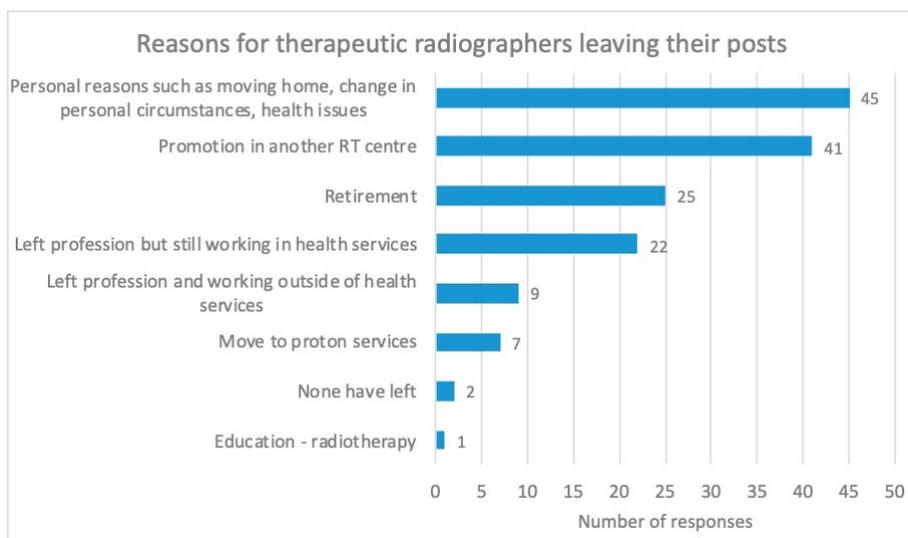


Figure 9 Reasons for therapeutic radiographers leaving their posts (n=61)

9 Use of agency therapeutic radiographers

This section covers the use of agency therapeutic radiographers in UK radiotherapy services.

As of the census date, 34% of respondents are employing agency therapeutic radiographers

Use of agency therapeutic radiographers	Number of respondents
Yes	21
No	40

Table 4 Number of respondents using agency therapeutic radiographers (n=61)

Reasons for use of agency therapeutic radiographers	Number of respondents
An increase in therapeutic radiographer establishment	4
Existing vacancies in therapeutic radiographer workforce establishment	15
To cover long-term absence	6
Other	10

Table 5 Reasons for using agency therapeutic radiographers (n=21)

The reasons for using agency therapeutic radiographers are given in table 5. Under 'Other', the reasons reported include:

- Increased service demand (3 respondents)
- Cover maternity leave (3 respondents)
- Extended day shift pattern during Linac Replacement Programme (2-year duration)
- Temporary increase in the working hours of the department
- Establishment increased in January but unable to recruit to the previous level, let alone the increased establishment
- Employed on staff bank rather than agency

Figure 10 shows that 81% of the agency therapeutic radiographers were trained in the UK.

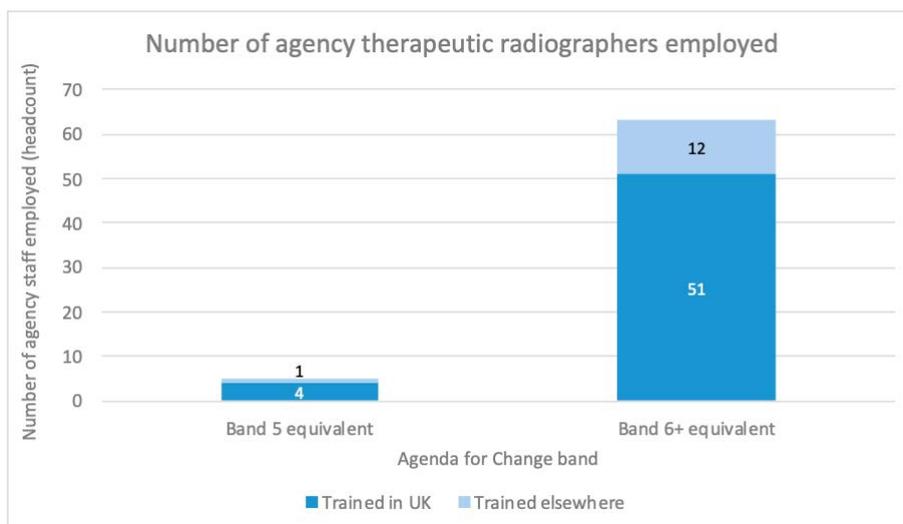


Figure 10 Number (headcount) of agency therapeutic radiographers used trained in the UK and elsewhere (n=21)

10 General comments

At the end of the census questionnaire, respondents were asked for any general comments relating to their submission. They were also asked if they are 'over-established' at any AfC bands. Twenty-seven respondents made comments, and themes mentioned by three or more respondents are listed below with an illustrative comment:

- **Service is over-established** (11 respondents) "Over-established at band 5 (+4) for maternity leave, career break and proactive recruitment reasons."
- **Consultant posts** (5 respondents) "We have 6 consultant radiographers: 4 are 8b completed training; 2 are 8a in training."
- **Reasons for leaving** (4 respondents) "2 x band 5s have moved to Mammography (in the trust) for improved working hours and automatic promotion to band 6. 1 x band 5 moved to *[private provider]*. 1 x band 5 dismissed due to poor attendance."
- **Covering parental leave** (4 respondents) "Over-established by 8 WTE at band 6 due to acting-up posts to cover maternity leave."
- **Covering time lag between vacancy and recruitment** (4 respondents) "Currently over-established at band 5 by 4.0 WTE to allow for people leaving."
- **Covering development cycle** (3 respondents) "We have been unable to achieve full establishment at band 6 for over 3 years. To compensate we are over-established at band 5 with a view to promote internally as staff gain band 6 competency."
- **High staff turnover** (3 respondents) "30% turnover, but many internal so recruitment workload is high. Difficult to recruit to *[location]* and will start a social media campaign in new year."

11 References

1. National Cancer Services Team. (2011). *UK Census of Radiotherapy Workforce 2010*.
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12 Downloads

Accessible from <https://www.sor.org/learning/document-library?title=census>

- CoR radiotherapy radiographic workforce UK census questionnaire (PDF)
- CoR radiotherapy radiographic workforce UK census spreadsheet (Excel)



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