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Executive Summary

In May 2016, the College of Radiographers (CoR) carried out a census of the diagnostic radiography workforce in the UK. The objectives were to establish the size, structure, nature and vacancy rate of the workforce in order to inform workforce planning. Around 90 providers of diagnostic imaging responded to an online questionnaire. This document presents an analysis of the census results and compares them to a similar census carried out in September 2014. The following bullet points highlight the main findings:

- The average number of diagnostic radiography establishment staff by whole time equivalent (WTE) per respondent is 66.7.
- The average current vacancy rate for the diagnostic radiography workforce is 13.1% at the census date of 1 May 2016. This compares to an average current vacancy rate of 7.8% in the September 2014 census. The increase in current vacancy rate since the last census may in part be due to the different times of year. This May 2016 census was before the largest intake of recently qualified radiographers in the year, which is around June/July.
- The average current vacancy rate varies by UK country: England 13.5%, Scotland 4.6% and Wales 12.4%. (There is insufficient data to provide a figure for Northern Ireland.)
- The average three-month vacancy rate across all respondents is 8.8%.
- The average percentage of the respondents’ establishment headcount on long term absence is 4.5% (comprised of 0.6% on a career break; 1.5% on long term sickness absence and 2.4% on parental leave).
- 4.4% of respondents’ radiographic workers are due to retire in the next two years.
- Radiographic staff of band 7 (or equivalent) and above spend on average 50% of their time on non-clinical duties.
- On average each respondent has 4.2 members of staff (WTE) in postgraduate training in MRI, CT, ultrasound, breast or reporting.
- 69% of respondents use either diagnostic radiography or sonography agency staff (or both). None of the eight non-NHS providers responding to this question use agency staff.
- There is an average of 0.8 clinical staff band 5 (or equivalent) and above (headcount) per respondent not registered with the Health and Care Professions Council (HCPC).
- 90% of radiographers (by headcount) at the responding providers are from the UK.
- On average, each respondent has 11.7 radiographers, sonographers and/or nuclear technologists (headcount) carrying out advanced practice and 0.5 carrying out consultant-level practice as of the census date 1 May 2016. Both numbers have increased since the previous census in September 2014.
- The main reasons respondents gave for radiographers leaving their posts are promotion in other centre, retirement and personal reasons.

1. Introduction

This report presents an analysis of an online census of the diagnostic radiography workforce in the UK run by the CoR in May 2016. It follows on from a similar census in September 2014. The census was targeted at employers of diagnostic radiographers in England, the Channel Islands, the Isle of Man, Northern Ireland, Scotland and Wales, in the NHS and other healthcare sectors. Respondents were asked about the type and scale of radiography services they provide and size and nature of their radiography workforce. The results of this census will inform the work of professional bodies, workforce planners and commissioners/providers of radiography education.

2. Methodology

The 2016 workforce census captures data about the diagnostic radiography workforce in the UK at a census date of 1 May 2016. Radiology services managers (or equivalents) were asked to answer the census on behalf of all diagnostic radiography services in their hospital/workplace. They were asked to include all diagnostic radiographers, sonographers, nuclear medicine technologists, PET-CT technologists, assistant practitioners and trainee assistant practitioners, but not to include radiographic assistants (helpers / healthcare support workers), clerical workers, clinical scientists, radiotherapy staff or third party managed services where the staff are employed by the third party.

Respondents were asked:

- Their contact details and details of the workplaces on behalf of which they were responding
- The areas/modalities in which they provide radiography services
- Establishment figures by AfC band - whole time equivalent (WTE) and headcount
- Vacancy figures by AfC band - current and three-month
- Long term absence figures by AfC band - career break, long term sickness and maternity leave
- Numbers expected to retire in the coming year and in the subsequent year
- Time spent on non-clinical duties
- Numbers in training
- Use of agency staff
- Numbers of staff not registered with the Health and Care Professions Council (HCPC)
- Geographical origin of radiographic workforce (UK, EU or non-EU)
- Numbers in advanced and consultant practice
- Reasons for radiographers leaving their posts

Both NHS and non-NHS providers were asked to provide their workforce data by AfC band. To assist non-NHS providers, who may not use the AfC system, the questions included the salary range for each AfC band. Therefore, all data could be collected and analysed by AfC band.

The full set of questions for the 2016 census is provided in Appendix I.

The census was answered by 86 respondents. The number of respondents to each question varies and is represented by the ‘n’ figure given for each question in the analysis below.
3. Profile of respondents

3.1 Size distribution
The majority of respondents have a radiography workforce of less than 100 WTE. Just over a half of the respondents employing less than 20 are independent/private hospitals.

Figure 1. Distribution of respondent size (n=86)

3.2 Responses by geographical area
Employers from all the UK countries responded. Within England, responses were received from all 13 Local Education and Training Bodies (LETBs – Health Education England local boards).

Figure 2. Number of responses by geographical area (n=86)
3.3 Responses by type of employer

The majority of responses were received from NHS healthcare providers.

Figure 4. Number of responses by type of employer (n=86)
3.4 Types of radiography services
Respondents were asked in which areas/modalities their workplace/hospital provided radiography services. Figure 5 illustrates the wide range of radiography services provided.

**Figure 5. Areas/modalities in which radiography services are provided (n=86)**

- AAA screening
- Accident and Emergency
- Bone Densitometry
- Breast Imaging/Screening
- Cardiology
- Catheter Lab
- Community hospital/department
- CT
- Dental
- Facility provided by external provider staffed with NHS...
- Hybrid scanning PETCT/PETMR
- Interventional radiology non-vascular
- Interventional radiology vascular
- Maternity
- Mobile units
- MRI
- NHS facility staffed by non-NHS employees
- Neuroradiology
- Nuclear Medicine
- Paediatric
- Radiology / X-ray
- Ultrasound
- Vascular
- X-ray including fluoroscopy

There were 86 respondents. The chart shows the number of respondents who provided services in each area/modalities.

- **NHS**
- **Non-NHS**

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The chart indicates that the wide range of radiography services provided includes various modalities such as AAA screening, Accident and Emergency, Bone Densitometry, Breast Imaging/Screening, Cardiology, Catheter Lab, Community hospital/department, CT, Dental, Facility provided by external provider staffed with NHS, Hybrid scanning PETCT/PETMR, Interventional radiology non-vascular, Interventional radiology vascular, Maternity, Mobile units, MRI, NHS facility staffed by non-NHS employees, Neuroradiology, Nuclear Medicine, Paediatric, Radiology / X-ray, Ultrasound, Vascular, and X-ray including fluoroscopy. The number of respondents who provided services in each area/modalities is indicated in the chart.
4. Shape of workforce by agenda for change band

The average number of radiography establishment staff by WTE per respondent is 66.7 at the census date of 1 May 2016. The ‘Christmas tree’ diagram in figure 6 illustrates the average number of WTE staff by AfC band. The diagram from the September 2014 census is shown for comparison. The largest change is at band 6, with an increase in the average number of establishment staff from 25.1 to 27.8 WTE.

Figure 6. Average number of WTE establishment staff by AfC band (n=86)

5. Vacancy rate

5.1 Current vacancy rate
75 of the 85 respondents to this question (88%) report vacancies.

The average current vacancy rate across all respondents is 13.1% at the census date of 1 May 2016. (The current vacancy rate is defined as the total number of WTE vacancies as a percentage of the WTE establishment number of staff.) This compares to an average current vacancy rate of 7.8% in the September 2014 census.

The increase in current vacancy rate since the last census may in part be due to the different times of year. This May 2016 census was before the largest intake of recently qualified radiographers in the year, which is around June/July. This theory is supported by figure 7 which shows the highest vacancy rate of 27.5% at band 5, which is the intake band for recently qualified radiographers.
5.2 Current vacancy rate by country

The average current vacancy rate varies by UK country: England 13.5%, Scotland 4.6% and Wales 12.4%. (There is insufficient data to provide a figure for Northern Ireland.) Figure 8 breaks down these figures by AfC band.
5.3 Three-month vacancy rate

66 of the 84 respondents to this question (79%) report vacancies which have existed for three months or longer. The average three-month vacancy rate across all respondents is 8.8% at the census date of 1 May 2016. This compares to an average three-month vacancy rate of 3.3% in the September 2014 census. The highest three-month vacancy rate by AfC band is 18.7% at band 5.

![Figure 9. Three-month vacancy rate by AfC band (n=84)](image)

6. Long-term absence rate

The average percentage of the respondents’ establishment headcount on long-term absence is 4.5% as of the census date 1 May 2016 (comprised of 0.6% on a career break, 1.5% on long-term sickness absence and 2.4% on parental leave).

This compares to an average percentage on long-term absence of 3.8% in the September 2014 census (comprised of 0.2% on a career break, 1.0% on long term sickness absence and 2.6% on maternity leave).

![Figure 10. Long-term absence rate by AfC band (n=54)](image)
7. Upcoming retirements

Respondents were asked to give the number of radiographic workforce posts with the post holder due to retire in the coming year (between 1 May 2016 and 30 April 2017) and the subsequent year (between 1 May 2017 and 30 April 2018). In total 4.4% of respondents’ radiographic workers are due to retire in the next two years.

![Figure 11. Estimated retirements in the next two years (n=53)](image)

8. Non-clinical duties

Respondents were asked to estimate the percentage of time radiographic staff of AfC band 7 (or equivalent) and above spend on non-clinical duties, and give the nature of these duties. Overall, radiographic staff of band 7 (or equivalent) and above spend an average of 50% of their time on non-clinical duties.

![Figure 12. Estimated percentage of time spent on non-clinical duties (n=63)](image)
Figure 13. Nature of non-clinical duties carried out by band 7 and above radiographic staff (n=66)

Other types of non-clinical duties given by respondents in free-text include:

- Audits (1 respondent)
- Clinical governance (1 respondent)
- Data mining from RIS (1 respondent)
- Diagnostic lead (1 respondent)
- E-rostering (1 respondent)
- Meetings (1 respondent)
- Quality system (1 respondent)
- Radiation protection (2 respondents)
- Reporting (1 respondent)
- Service provision and delivery (1 respondent)

Other comments include:

- Some band 6 staff participate in ISAS activities, approx 10 hpw; also we allow the Radiation Protection Supervisors (B6) a session a fortnight, about 2-3 hpw. The Clinical Lecturer B6 is employed 15hpw by University
- Those with bigger areas take longer to do management duties at 8a. Some solely non-clinical e.g. PACs and DM. Individual numbers differ enormously.
• Difficult to answer this question as different senior roles will spend different amount of time on non-clinical duties - for example - a Band 7 Sonographer will spend a very different amount of time on non-clinical duties compared to a Band 7 Service Lead.

9. Postgraduate training

Respondents were asked the number of staff (WTE) currently in postgraduate training in MRI, CT, ultrasound, breast or reporting. On average each respondent has 4.2 members of staff in postgraduate training in these modalities.

Figure 14: Average number of staff (WTE) in postgraduate training per respondent (n=67)

Other types of postgraduate training given by respondents in free-text include:

• Assistant practitioners (1 respondent)
• Clinical examination of the breast (1 respondent)
• Education & practice (1 respondent)
• Fluoroscopy (2 respondents)
• Forensics (2 respondents)
• Healthcare management (1 respondent)
• ILM course (1 respondent)
• Nuclear medicine (7 respondents)
• PET-CT (1 respondent)
• Proctogram reporting (1 respondent)
• RNI (1 respondent)
• Upper GI (1 respondent)

One respondent commented, “Other courses cannot be afforded due to limited funding and using endowments. High costs for some e.g. US are limiting. Needs basis used, but remains too little for this type of expected level of progression to be supported by academic qualification.”
10. Agency staff

Of the 67 respondents, 46 (69%) use either diagnostic radiography or sonography agency staff (or both). 34 of the 67 respondents (51%) use diagnostic radiography agency staff and 37 (55%) use sonography agency staff.

None of the eight non-NHS providers responding to this question use agency staff. Although, one non-NHS provider employs six sonography locum staff directly (not through an agency).

Figure 15 illustrates that the main reason for using agency staff is existing vacancies.

Figure 15. Reasons for using agency staff (n=67)

![Figure 15. Reasons for using agency staff (n=67)](image)

Figure 16 shows that there are nearly the same number of agency staff at band 5 trained in the UK as outside the UK. For band 6 and above, there are around twice as many trained in the UK as overseas.

Figure 16. Training location of agency staff (n=41)

![Figure 16. Training location of agency staff (n=41)](image)
11. Registration status of clinical staff

18 of the 62 respondents (29%) have clinical staff of band 5 (or equivalent) and above not registered with the HCPC. There is an average of 0.8 clinical staff band 5 (or equivalent) and above (headcount) per respondent not registered with the HCPC.

12. Geographical origin of radiographers

90% of radiographers (by headcount) at the responding providers are from the UK.

Figure 17. Geographical origin of radiographers (n=31)

13. Advanced and consultant practice

On average, each respondent has 11.7 radiographers, sonographers and/or nuclear technologists (headcount) carrying out advanced practice and 0.5 carrying out consultant-level practice as of the census date 1 May 2016. Both numbers have increased since the previous census in September 2014, illustrated by figure 18.

Figure 18. Average number of radiographers, sonographers and nuclear medicine technologists in advanced and consultant-level practice per respondent (n=60)
14. Reasons for leaving

The main reasons respondents gave for radiographers leaving their posts are promotion in other centre, retirement and personal reasons.

**Figure 19. Reasons for radiographers leaving their posts (n=65)**

- Promotion in other centre: 72%
- Retirement: 65%
- Personal reasons: 63%
- Left to undertake work as an agency radiographer: 34%
- Left centre due to higher salary elsewhere: 32%
- Left profession but still working in health services: 17%
- Education: 9%

Other reasons for leaving given in the free-text include:

- Due to cost of living in London (1 respondent)
- Emigration (1 respondent)
- Extended working hours without penalty rates (1 respondent)
- Implementation of shift system and reduction in potential earnings (1 respondent)
- Internal promotion (2 respondents)
- Left due to bullying & harassment in the workplace by the previous manager (1 respondent)
- Left due to higher commitment of on call duty turns (1 respondent)
- Left to work for veterinary centre (1 respondent)
- Stress due to staffing levels and on-call pressures (1 respondent)
- To follow other opportunities not provided in this department (1 respondent)
- To work for private companies (4 respondents)
- Went to another department (1 respondent)

15. General respondent comments

At the end of the questionnaire, respondents were asked if they had any general comments relating to their submission. Themes mentioned by two or more respondents are given below with the number of respondents in brackets after the theme and an illustrative comment below.

**Theme: Recruitment issues (3)**

“Sonographer posts band 7 advertised 4 times no credible applicants, gone down training route.”

**Theme: Recruitment and retention allowance paid to sonographers (2)**

“A 7% recruitment and retention allowance is paid to sonographers.”
Theme: Training difficulties (2)

“Training is affected by lack of funding post graduate - greatest need not desire affects provision.”

Theme: Retirements (2)

“Can’t train for next lot of sonographer retirements as no band 5 to release.”

Appendix I - Questionnaire