

# The breast imaging and diagnostic workforce in the United Kingdom

Results of a survey of NHS Breast Screening Programme units and radiology departments

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## Foreword and acknowledgements

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This report represents the collective effort of several individuals and organisations with a common interest in providing accessible, high-quality breast imaging services in the UK. The workforce involved in providing these services includes radiologists, breast clinicians, radiographers and advanced practitioners. Collating quantitative and qualitative data about this workforce is vital in ensuring that breast imaging continues to be provided at a high level.

The survey was initiated by: Professor Erika Denton (Ex-National Clinical Director for Diagnostics, NHS England), Dr Hilary Dobson OBE (Ex-Vice Chair, British Society of Breast Radiology), Professor Julietta Patnick CBE (Ex-Director of NHS Cancer Screening Programmes, Public Health England), Dr Caroline Rubin (Medical Director for Education and Training, The Royal College of Radiologists), Dr Nisha Sharma (Consultant Breast Radiologist, The Leeds Teaching Hospitals NHS Trust) and Dr Sue Barter (Ex-Medical Director Professional Practice, The Royal College of Radiologists).

Mr Don Liu (Professional Services Manager, The Royal College of Radiologists) developed and conducted the survey and analysed the results in conjunction with the clinicians above.

Many thanks also go to the directors of NHS Breast Screening Programme units and clinical directors of radiology departments in NHS hospitals who found time to submit their data.

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## 1. Background

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The UK clinical radiology workforce census undertaken by The Royal College of Radiologists (RCR) is now established as an annual reporting mechanism and has informed and influenced workforce planning for several years. While some data relating to special interests within the census has been included, to date much of this has been at an extremely high level. The increasing recognition of significant challenges to the delivery and sustainability of breast services within the UK has prompted a more detailed collation of workload and workforce factors within this particular area of specialism. The information gathered will feed into policy initiatives at a national level. The Independent Cancer Taskforce report called for work to better understand a predicted workforce deficit in breast radiology and to develop a plan to address this.<sup>1</sup>

The establishment of a national breast screening programme, as well as successful campaigns to inform and educate on the subject of breast health against a background of technological advances, has resulted in a significant rise in both numbers and complexity of diagnostic breast imaging. Breast cancer is the most common cancer in the UK and a leading cause of death in women.<sup>2</sup> National Cancer Intelligence Network data show the annual number of newly diagnosed cases of female breast cancer rising continuously for the last 20 years – the 2012 figure (most recent) was over 42,000 cases in England.<sup>3</sup> Various strategies have been employed to respond to the workload challenges resulting from this increased incidence, the most significant

of which has been the adoption of the four-tier system of advance practice. These challenges are unlikely to abate. Trials are being conducted to evaluate the potential benefits of extending the UK NHS Breast Screening Programme (UK NHSBSP) to cover women aged 47 to 73.<sup>4</sup> Currently, only those aged 50–70 are covered. If the extension was implemented now, according to population figures from the Office of National Statistics, the number of women potentially covered in the UK would increase by around 28%, from 8 million to 10.2 million.<sup>5</sup>

A particular confounding factor that will be encountered over the next five years is the planned retirement of the cohort of radiologists, newly appointed as NHS consultants in the late 1980s to implement the Forrest Report's recommendation to set up the NHSBSP.<sup>6</sup> Similar challenges are predicted to affect the radiographic workforce too, but information relating to other health professionals who contribute to diagnostic breast work is poorly understood.

With this in mind, the British Society of Breast Radiology, NHS England, Public Health England and The Royal College of Radiologists collaborated to design a survey, to garner information relating to the specific issues of skill-mix and workforce in UK diagnostic breast services to inform a strategy to sustain breast services over the coming years. This report presents the findings of the survey.

## 2. Methodology

### Survey

A survey was designed by the working group to collect data on radiologists, breast clinicians, consultant radiographers and advanced practitioners providing breast services in NHSBSP units and radiology departments. Data on numbers working, expected retirements, unfilled posts and breast imaging activities were sought. Survey responses were collected using the Snap Survey web-based software package. The survey was open for approximately one month between 8 May and 9 June 2015.

### Response rate

An online link to the survey was emailed to all NHSBSP units (n=96) and radiology departments (n=194) in the UK. Directors of screening in

NHSBSP units and clinical directors of radiology departments were used as the main contacts. Ninety-five survey responses were received. This included a single response covering all four NHSBSP units in Wales. For the purposes of analysing the data the Welsh NHSBSP units counted as four separate responses, therefore taking the total number of responses to 98.

See Table 1 for the number of NHSBSP units and radiology departments covered by the responses. One-third of these responses (n=34) provided data for both an NHSBSP unit and one or more radiology departments. This is because radiology departments that provided both breast screening and symptomatic breast services were asked to liaise with their local NHSBSP unit so that only one response was submitted for both services.

**Table 1. Number of NHSBSP units and radiology departments in the UK covered by survey responses**

Country/region	NHSBSP units	Radiology departments
England – East Midlands	7	4
England – East of England	7	6
England – London	4	12
England – North East	4	5
England – North West	6	4
England – South Central	6	4
England – South East	5	5
England – South West	6	11
England – West Midlands	5	5
England – Yorks and Humber	4	4
Northern Ireland	2	2
Scotland	2	5
Wales	4	3
<b>Total</b>	<b>62 (65% of units)</b>	<b>70 (36% of departments)</b>

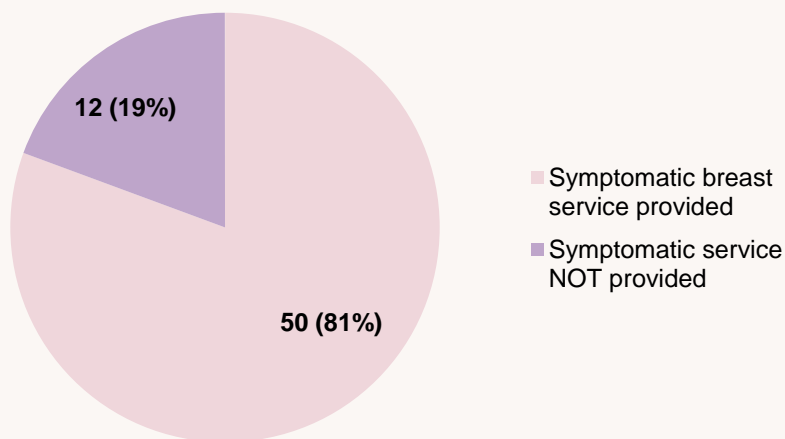
### 3. Survey results – breast radiologists

#### Types of breast services provided

##### NHS Breast Screening Programme units

In addition to screening, just over 80% of NHSBSP units covered by this survey also provided a symptomatic breast service.

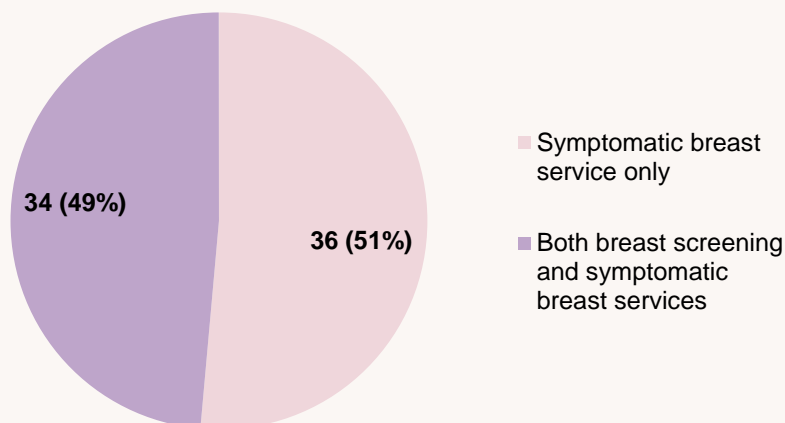
**Figure 1. Number of NHSBSP units providing symptomatic breast services**



##### Radiology departments

All radiology departments covered by the survey provided a symptomatic breast service. Nearly 50% of these departments also undertook breast screening.

**Figure 2. Types of breast services provided by radiology departments**



## Breast cancers detected symptomatically

The 50 NHSBSP units and 70 radiology departments providing a symptomatic breast service between them detected a total of 30,360 breast cancers in the 12 months prior to

completing this survey. The average number of cancers detected symptomatically by these units and departments was 232 and 268 respectively, as shown in Table 2.

**Table 2. Breast cancers detected symptomatically in the past 12 months (since May 2014)**

	Breast cancers detected	Range (lowest to highest)	Median	Mean
NHSBSP units	11,596	1–470	207	232
Radiology departments	18,764	70–611	250	268

## Radiologists providing breast services

Respondents were asked to provide figures on the number of radiologists working for their NHSBSP unit or radiology department or total figures if completing the survey for both a department and unit.

### Headcount of breast radiologists

A total headcount of 407 radiologists was found to be providing breast services in the 62 NHSBSP units and 70 radiology departments responding to this survey. The number of whole-time equivalent (WTE) breast radiologists –

taking into account those working less than full-time (LTFT) – can be calculated using the ratio of 1.06 headcount to 1.00 WTE. This ratio was used in calculating WTE figures in the RCR 2014 workforce census report.<sup>7</sup>

### In summary:

- 25% percent of units and/or departments had two or fewer breast radiologists. In seven cases there was just one breast radiologist working in the unit or department.
- Just over half of breast radiologists (213 out of 407) covered by this survey worked LTFT.

**Table 3. Headcount of breast radiologists working in NHSBSP units and radiology departments**

Country/region	Headcount		WTEs		No. of units/depts. with:	
	Full-time	Less than full-time	Total in post	WTEs	≤2 breast radiologists in post	≥50% breast radiologists working LTFT
England – East Midlands	19	8	27	25	2	3
England – East of England	17	11	28	26	4	4
England – London	22	56	78	74	1	9
England – North East	6	19	25	24	1	4
England – North West	25	4	29	27	4	2
England – South Central	11	16	27	25	1	3
England – South East	12	18	30	28	1	4
England – South West	19	24	43	41	3	6
England – West Midlands	16	12	28	26	1	3
England – Yorks and Humber	16	10	26	25	2	4
Northern Ireland	14	0	14	13	0	0
Scotland	11	24	35	33	3	3
Wales	6	11	17	16	1	7
<b>Total</b>	<b>194</b>	<b>213</b>	<b>407</b>	<b>384</b>	<b>24</b>	<b>52</b>

**Expected retirements – breast radiologists**

Respondents were asked how many of their breast radiologists are expected to retire by 2025. Table 4 details the numbers expected to retire in each country/region in the short term (2015–2020) and long term (2015–2025). Some individuals will fall into both categories. Figure 3 details the proportion of the current workforce retiring during these time periods.

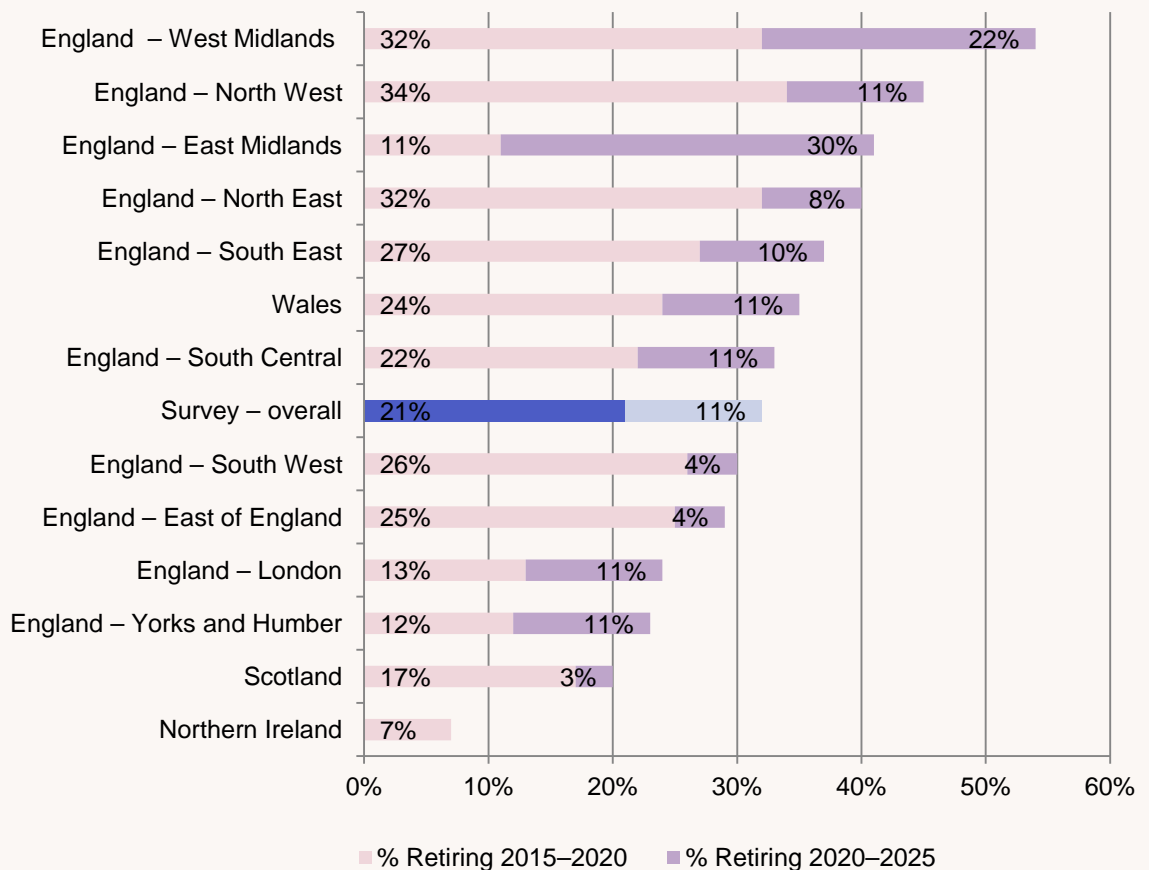
**In summary:**

- One-in-five breast radiologists covered by this survey are expected to retire by 2020, one-in-three by 2025. These figures correspond with national data on expected retirement rates of breast radiologists collected through the RCR 2014 consultant workforce census.<sup>7</sup>
- Retirement rates vary across UK countries/regions. Just over 50% of breast radiologists currently working in the West Midlands will retire by 2025, compared to just 7% in Northern Ireland.



**Table 4. Number of breast radiologists expected to retire in the next five and ten years**

Country/region	Headcount	Retiring next 5 years (2015–2020)	Retiring next 10 years (2015–2025)
England – East Midlands	27	3	11
England – East of England	28	7	8
England – London	78	10	19
England – North East	25	8	10
England – North West	29	10	13
England – South Central	27	6	9
England – South East	30	8	11
England – South West	43	11	13
England – West Midlands	28	9	15
England – Yorks and Humber	26	3	6
Northern Ireland	14	1	1
Scotland	35	6	7
Wales	17	4	6
<b>Total</b>	<b>407</b>	<b>86</b>	<b>129</b>

**Figure 3. Percentage of breast radiologists expected to retire in the next five and ten years**

## Unfilled posts – breast radiologists

Figure 4 and Table 5 present the number of unfilled breast radiology posts that have been identified. A comparison is made with the number of known substantive (filled and unfilled) posts covered by the survey.

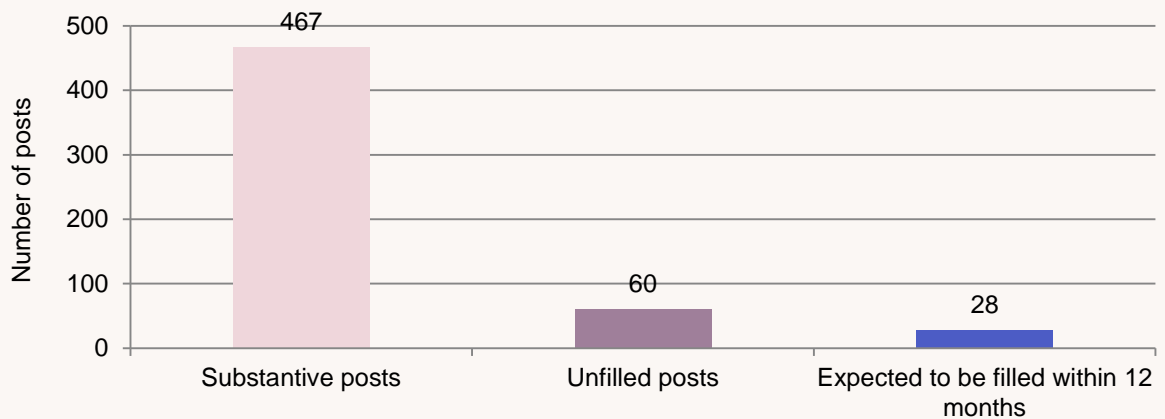
### In summary:

- There were 60 unfilled radiology posts across the 62 NHSBSP units and 70 radiology

departments covered by this survey. This represents 13% of 467 substantive posts – closely matching the vacancy rate for consultant breast radiologists identified through the RCR 2014 workforce census.<sup>7</sup>

- Respondents indicated that only half of these unfilled posts were expected to be filled in the next 12 months.

**Figure 4. Extent of unfilled posts for breast radiologists identified by survey responses**



**Table 5. Unfilled posts for breast radiologists**

Country/region	Number of unfilled posts	Expected to be filled in next 12 months	Unfilled posts (% of substantive posts*)
England – East Midlands	4	2	13%
England – East of England	2	2	7%
England – London	9	6	10%
England – North East	3	0	11%
England – North West	6	3	17%
England – South Central	2	1	7%
England – South East	11	2	27%
England – South West	7	5	14%
England – West Midlands	5	4	15%
England – Yorks and Humber	5	1	16%
Northern Ireland	0	0	0
Scotland	3	1	8%
Wales	3	1	15%
<b>Total</b>	<b>60</b>	<b>28</b>	<b>13%</b>

## Breast programmed activities – breast radiologists

Respondents were asked to state the total number of breast programmed activities (PAs) undertaken by radiologists working full and less than full time. The mean number of breast PAs undertaken by each whole-time equivalent (WTE) breast radiologist has been calculated. Also calculated is the mean number of breast PAs allocated to each unfilled breast radiology post but not currently undertaken.

### In summary:

- The mean number of breast PAs undertaken by each WTE breast radiologist was 4.5. This indicates that many of these individuals also undertake clinical activities away from breast radiology and have other specialty interests
- Those respondents submitting information just for a radiology department provided a mean figure of 4 breast PAs for those radiologists providing a breast service compared to a mean of 4.5 breast PAs for those radiologists working in a NHSBSP unit.
- A total of 275 breast PAs per week was allocated to 60 unfilled breast radiology posts. These breast PAs are being covered by radiologists in post through their SPA time or undertaken as unpaid extra work.

(including general radiology). The remaining time in their job plans is likely to be allocated to supporting professional activities (SPAs). According to the RCR 2014 workforce census there was an average of 2.2 SPAs per full-time NHS consultant.<sup>7</sup>

**Table 6. Number of breast PAs undertaken or allocated to posts – breast radiologists**

Country/region	WTEs	Filled posts			Unfilled posts	
		PAs undertaken	Mean PAs per WTE	Headcount	PAs allocated	Mean PAs allocated to each unfilled post
England – East Midlands	25	122	4.8	4	27	6.8
England – East of England	26	117	4.4	2	15	7.5
England – London	74	291	4.0	9	42	4.7
England – North East	24	125	5.3	3	14	4.7
England – North West	27	134	4.9	6	25	4.2
England – South Central	25	151	5.9	2	11	5.5
England – South East	28	121	4.3	11	56	5.1
England – South West	41	189	4.7	7	18	2.6
England – West Midlands	26	115	4.4	5	24	4.8
England – Yorks and Humber	25	124	5.1	5	20	4.0
Northern Ireland	13	30	2.3	0	0	0
Scotland	33	123	3.7	3	4	1.3
Wales	16	82	5.1	3	19	6.3
<b>Total</b>	<b>384</b>	<b>1,724</b>	<b>4.5</b>	<b>60</b>	<b>275</b>	<b>4.6</b>

## Workforce issues – breast radiologists

The final question of the survey asked for free-text comments on how respondents were planning to deal with workforce issues related to their breast screening and/or symptomatic breast

services. Those comments relating specifically to breast radiologists have been categorised and listed in Table 7. The categories emerging cover recruitment (UK and international), use of locums and retired radiologists, training and development and establishing career pathways for trainees.

**Table 7. Actions taken or which should be taken to deal with workforce issues – breast radiologists (free-text comments)**

Actions	Comments – selected examples
Recruitment – UK and international	<p><i>We have advertised for a breast consultant radiologist, either locum or permanent, however, there is just no one available with the relevant skills to fulfil NHSBSP criteria. Numerous foreign candidates with limited breast experience, but does not help with UK screening. ... we desperately need a consultant radiologist. Presently we have one consultant radiologist on long-term sick, and our other newly qualified consultant radiologist temporarily off sick, possibly two months. Life is difficult in [the] breast unit presently, but I think this is not uncommon. Foreseeable future for all breast units is challenging. Consultant radiologists with breast speciality are a rare breed. We have a problem.</i></p> <p><i>Our entire complement of symptomatic breast radiologists resigned to work in our local breast screening unit. We had to use locum doctors to bridge the gap and we have managed to recruit one experienced breast radiologist from Prague and a newly qualified radiologist from Egypt. We have two advanced practitioners, one is training in mammography reading and the other might start performing ultrasound guided biopsies. Maintaining this service has been extremely difficult. If these plans to settle our symptomatic service fail then our next step will be simply to state to our local [Clinical Commissioning Group] CCG that our hospital cannot support this service.</i></p> <p><i>We are establishing links with [European Economic Community] EEC countries as we find there are breast radiologists interested in working in the UK. We have a friendly enthusiastic team of radiologists who are open to assist with advice and training which helps to get people interested.</i></p> <p><i>Although as a lead I have this in my sights, I am thwarted by the trust's financial and institutional reticence to proactively deal with these problems. We do not have any consultants near retirement, but struggle to recruit as there are so few trainees, and in London this is exacerbated, as there are so many options for posts in other trusts.</i></p>
Use of locums and retired radiologists	<p><i>Planning to recruit newly retired breast radiologists to work on a part-time basis providing NHS symptomatic breast imaging. We are fortunate to live in a very desirable part of the South West and have many retirees coming to live in the area.</i></p> <p><i>Symptomatic service only at [foundation trust]. We are trying to recruit a second breast radiologist. Currently employing a locum breast radiologist to provide cover (for nine months, contract expires at end of Sep 2015).</i></p> <p><i>Symptomatic breast service only at [hospital]. Two consultants provided one clinic a week each and breast [multidisciplinary team] MDT. One is on 'retire and return' and does extra clinics when needed. The other does not perform core biopsies. We have a locum from the adjacent breast screening service and hospital who does the two clinics</i></p>

*in one day. Extra clinics are arranged on an ad-hoc basis when there is an increase in demand. We have advertised three times over the course of a year but have no applicants.*

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Training and development

*Has the College considered a fast track Breast Radiology Training scheme? Radiology is a specialty with many more applicants than training places. If say a three-year training programme involving just breast radiology training was available, it may help fill some of the gaps, although with at least a three-year lag. It would have to be on top of other radiology training places.*

*Seriously concerned about fragility of service, especially with likely retirement within five years. [Need to] Pressure nationally to increase training posts, and be[ing] nice to local trainees who may have a breast interest!*

*We are affiliated to a large radiology training programme, and have several interested StRs who are planning to spend time with us on senior rotations (three starting clinical fellowships in the next 12 months). We provide a lot of active hands on experience, and encourage research and audit which is popular. We also provide attachments and training for visiting clinicians. We would be happy to expand this role if it generated income for the [hospital] training programme.*

*We have radiologists in symptomatic who are primed to accept screening sessions to enhance their roles. We have two registrars coming through the system who will qualify in August 2016. They are both interested in breast and can take on screening sessions and backfill those radiologists moving from symptomatic services.*

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Establishing career pathways

*We have a Radiology Academy on site with many radiology registrars in the department, and so we have less need for advanced practitioners/consultant radiographers than some departments. Breast radiology seems popular with our trainees, and so we are optimistic we will produce more breast radiologists over the next few years. We hope to develop a 5/6th year Breast Radiology fellowship to attract and train radiologists to a higher level. This will also assist in our own capacity shortage as demand for services increases.*

*Engage with training radiologists to expose them to screening and breast radiology. Currently developing a breast fellowship programme.*

*We are very proactive with our breast registrars and currently have three trainees in the scheme who are very interested in pursuing breast radiology. We have been successful in training up breast radiologists for the past few years.*

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## 4. Survey results – breast clinicians

Respondents were asked to provide figures for their NHSBSP unit or radiology department or total figures if completing the survey for both a department and unit.

### Headcount of breast clinicians

As well as providing details on breast clinicians one respondent stated they had two breast surgeons working with their radiology department. Another department regularly had two locums helping with extra clinics.

### In summary:

- A total headcount of 93 breast clinicians was made known through the survey.
- Breast clinicians were working in only one-third of the NHSBSP units and/or radiology departments (n=36) covered by this survey.
- Where breast clinicians were in post, the number ranged from one (12 responses) to seven (two responses). The average number of breast clinicians across the 36 NHSBSP units and/or radiology departments was between 2 and 3.
- Of the 93 breast clinicians in post, 43% worked LTFT.

**Table 8. Headcount of breast clinicians working in NHSBSP units and radiology departments**

Country/region	Headcount			No. of units/depts.:	
	Full-time	Less than full-time	Total in post	With breast clinicians in post	With NO breast clinicians in post
England – East Midlands	3	3	6	4	3
England – East of England	0	1	1	1	8
England – London	8	2	10	2	11
England – North East	4	1	5	2	4
England – North West	0	1	1	1	7
England – South Central	1	0	1	1	5
England – South East	11	8	19	6	1
England – South West	2	7	9	5	8
England – West Midlands	6	3	9	2	5
England – Yorks and Humber	7	0	7	1	5
Northern Ireland	1	2	3	2	0
Scotland	4	8	12	4	3
Wales	6	4	10	5	2
<b>Total</b>	<b>53</b>	<b>40</b>	<b>93</b>	<b>36</b>	<b>62</b>

## Expected retirements – breast clinicians

Table 9 details by country/region the number of breast clinicians expected to retire in the short term (2015–2020) and long term (2015–2025). Some individuals will fall into both categories.

### In summary:

- Nearly half of the current breast clinician workforce covered by this survey is expected to retire by 2025. One-quarter will retire by 2020.
- Those regions with the highest 2015–2025 retirement rates include East of England, South West England and Yorkshire and Humberside, where nearly all or all of their current breast clinicians are expected to retire.

**Table 9. Number of breast clinicians expected to retire in the next five and ten years**

Country/region	Headcount	Retiring next 5 years (2015–2020)	Retiring next 10 years (2015–2025)	% retiring in next 10 years (2015–2025)
England – East Midlands	6	3	4	67%
England – East of England	1	1	1	100%
England – London	10	2	2	20%
England – North East	5	1	3	60%
England – North West	1	0	0	0
England – South Central	1	0	0	0
England – South East	19	6	8	42%
England – South West	9	2	7	78%
England – West Midlands	9	1	3	33%
England – Yorks and Humber	7	5	7	100%
Northern Ireland	3	1	2	67%
Scotland	12	2	6	50%
Wales	10	2	3	30%
Total	93	26	46	49%

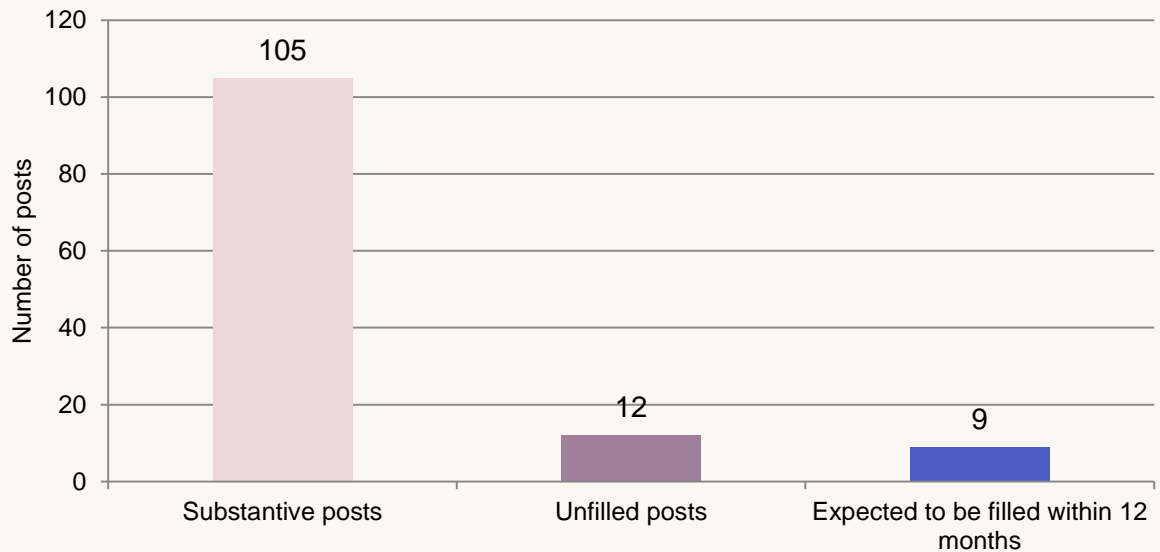
## Unfilled posts – breast clinicians

Figure 5 presents the number of unfilled breast clinician posts identified through the survey.

### In summary:

- Of the 105 substantive (filled and unfilled) posts for breast clinicians, 11% (n=12) remained unfilled. However, respondents indicated that most of these unfilled posts were expected to be filled in the next 12 months.

- The unfilled posts identified in this survey are all to be found in NHSBSP units and/or radiology departments that already have breast clinicians in place.

**Figure 5. Extent of unfilled posts for breast clinicians**

### Breast programmed activities – breast clinicians

Respondents were asked to state the total number of breast PAs undertaken by those breast clinicians working full and less than full time, and also the number of breast PAs allocated to unfilled posts and not currently undertaken.

#### Note:

- Five of the respondents indicated they had vacancies for breast clinicians (n=6) but stated there were no allocated breast PAs for these posts. It is assumed that this was done in error. For the purpose of this report 3.5 breast PAs have been allocated to each of these posts – the figure represents the mean breast PAs stated for breast clinicians where this part of the survey was correctly filled in.



**Table 10. Number of breast PAs undertaken or allocated to posts – breast clinicians**

Country/ region	Filled posts			Unfilled posts		
	Headcount (LTFT )	PAs undertaken	Mean PAs	Headcount	PAs allocated	Mean PAs allocated
England – East Midlands	6 (3)	49	8.2	1	10.0	10.0
England – East of England	1 (1)	6	6.0	0	0.0	0.0
England – London	10 (2)	25	2.5	1	3.5	3.5
England – North East	5 (1)	16	3.2	1	3.5	3.5
England – North West	1 (1)	6	6.0	0	0.0	0.0
England – South Central	1 (0)	6	6.0	0	0.0	0.0
England – South East	19 (8)	84	4.4	3	6.0	2.0
England – South West	9 (7)	56	6.2	0	0.0	0.0
England – West Midlands	9 (3)	42	4.7	1	3.5	3.5
England – Yorks and Humber	7 (0)	36	5.1	1	5.0	5.0
Northern Ireland	3 (2)	17	5.7	2	7.0	3.5
Scotland	12 (8)	55	4.6	1	1.0	1.0
Wales	10 (4)	75	7.5	1	3.5	3.5
<b>Total</b>	<b>93 (40)</b>	<b>473</b>	<b>5.1</b>	<b>12</b>	<b>43</b>	<b>3.6</b>

**In summary:**

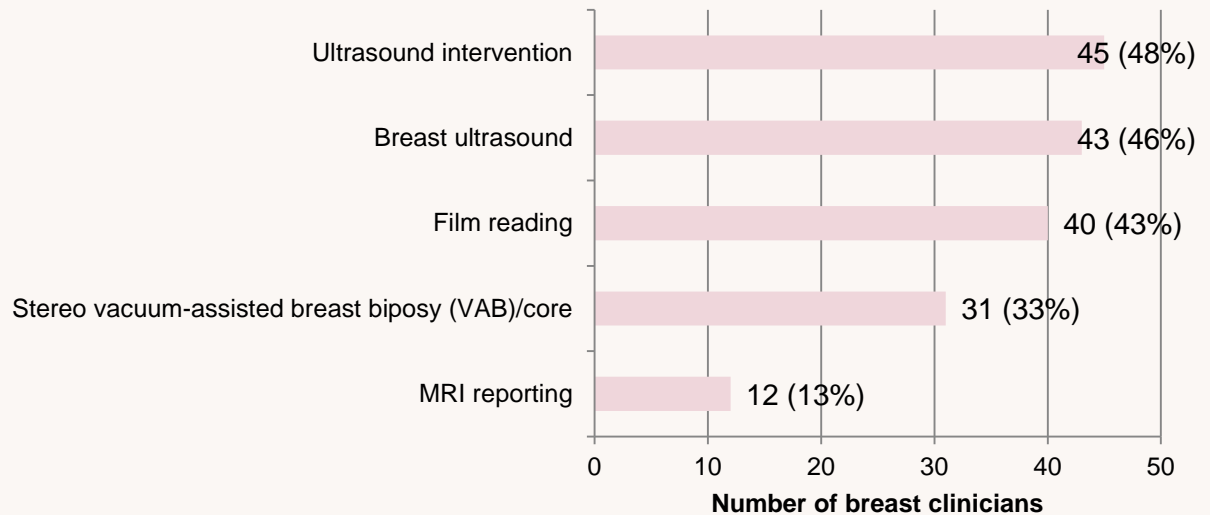
- The mean number of breast PAs undertaken by the 93 breast clinicians covered in this survey was 5.1. It should be noted that that 40 of these clinicians worked less than full time.
- A total of 43 breast PAs was allocated to the ten unfilled breast clinician posts identified through this survey. These PAs are not currently being undertaken and therefore are being 'lost'. One PA equals four hours of clinical time per week. Therefore the clinical time lost by these posts remaining vacant is in

the region of 172 hours per week, or 8,944 hours per year.

**Breast screening activities – breast clinicians**

Respondents were asked to indicate from a list of options the types of breast screening activities undertaken and by how many breast clinicians. Nearly half of the breast clinicians covered by this survey undertook ultrasound intervention compared to only one-in-ten undertaking magnetic resonance imaging (MRI) reporting.

**Figure 6. Breast screening activities undertaken by breast clinicians**  
(Percentage of breast clinicians covered by survey)



Two respondents selected 'other' and stated what they were:

- Localisations
- Clinical examination counselling and giving results.

### Workforce issues – breast clinicians

The final question in the survey asked respondents how they were planning to deal with workforce issues relating to breast screening and/or symptomatic breast services in their organisations. The following comments relating specifically to breast clinicians were received:

- We are looking to train a [general practitioner] GP to become a breast physician but with radiology skills (film reading and [ultrasound] US).
- Encourage further GP to diversify into breast clinician training.
- Continue to develop breast clinicians, while accepting the training scales are longer.
- Further explore the role of breast clinicians. In the past we have had some success recruiting and training GPs into the breast clinician role including image interpretation and US guided biopsy

## 5. Survey results – consultant radiographers providing breast services

Respondents were asked to provide figures for their NHSBSP unit or radiology department or total figures if completing the survey for both a department and unit.

### Headcount of consultant radiographers providing breast services

The headcount of consultant radiographers providing breast services identified in this survey can be found in Table 11. One respondent stated that there were no consultant radiographers in post although certified mammographers provided double reporting of mammograms. Another respondent stated one of their radiographers has just passed her breast ultrasound exam and would be helping in future in the full-time (FT) clinics.

### In summary:

- A total headcount of 47 consultant radiographers providing breast services was made known through the survey.
- Seven-in-ten NHSBSP units and/or radiology departments did not have a consultant radiographer specialising in breast work.
- The 47 consultant radiographers identified in this survey worked across 30 NHSBSP units and/or radiology departments – an average of between 1 and 2. The number of consultant radiographers ranged from one (20 responses) to four (three responses) across these units and/or departments.
- Of the consultant radiographers identified in this survey, 28% worked less than full-time (LTFT).

**Table 11. Headcount of consultant radiographers providing breast services in NHSBSP units and radiology departments**

Country/region	Full-time	Headcount		No. of units/depts.:	
		Less than full-time	Total in post	With radiographers in post	With NO radiographers in post
England – East Midlands	1	0	1	1	6
England – East of England	6	3	9	5	4
England – London	4	1	5	2	11
England – North East	5	0	5	2	4
England – North West	3	0	3	3	5
England – South Central	0	2	2	2	4
England – South East	0	0	0	0	7
England – South West	4	0	4	3	10
England – West Midlands	5	3	8	4	3
England – Yorks and Humber	5	1	6	3	3
Northern Ireland	0	0	0	0	2
Scotland	0	1	1	1	6
Wales	0	3	3	4	3
<b>Total</b>	<b>33</b>	<b>14</b>	<b>47</b>	<b>30</b>	<b>68</b>

## Expected retirements – consultant radiographers providing breast services

Table 12 details in each country/region the number of consultant radiographers expected to retire in the short term (2015–2020) and long term (2015–2025). Some individuals will fall into both categories.

**Table 12. Number of consultant radiographers providing breast services expected to retire in the next five and ten years**

Country/region	Headcount	Retiring next 5 years (2015–2020)	Retiring next 10 years (2015–2025)	% retiring in next 10 years (2015–2025)
England – East Midlands	1	0	1	100%
England – East of England	9	1	3	33%
England – London	5	1	1	20%
England – North East	5	2	2	40%
England – North West	3	0	1	33%
England – South Central	2	0	1	50%
England – South East	0	0	0	0%
England – South West	4	2	4	100%
England – West Midlands	8	3	5	63%
England – Yorks and Humber	6	1	4	67%
Northern Ireland	0	0	0	0%
Scotland	1	1	1	100%
Wales	3	0	0	0%
<b>Total</b>	<b>47</b>	<b>11</b>	<b>23</b>	<b>49%</b>

### In summary:

- Nearly half of the 47 consultant radiographers in this survey are expected to retire within the next ten years. One-quarter will retire within the next five years.
- Ten-year rates across UK countries/regions vary from 20% (London) to 100% (East Midlands, South West England and Scotland) of current consultant radiographers providing breast services retiring by 2025.

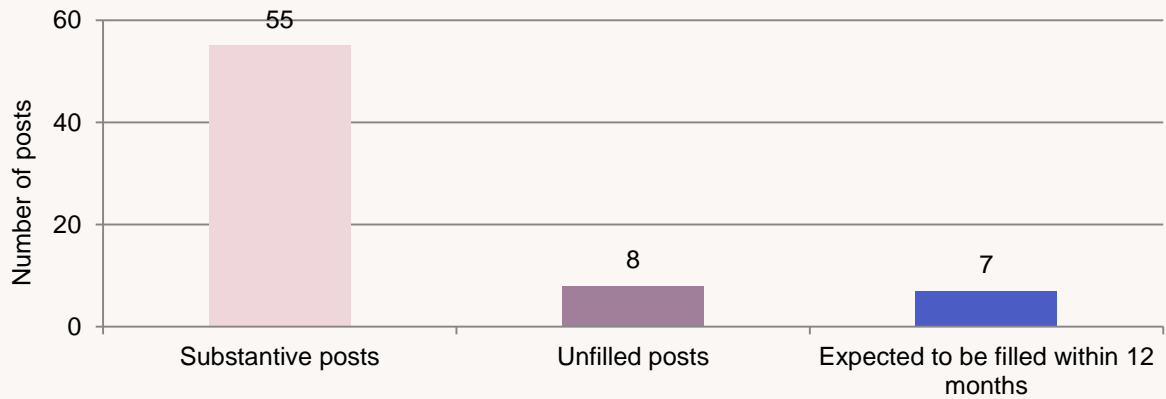
## Unfilled posts – consultant radiographers providing breast services

Figure 7 presents the number of unfilled posts for consultant radiographers that have been identified. A comparison is made with the number of known substantive (filled and unfilled) posts covered by the survey.

### In summary:

- The survey identified eight unfilled consultant radiographer posts. Nearly all of these posts were expected to be filled in the next 12 months.
- These unfilled posts were in eight NHSBSP units and/or radiology departments. Six of these units and/or departments already had at least one consultant radiographer specialising in breast work in post.

**Figure 7. Extent of unfilled posts for consultant radiographers providing breast services**



### Breast programmed activities – consultant radiographers

The number of breast PAs allocated to filled and unfilled posts for consultant radiographers can be found in Table 13.

Note:

- One respondent indicated a consultant radiographer was in post providing breast services but a breast PAs figure was not provided. It is assumed this was done in error.

For the purpose of this report 7.5 breast PAs have been allocated to this post (the mean PA figure based on responses that were correctly provided).

- Three respondents indicated they had unfilled posts but no allocated breast PAs. 6.7 PAs have been allocated for the purposes of this report (the mean figure for those responses correctly provided).

**Table 13. Number of breast PAs undertaken or allocated to posts – consultant radiographers**

Country/ region	Filled posts			Unfilled posts		
	Headcount (LTFT )	PAs undertaken	Mean PAs	Headcount	PAs allocated	Mean PAs allocated
England – East Midlands	1 (0)	8.0	8.0	0	0.0	0.0
England – East of England	9 (3)	34.0	3.8	0	0.0	0.0
England – London	5 (1)	49.0	9.8	1	6.0	6.0
England – North East	5 (0)	48.0	9.6	1	6.7	6.7
England – North West	3 (0)	28.0	9.3	0	0.0	0.0
England – South Central	2 (2)	15.5	7.8	0	0.0	0.0
England – South East	0 (0)	0.0	0.0	1	6.7	6.7
England – South West	4 (0)	39.0	9.8	1	10.0	10.9
England – West Midlands	8 (3)	64.0	8.0	3	20.7	6.9
England – Yorks and Humber	6 (1)	50.0	8.3	1	10.0	10.0
Northern Ireland	0 (0)	0.0	0.0	0	0.0	0.0
Scotland	1 (1)	3.0	3.0	0	0.0	0.0
Wales	3 (3)	16.0	5.3	0	0.0	0.0
<b>Total</b>	<b>47 (14)</b>	<b>354.5</b>	<b>7.5</b>	<b>8</b>	<b>60.1</b>	<b>7.5</b>

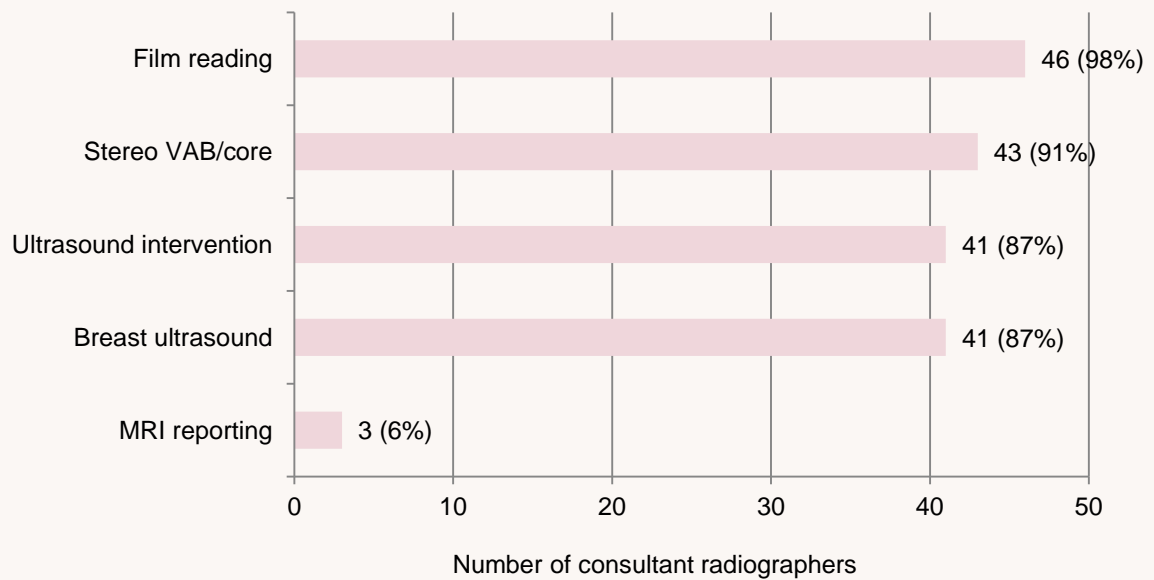
**In summary:**

- The mean number of breast PAs was 7.5 for the 47 consultant radiographers in this survey. It should be noted that 14 of these radiographers worked less than full-time.
- There were 60 breast PAs not currently being undertaken due to consultant radiographer posts remaining vacant. One PA equals four hours of clinical time per week. Therefore the clinical time in breast services being 'lost' is in the region of 240 hours per week, or 12,400 hours per year.

**Breast screening activities – consultant radiographers**

Nearly all of the 47 consultant radiographers in this survey undertook the breast screening activities listed in Figure 8. An exception to this was MRI reporting where only three (6%) radiographers undertook this activity.

**Figure 8. Breast screening activities undertaken by consultant radiographers**  
(Percentage of consultant radiographers covered by survey)



Respondents who selected 'other' stated what they were:

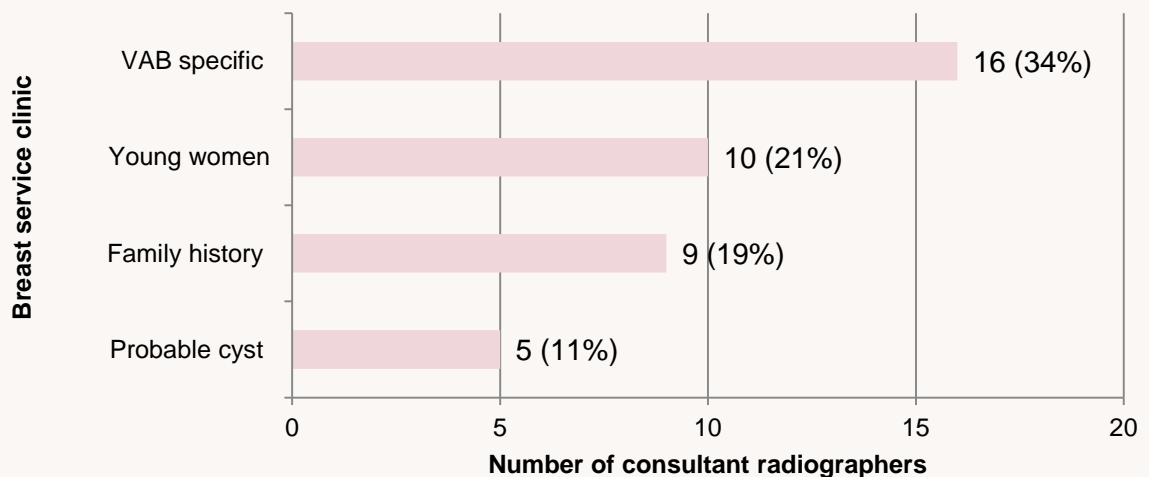
- Localisation wires and one-stop clinics
- Image-guided localisation
- Marker wires

- Ultrasound vacuum-assisted breast excision
- Radiology StR teaching.

## Breast service clinics – consultant radiographers

Respondents were asked, in reconfiguring and streamlining their breast services, how many consultant radiographers were involved in providing the breast clinic types listed in Figure 9.

**Figure 9. Consultant radiographers providing breast service clinics**  
(Percentage of consultant radiographers covered by the survey)



Respondents who selected 'other' breast clinics or service provision stated what they were:

- Ultrasound clinic for symptomatic patients referred from breast clinicians
- General symptom clinics and screening assessment
- Primary endocrine clinic
- One-stop breast clinics
- Routine follow-up clinics
- General assessment clinics.

### Use of consultant radiographers

Respondents were asked what else has been or can be done to make better use of consultant radiographers in providing effective breast services. Table 14 categorises and lists these comments and includes specific comments about consultant radiographers derived from the final question of the survey asking how respondents were planning to deal with workforce issues

related to their breast screening and/or symptomatic breast services.

Negative comments: two of the respondents were unsure about consultant radiographers working in their breast service teams.

- We have not found this to be good practice in our service due to the widespread geographical configuration of the service leading to a lot of single-handed working.
- The national requirement for consultant radiographer [is] to do only five direct clinical care PAs out of ten. [This] means that they are not a cost-effective appointment and we prefer advanced practice radiographers, who are much more effective and do not need an unnecessary higher degree.

Positive comments: most of the comments were positive in highlighting actions taken or that should be taken to recruit, train and develop and expand the role of consultant radiographers.



**Table 14. Actions taken or that should be taken to better utilise consultant radiographers in providing effective breast services (free-text comments)**

Actions	Comments – selected examples
Recruitment	<p><i>Producing business case for VAB service. One-stop clinics led by consultant radiographer.</i></p> <p><i>Local (financial, top managerial) support for such posts. We have a business case in for a consultant radiographer – no progress in nine months despite shortage of radiologists.</i></p> <p><i>The trust is dragging their heels in moving forward with agreeing a consultant radiographer post. We have an advanced practitioner who has completed all modules and is ready to go into a trainee consultant post. She is able to perform ultrasound, biopsy and stereo biopsy and is learning to do assessments now.</i></p> <p><i>Considering advertising for a consultant radiographer if unable to appoint a consultant radiologist.</i></p>
Training and development	<p><i>We are fortunate to have had no difficulty recruiting consultant radiologists in the past but we are losing one consultant through emigration this year with no realistic prospect of replacement. As a result we are considering developing a consultant radiographer role but do not anticipate finding a trained candidate so this will not be a short-term solution.</i></p> <p><i>Main recruitment difficulty is for mammographers. We have to train most ourselves which is resource-expensive and there is a limit to how many trainees can be taken on at any one time. We successfully use assistant practitioners, but these usually have to be trained in-house as well.</i></p> <p><i>One of our breast radiographers is training in mammogram reporting. She will also need to train in breast ultrasound and biopsies but [we] will need a consultant in breast radiology to satisfy governance.</i></p> <p><i>Currently [we] have [a] radiographer doing film reading training, and strong desire of other radiographers to do same if opportunity arises.</i></p>
Role expansion	<p><i>Lists paralleling consultant radiologists at time of rapid clinics – to improve efficiency of throughput (we have six clinicians referring patients and only two radiologists imaging, so often there is a bottle neck in the imaging department).</i></p> <p><i>Consultant radiographer of clinical specialist ... also provides admin cover for the National Breast Screening System database, result and data entry, KC62, ABS data entry. This helps the surgeons and has historically been dealt with by the superintendent in our unit. This role will stay with the clinical specialist.</i></p> <p><i>Consultant radiographer works the same spectrum as radiologists and breast clinician apart from reporting MRI.</i></p> <p><i>Our consultant radiographer works as a radiologist covering all duties to an equal standard. She is also our clinical lead.</i></p>

## 6. Survey results – advanced practitioners providing breast services

Respondents were asked to provide figures for their NHSBSP unit or radiology department or total figures if completing the survey for both a department and unit.

### Headcount of advanced practitioners providing breast services

The number of advanced practitioners providing breast services identified in this survey can be found in Table 15.

Note: For five of the survey responses, the sum of those working full-time and LTFT did not equal the total headcount. These figures were adjusted by taking into account the data on breast programmed and screening activities submitted by these respondents.

### In summary:

- A total 261 advanced practitioners providing breast services were identified through the survey. These advanced practitioners worked across 73 NHSBSP units and/or radiology departments – an average of between three and four per unit/department. The number of advanced practitioners at each site ranged from one (14 responses) to 11 (one response).
- Nearly three-quarters of NHSBSP units and/or radiology departments had advanced practitioners in post undertaking breast work.
- Of the advanced practitioners in post 53% worked LTFT.

**Table 15. Headcount of advanced practitioners providing breast services in NHSBSP units and radiology departments**

Country/region	Full-time	Headcount		No. of units/depts.	
		Less than full-time	Total in post	With advanced practitioners in post	With NO advanced practitioners in post
England – East Midlands	12	11	23	7	0
England – East of England	6	9	15	6	3
England – London	6	17	23	7	6
England – North East	14	4	18	4	2
England – North West	15	15	30	8	0
England – South Central	11	2	13	6	0
England – South East	12	13	25	6	1
England – South West	9	15	24	9	4
England – West Midlands	12	10	22	5	2
England – Yorks and Humber	10	21	31	6	0
Northern Ireland	4	4	8	2	0
Scotland	5	6	11	2	5
Wales	6	12	18	5	2
<b>Total</b>	<b>122</b>	<b>139</b>	<b>261</b>	<b>73</b>	<b>25</b>

## Expected retirements – advanced practitioners providing breast services

Table 16 details in each country/region the number of advanced practitioners expected to retire in the short term (2015–2020) and long term (2015–2025). Some individuals will fall into both categories.

### In summary:

- 43% of advanced practitioners undertaking breast work are expected to retire in the next ten years, 26% in the next five years.
- Ten-year rates vary across UK countries and regions from 16% in Yorkshire and Humber to 70% in the West Midlands.

**Table 16. Number of advanced practitioners providing breast services expected to retire in the next five and ten years**

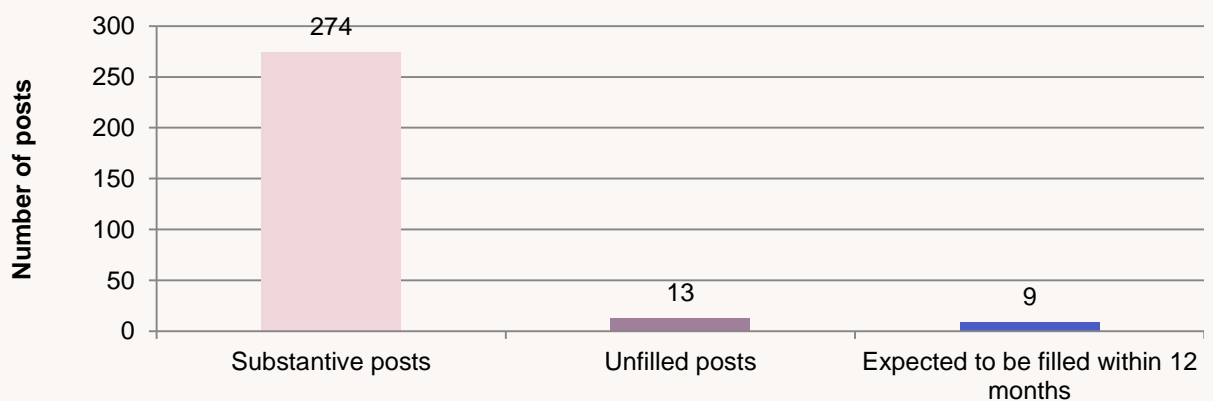
Country/region	Headcount	Retiring next 5 years (2015–2020)	Retiring next 10 years (2015–2025)	% retiring in next 10 years (2015–2025)
England – East Midlands	23	7	16	70%
England – East of England	15	5	6	40%
England – London	23	6	8	35%
England – North East	18	5	8	44%
England – North West	30	9	10	33%
England – South Central	13	3	7	54%
England – South East	25	7	11	44%
England – South West	24	8	14	58%
England – West Midlands	22	5	15	68%
England – Yorks and Humber	31	4	5	16%
Northern Ireland	8	3	4	50%
Scotland	11	2	4	36%
Wales	18	4	5	28%
<b>Total</b>	<b>261</b>	<b>68</b>	<b>113</b>	<b>43%</b>

## Unfilled posts – advanced practitioners providing breast services

Figure 10 presents the number of unfilled posts for advanced practitioners undertaking breast

work that have been identified through this survey. A comparison is made with the number of known substantive posts (filled and unfilled posts covered by the survey).

**Figure 10. Extent of unfilled posts for advanced practitioners providing breast services**



## Breast programmed activities – advanced practitioners

The number of breast PAs allocated to filled and unfilled posts for advanced practitioners undertaking breast work can be found in Table 17.

Note:

- Three respondents indicated that there were five advanced practitioners in post providing breast services but no breast PAs allocated. It is assumed this was done in error. For the purpose of this report 3.5 breast PAs have been allocated to these posts (the mean figure for those responses correctly provided).
- Six respondents indicated they had unfilled posts (n=8) but no allocated breast PAs. For each of these posts 7.5 PAs have been

allocated for the purposes of this report (the mean figure for those responses correctly provided).

### In summary:

- The mean number of breast PAs was 3.7 for the 261 advanced practitioners covered by this survey. Of the advanced practitioners 139 worked LTFT.
- The total number of breast PAs not being undertaken, and therefore being 'lost' due to posts remaining vacant, was 97. One PA equals four hours of clinical time per week. Therefore the clinical time being lost in breast services is in the region of 388 hours per week, or 20,176 hours per year.

**Table 17. Number of breast PAs undertaken or allocated to posts – advanced practitioners**

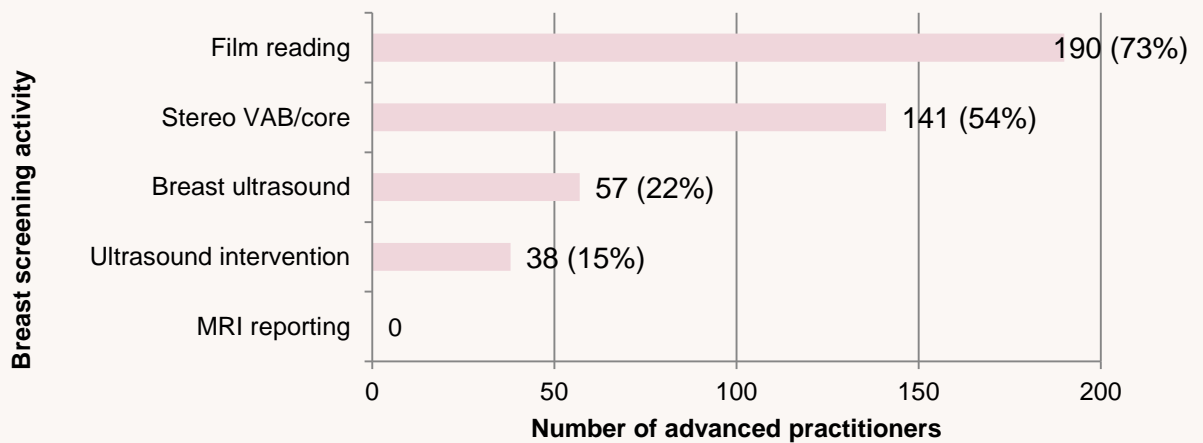
Country/ region	Headcount (LTFT )	Filled posts		Headcount	Unfilled posts	
		PAs undertaken	Mean PAs		PAs allocated	Mean PAs allocated
England – East Midlands	23 (11)	68.0	3.0	1	6.0	6.0
England – East of England	15 (9)	45.0	3.0	1	1.0	1.0
England – London	23 (17)	46.0	2.0	0	0.0	0.0
England – North East	18 (4)	86.0	4.8	0	0.0	0.0
England – North West	30 (15)	155.0	5.2	2	15.0	7.5
England – South Central	13 (2)	41.0	3.2	0	0.0	0.0
England – South East	25 (13)	63.0	2.5	1	7.5	7.5
England – South West	24 (15)	61.5	2.6	2	20.0	10.0
England – West Midlands	22 (10)	98.0	4.5	1	7.5	7.5
England – Yorks and Humber	31 (21)	185.0	6.0	3	25.0	8.3
Northern Ireland	8 (4)	18.0	2.3	0	0.0	0.0
Scotland	11 (6)	36.0	3.3	0	0.0	0.0
Wales	18 (12)	53.0	2.9	2	15.0	7.5
<b>Total</b>	<b>261 (139)</b>	<b>955.5</b>	<b>3.7</b>	<b>13</b>	<b>97.0</b>	<b>7.5</b>

## Breast screening activities – advanced practitioners

Three-quarters of advanced practitioners undertaking breast work did film reading. MRI reporting is not an activity undertaken by the advanced practitioners covered by this survey.

**Figure 11. Breast screening activities undertaken by advanced practitioners**

*(Percentage of advanced practitioners covered by survey)*



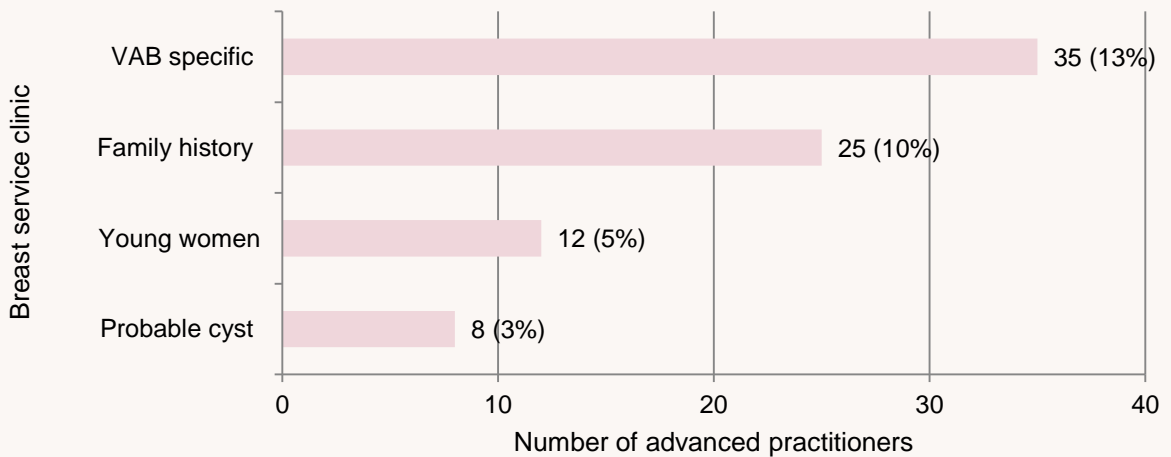
Respondents who selected 'other' stated what they were:

- Marker wires
- Tomosynthesis and contrast-enhanced spectral mammography
- Stereotactic localisation
- Stereo-guided biopsies and procedures
- Stereo-guided wire insertions
- Localisation for surgery – stereo and ultrasound
- Breast biopsy
- X-ray localisations
- Clinical breast examination
- US intervention limited to cyst aspirations.

## Breast service clinics – advanced practitioners

Respondents were asked in reconfiguring and streamlining their breast services how many advanced practitioners were involved in providing the breast clinic types listed in Figure 12.

**Figure 12. Advanced practitioners providing breast service clinics**  
(Percentage of advanced practitioners covered by survey)



Respondents who selected 'other' breast clinics or service provision stated what they were:

- Assessment and symptomatic clinics for biopsy
- Family history clinic [by senior breast cancer nurse specialist and nurse advanced practitioner]
- Results giving clinics
- Clinical examinations
- Sonographer will scan probable cysts and young women
- Surgical clinic [by nurse clinical specialist/advanced practitioner]
- VABs done within assessment clinics
- Assist with multidisciplinary team meeting preparation.

## Advanced practitioners in the provision of breast services

Respondents were asked what else has been or can be done to take better advantage of advanced practitioners in providing effective breast services. Table 18 categorises and lists these comments. Also, in Table 18, are specific comments about advanced practitioners derived from the final question of the survey asking how respondents were planning to deal with workforce issues related to their breast screening and/or symptomatic breast services.

**Table 18. Actions taken or that should be taken to make better use advanced practitioners in providing effective breast services (free-text comments)**

Actions	Comments – selected examples
Training and development	<p><i>Appoint and train more [advanced practitioner] AP radiographers – two in training at the moment. They will be fully trained and able to do all interventions within two years (the approximate time we have found it takes to train a breast advanced practitioner).</i></p> <p><i>We are now in a position to train a radiographer in stereo-guided biopsies, training starts in June 2015.</i></p> <p><i>I would like to train more film readers, and thereafter training for stereotactic biopsy.</i></p> <p><i>At my trust, try and teach [the advanced practitioner] [ultrasound] u/s intervention like cyst aspiration and fine needle aspiration biopsies.</i></p> <p><i>Training in VABs so that they can perform this as firstline instead of [14-gauge] 14 g core biopsies in clinics.</i></p> <p><i>Currently we offer a foundation degree for AP to enter the service but currently very few applicants.</i></p>
Role expansion	<p><i>We are working towards other roles for advanced practitioners, including US training but do not anticipate this providing realistic assistance for several years.</i></p> <p><i>Allowing two advanced practitioners to read screening films together and arbitrate/consensus.</i></p> <p><i>Provide counselling of women recalled to assessment.</i></p> <p><i>Develop skills in US intervention to enable [the advanced practitioner to] lead one-stop clinics.</i></p>
Enhancing workforce skill mix	<p><i>Continue with skill mix but by having different advanced practitioners with specific skill our staff can extend their practice but also maintain the service on the vans.</i></p> <p><i>Second stereo biopsy, VAB, localising advanced practitioners would make our service more robust.</i></p> <p><i>One senior breast cancer nurse specialist provides skill mix in the family history clinic.</i></p> <p><i>A number of advanced practitioners are currently training to become consultant radiographers and provide most of the additional skilled work outside film reading.</i></p>
Increasing productivity	<p><i>We are currently training up our advanced practitioner to perform ultrasound and ultrasound interventions. She will then run one-stop clinics alongside a radiologist to increase capacity. Eventually she will be trained for wire placement.</i></p> <p><i>Use of advanced practitioner in one-stop clinic alongside radiologist to increase throughput.</i></p>

*Train additional APs in stereo procedures to ensure cross cover and maximise throughput in assessment clinics.*

*Existing AP qualified in reading and stereo [Vacuum Assisted Core Biopsy of the Breast] VACB undergoing ultrasound training, so will be able to increase symptomatic throughput in one-stop clinic.*

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Substitution for  
clinicians

*Advanced practice radiographers with the appropriate training can do virtually anything a radiologist can do.*

*Consider consultant radiographer if unable to recruit to consultant radiologist post.*

*We are encouraging advanced practitioners in view of the fact that we cannot recruit doctors. The low number of doctors, however, limits training time. The trust needs to engage in helping funding.*

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## 7. Workforce issues in breast imaging and symptomatic breast services

The final question of the survey asked respondents how they or their organisations were planning to deal with breast screening and/or symptomatic breast service workforce issues. Examples of comments relating specifically to breast radiologists, breast clinicians, consultant radiographers and advanced practitioners can be found in the relevant sections of this report.

### Strategic approaches

Strategic approaches in dealing with workforce issues were also outlined by respondents. These approaches looked at service design and initiatives, collaborative working arrangements, succession planning and reviewing workforce and skill mix arrangements.

**Table 19. Strategic approaches in dealing with workforce issues in breast imaging and symptomatic breast services**

Actions	Comments – selected examples
Service design and initiatives	<p><i>Increasing workload is a challenge. There are ongoing discussions about redesign of services with a view to implement 'imaging led follow-up for patients with known diagnosis of cancer and in patients with positive family history.' We are planning to introduce use of VAB in diagnostic services at [health board], which will also stretch resources. At the moment we are able to meet the demands of the service but with the introduction of VAB and imaging led follow-up for patients with breast cancer, we will have to look at increasing the sessional commitment, or consider skill mix and encourage mammographer reporting.</i></p> <p><i>We are recruiting another consultant radiologist and plan to advertise for another if there is a suitable candidate. We are also trying to streamline our services so we use [7-guage] 7-G VAB as first line instead of 14 G in order to use our sessions more effectively. The advanced practitioners will be able to do VAB so that the consultants can be freed up to assess more women and film read.</i></p>
Collaborative working arrangements	<p><i>We are a symptomatic unit with close working relationships with our screening unit who undertake all our stereo procedures and MRIs. Our trust are keen to offer these services locally and we are hoping to train our lead mammographer to perform stereos, but that is on hold at the moment. Not optimistic about recruiting more breast radiologists and in the longer term our future may lie as a satellite of the screening unit who may find it easier to recruit.</i></p> <p><i>Development of breast service strategy to encompass new developments, acknowledgement of increasing demand and assessment of staffing requirements to ensure the correct levels and grade are employed. Looking at ways of regional collaboration but difficult in breast due to on-site requirement in symptomatic clinics.</i></p> <p><i>We have tried (with very limited success) numerous times over the last seven years to link with each of two local screening units to create joint appointments. There has been very little interest from any trainees for this type of post and no applicants. We have very little tangible support from screening centres who understandably look after their own interests first, are struggling with workload themselves and who are worried about potential loss of income by linking with symptomatic units.</i></p>

Succession  
planning

*Effective workforce and succession planning is key in ensuring the continuity of the service.*

*We have just recruited a new breast radiologist to a part-time symptomatic and part-time general radiology post and are planning that she will become full-time breast at the first available opportunity – succession planning.*

*Currently at required strength in radiologist PAs. Need succession planning in mammography and breast ultrasound for retirements.*

*We have recently had one advanced practitioner who has retired and one who is due to retire in the next few years, so we are already training two radiographers in advanced practice who will qualify in September in film reading. They will then go on to train in ultrasound. Our advanced practitioners are trained in biopsy, with one doing ultrasound and the other doing stereo VAB. We hope this will create a robust service.*

*We are very worried also about the management side as there is a paucity of radiologists who are interested in being directors of screening.*

Reviewing  
workforce and skill  
mix

*We have just advertised for a full time consultant colleague but had no suitable applicants. We plan to re-advertise in September. If we fail to appoint we will need to consider adjusting our job plans to do more breast radiology and less general radiology. We may consider training further advanced practitioners. The consultants are currently being paid 0.7 PA extra each (5 x 0.7=3.5) as a gesture to acknowledge the high work intensity and one of the consultants has temporarily given up 1PA in general radiology to do breast work instead.*

*We are hoping to recruit a radiologist shortly. We have two locum consultant radiographers as well as a full-time consultant radiographer in post: one of our advanced practitioners is currently training towards becoming consultant radiographer, so that we can replace the current WTE consultant radiographer who will be retiring within the next five years. I will look towards underpinning this with more radiographers training in advanced practice. We currently have two assistant practitioners who support the practitioners in their roles: if either of these left I would look towards recruiting radiographers as the training of assistant practitioners is expensive and there is a limitation to their role, although it is recognised it is a valuable one.*

*We are being pro-active with advanced practitioners (APs). There is a limit with the number of doctors versus APs as to how many we can train/supervise, particularly as they move towards ultrasound and biopsy modules – this is time intensive. We have two APs who can read together. Doctors still do consensus/arbitration discussions with APs to limit recall rate. We need to move our most senior AP into [a] trainee consultant post. We are awaiting trust support and funding for this. We still need to recruit more consultant radiologists to balance the ratio of doctors to APs so we can efficiently train more APs to do more tasks. We keep advertising, have interviewed some [but] cannot get successful applicants – a lot of foreign applicants with poor English [and the General Medical Council] GMC not accepting [them] as they cannot pass test. We have locum support for some of the symptomatic work. This is very expensive. We have pending retirements and we will not have enough [of a] workforce to cover this in spite of what we have tried to do with radiographer skills mix. Crisis looming!*

*Our team dream list would be investment in retaining senior staff and looking at improving working conditions, eg no on-call, adequately protected SPA time. Identify interested SpRs from an early stage and give them a financial incentive (eg additional £10k per annum) to continue in breast as senior trainees (can provide support to [direct clinical care] DCC). There should be a contract tie in for a consultant post. Investment in retaining advanced practitioners and clear national structure on training/pay scale. In reality we are inadequately funded and resourced from staff, equipment and space with the most pressing compromise to screening coming from the symptomatic service and cancer targets. There appears to be no reprieve with additional campaigns [which are] poorly timed, notably 'Be Clear on Cancer' (July/August 2015).*

## Workload concerns

The demands made on breast service teams were also considered an important dimension by those responding to this survey. A number of insightful comments were received setting out concerns about workload.

- We have seen a massive increase in symptomatic workload due to suspension of breast services by a neighbouring trust and, despite being well-staffed at present by radiologists, are struggling to cope and are seeking locum assistance. We have trainees interested in breast but their [Certificate of Completion of Training] CCT date is not within the next year and it is difficult to know how we can find a more immediate solution. It has become more difficult to recruit all staff apart from advanced practitioners. All other staff in short supply. Those in post are working at maximum capacity. Sickness absence is a problem for radiographers.
- As two of our three breast radiologists also do general/musculoskeletal radiology, we are struggling to accommodate all the work. We desperately need more consultants who are trained in breast work.
- We always look ahead to incremental symptomatic breast service demands and changes to the national screening programme we appointed and trained our consultant radiographer in 2011/2 and this has been very successful.
- Currently under enormous pressure to meet targets, two week wait, etc. Difficulty recruiting colleagues. Short-term solution [is] extra paid clinic sessions to meet demand and workload. Need to entice and train more breast radiologists!
- The shortage in mammographers is equally as big a problem and maintaining the round length is becoming an issue.
- We are hard pressed ever since my colleague decided to retire in Nov 2013. She was a symptomatic part-time radiologist (only) which is hard if not impossible to replace. More so since the Big Professor has met the StRs and told them, 'Not to join only symptomatic units.'. The neighbouring screening trust do not have enough screen read films to employ a joint post as most of their films are being read by advanced practitioners. They too want consultants for their symptomatic clinics!! We have seen 30% rise in number of patients over last two years; making it even harder to meet the targets. At the minute it is me and an advanced practitioner who are managing the services mainly. Every symptomatic film is being double read between us. We are kindly being helped by two consultant radiologist from nearby screening trust; who cover my annual leave and breeches on locum basis and on 'as and when' basis. Our trust and managers are trying their level best to help us but not yet managed to fill the post (not to blame them). At the minute we are in a process of realigning the services with neighbouring screening unit. The talks are at preliminary stage but negotiations are on.

- Accurately tracking the demand especially for symptomatic workload with weighted data for complexity of workload.
- Merger with [hospital] has already happened. Workforce needs to be re-evaluated in terms of the new merged department but negotiations are only just starting. We are taking on more surgical work, by doing vacuum biopsies and excisions rather than surgery, so we may need to increase the workforce in view of this, eg for B3 work but also starting vacuum excisions for cancer patients too ill for surgery or declining to have surgery.
- The situation in our unit is very complex. The symptomatic service is provided on two sites, screening on one. The current distribution of substantive breast radiologists is that two part time radiologists are based on symptomatic site only and in total they offer 5 PA sessions of breast work. Within screening and

symptomatic service on the other site, there is only one substantive radiologist who in total offers five breast sessions, which include three screening and two symptomatic sessions. The service therefore is hugely understaffed. We have up to three locum consultant radiologists working on this site and one retired radiologist offering symptomatic sessions on both sites (three sessions in total). Though there is no more than one substantive and 1.5 locum radiologist working in the department every week. This allows us to just provide bare minimum of sessions required currently, predominantly for the symptomatic service. The screening service radiologist sessions are used mostly for assessment clinics and small volume of film reading while the majority of screening reading is undertaken by advanced practitioners.

## 8. Discussion and main findings

Breast radiologists comprise the largest subspecialty group of clinical radiologists as recorded by the RCR 2014 workforce census.<sup>7</sup> This additional survey of their clinical work provides a level of detail not previously included in the RCR annual census reports, and confirms the prediction of significant workforce challenges within an increasing, yet changing, clinical demand. Both NHS primary and secondary care are dealing with more 'worried well' women, and diagnostic imaging is required to provide an ever-increasing number and complexity of tests.

Together with the findings of the RCR 2014 workforce census the key findings of this survey can be summarised as follows:

### Radiologists

- The breast radiologist workforce has a higher proportion of women with a female to male ratio of 2:1 compared to general radiology with a 1:1.18 female to male ratio.
- The breast radiologist workforce has a higher proportion of LTFT consultants (35%) compared to general radiology (23%)
- Of those breast radiologists who are LTFT, a higher proportion are women (45% female and 15% male) when compared to general radiology (42% female and 12% male).
- There are very few breast radiologists whose job plan has a funded academic component.
- Breast radiologists have a higher proportion of older radiologists with 42% aged 50 years and over (compared with 34% in general radiology).
- There has been a doubling of unfilled radiologist posts since 2010 which is higher than that reported for general radiology as is the proportion of posts unfilled for eight months (53%) and 12 months (47%). There is a wide range of regional variation in these reported rates.
- A significant proportion of clinical work is being delivered by existing staff as extra-contractual activity, similar to that seen in general radiology

- Of the NHSBSP units included in this survey, 25% are staffed by two or fewer consultant radiologists, which raises issues relating to 'critical mass' or the potential to have issues relating to 'single points of failure.'

Importantly, there is a significantly higher rate of planned retirements in the next five years of breast radiologists (21%) compared with that of general radiology (14%). By 2025, the rates are predicted at 38% (breast radiology) and 29% (general radiology). By 2030, the rates are predicted at 53% (breast radiology) and 46% (general radiology). These are the highest rates of planned retirements of any clinical radiology specialty.

### Breast clinicians

- Breast clinicians are present in a third of NHSBSP units responding to this survey and are recognised as providing a significant contribution across an extensive range of diagnostic breast imaging.
- Breast clinicians' job plans contain a high proportion of direct clinical care (DCC) provision.
- A high proportion of breast clinicians (43%) work LTFT.
- Recruitment and retention of breast clinicians has been challenged by changes to the terms and conditions of job contracts in recent years, with the level of unfilled posts being reported at 11%, virtually all of which have been long term.
- Retirement of breast clinicians is reported at a significant rate; 25% plan to retire within five years and nearly 50% by 2025.

## Consultant radiographers

- Consultant radiographers are present in 30% of responding units and they too are recognised as providing a significant contribution across an extensive range of diagnostic imaging procedures.
- 28% of consultant radiographers work LTFT.
- Consultant radiographers share a similar demographic with breast clinicians when considering planned retirements with a predicted rate of 25% at five years and nearly 50% by 2025.
- 20% of consultant radiography posts are unfilled, largely on a long-term basis.

## Advanced practitioners

- In contrast to consultant radiographers, a large proportion (nearly 80%) of responding NHSBSP units have advanced practitioners providing an extensive and significant contribution across a range of diagnostic breast imaging procedures.
- Approximately 50% of advanced practitioners work LTFT and each NHSBSP unit has on average 1–2 advanced practitioners.
- Planned retirement rates among advanced practitioners are reported as being 26% in the next five years, rising to 43% by 2025.

## Workforce strategies

The survey captured a number of workforce strategies which have been planned or executed to date. These include:

- International recruitment
- Return after retirement
- Revision of radiological training in breast imaging
- Further enhancement of role extension within and beyond current workforce.

There is no single solution that will address these challenges. Each of these strategies should be shared widely to address the difficulty of future sustainability of breast services in the UK. The potential impact of new technologies should be assessed within this context. A 'whole service' approach will be required to reflect the changing needs of the breast imaging and diagnostic service and workforce. This important survey, which for the first time includes the contributions by non-radiologists to diagnostic breast imaging services, is a crucial step in quantifying these challenges.

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