Scope of radiographic practice survey 2012

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Summary

This research was carried out by the Society and College of Radiographers (SCoR) in March and April 2012 to identify the current scope of practice for the radiographic workforce across the spectrum of clinical imaging and radiotherapy in the United Kingdom (UK). It is intended to update the Scope of Practice 2008 report. The research covers radiotherapy and diagnostic imaging practice in the National Health Service (NHS) and independent/private sectors.

Executive Summary

Background and Nature of the Research

This work was carried out by the Society and College of Radiographers to update the Scope of Practice 2008 report$_1$ by identifying practice developments over the past four years and quantifying the scope of current practice.

Exploring the Diagnostic Radiographic Workforce

143 service managers in diagnostic imaging departments across the UK responded to an online questionnaire identifying the scope of practice of diagnostic radiographers in their department.

The results show that the scope of practice for the diagnostic radiographic workforce continues to develop. Significant numbers of departments have radiographer-led examinations, interventional procedures and gastro-intestinal studies. Many radiographers issue written reports, especially in ultrasound departments. In diagnostic ultrasound, fewer departments are offering a service in early pregnancy, obstetrics and abdominal and more departments are offering nuchal thickness and musculoskeletal services when compared to the 2008 survey. There has been a three-fold increase in the proportion of departments with research radiographers since 2008. However, there has been a slight drop from 42% to 33% in the proportion of departments with radiographers with a substantive role in clinical education over the same period.

Exploring the Therapeutic Radiotherapy Workforce

Radiotherapy service managers from 43 out of 64 centres across the UK responded to an online questionnaire identifying the scope of practice of therapeutic radiographers in their respective centres.

The results from this survey demonstrate that the role of the therapeutic radiographer continues to expand with responsibilities across the entire radiotherapy pathway. In many centres these include

responsibility for an increasing range of pre-treatment, treatment and post treatment activities. All but one centre have therapeutic radiographers responsible for pre-treatment imaging, whilst two thirds of centres (67%) have a radiographer-led treatment planning service. Most centres (81%) have radiographer-led on treatment review, and in 30% of centres radiographers are undertaking supplementary prescribing. Around two thirds of centres (65%) have tumour site specialist radiographers and just over four fifths of centres (81%) have technical specialist roles. There has been a 29% increase in the number of centres with advanced practitioners and a 7% increase of those with consultant practitioners since 2008. There has been a slight increase in the percentage of centres with research radiographers, from 61% in 2008 to 70% in this survey. However, as with diagnostic radiographers, there has been a drop in the proportion of centres with radiographers with a substantive role in clinical education from two thirds (67%) in 2008 to just over half (51%) in this survey.

1 Scope of Radiographic Practice (2008) University of Hertfordshire in collaboration with the Institute for Employment Studies for the Society and College of Radiographers

1. Background and Nature of the Research

1.1 Introduction

This research was carried out by the Society and College of Radiographers (SCoR) in March and April 2012 to identify the current scope of practice for the radiographic workforce across the spectrum of clinical imaging and radiotherapy in the United Kingdom (UK). It is intended to update the Scope of Practice 2008 report[2]. The research covers radiotherapy and diagnostic imaging practice in the National Health Service (NHS) and independent/private sectors.

1.2 Background

The Scope of Practice 2008 report stated that the scope of practice for the diagnostic radiographic workforce in the acute sector was diverse and expanding. It identified many examples of emerging new roles undertaken by radiographers: significant numbers were performing interventional procedures and specialist gastrointestinal studies; many radiographers were reporting independently of radiologists, especially in ultrasound where numbers exceed 80%; and almost all diagnostic radiographers were involved in audit. The report's authors identified that the greatest driver for implementation of new roles was service demand and that radiologists' resistance, although generally subsiding, continued to be an inhibitor. There was evidence that the career progression framework was being adopted but not by all employers.

The scope of practice for the therapeutic radiographic workforce was also expanding. There were examples of radiographer involvement in pre-treatment simulation leading to autonomous planning and treatment prescribing by radiographers. Developments in specialist brachytherapy were reported from nine radiotherapy centres. Radiographers were staffing on-treatment reviews in 21 centres and in 10 centres were involved in patient follow up clinics. Nearly two thirds of centres had research radiographers and in 14 centres there was radiographer led research. New roles were emerging in more holistic aspects of patient management including palliative care and counselling. Over half of all centres had advanced practitioners and consultant radiographers were employed in three centres.

The report authors concluded that the scope of practice for UK radiographers was broad and continuing to expand. They highlighted the importance of further implementation of the career

progression framework and the need for more radiographer-led clinical research to improve patient outcomes and strengthen the profession.

1.3 Aims of the research

The aims of the work undertaken and reported here were to:

- Quantify the different roles undertaken by the radiography workforce within clinical practice.
- Identify role developments which have occurred within the profession over the past 4 years (since the publication of the Scope of Practice 2008 report).

This work will inform a revised Learning and Development Framework by the College of Radiographers.

2 Scope of Radiographic Practice (2008) University of Hertfordshire in collaboration with the Institute for Employment Studies for the Society and College of Radiographers

2. Exploring the Diagnostic Radiography Workforce

2.1 Introduction

This chapter reports data on the diagnostic radiography workforce across the United Kingdom. An online questionnaire was used to seek information on roles and developments in the workforce. Information was sought on the different roles undertaken within clinical practice.

2.2 Methodology

2.2.1 Questionnaire design

The research tool was an online questionnaire via Survey Monkey. A copy of the questionnaire can be found in the appendices.

2.2.2 Participants

Emails invitations containing a link to the online questionnaire were sent to 1278 diagnostic imaging managers / superintendent radiographers / consultant radiographers throughout the UK in March 2012. Email addresses were sourced from the SCoR membership database. The survey was targeted at the total population as this would ensure that the samples were representative and not biased.

Responses were received from 143 departments which is an 11% response rate. This compares to 108 managers responding to the equivalent 2008 survey. In this survey none of the questions were mandatory so different questions may have different response rates. Where more than one response was received from a department the later response has been disregarded.

The results are not directly comparable to the 2008 survey as this survey targeted individual departments whereas the 2008 survey was directed at overall hospital-wide imaging managers. So in the 2012 survey we have responses from ultrasound department managers for example where we might expect the answers to be different to those provided by the overall imaging manager for the site / hospital. The 2008 survey also looked only at NHS acute hospitals whereas the 2012 survey covered all types of departments including those in a community or private setting.

2.3 Results

2.3.1 Demographic data

The region and type of hospital for those responding are shown in table 2.1. The highest response was 22 from Scotland with none from Northern Ireland being the lowest. Five respondents identified themselves as being in the private / independent sector.

Table 2.1 Region and type of hospital

Region	Foundation	Non-teaching	Teaching	Other / unknown	Grand Total
Northern Ireland	0	0	0	0	0
Scotland	0	3	9	4	16
Wales	1	6	4	0	11
East Midlands	2	0	3	0	5
East of England	3	4	2	2	11
London	8	4	5	5	22
North East	8	0	0	1	9
North West	5	1	1	1	8
South Central	1	2	1	0	4
South East Coast	3	1	1	1	6
South West	9	0	6	0	15
West Midlands	4	1	1	0	6
Yorkshire and Humber	3	2	2	0	7
Unknown	0	0	1	22	23
Grand Total	**47**	**24**	**36**	**36**	**143**

The department type of those responding is shown in table 2.2 by UK country / region.

Table 2.2 Region and type of department

Region	Radiology / x-ray / Imaging	CT and / or MRI	Ultrasound	Breast imaging	Unknown / Other	Grand Total
Northern Ireland	0	0	0	0	0	0
Scotland	12	2	1	0	1	16
Wales	5	2	1	0	3	11
East Midlands	4	0	1	0	0	5
East of England	4	0	2	2	3	11
London	11	2	1	1	7	22
North East	8	0	0	1	0	9
North West	7	1	0	0	0	8
South Central	3	0	0	0	1	4
South East Coast	5	0	0	0	1	6
South West	9	1	1	1	3	15
West Midlands	4	0	0	0	2	6
Yorkshire and Humber	6	1	0	0	0	7
Unknown	6	5	2	2	8	23
Grand Total	**84**	**14**	**9**	**7**	**29**	**143**

2.3.2 Reporting roles

Table 2.3 shows the responses to questions about reporting roles. Where an equivalent question was asked in the 2008 survey the equivalent percentage is shown for comparison.

Table 2.3 Reporting roles frequencies

Role	Number of departments with role	Total number of respondents to question	%	% (2008 survey)
'Red dot' scheme	78	137	57%	84%
Radiographer-led 'hot-reporting' service in A&E	29	135	22%	18%
'Written preliminary comment' scheme	20	137	15%	N/A

The percentage of departments with a 'Red dot' scheme increases to 71% when only responses from radiology / x-ray / imaging departments are considered. Furthermore, 73% of radiology / x-ray / imaging departments have a 'Red dot' scheme and/or a 'Written preliminary comment' scheme.

2.3.3 Advanced trauma life support team roles

Table 2.4 shows the response to the question about radiographers forming part of advanced trauma life support teams.

Table 2.4 Advanced trauma life support team roles frequencies

Role	Number of departments with role	Total number of respondents to question	%	% (2008 survey)
Radiographers form part of advanced trauma life support team	10	134	8%	N/A

2.3.4 Imaging request roles

Table 2.5 shows the responses to questions about imaging request roles.

Table 2.5 Imaging request roles frequencies

Role	Number of departments with role	Total number of respondents to question	%	% (2008 survey)
Requests for imaging	73	137	53%	N/A
Justification under IR(ME)R	120	137	88%	N/A

2.3.5 Audit and research roles

Table 2.6 shows the number of departments with radiographers undertaking audit and the number of departments with radiographers with a substantive role (0.2 whole time equivalent and above) in research.

Table 2.6 Audit and research roles frequencies

Role	Number of departments with role	Total number of respondents to question	%	% (2008 survey)
Radiographers undertaking audit	135	137	99%	94%
Research radiographers	23	135	17%	5%

Six departments have research radiographers at Agenda for Change (AfC) band 6, fourteen at AfC band 7, six at AfC band 8a and two at AfC band 8b, c or d.

2.3.6 Clinical education

Table 2.7 shows the number of departments with radiographers with a substantive role (0.2 whole time equivalent and above) in clinical education.

Table 2.7 Clinical education roles frequencies

Role	Number of departments with role	Total number of respondents to questions	%	% (2008 survey)
Clinical education radiographers	45	137	33%	42%

2.3.7 Injection and interventional roles

Table 2.8 shows the responses to questions about injection and interventional roles.

Table 2.8 Injection and interventional roles frequencies

Role	Number of departments with role	Total number of respondents to questions	%	% (2008 survey)
IV / cannulation	101	137	74%	94%
Image guided intervention	35	135	26%	N/A
Peripherally inserted central catheters (PICCs)	7	135	5%	N/A
Supplementary prescribing	17	131	13%	12%

The percentage of departments with radiographers performing intravenous injection / cannulation increases to 82% when only responses from radiology / x-ray / imaging departments are considered.

It is claimed that supplementary prescribing was undertaken in 17 (13%) of the sample sites. However, this figure is higher than expected. It may be that the question was misinterpreted and included those administering a healthcare product or medicine under a patient group direction or a patient specific direction.

2.3.8 Radiographer-led investigation roles

Table 2.9 shows the responses to questions about injection and interventional roles.

Table 2.9 Radiographer-led investigation roles frequencies

Role	Number of departments with role	Total number of respondents to questions	%	% (2008 survey)
Angiographic procedures	4	129	3%	N/A
IVUs	23	129	18%	35%
Radiographer-led CT examinations	43	129	33%	34%
Radiographer-led MRI examinations	30	127	24%	19%
Dacro-cystograms	3	127	2%	N/A
Sialograms	5	128	4%	N/A
Cardiac and/or physiological measurement	7	128	6%	6%
Pharmacological stressing in RNI	10	122	8%	12%
Exercise stressing in RNI	11	124	9%	8%

2.3.9 Gastrointestinal and gynaecological imaging roles

Table 2.10 shows the responses to questions about gastrointestinal and gynaecological roles.

Table 2.10 GI and gynae roles frequencies

Role	Number of departments with role	Total number of respondents to questions	%	% (2008 survey)
Barium studies	63	129	49%	N/A
Endoscopic gastro-intestinal procedures	8	128	6%	N/A
Computed tomography colonography (CTC) imaging	58	127	46%	N/A
Hysterosalpingography	22	127	17%	N/A
Hycosys (hysterosalpingo-contrast-sonography)	9	129	7%	N/A

2.3.10 Diagnostic ultrasound

Managers were asked to indicate against a predetermined list whether sonographers (or radiographers, where relevant) offered a service in the areas shown in Table 2.11.

Table 2.11 Diagnostic ultrasound roles frequencies

Role	Number of departments with role	Total number of respondents to questions	%	% (2008 survey)
Early pregnancy	60	92	65%	77%
Obstetrics	64	92	70%	79%
Nuchal thickness	57	92	62%	48%
Neonatal head	32	92	35%	42%
Gynaecology	74	92	80%	85%
Abdominal	78	92	85%	94%
Transrectal	16	92	17%	19%
Thyroid	38	92	41%	N/A
Testes	64	92	70%	N/A
Other small parts	47	92	51%	N/A
Deep vein thrombosis identification	61	92	66%	N/A
Role	**Number of departments with role**	**Total number of respondents to questions**	**%**	**% (2008 survey)**
Other vascular	45	92	49%	N/A
Musculoskeletal	43	92	47%	39%
Ultrasound guided joint injection	9	92	10%	N/A
Cardiac	7	92	8%	7%
Breast	23	92	25%	20%
Hycosys	7	92	8%	N/A
Other contrast examinations	7	92	8%	N/A
Nerve blocks	3	92	3%	0.0

Some respondents also gave other ultrasound areas not included in the above list: paediatric hip (2 departments); transrectal biopsies (2 departments); trans cranial doppler (1 department); breast vacuum biopsy (1 department); and fine needle aspiration (1 department).

2.3.11 Ultrasound reporting practice

Excluding obstetric reporting, managers were asked to identify which phrase best fitted their departmental reporting practice in ultrasound. The options presented were:

1. A pro-forma or tick chart is completed by the sonographer, but verified by another person (e.g. a radiologist).
2. A pro-forma or tick chart is completed and verified by the sonographer.
3. An independent (free text) report is produced by the sonographer but verified by another person.
4. An independent report is produced and verified by the sonographer.

The responses are shown in table 2.12. The majority of departments responded that an independent report is produced and verified by the sonographer.

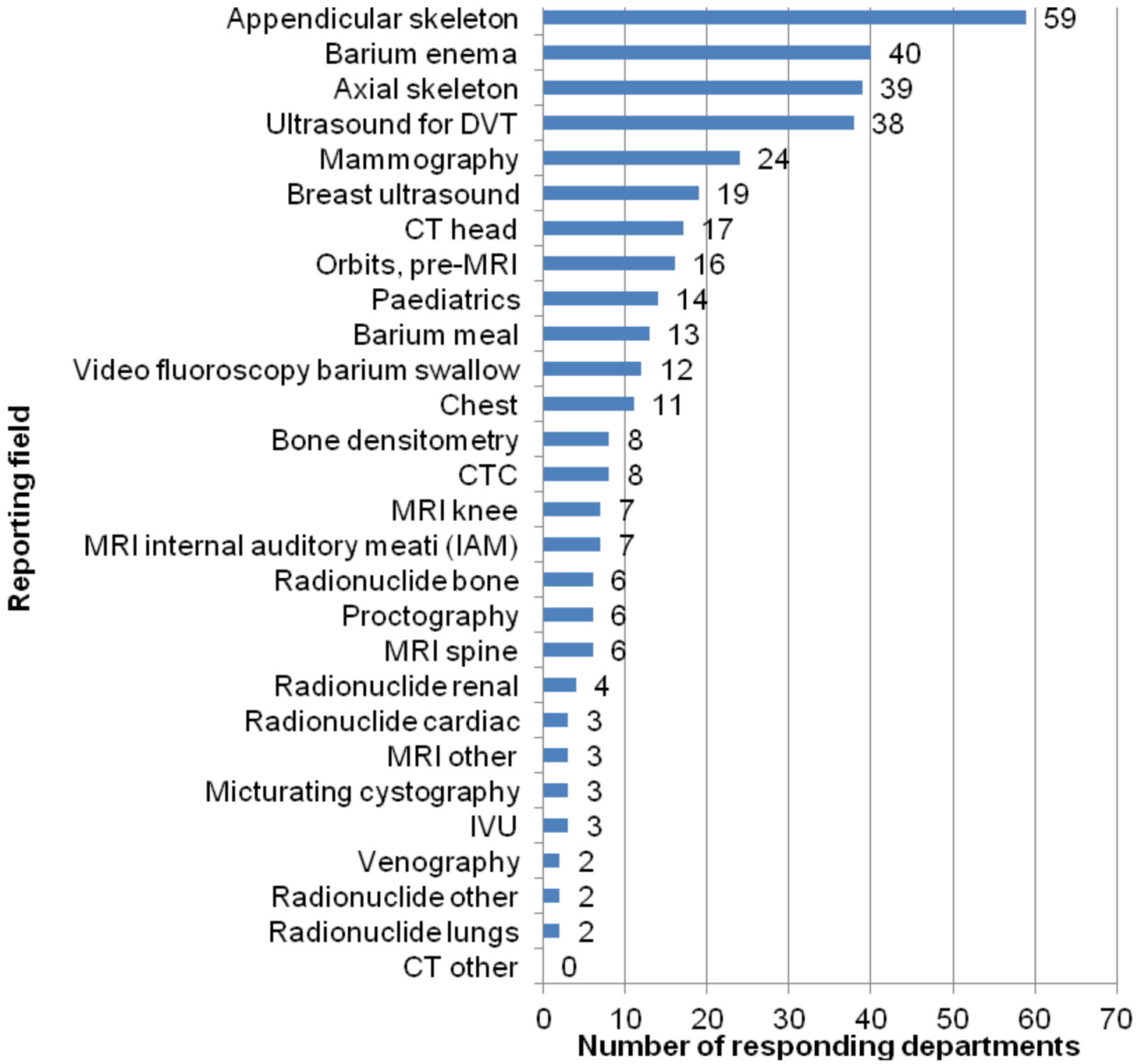
Table 2.12 Ultrasound reporting practices

Role	Responses	Total number of respondents to questions	%	% (2008 survey)
A pro-forma or tick chart is completed	0	89	0%	1%

by the sonographer, and verified by another person (e.g. radiologist).				
A pro-forma or tick chart is completed and verified by the sonographer.	2	89	2%	5%
An independent (free text) report is produced by the sonographer and verified by another person.	7	89	8%	3%
An independent report is produced and verified by the sonographer.	80	89	90%	82%

2.3.12 General reporting practice

Managers were asked to indicate against a predetermined list in which categories do radiographers in their department issue written reports. The results are shown in Figure 2.1.

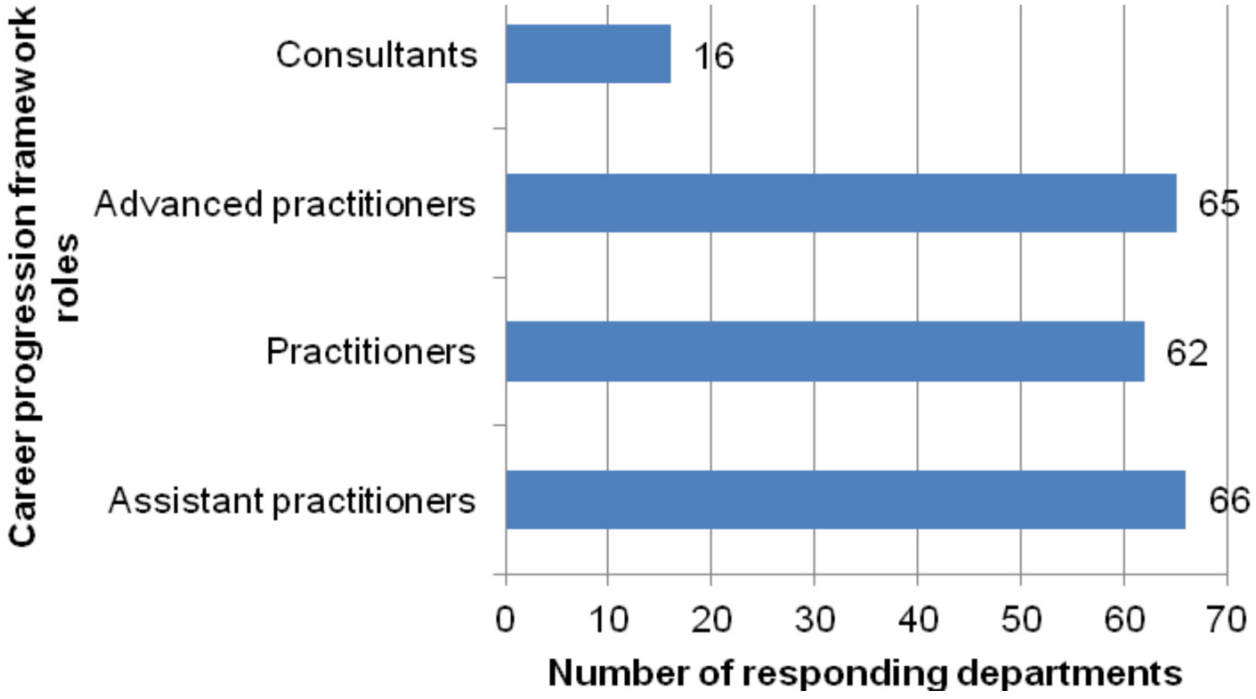


Some respondents gave other reporting areas not given in the above list: ultrasound (6 departments); barium swallow/contrast swallow (1 department); fetal cardiography (1 department); insertion of tunnel lines (1 department); pre-lim comment on scaphoid MRI to fracture clinic for [patient] management - formal report follows (1 department); video urodynamics (1 department); Hysterosalpingography reporting (1 department); Report on the siting of nasogastric tubes (1 department).

2.3.13 Career progression framework roles

Managers were asked if they have the following career progression framework roles in their department: assistant practitioners; practitioners; advanced practitioners; and/or consultants.

We would expect the number of departments with practitioners to be higher than any of the other roles because all departments will have practitioners i.e. radiographers practising at Agenda for Change band 5/6 or equivalent. The responses indicate therefore that some respondents misinterpreted this response option, perhaps because the term practitioner is not widely used. There was a similar misinterpretation in the 2008 survey.



2.3.14 Other radiographic roles

Managers were asked to describe any other roles carried out by radiographic staff in their department that had not been covered in this questionnaire.

A total of 28 additional roles were identified across the departments. Table 2.13 identifies the roles presented by managers and the number of sites where they have been adopted. Roles which have been incorporated previously in this report are not included in the table below.

Table 2.13 Other radiographic roles

Role	Responses
Audit development and review	1
Quality management	2
Hospital wide ultrasound clinical governance	1
Performance manage waiting lists across modalities	1
People management	3
Training	3
Lecturing	2
IR(ME)R lead	1
IT	1
PACs	3
Forensic service for the coroner	1
Arthrography	2
Barbotage and high volume saline paratenon stripping	1
Bone marrow sampling	1

Breast cancer follow up service	1
Breast biopsies	4
Radiotherapy planning scanning	1
Cell labelling in an isolator	1
Contrast administration	2
Administration of diuretics	1
Administration of thyroid blocking agents	1
Pharmacy	2
Radio-iodine therapy for thyrotoxic and cancer patients	1
Cystograms	1
Video urodynamics	1
Glomerular filtration rate	1
Lithotripsy	1
Tubograms	1

2.4 Discussion

The results from this survey demonstrate that the role of the diagnostic radiographer continues to expand.

One third of responding departments have radiographer-led CT examinations and one quarter have radiographer-led MRI examinations. Nearly half of responding departments have radiographer-led barium studies and nearly half have radiographers undertaking CTC imaging. Over half the departments have radiographers making requests for imaging and nearly nine out of ten have radiographers justifying requests for images under IR(ME)R.

The proportion of departments with ‘red dot’ schemes in place has reduced since 2008 perhaps as they have been replaced by other image interpretation reporting systems. Outside ultrasound, the most common categories for radiographer written reports are appendicular skeleton, barium enema and axial skeleton. Within ultrasound, nine out of ten departments selected “An independent report is produced and verified by the sonographer” as the best description of their practice.

Three-quarters of departments have radiographers performing intravenous injection / cannulation. This is a decrease since the 2008 survey. The number of departments where radiographer-led intravenous urograms (IVUs) are undertaken has nearly halved since the 2008 survey. This reduction in IVUs may be as a result of a move towards more CT urograms and ultrasound.

The proportion of departments with research radiographers has increased threefold since 2008 which is pleasing as the 2008 report identified radiographer-led clinical research as an area for development. One third of responding departments have radiographers with a substantive role in clinical education which is a slight drop since the 2008 survey and highlights a potential area for improvement.

In diagnostic ultrasound fewer departments are offering a service in early pregnancy, obstetrics and abdominal and more departments are offering nuchal thickness and musculoskeletal services when compared to the 2008 survey. This may reflect an increase in service demand in the latter areas, such as the introduction of the Fetal Anomaly Screening Programme (or equivalent) first trimester ultrasound examination between 11w and 13w 6d to include nuchal translucency measurement as part of the combined test.

When asked about other radiographic roles not covered in the survey, breast biopsies, identified by 4 departments, was the most frequent response.

3. Exploring the Therapeutic Radiography Workforce

3.1 Introduction

This chapter reports data on the therapeutic radiography workforce across the United Kingdom. An online questionnaire was used to seek information on roles and developments in the workforce. Information was sought on the different roles undertaken within clinical practice.

3.2 Methodology

3.2.1 Questionnaire design

The research tool was an online questionnaire via Survey Monkey. A copy of the questionnaire can be found in the appendices.

3.2.2 Participants

Email invitations containing a link to the online questionnaire were sent to the radiotherapy service managers (RTSMs) at the 64 radiotherapy centres in the UK in March 2012. Email addresses were sourced from the SCoR list of radiotherapy service managers. The survey was targeted at the total population as this would ensure that the samples were representative and not biased.

Responses were received from 43 centres which is a 67% response rate. This compares to a 53% response rate in the equivalent 2008 survey. The responses were checked to ensure there was no more than one response per department.

The results are not directly comparable to the 2008 survey as the questions asked in this survey were largely redesigned. However, where an equivalent question was asked in 2008, the results are shown for comparison.

3.3 Results

3.3.1 Demographic data

The region and type of hospital for those responding are shown in table 3.1.

Table 3.1 Region and type of hospital

Region	NHS Health Board	NHS Foundation Trust	NHS Trust	Private / Independent / Charity	Unknown	Grand Total
Northern Ireland, Scotland and Wales	5		1			**6**
London		2	1	2		**5**
Midlands and East		5	9			**14**
North of England		5	3			**8**
South of England		4	4			**8**
Unknown					2	**2**

Grand Total	**5**	**16**	**18**	**2**	**2**	**43**

3.3.2 Community roles

Table 3.2 shows the number of centres with radiographers working as community liaison radiographers and taking on health promotion activities in the community.

Table 3.2 Community roles frequencies

Role	Number of centres with role	Number of respondents to question	%	% (2008 survey)
Community liaison radiographers	2	43	5%	N/A
Health promotion activities	2	43	5%	N/A

3.3.3 Service management roles

Table 3.3 shows the frequency of managers (other than RTSMs) outside the radiotherapy department working within cancer services with a therapeutic radiographer background.

Table 3.3 Service management roles frequencies

Role	Number of centres with role	Number of respondents to question	%	% (2008 survey)
Managers (except RTSMs) working within cancer services	7	43	16%	N/A

The specific job titles of these managers are: Cancer centre manager (1 centre); Cancer information centre manager (1 centre); Clinical audit facilitator (1 centre); Cancer support service (1 centre); Directorate manager for medical services (1 centre); and R&D manager (2 centres).

3.3.4 Cancer network group roles

Table 3.4 shows the frequency that therapeutic radiographers are members of network groups. Note that the questions were not all applicable to all respondents, for example where the role is only present in England.

Table 3.4 Service management roles frequencies

Role	Number of centres with role	Number of respondents to question	%	% (2008 survey)
Members of network radiotherapy group	38	41	88%	N/A
Members of the network tumour site groups	16	41	39%	N/A
Members of the network technical specialist groups	8	33	24%	N/A

3.3.5 Quality management roles

Table 3.4 shows that 91% of centres have therapeutic radiographers responsible for the quality assurance accreditation system in their centres. This has increased from 79% in 2008.

Table 3.5 Quality management roles frequencies

Role	Number of centres with role	Number of respondents to question	%	% (2008 survey)
Quality assurance	39	43	91%	79%

3.3.6 Referral roles

Table 3.6 shows the frequency of therapeutic radiographers undertaking referral roles.

Table 3.6 Referral roles frequencies

Role	Number of centres with role	Number of respondents to question	%	% (2008 survey)
Accept newly referred patients for radiotherapy	6	43	14%	N/A
Attending cancer multi-disciplinary team meetings	32	43	74%	N/A
Attending radiotherapy multi-disciplinary team meetings	39	42	93%	N/A
Always or sometimes participating in the decision to treat	22	43	51%	N/A

3.3.7 Pre-treatment patient preparation roles

Table 3.7 shows that 16 centres have therapeutic radiographers responsible for obtaining informed consent from patients.

Table 3.7 Pre-treatment patient preparation roles frequencies

Role	Number of centres with role	Number of respondents to question	%	% (2008 survey)
Obtaining informed consent from patients	16	43	37%	N/A

3.3.8 Pre-treatment process roles

Table 3.8 shows frequency of therapeutic radiographer involvement in pre-treatment roles.

Table 3.8 Pre-treatment process roles frequencies

Role	Number of centres with role	Number of respondents to question	%	% (2008 survey)
Making immobilisation shells for patients	30	43	70%	N/A
Making lead masks	15	43	35%	N/A
Pre-treatment imaging: CT,CT-PET,CT-MRI	42	43	98%	N/A
Radiographer-led treatment planning service	29	43	67%	79%

Role	Number of centres with role	Number of respondents to question	%	% (2008 survey)
Radiographer-led IMRT planning	10	43	23%	N/A
Volume delineation	17	43	40%	N/A
Production of dosimetric plan for individual patients	25	43	58%	N/A
Authorisation of the treatment plan	9	43	21%	N/A
Prescription of the radiotherapy treatment	5	43	12%	6%
Authorisation of the treatment prescription	4	43	9%	N/A
Insertion of fiducial markers	1	43	2%	N/A

3.3.9 Tumour site specialist roles

28 of the responding centres (65%) have tumour site specialist radiographers. This is an increase from 27% in the 2008 survey. Table 3.9 shows the associated specialities.

Table 3.9 Tumour site specialist roles frequencies

Speciality	Number of centres with role	Number of respondents to question	%	% (2008 survey)
Gynae-oncology	18	43	42%	N/A
Head & neck	16	43	37%	N/A
Breast	15	43	35%	N/A
Paediatric	11	43	26%	N/A
Lung	10	43	23%	N/A
Neuro-oncology	7	43	16%	N/A
Palliative care	3	43	7%	N/A

The other specialities given in the free text were: colorectal (3 centres); urology (3 centres); skin (2 centres); upper GI (1 centre); prostate (1 centre); and total body irradiation (TBI) & total skin electron irradiation (TSEI) (1 centre).

3.3.10 Technical specialist roles

35 of the responding centres (81%) have technical specialist roles. Table 3.10 shows the associated specialities.

Table 3.10 Technical specialist roles frequencies

Speciality	Number of centres with role	Number of respondents to question	%	% (2008 survey)
IGRT	24	43	56%	N/A
Brachytherapy	23	43	54%	61%
IMRT	14	43	33%	N/A
4 D adaptive	7	43	16%	N/A

The other specialities given in the free text were: imaging (3 centres); pre-treatment (2 centres); systems administration & IT (2 centres); breast mark-up (1 centre); clinical trials and audit (1 centre); and stereotactic (1 centre).

3.3.11 Radiographer-led brachytherapy treatment service roles

21 of the responding centres (49%) have therapeutic radiographers responsible for a radiographer-led brachytherapy treatment service. Table 3.11 shows the associated specialities.

Table 3.11 Radiographer-led brachytherapy treatment roles frequencies

Speciality	Number of centres with role	Number of respondents to question	%	% (2008 survey)
Gynaecological cancer	20	43	47%	N/A
Prostate cancer	2	43	5%	N/A

The other speciality given in the free text was the oesophagus.

3.3.12 Advanced practitioner roles

36 of the responding centres (84%) have therapeutic radiographers who are advanced practitioners. This has increased from 55% of responding departments in 2008.

Table 3.12 shows the associated specialities.

Table 3.12 Advanced practitioner roles frequencies

Speciality	Number of centres with role	Number of respondents to question	%	% (2008 survey)
Technical specialist	21	43	49%	N/A
Breast	14	43	33%	N/A
Gynae-oncology	12	43	28%	N/A
Head & neck	10	43	23%	N/A
Lung	8	43	19%	N/A
Paediatric	8	43	19%	N/A
Neuro-oncology	4	43	9%	N/A
Palliative care	3	43	7%	N/A

The other specialities given in the free text were: imaging (4 centres); clinic / on-treatment review (4 centres); brachytherapy (3 centres); pre-treatment planning (3 centres); stereotactic (2 centres); breast mark-up (1 centre); clinical trials (1 centre); IGRT (1 centre); dosimetry (1 centre); isotopes (1

centre); patient information and support (1 centre); portal image review (1 centre); prostate (1 centre); tissue viability (1 centre); and urology (1 centre)

3.3.13 Consultant practitioner roles

7 of the responding centres (16%) have therapeutic radiographers who are consultant practitioners. This has increased from 9% of responding departments in 2008.

Table 3.13 Consultant practitioner roles frequencies

Speciality	Number of centres with role	Number of respondents to question	%	% (2008 survey)
Gynae-oncology	3	43	7%	N/A
Breast	1	43	2%	N/A
Head & neck	1	43	2%	N/A
Lung	1	43	2%	N/A
Neuro-oncology	1	43	2%	N/A
Palliative care	1	43	2%	N/A

The other specialities given in the free text was brachytherapy (2 centres).

3.3.14 On-treatment review clinic roles

Table 3.14 shows the frequency of on-treatment review clinic roles in the responding departments.

Table 3.14 On-treatment review clinic roles frequencies

Role	Number of centres with role	Number of respondents to question	%	% (2008 survey)
Radiographer-led on-treatment review clinics	35	43	81%	N/A
Supplementary prescribing of drugs for patients as part of their toxicity management before and during their course of radiotherapy	13	43	30%	N/A
Using toxicity assessment scales	33	43	77%	N/A

The 2008 survey did not address this area of practice so there is no comparison data. However, the 2012 survey shows that radiographers undertake on-treatment review in most departments.

3.3.15 Administration and management of chemotherapy (CT) / concomitant RT and CT roles

Table 3.15 shows the frequency of administration and management of chemotherapy (CT) / concomitant RT and CT roles in the responding departments.

Table 3.15 Administration and management of CT / concomitant RT and CT roles frequencies

Role	Number of centres with role	Number of respondents to question	%	% (2008 survey)
Administering cytotoxic chemotherapy	1	43	2%	N/A
Co-ordination and management of concomitant RT & CT treatment regimes	26	43	60%	N/A

3.3.16 Follow up clinic roles

Table 3.16 shows the frequency of follow up clinic roles in the responding departments.

Table 3.16 Follow up clinic roles frequencies

Role	Number of centres with role	Number of respondents to question	%	% (2008 survey)
Radiographer-led follow up services	13	43	30%	30%
Education of patients as part of self management follow up	12	43	28%	N/A
Supplementary prescribing of drugs for patients as part of their toxicity management after their course of radiotherapy has finished	3	43	7%	N/A
Toxicity assessment, monitoring and management of radiotherapy patients after their course of radiotherapy has finished	10	43	23%	N/A

3.3.17 Research roles

Table 3.17 shows the number of responding centres with dedicated radiotherapy research roles.

Table 3.17 Research roles frequencies

Role	Number of departments with	Total number of respondents to	%	% (2008 survey)

	role	question		
Research radiographers	30	43	70%	61%

Eleven centres have research radiographers at Agenda for Change (AfC) band 6, twenty-one at AfC band 7, seven at AfC band 8a and two at AfC band 8b, c or d.

3.3.18 Clinical education roles

Table 3.18 shows the number of responding centres with therapeutic radiographers with a substantive role (0.2 WTE and above) in clinical education.

Table 3.18 Clinical education roles frequencies

Role	Number of departments with role	Total number of respondents to question	%	% (2008 survey)
Clinical education radiographers	22	43	51%	67%

Ten centres have therapeutic radiographer roles in clinical education funded by the health board / trust, six are funded by a higher education centre, and six are jointly funded.

3.3.19 Other roles

Table 3.19 shows the frequency of other therapeutic radiographer roles in the responding centres.

Table 3.19 Other roles frequencies

Role	Number of departments with role	Total number of respondents to question	%	% (2008 survey)
Professionally trained counsellors who accept patients for counselling therapy	7	43	16%	N/A
Information and support services	25	43	58%	45%
IT/Data management and/or RPORT	27	43	63%	N/A

Managers were then asked to describe in free text any other roles carried out by radiographic staff in their department that had not been covered in this questionnaire.

There were 14 responses with a total of 30 roles identified across the departments. Table 3.20 identifies the roles presented by managers and the number of sites where they have been adopted. Roles which have been incorporated previously in this report are not included in the table below.

Table 3.20 Other radiographic roles

Role	Responses
Lymphoedema specialist	1
Cannulation and administration	5
Blood tests	1
Acupuncture	1

General manager	2
CPD / Practice development manager	2
Cancer bed management	1
Health and safety lead	1
IR(ME)R lead	1
Cancer wait times pathway management for all oncology, haematology and some palliative medicine cases	1
Chemotherapy groups	2

3.4 Discussion

The results from this survey demonstrate that the role of the therapeutic radiographer continues to expand across the entire radiotherapy pathway.

Around one third of centres (37%) have therapeutic radiographers responsible for obtaining informed consent from patients and nearly all centres (93%) have therapeutic radiographers attending radiotherapy multi-disciplinary team meetings.

All but one centre have therapeutic radiographers responsible for pre-treatment imaging. Two thirds of centres (67%) have a radiographer-led treatment planning service which is a decrease of 12% since 2008. Around two thirds (65%) of centres have tumour site specialist radiographers compared to just over a quarter of centres (27%) in 2008. Just over four fifths of centres (81%) have technical specialist roles, although there has been a fall in therapeutic radiographers with brachytherapy roles from 61% in 2008 to 54% in this survey.

The increasing implementation of the career progression framework is shown by a 29% increase in the number of centres with advanced practitioners and a 7% increase of those with consultant practitioners since 2008.

While there are a low number of community liaison roles in only 2 centres (5%), there are 38 centres (88%) with therapeutic radiographers who are members of their network radiotherapy group. 13 centres (30%) have therapeutic radiographers responsible for radiographer-led treatment follow-up and 10 centres (23%) have therapeutic radiographers responsible for toxicity monitoring and management of patients after completion of their treatment.

There has been a growth in the percentage of therapeutic radiographers responsible for the quality assurance accreditation system in their centres of 12% since 2008.

There has been a slight increase in the percentage of centres with research radiographers, from 61% in 2008 to 70% in this survey. However, the proportion of centres with therapeutic radiographers in clinical education roles has reduced from two thirds (67%) in 2008 to just over half (51%) in this survey. The percentage of centres with therapeutic radiographers in information and support services roles has increased from 45% to 58% over the same period.

4. Contributors

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Appendix A – Questionnaires

Diagnostic radiography workforce questionnaire

Therapeutic radiography workforce questionnaire