IMPROVING RETENTION OF THE RADIOTHERAPY WORKFORCE – THE ROLE OF PRACTICE PLACEMENTS IN STUDENT ATTRITION FROM PRE-REGISTRATION PROGRAMMES IN ENGLAND

EXECUTIVE SUMMARY AND RECOMMENDATIONS

Foreword

The role of radiotherapy in the treatment and cure of cancer is growing. Access to radiotherapy is modelled at about 50%; that is half of all patients diagnosed with cancer should be offered it as part of their treatment plan. Currently, radiotherapy in England falls short of this and increasing access to it will play an important part of the national agenda to save an additional 5,000 lives every year.

However, the expansion of the radiotherapy workforce, both in numbers and skills mix, remains a challenge to increasing access and to technical capability. Increasing complexity of radiotherapy both with IMRT (intensity modulated radiotherapy) and with IGRT (image guided radiotherapy), leading to use of 4D adaptive radiotherapy, is vital if we are to maximise the opportunity for World Class Radiotherapy. Additionally, as the NHS prepares to move to 7 day working (radiotherapy patients have indicated they are prepared to accommodate both evening and weekend appointments), developing sufficient workforce to meet this patient-centred development will be a key part of the NHS Commissioning Board's strategy.

The issue of attrition from training placements for therapeutic radiographers has been a challenge for some years. Whilst it has marginally decreased, it still remains significantly higher than any other comparable profession. It is reasonable to state that if attrition was reduced to the levels of similar professions, the supply and demand challenge for therapeutic radiographers would largely be solved.

I am therefore pleased that this report written by Hazel Colyer and supported by the Society and College of Radiographers through the National Radiotherapy Implementation Group's Workforce sub-group, tackles this issue with key recommendations and evidence-based opportunities.

I would encourage all providers of both radiotherapy training placements and radiotherapy education to work together to consider and implement the recommendations in this report. I would also encourage those who commission training placements for this important staff group to consider this report and to ensure it is widely implemented.

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Executive summary and recommendations

A. Introduction

A.1 Attrition from pre-registration therapeutic radiography (radiotherapy) programmes has been high for many years when compared to other health professions and occurs mainly during the first year of study. During 2010/11, the last year for which figures are available, it was 36.5%. [1] A survey of therapeutic radiography students undertaken by the Society and College of Radiographers (SCoR) in 2011 suggested that dissatisfaction with practice placements was the most frequently reported reason why students did not complete their programme. [2] Together with wrong career choice, this reason was similarly reported in the 2012 survey. [3]

A.2 The National Cancer Action Team (NCAT) invited bids for a project to evaluate the part played by practice placements in student attrition and to make recommendations for improving student retention. They recognise that poor student retention is wasteful of resources and impeding the implementation of the National Radiotherapy Implementation Group's (NRIG) plans for sustaining and developing the radiotherapy workforce. The most recent progress review highlights the need for a 39% increase in therapeutic radiography workforce by 2016.[4] The SCoR employed an independent education professional to develop a bid and subsequently manage the project with the support of a Steering Group that included the NCAT Associate Director-Radiotherapy, and an external expert in practice learning from another health care profession.

A.3 The full report describes in detail the project's scope, methods, data analysis and findings, and is published separately from this executive summary. It demonstrates the reliability of the data collection methods and assures validity of the findings and recommendations. Involvement of all relevant stakeholders, including students, was sought at each stage to promote ownership of the problem of attrition and offer solutions that, if implemented, can be expected to work.

A.4 The project findings confirm that attrition from therapeutic radiography pre-registration programmes is a multi-faceted issue and the recommendations proposed address both the systematic and the relational aspects of what is a complex organisational situation. If the project objectives are to be met and attrition reduced, it is vital that these are viewed as a whole and implemented without delay.

A.5 The recommendations are the responsibility of all those who are involved with the planning, organisation and delivery of pre-registration education, including the students. Education commissioners are crucial because they have the necessary authority to drive their implementation, through the contracts made with HEIs, for the provision of pre-registration programmes. Higher education institutions and their service partners must work together to implement them in programmes and placements and the professional body has an important role to play.

A.6 The recommendations have been formulated at strategic, operational and professional levels. Strategically, they are directed at the new provider-led education commissioners; the Local Education and Training Boards (LETBs) and to Health Education England (HEE), to which LETBs are accountable. Operational recommendations are to education providers and radiotherapy service managers. As the organisation concerned with the maintenance and development of professional

standards at all levels of radiographic practice, there are also recommendations for the Society and College of Radiographers to consider.

B. Background

B.1 There are 10 Higher Education Institutions (HEIs) in England offering pre-registration therapeutic radiography education; Birmingham City University, City University London, University of Hertfordshire, Kingston and St Georges University of London, Liverpool University, London South Bank University, Portsmouth University, Sheffield Hallam University, University Campus Suffolk and the University of the West of England.

B.2 The total number of education commissions for 2011/12 was reported as 364, with the range being 20 – 65 per year. All education providers offer a 3 year, full time BSc (Hons), three offer a 2 year Postgraduate Diploma and one offers a 3 year MSc programme. Successful completion of a programme's academic and practice requirements confers eligibility for registration as a therapeutic radiographer with the Health and Care Professions Council (HCPC).

B.3 There are 50 providers of radiotherapy services on 58 sites in England. The number of radiotherapy centres providing recurring placements was reported to be 50 and this is the sample on which the project findings are based. This figure includes some placements that are shared by two HEIs. There is a small number of centres providing non-recurring or occasional placements and a growing number of independent sector providers that do not take students at the present time.

C. Project aim, objectives and methods

C.1 The aim of the project is to improve student retention in pre-registration therapeutic radiography programmes. Its goals are:

- to reduce attrition during the first year of study from academic year 2013/14;
- to achieve a year on year improvement in student retention from 2014;
- to produce an increase in students' satisfaction with their practice placement experience as reported in the 2013 Society and College of Radiographers' student survey.

C.2 The nature of the study was an audit of current practices and perceptions of those practices in practice learning placements in radiotherapy centres in England. Face to face meetings with radiotherapy service staff were held. As such, the study was categorised as part service evaluation and part audit. Accordingly, there was no requirement for it to be scrutinised by a UK Research Ethics Committee. Nevertheless, the study was carried out such that the rights, safety, dignity and well-being of all participants in the study were upheld.

C.3 A mixed methodology comprising quantitative and qualitative data gathering with a range of stakeholders, including radiotherapy service managers (RSMs), education providers and current students, was developed with the following objectives:

- to evaluate compliance with a range of nationally recognised quality standards[5,6,7,8] for placement learning by Radiotherapy Departments in England;
- to gain an understanding of the drivers and barriers impacting on placement quality and the student experience;
- to propose actions for improvement.

C.4 Between April and October 2012, data was collected and triangulated from the following sources:

- online audit of radiotherapy service managers in England to assess compliance with nationally recognised quality standards, using Survey Monkey™ (N=50);
- visits to 10 radiotherapy centres, 20% of the sample, to verify and validate compliance by testing selected evidence, clarifying responses and interviewing an opportunistic range of staff and students;
- telephone interviews with HEI leads for pre-registration programmes (N=10);
- a dissemination workshop for radiotherapy service managers, radiotherapy centre leads for student education and HEI programme leaders;
- student conference for cohort representatives from all pre-registration programmes offered by HEIs.

C.5 At each stage, data was summarised, analysed and returned to the participants for verification and validation. Seven substantive themes emerged; Managing Placement Capacity, Ensuring Effective Partnership Working with the HEI, Promoting Security and Belonging, Selection and Preparation of Students, Student Support and Assessment, Creating a Stronger Learning Culture in Departments and Managing Staff and Student Expectations.

C.6 Overall compliance with standards for placement learning have been RAG-rated (red, amber, green rated) and further analysis undertaken to produce a table demonstrating the mean score by theme for each Radiotherapy Centre in England. This is appended to this summary. **Please note: the raw data in this table was provided by individual Radiotherapy Service Managers and represents their perceptions of compliance with the audit statements.**

C.7 From the themes, initial draft recommendations were developed at the dissemination workshop and validated subsequently with all stakeholders. These were further refined at the student conference and considered by the Project Manager and Steering Group in order to develop robust and comprehensive recommendations.

D. Recommendations

D.1 Recommendations arising from this project are set out below. In addressing these, it is important that they are dealt with as a whole, although particular recommendations have been aligned with relevant stakeholders in order to facilitate engagement.

D.2 Education commissioners

Health Education England (HEE)

1. The Quality Framework for LETBs should include evidence of systematic planning to ensure that the number of pre-registration student commissions is aligned with placement opportunities such that students in the same cohort do not share a placement* and that overlaps with other cohorts are avoided.

Local Education and Training Boards (LETBs) and associated Local Partnership Groups

1. Education and training commissions should be based on the explicit demonstration that the ratio of student numbers to placement availability is such that students in the same cohort do not share a placement and that overlaps with other cohorts are avoided.
2. To ensure a comprehensive experience, the full range of placement opportunities in a radiotherapy centre across the cancer patient pathway must be offered.
3. A written policy for managing unavoidable placement sharing must be in place, including where placements are shared with another HEI.
4. There should be evidence of the number of placement opportunities matching student numbers (a 'metric').
5. A Practice Educator (PE) is required in each centre.
6. A formal local service level agreement (SLA) that sets out the duties and expectations of each should be in place between the HEI and its individual placement providers.
7. The opportunity for a clinical visit must be made available by centres prior to any offer of a place on a pre-registration therapeutic radiography programme.
8. Consideration should be given to re-balancing placement providers used by specific HEIs or even reducing the present number of HEIs providing pre-registration education to meet the objective in 1 above.

In addition to the recommendations above, Education Commissioners should note that students expressed significant concerns related to personal finance as a contributor to student attrition. While these concerns are outside the scope of the project and not explored in this full report, commissioners cannot ignore this matter if they are serious about maximising student retention.

* A placement is defined as one of the necessary practice learning experiences within the patient pathway that student therapeutic radiographers must have to meet the standards for HCPC registration. See attached flow chart for further information.

D.3 HEIs

1. A formal service level agreement (SLA) that sets out the duties and expectations of each should be put in place between the HEI and its individual placement providers and reviewed annually.
2. Programme developmental review and revalidation should mitigate placement overcrowding through placement plans that avoid overlaps between cohorts.
3. A written policy for managing unavoidable placement sharing must be in place, including where placements are shared with another HEI.
4. Student selection must be made more rigorous and comprehensive through the inclusion of interviewing and the use of appropriate tools such as psychometric testing, values assessment, and team working skills observation.
5. Prospective students must have undertaken a clinical visit and submitted a report to be considered during the selection and recruitment processes, and prior to the offer of a place.
6. Clinical staff must be included in the selection and interviewing processes and, where possible, service users and existing students should be involved.
7. Comprehensive, inclusive preparation for placement must be prioritised in programmes.
8. Clinical staff education and training in student support and assessment must be formalised and managed by the HEI and annual updates must occur.

9. Bullying and harassment in the academic and clinical environments is unacceptable and procedures demonstrating its active management and monitoring must be in place.
10. Academic staff must be up to date, professionally credible and have a visible presence in practice.

D.4 Radiotherapy centres

1. Centres must have education and training plans that demonstrate commitment to learning and development by ensuring opportunities for all staff to engage in appropriate CPD in accordance with the profession's career framework.
2. Staff responsibilities in relation to student education should be embedded in job descriptions and monitored through personal professional development reviews (PDR).
3. Centre policies and practices should acknowledge the different needs of students as a group and promote visibility and inclusivity.
4. Bullying and harassment, where it occurs, must be actively managed and eradicated.
5. A formal service level agreement (SLA) with the HEI, which sets out the duties and expectations of each, should be in place and reviewed annually.
6. The full range of placement opportunities in the radiotherapy centre and across the patient pathway must be utilised to ensure a comprehensive experience.
7. A written policy for managing unavoidable placement sharing must be in place.
8. The opportunity for a clinical visit must be made available prior to an offer of a place.
9. Staff must engage fully in programmes of education and training for student support and assessment.

D.5 Radiotherapy centres and HEIs jointly

1. All the provisions of the service level agreement (SLA) should be utilised to ensure that student education and support is prioritised appropriately by staff at all levels in the organisations.
2. Preparation for placement must be realistic and include VERT™-based practical skills, relationship skills and emotional resilience.
3. An early, developmental placement to clarify the student role and develop an individual action plan that enables a personalised approach to student learning and support should be devised.
4. Students should be assigned a suitably prepared mentor who has received training or update in student support and assessment within the past 12 months.
5. Regular clinical tutorials and peer action learning sets should be agreed and integrated into placement learning.

D.6 The Society and College of Radiographers

1. Minimum standards of education and training for mentors/assessors should be developed, to include a developmental pathway from mentor (20 credits) to practice educator (PgCert).
2. Guidance about appropriate psychometric tests and values assessment for student selection should be offered.
3. Guidance and a template for a clinical visit report to be used during the selection process should be developed.
4. Capability standards for the profession in response to the expressed view that a national approach is needed to underpin and bring consistency to the assessment of practice in pre-registration programmes should be developed.

5. Strategies that increase the visibility and value of the profession should continue to be developed.

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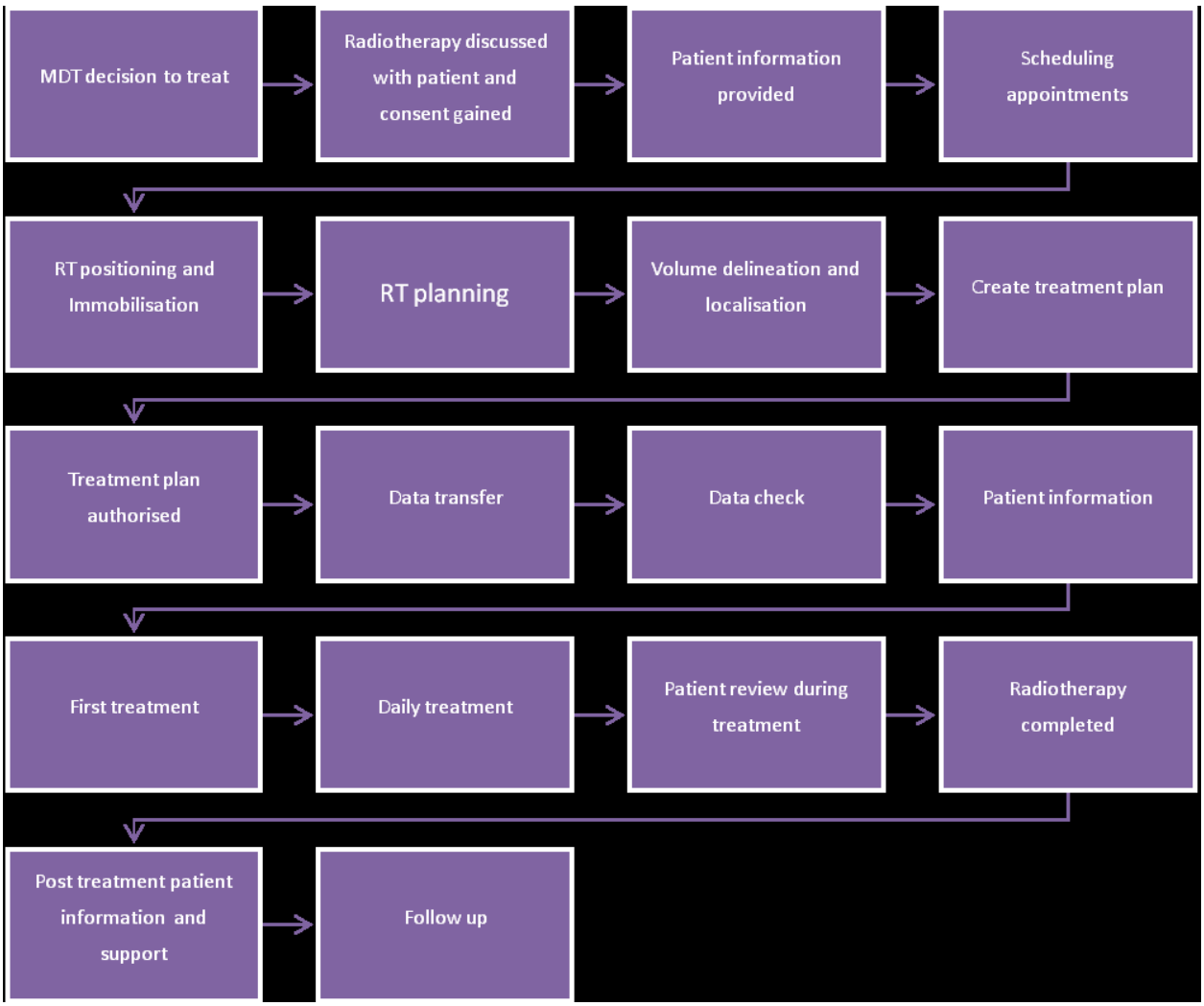
APPENDIX 1

Simplified Radiotherapy (RT) Pathway.

This simplified linear pathway does not show the cyclical nature of the treatment verification and planning steps associated with the use of IGRT/Adaptive RT/ In-vivo dosimetry interventions



Radiotherapy Services in England 2012
http://ncat.nhs.uk/sites/default/files/Radiotherapy-Services-in-England-2012.pdf
(accessed 25/04/13)

APPENDIX 2

Improving Retention in Pre-registration Therapeutic Radiography in England 2012
Self-Audit of Quality Standards for Practice Placements by RSMs
Compliance by Centre with Mean Scores for Themes

No	Radiotherapy Centre	Overall Compliance	Managing Placement Capacity (N=5)	Ensuring Effective P/ships With HEIs (N=10)	Promoting Security & Belonging (N=10)	Selection & Prepar-ation (N=5)	Student Support and Assess-ment (N=15)	Creating Stronger Learning Culture (N=17)	Managing Staff & Student Expect-ations (N=14)
1	Weston Park Hospital Sheffield	>95%	1.6	1.3	1.5	1.6	1.5	1.6	1.6
2	Colchester Hospital University NHS FT	>95%	1.6	1.2	1.2	1.2	1.1	1.3	1.1
3	Arden Cancer Centre, UHCW, Coventry	>95%	1.6	1.1	1.3	1.2	1.3	1.4	1.3
4	Norfolk and Norwich University Hospital	>95%	1.4	1.1	1.3	1.4	1.1	1.1	1.2
5	Northamptonshire Centre for Oncology	>95%	1.6	1.6	1.3	1.4	1.3	1.4	1.5
6	Southend University Hospital NHS FT	>95%	1.6	1.2	1.3	1.4	1.3	1.3	1.3
7	University College Hospitals London NHS FT	>95%	2.2	2.0	1.8	1.6	2.0	1.9	1.8
8	Berkshire Cancer Centre, RBFT, Reading	>80%	2.4	1.7	1.7	2.0	1.8	1.8	1.8
9	Dorset Cancer Centre, Poole	>80%	1.8	1.5	1.5	1.4	1.5	1.6	1.5
10	Lincolnshire Oncology Centre, Lincoln	>80%	2.4	1.4	1.9	1.6	1.5	1.7	1.5
11	Northern Centre for Cancer Treatment, Newcastle	>80%	1.6	1.2	1.3	1.8	1.3	1.4	1.3
12	Oxford Cancer Centre, Churchill Hospital, Oxford	>80%	2.0	2.0	2.2	2.0	2.1	2.1	2.1
13	Plymouth Oncology Centre, Plymouth	>80%	2.0	1.8	1.6	2.0	1.9	1.9	1.7
14	Torbay Oncology Unit, Torquay	>80%	2.2	1.5	1.4	2.0	1.4	1.4	1.2
15	Queen's Centre for Oncology & Haematology, Hull	>80%	2.2	1.4	1.8	1.2	1.2	1.5	1.5
16	Barts and the London NHS Trust	>80%	2.0	1.8	2.0	2.2	2.2	2.2	2.1
17	Deansley Centre, New Cross Hosp, Wolverhampton	>80%	2.6	1.8	1.9	2.4	2.0	2.1	1.9
18	The Christie Hospital NHS FT, Manchester	>80%	2.8	1.7	1.9	2.4	1.7	1.9	1.7
19	Kent Oncology Centre, Maidstone Hospital	>80%	2.6	2.1	1.6	1.8	1.9	2.0	1.9
20	Nottingham University Hospitals NHS Trust	>80%	1.8	1.4	1.7	1.8	1.5	1.7	1.9

21	Portsmouth Haematology & Oncology Centre	>80%	2.2	2.0	2.0	2.2	2.2	2.2	2.0
22	Royal Cornwall Hospital, Truro	>80%	2.4	2.0	1.9	2.6	2.1	2.2	2.1
23	Shrewsbury RT Department, Shrewsbury & Telford	>80%	2.4	2.1	1.9	2.0	2.0	2.0	1.9
24	St Luke's Cancer Centre, RSCH, Guildford	>80%	1.8	2.0	1.8	2.0	2.0	1.9	1.9
25	Suffolk Oncology Centre, Ipswich Hospital, Ipswich	>80%	2.4	2.1	2.1	2.2	2.1	2.2	2.1
26	Exeter Oncology Centre, RD&E Hospital, Exeter	>80%	2.4	2.0	2.1	2.2	2.1	2.2	2.1
27	Gloucester Oncology Centre, Cheltenham	>80%	2.4	2.0	2.1	2.4	2.1	2.2	2.1
28	The James Cook University Hospital, Middlesbrough	>80%	2.4	2.1	2.1	2.2	2.1	2.2	2.1
29	North Middlesex University Hospital, London	>80%	2.4	1.8	1.4	1.6	1.4	1.4	1.2
30	Rosemere Cancer Centre, Preston	>80%	2.4	1.8	1.6	2.0	1.3	1.5	1.4
31	Addenbrooke's Hospital, Cambridge	>80%	2.6	2.1	2.1	2.2	2.1	2.2	2.1
32	Bristol Haematology and Oncology Centre, Bristol	>80%	2.0	1.8	2.0	2.2	2.1	2.1	1.9
33	Derby Hospital NHS Foundation Trust, Derby	>80%	2.4	1.8	2.3	2.0	1.9	2.0	1.9
34	Imperial College H/care NHS Trust, Charing Cross	>80%	2.4	1.7	2.1	1.6	1.6	1.8	1.7
35	The Royal Free Hospital NHS FT London	>80%	2.4	2.0	2.1	2.6	2.2	2.2	2.1
36	St James's Institute of Oncology, Leeds	>80%	2.2	2.1	2.2	1.6	1.9	2.1	2.0
37	University Hospitals Southampton NHS FT	>80%	2.4	1.5	2.1	2.0	2.2	2.2	1.9
38	Beacon Centre, Musgrove Park Hospital, Taunton	>70%	2.6	1.6	1.7	1.8	1.6	1.9	1.7
39	The Clatterbridge Cancer Centre, Merseyside	>70%	2.4	1.8	2.2	2.6	2.0	2.2	2.1
40	Cancer Centre London, Parkside, Wimbledon	>70%	2.2	1.7	1.9	3.0	2.0	2.3	2.1
41	Guys and St Thomas' NHS FT, London	>70%	2.6	1.9	2.1	1.8	2.1	2.3	2.0
42	The London Clinic, Devonshire Place, London	>70%	2.2	1.6	1.7	1.8	1.6	1.8	1.7
43	Royal Marsden Hospital, Fulham Road and Sutton	>70%	Data not	available		Data not	available		
44	Royal United Hospital, Bath	>70%	2.6	2.3	2.2	2.4	2.3	2.2	2.1
45	Sussex Cancer Centre, Brighton & Sussex UNHS Trust	>70%	2.2	1.7	1.7	2.0	1.9	2.1	1.9
46	Mount Vernon Cancer Centre, Northwood	>60%	2.4	2.2	2.3	2.2	2.3	2.4	2.4
47	Queen Elizabeth Hospital, Birmingham	>60%	3.0	1.9	2.1	2.4	2.0	2.2	1.7
48	University Hospital of North Staffordshire, Stoke	>60%	2.4	2.2	2.4	2.6	2.3	2.3	2.3
49	Queens Hospital, Romford	>50%	3.4	2.7	2.4	2.4	2.6	2.6	2.4
50	Leicester Royal Infirmary, Uni' Hospitals of Leicester	<50%	2.8	2.9	2.3	2.7	2.5	2.3	2.2

Key: Compliance Statements N = 31

>95% = 0-1 statements disagree/strongly disagree

>80% = 3-6 statements disagree/strongly disagree

>70% = 7-9 statements disagree/strongly disagree

>60% = 10-12 statements disagree/strongly disagree

>50% = 13-15 statements disagree/strongly disagree

Scoring used in themes (each statement):

Strongly agree = 1

Agree = 2

Disagree = 3

Strongly disagree = 4

NB: the raw data in this table wasprovided by individual Radiotherapy Service Managers and represent their perceptions of the placement learning audit statements in the Radiotherapy centre