



Radiography Skills Mix

A report on the four-tier service delivery model

June 2003

READER INFORMATION

Policy HR/Workforce Management Planning Clinical	Estates Performance IM & T Finance Partnership Working
Document Purpose	For Information
ROCR Ref:	Gateway Ref: 1539
Title	Radiography Skills Mix
Author	DH Learning and Personal Development Division
Publication date	3 June 2003
Target Audience	PCT CEs, NHS Trusts CEs, StHAs CEs, NHS Trust Board Chairs, Directors of HR, Allied Health Professionals
Circulation list	
Description	The demand for diagnostic and therapeutic radiography services is increasing at a time when there are continued shortages of suitably trained and qualified staff. Radiography Skills Mix sets out a career progression model which encourages new ways of working for existing staff and introduces the new role of assistant practitioner in radiography
Cross Ref	NHS and Cancer Plans, Working together-Learning together
Superseded Doc	
Action required	
Timing	N/A
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For recipient use	

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Foreword

by Professor Mike Richards – National Cancer Director

The NHS Cancer Plan set out ambitious aims to reduce mortality from cancer and to bring cancer services up to the level of the best in Europe. These aims were backed by commitments to expand capacity through investment in the cancer workforce and in equipment and to reform service delivery.

Two of the key aims in the NHS Cancer Plan impact directly on radiographers. The first is the commitment to extend the NHS Breast Screening Programme to include women aged 65–70 years. The second is the commitment to reduce waiting times for diagnosis and treatment across all cancer types. From the outset it was recognised that achievement of these targets would require expansion of the radiography workforce and the implementation of new models of service delivery. A Radiography Workforce Team, which I chair, was established three years ago to oversee this work. This team is now a subgroup of the Cancer Care Group Workforce Team, which has overall responsibility for the development of the cancer workforce.



The Radiography Workforce Team has focused on strategies for improving radiographer staffing levels and on overseeing the development and piloting of a new career structure based on the four-tier model. Close links have been established with the Changing Workforce Programme and the Cancer Services Collaborative, both of which form part of the Modernisation Agency. Over the past three years radiography commissions have increased year on year and the skill mix programme, which initially focused on breast screening, has been extended to encompass radiotherapy and clinical imaging.

The success of the skill mix programme has depended critically on the commitment of radiographers and on the support of radiologists and clinical oncologists. It has also been attributable to the enthusiasm and hard work of the implementation teams and staff in the pilot sites.

The four-tier model is now being adopted by an increasing number of departments. This is bringing new staff into the clinical service and will, I believe, provide more interesting and challenging careers for radiographers. This should in turn enhance recruitment and retention and thus bring benefits to patients.

A handwritten signature in black ink, which appears to read "Mike Richards". The signature is written in a cursive, flowing style.

Professor Mike Richards
National Cancer Director

Acknowledgements

These projects could not have been envisioned, developed and delivered without the invaluable contribution and support of individuals and organisations throughout the health care sector.

We would like to express our thanks to the following:

DH Learning and Personal Development Division
DH Radiation Protection Team
Institute of Physics and Medical Engineering
Jaqui Parker Associates
NHSBSP Coordinating Team
Royal College of Radiologists
Rae Wallin Ltd
Skills for Health
Society and College of Radiographers
Survey and Statistical Research Centre, Sheffield Hallam University
Trust Chief Executives
Workforce Development Confederations

Glynis Freeman	DH
Heather Lawrence,	Chief Executive, Chelsea and Westminster NHS Trust
Jenny Caseldine,	Development Site Coordinator, NHSBSP
Kathlyn Slack	DH
Lesley Forsyth	Preceptorship Lead, Radiotherapy
Lynn Hinton	Cancer Projects Administrator
Margaret King	Patient Representative
Professor Mike Richards	National Cancer Director
Steve Ebdon Jackson	DH

Members of strategic groups, steering groups, and reference panels
Staff of the Breast Screening Field Testing sites
Staff of the Clinical Imaging Scoping sites

And our particular thanks to the

Staff of the Breast screening, Radiotherapy and Clinical Imaging Development sites

The Projects Team

Linda Lee
Stephanie McWilliam
Charlotte Beardmore
Stephen Evans
Carol Wilby

Executive Summary

This report sets out the background, process and outcomes of the Skills Mix Project in Radiography. The shortages of radiographers, radiologists and oncologists and the increasing pressures on service are well recognised. The governments commitment to develop more staff, and new grades of staff, to address these pressures for the benefit of patients was set out in the both the NHS and Cancer Plans

The document provides an overview of the Skills Mix project and identifies the key factors to implementing the model more widely.

In 1999, at a Downing Street Cancer summit, agreement was reached on the development of a new model of service delivery within radiography. This introduced for the first time the concept of a new role, with the development of assistant practitioners across all specialisms and modalities. Three discrete service areas were prioritised and set against service and infrastructure investment plans. The three areas in order of priority were:

- breast screening;
- therapeutic radiography;
- diagnostic radiography (including ultrasonography).

Developments within each of the modalities were based on overarching principles and followed the same methodology:

- functional and occupational mapping occurred as a precursor to national occupational standards development;
- current National Vocational Qualifications (Diagnostic and Therapeutic Support, level 3) were used as a common core baseline education package with additional occupational standards developed in support of the role of assistant practitioner;
- identified sites focused on developing all four tiers of the service delivery model. The four tiers were identified as:
 - assistant practitioner
 - state registered practitioner
 - advanced practitioner
 - consultant practitioner;
- equity and transferability should be maintained across all assistant practitioner posts and educational development;
- the development of roles and competencies conformed to current Ionising Radiation legislation.

A radiography workforce group, chaired by Professor Mike Richards (National Cancer Director), steered the development and direction of the project progression. The group received reports from the three modality specific strategy groups and reported in to the Cancer Care Group Workforce Team.

Development sites were identified for each modality. These were tasked with trialling, testing and defining the four tiers of the model and working with Skills for Health, the Sector Skills Council (formerly Healthwork UK) to develop the occupational standards that underpin the new roles. Service monitoring was on going within the development sites throughout the projects and the views of patients and staff were sought.

All sites introduced the new role of an assistant practitioner. Many of these were already employed within the department as radiographer helpers; others were recruited from other Trust departments. A significant number were recruited from external sources. Some assistant practitioners have now completed their training and are making a major contribution to delivering patient care

Radiographers provided the education and training for assistant practitioners, with many radiographers gaining additional skills through the National Vocational Qualification in Training and Assessing in the Workplace. In addition, many radiographers took on clinical roles and responsibilities beyond those normally recognised as the role of a practitioner.

The role of advanced practitioner has been introduced and these practitioners are involved, for example, in producing final reports on diagnostic examinations and planning radiotherapy treatment. They also make a contribution to staff development and research activities Education and training for these roles was either provided by universities or delivered and assessed by staff from the clinical teams within the Trust.

Recruitment to the first consultant radiographer post at one of the radiotherapy development sites is now underway. Other consultant job descriptions are being developed in several sites across the modalities.

The multi professional clinical teams from the development sites have completed their work with Skills for Health to develop the occupational standards across all tiers. These are now available to service and education providers to assist in identifying the skills, knowledge and competencies required for each of the clinical functions.

The clinical supervision and preceptorship models, emergent from within the project, support continuing development processes and underpin the framework of life long learning.

This framework meets the aspirations and challenges of the *NHS* and *Cancer Plans* and the development strategies identified within *Working Together – Learning Together*.

1 Background

1.1 This report describes the national Radiography Services Skills Mix project.

Radiography workforce issues have been identified as being critical, given:

- the current world shortage of radiologists, oncologists and radiographers;
- continuing expansion of cancer services to meet public expectations and government targets;
- pressure from radiographers to develop effective career development pathways;
- a large percentage of part-time staff, high staff turnover and a current working population approaching retirement age;
- the drive for continuous improvement in the delivery of the diagnosis and treatment of cancer;
- and more recently the need to remove blockages occurring within general diagnostic processes.

The skills mix project was established to introduce and evaluate a new tiered service delivery model, designed to help address these needs.

1.2 The project arose from the Prime Minister's Challenging Cancer Summit held in May 1998. Discussion focused primarily on proposed changes to the National Health Service Breast Screening Programme (NHSBSP). At that time women aged 50 to 64 were invited to this national programme; however, it was proposed that the age of invitation should be increased to 70 years. It was recognised that the anticipated increase in workload resulting from the service improvement would impact directly on clinical services already reaching crisis level.

1.3 These discussions led to the creation of a working party comprising the Chief Medical Officer (CMO), the Royal College of Radiologists (RCR) and the Society and College of Radiographers (SCoR) together with representatives from nursing, the education sector and other bodies. The group concluded that skill-mix changes were necessary to support the delivery of care across the full range of diagnostic and therapeutic radiography services. In due course, projects groups were formed for breast screening, radiotherapy and clinical imaging.

1.4 The following principles were outlined for the three service areas:

- The entire clinical service should be re-structured according to the essential roles, skills and experience required. The exact nature of the emerging new roles would be determined by the skills and competencies required of the whole clinical team.
- Standards of practice, task for task, should be identical across the disciplines involved. Irrespective of profession or discipline, each task would be identified with all its essential competencies mapped.
- A four-tier multidisciplinary model¹, designed to shape a clinical team around client and care requirements rather than professional boundaries, should be tried and tested. It was envisaged that the model would be implemented as a whole and not as single tiers.
- The model should offer radiographers greater potential for an extended clinical career, developing roles and responsibilities beyond those conventionally associated with radiography.
- The model should offer new or existing staff opportunities to develop clinical skills which were equitable and transferable, with the potential for further career development.
- A competency framework and occupational standards² should be developed to inform curriculum design for every profession and discipline operating within each of the four tiers.

1.5 The decision to pilot the four tier model in breast screening was made in April 2000 at a strategic meeting chaired by National Cancer Director, Professor Mike Richards. Soon after this meeting the process began to identify the development sites within breast screening and commence the introduction of the four-tier concept and the development of the occupational standards that gave the concept its operating framework.

1.6 After the initial launch in 2000 of the breast screening project, and early indications of success in that arena, the decision was taken to extend the concept to radiotherapy in 2001 and to clinical imaging in early 2002. All three projects have followed similar principles, aims and objectives, all of which have varied little from the original remit set out by the Skills-Mix Working Party that first met in 1999.

1.7 The aims of the projects were to:

- redesign the clinical team by skills and experience rather than profession;
- introduce a tiered structure incorporating mechanisms of lifelong-learning and skills-escalation;
- develop occupational standards for the clinical aspects of each service;
- review and implement educational and learning processes to enable practitioners to develop new and valued roles within the multidisciplinary team.

1.8 Inevitably there was concern amongst the professional groups about the implications of the projects. Radiographers, radiologists and oncologists all sought reassurance that the model would not dilute the standards and scope of their professions.

1.9 Both colleges worked hard to explain the advantages of the model to their members and to ensure the pilots progressed in a proper and professional manner.

1 Chapters 3 and 4 and Appendix 1 4-tier definitions and indicators.

2 Chapter 5, Appendix 2 List of new occupational standards and Appendix 3 Occupational Standards identified from Diagnostic and Therapeutic support NVQ.

- 1.10 Evidence provided by staff attitude surveys³ demonstrates that initial concerns have given way to acceptance and enthusiasm, and determination in some centres to see the 4-Tier model introduced widely.
- 1.11 The close involvement of the professional bodies has been a notable strength of the project and an excellent example of co-operative working in the best interests of the public.
- 1.12 The projects have also required close working with further and higher education providers and with specialists in the field of occupational standards
- 1.13 This report is published at a time when the concept of skills mix is already well accepted throughout the radiological community and underway in radiology and radiotherapy services throughout the UK.

Ann Cattell, Chief Executive of the Society and College of Radiographers



'The model has been welcomed as offering an opportunity for all members of the team to be recognised for their contribution and for individuals to develop that contribution to meet the needs of patients and clients. The project has taught us much about the necessary processes to develop standards and training programmes safely and for patients' benefit; we have also learnt that it is not a quick fix!'

Matthew Wallis, RCR representative for the Breast Screening Project and Clinical Director at Warwickshire, Solihull and Coventry development site



'Introducing new ways of working and simultaneously writing occupational standards has been an 'interesting' and challenging experience for every one. Despite (or perhaps because of) the pitfalls enroute a workable solution to some of our problems has emerged. This enables departments to select the parts that best fit their local needs. Certainly in Coventry our newly extended team has been able to improve services and implement expansion of the breast screening programme.'

2 The Projects

- 2.1 The projects were sponsored by the Learning and Personal Development Division of the Department of Health and reported to the Cancer Care Group Workforce Team.
- 2.2 Similar processes were adopted in each project for site selection, implementation, monitoring and development of occupational standards . However, each subsequent project was able to build on the experience of others, so that effectiveness and efficiency in meeting the project aims were increased.
- 2.3 Applications were received from a large number of centres for each project. These were short listed according to agreed criteria and selection was based on cross agency panel discussion, interview and presentation.
- 2.4 The selected sites reflected a broad range of size of service, urban and rural communities, acute and community hospitals, and the full range of clinical practice. They also represented a cross section of the strengths and constraints being experienced by diagnostic and therapeutic services at the time.
- 2.5 The breast screening and radiotherapy sites were involved in all phases of the project including, implementing the tiered model, functional and occupational mapping prior to the development of occupational standards and providing staff representatives of multi disciplinary teams to contribute to the occupational standards development process
- 2.6 The clinical imaging project benefited from experiences gained in breast screening and radiotherapy and divided the process into two phases. Initially scoping sites were identified to provide a broad range of departments within which the analysis of tasks and functions could take place. The second phase identified development sites to implement the 4-tier model and contribute to the development of the occupational standards.

Breast screening Development sites

Bolton Breast Screening Service
Derby Breast Screening Service
Norfolk and Norwich Breast Screening Service
Warwickshire, Solihull and Coventry Breast Screening Service

Radiotherapy Development sites

Addenbrooke's NHS Trust
Lancashire Teaching Hospitals NHS Trust
Maidstone and Tunbridge Wells NHS Trust
Newcastle Upon Tyne Hospitals NHS Trust
Nottingham City Hospital NHS Trust
Sheffield Teaching Hospitals NHS Trust
Southern Derbyshire Acute Hospitals NHS Trust
United Bristol Healthcare NHS Trust
United Lincolnshire Hospitals NHS Trust

Clinical imaging Scoping Sites

Bradford Royal Infirmary
Central Manchester NHS Trust
Hinchingsbrooke Healthcare NHS Trust
Leeds Teaching Hospitals NHS Trust
Northumbria Healthcare NHS Trust
Scunthorpe General Hospital
St. Thomas' Hospital

Clinical imaging Development sites

Hinchingsbrooke Healthcare NHS Trust
Leeds Teaching Hospitals NHS Trust
London Consortium including:-
Homerton University Hospital NHS Trust
University College London Hospitals NHS Trust
University Hospital Lewisham NHS Trust
Macclesfield General Hospital
Newcastle upon Tyne Hospitals NHS Trust
Northumbria Healthcare NHS Trust
Nottingham City Hospital NHS Trust
Sheffield Hospitals NHS Trust

- 2.7 All development sites were contracted to undertake a feasibility exercise to test the practical implications of implementing new roles within a tiered structure of service delivery. This required each development site to recruit at least two individuals to train as assistant practitioners, two state registered radiographers to develop into the higher level practice roles of an advanced practitioner and to consider the development of a consultant practitioner post.
- 2.8 Development sites were also contracted to provide multi professional teams to work with Skills for Health in developing the occupational standards to underpin both new and existing clinical roles.
- 2.9 Sites also helped identify areas of practice commensurate with roles at all levels of the tiered model and develop the definitions and indicators.⁴
- 2.10 Strategic groups were formed for each project to coordinate the implementation of the 4-tier model, review progress and link to the occupational standards development. Membership was drawn from the Society of Radiographers, the Royal College of Radiologists, the Institute of Physics and Engineering in Medicine, NHSBSP coordinating team, the RCR Clinical Oncology Patients Liaison Group, Skills for Health, Workforce Development Confederations, Trust Chief Executives, the Department of Health, Development sites and service representatives.
- 2.11 Communication with, and between, the development sites was an essential feature of the projects. The Development sites were visited on a regular basis by both the DH project teams and other key stakeholders to provide ongoing advice and support. Development site staff met regularly at workshops and meetings throughout the projects. This networking provided opportunities to exchange ideas, clarify roles and discuss education and training issues.
- 2.12 A communication team was also established to ensure that the wider health care sector would be regularly informed of progress in this important initiative. Updates, covering all three projects were provided on www.doh.gov.uk/radiography and circulated to RCR, SCoR, WDC's and the development sites.
- 2.13 Service monitoring processes were implemented within each development site for the life of the project. Patient and user views were sought, monitored and considered throughout the projects. Clinical staff also participated in staff attitude surveys⁵, reported regularly on progress and provided data for eventual evaluation of the project.

⁴ Appendix 1 4-tier definitions and indicators.

⁵ Appendix 4 Summary of staff attitude surveys.

3 The Four Tier Model – Principles

3.1 All tiers of the 4-tier skills mix model are associated with clinical roles (where a practitioner is directly engaged in clinical examination or treatment). The model does not exclude some level of administrative and management activity, but is primarily designed to encourage clinical role development, flexible working within teams and lifelong learning in support of a career path that remains clinically focused.

3.2 The Four Tier Model has four aims:

- to define multidisciplinary teams not by profession, but by the skills and competencies that best deliver the patient or client's needs;
- to promote new roles, extended roles and advanced practice that will encourage lifelong learning;
- to widen the routes of access to clinical careers and improve recruitment and retention of the health professions;
- in the public interest, to maintain practice standards and develop the inherent potential of all clinical practitioners.

The model has four levels that represent escalating competencies and responsibilities within a multidisciplinary team. Each level is defined accordingly; clinical tasks and activities associated with the team are mapped and competences are defined for these tasks, irrespective of profession or discipline. The definitions of the four tiers are as follows⁶:

- **Assistant practitioner:**

An assistant practitioner performs protocol-limited clinical tasks under the direction and supervision of a State-registered practitioner.

- **Practitioner (State registered*):**

A practitioner autonomously performs a wide-ranging and complex clinical role; is accountable for his or her own actions and for the actions of those they direct.

- **Advanced practitioner (State registered*):**

An advanced practitioner, autonomous in clinical practice, defines the scope of practice of others and continuously develops clinical practice within a defined field.

- **Consultant practitioner (State registered*):**

A consultant practitioner provides clinical leadership within a specialism, bringing strategic direction, innovation and influence through practice, research and education.

* *A professional regulated by the various Acts and Orders which ensure the public have access to and are treated by health professionals who are qualified and competent.*

- 3.3 The model enables the multi-disciplinary team to review the service requirement, determine who can do what and identify the skills and competences each must acquire to be able to work effectively within the multi-disciplinary team. Every practitioner permitted to perform a task must do so to the same rigour, applying the skills and expertise identified as essential to the task.
- 3.4 Each tier of the model is designed to promote new and extended roles appropriate to the integrated skills-requirement of the clinical team. To facilitate this process the four-tier model utilises preceptorship⁷, clinical supervision⁸ and continuing professional development⁹.
- 3.5 The model is designed to encourage clinical staff to delegate certain activities to others as they increasingly develop their own skill-set and in turn undertake clinical activities more typically done by other professions and disciplines. These shifts in the distribution of tasks and skills occur within the multidisciplinary team as a whole and must be carefully managed in the context of the required care process.
- 3.6 There are many people who have the personal attributes and the life experience to become excellent clinical professionals but who are without the qualifications to be able to enter a professional course of study. For all those who cannot gain access via the academic route, the assistant practitioner tier of the four-tier system provides the first rung of the ladder to a health professions career.
- 3.7 As assistant practitioners increasingly undertake protocol limited clinical activity, practitioners are offered the opportunity to learn new skills that will benefit the patient and improve the functioning of the clinical team. Presently many radiographers drift away from a predominantly clinical role long before they are due to retire. Their clinical skills are not fully utilised, as they move into increasingly administrative and managerial roles.
- 3.8 The advanced and consultant tiers of the model reflect the requirements of clinical governance in respect of their contribution to the continuous improvement of the service
- 3.9 The model facilitates constant evolution in the role of a professional practitioner. In future the direction that an individual's clinical career takes will be constrained only by the needs of the clinical team and the aspirations of the practitioner. This flexibility in role and professional development provides the incentive to remain in clinical practice longer, continuing to deliver the benefit of years of training and experience to patients.

7 Chapter 6 and Appendix 5 Preceptorship.

8 Chapter 6 and Appendix 6 Clinical Supervision.

9 Chapter 6 Continuing Professional Development.

4 The Four Tier Model – In practice

Assistant practitioners¹⁰

- 4.1 The role of the assistant practitioner is to directly contribute to patient care by undertaking less complex examinations or treatments within the imaging and therapy departments under the supervision of their state-registered colleagues. The employment of assistant practitioners will help in delivering timely care to patients and release practitioners to acquire additional clinical skills for the greater benefit of patients. Assistant practitioners in radiography will act as Operators under the Ionising Radiation (Medical Exposures) Regulations 2000.
- 4.2 All development sites recruited at least two assistant practitioners as part of the project. A large number of initial enquires and applications were received. Successful applicants were recruited from both within the NHS and external sources.

Breast screening

Assistant practitioners in breast screening have been trained to undertake basic mammographic projections to help deliver the service to the women attending for screening. Assistants also support members of the clinical team in other clinical procedures.

All the assistant practitioners within the development sites have successfully completed their training and are now working alongside state registered radiographers within either a static or mobile breast screening unit.

Radiotherapy

Many of the assistant practitioners work in megavoltage treatment delivery teams administering radiation and some in pre-treatment areas. They also undertake a variety of other roles in support of patient care.

Alison Tucson,
Assistant Practitioner
at Bolton, Bury and
Rochdale Breast
Screening Service



'I feel that being an assistant practitioner has been an opportunity to prove that I could develop my skills and take on added responsibilities. It has been reassuring to have the support of the state registered radiographers whenever I have needed it. Being chosen to be an assistant practitioner has given me a second chance to have a meaningful, worthwhile future, and who knows, one day, I may be a state registered practitioner supporting an assistant. That really would be seamless career progression!!'

Most of the trainee assistants have completed the NVQ 3 in Diagnostic and Therapeutic and many have completed their additional clinical training for the new role.

Several pilot sites have recruited a second cohort. Applications rates remain high with a large proportion of suitable applicants. Notably, there are large numbers with experience in health care and/or graduates from other work areas.

Emma King from Bristol
Oncology Centre



'The project has given me the opportunity to work and study for a new vocation/career and be supported throughout. I feel that the radiographers I have worked with have accepted my role and have helped me to develop in the way that suits the department best. I have particularly enjoyed the 'hands on' experience from working with the Radiotherapy team in the treatment room and have found the patient contact very rewarding.'

Louise Pope, assistant
practitioner, Bristol
Oncology Centre



'I have really enjoyed working as part of the radiotherapy team. Now that I am qualified I like delivering patient's treatment as a whole – calculations, setting-up patients and switching on the machine.'

Clinical imaging

Assistants have been trained to undertake one or more plain film examinations within the radiology department. The scope of practice within plain film imaging is defined by each individual department.

The most common area of practice is plain film examinations of the chest and extremities. Other assistants are covering a wider range of plain film examinations.

In one centre the assistant practitioner team are now undertaking 40% of the plain film examinations within the department during normal working hours.

Andrew and David Dowling at Nottingham City
Hospital NHS Trust



Andrew (20, left) *'My mother had been employed as radiographer helper for several years. I had just finished college and tried one or two jobs when she brought home some information on jobs at the hospital. As soon as I saw the Assistant Practitioner job it really stood out as something I would like to do. I was delighted and surprised to get an interview. I am now settled into the job I have grown in confidence with people in general and patients in particular. It has given me chance to show my potential and develop skills I never thought I had.'*

David (22, right) *'I had been working with an employment agency and, as with Andrew, my mother brought home information on jobs at Nottingham. My first job there was as a porter. Andrew had already started as an assistant practitioner and I was very interested in what he was doing and thought I would like it too. When the chance came I also applied and was successful. I now have more job satisfaction and really feel valued. I am really grateful for the chance to have a career and the chance to develop in the future.'*

Jackie Saxton, trainee Assistant Practitioner in Radiology at Sheffield
'Developing my role as an assistant practitioner has been tremendous. Before this opportunity, I had no career progression. It has opened new avenues for me, so much so that I enjoy my work so much I can't wait to get there.'

- 4.3 Many assistants have now completed their training and are working alongside their radiographer colleagues delivering the service to patients. In all cases they are clinically supervised by state-registered radiographers.
- 4.4 Since completion of the project, 28% of breast screening units are employing assistant practitioners to help deliver the service.
- 4.5 Some assistants have moved on to further their careers. Four of the original cohort of assistant practitioners in radiotherapy, have now entered undergraduate programmes to become state-registered radiographers and several other assistant practitioners across the projects are actively investigating this option. Two assistant practitioners from breast screening have moved on to other careers within the NHS; one, to become an occupational therapist, another, sponsored by their Trust to go into nursing.

Delivering Education and Training for Assistant Practitioners

National Vocational Qualifications

- 4.6 The majority of the development sites utilised the work-based, National Vocational Qualification (NVQ) in Diagnostic and Therapeutic Support (Level 3) to underpin the role development of assistant practitioners. NVQs are based on a series of occupational standards relating to working within NHS organisations and departments that can be selected to suit a particular role.
- 4.7 A number of occupational standards from the Diagnostic and Therapeutic Support NVQ have been identified by the Development sites as appropriate to the role in both diagnostic and therapeutic services.¹¹
- 4.8 Evaluation of local service needs identified the clinical functions associated with the assistant practitioner role. These clinical functions are now defined by the new occupational standards.¹² Education and training to support the development of the assistant was related to the requirements of each individual service and was delivered according to the resources and expertise available both within the department and externally, where appropriate.

British Technical Education Certificate (B.T.E.C.)

- 4.9 One development site from each of the breast screening, radiotherapy and clinical imaging sites utilised a work-related B.T.E.C. course in Health Studies to provide the theoretical requirements of the role. Clinical training was delivered, monitored and assessed by radiographic staff of the host department.

University Courses

- 4.10 Some universities have offered courses for the development of assistant practitioners. The results of the projects indicate that all courses designed for assistant practitioners should reflect the occupational standards defining the role. These will include the occupational standards incorporated within the Diagnostic and Therapeutic Support NVQ, and the new occupational standards which cover the clinical functions of acquiring images or delivering radiotherapy treatment.

11 Appendix 3 Occupational standards identified from Diagnostic and Therapeutic Support NVQ.

12 Appendix 2 List of new occupational standards.

13 Appendix 1 4-tier definitions and indicators.

Practitioners¹³

- 4.11 The role of radiography practitioners is to undertake a wide range of simple and complex imaging examinations or treatments on the full range of patient types and conditions in a variety of settings. Practitioners may act as Operator or Practitioner under IR(ME)R. Practitioners work independently in a variety of clinical settings; supervise students and other clinical professionals. Radiographers extend their roles by diverse routes according to local need and continuing professional development.
- 4.12 Practitioners also have a remit in training and in many departments they are involved in the clinical supervision and training of radiography students. Practitioners have been proactive in developing assistant practitioners. Some practitioners already have formal training qualifications others have enrolled on courses which support the assessment of work based learning such as the assessment and learning units of the Training and Development National Vocational Qualification.

Delivering education and training for Practitioners

- 4.13 Since the early 1990s radiography education and training has been undertaken within a graduate framework to provide equity, transferability and academic credit for radiography courses at both undergraduate and postgraduate level. Prior to 1990 radiographers were qualified at Diploma level.
- 4.14 Radiographers qualified by either the Diploma of the College of Radiographers, or latterly a degree in radiography, are eligible for registration with the Health Professions Council.
- 4.15 The transition of radiography into a graduate profession has provided practitioners who are fit for purpose, fit for practice and fit for award. A degree based education and training ensures that qualified professional staff are familiar with the value of evidence based practice, the outcomes of research and the need to contribute to the development of clinical practice by audit and research.
- 4.16 Courses leading to eligibility for professional membership and entry on the register are accredited by the College of Radiographers in partnership with the education provider and the regulatory authority, the Health Professions Council. Standards of education and professional practice are subject to both internal and external quality assurance processes.

Advanced practitioners¹⁴

- 4.17 Advanced practitioners work in a specific area of expert clinical practice and are involved in delivering specialist care to patients. They also develop other staff, demonstrate team leadership, contribute to the evidence base and service improvement.

14 Appendix 1 4-tier definitions and indicators.

Breast screening

Within the development sites radiographers were identified to develop their roles in film reading, performing and reporting breast ultrasound and X-ray guided needle biopsy.

A recent update from the NHSBSP indicates that 61 units are now employing radiographers to undertake one or more additional roles including:

- film reading;
- performing and reporting breast ultrasound;
- X-ray guided needle biopsy/marker localisation;
- ultrasound guided needle biopsy/marker localisation.

Radiotherapy

Within the development sites radiographers have developed their roles in a variety of areas:

- pre-treatment;
- lung cancer;
- gynaecological cancer.

Clinical imaging

Increasing numbers of radiographers have developed new skills within the development sites. These include reporting of:

- plain film;
- computed tomography;
- magnetic resonance imaging;
- barium studies;
- ultrasound examinations;
- bladder pressure studies.

Celia Lewis, Advanced Practitioner at Warwickshire, Coventry and Solihull Breast Screening Service



'I was delighted but apprehensive to be offered the post of Advanced Clinical Practitioner in our Dept. It covers all aspects of Breast Radiology and necessitated practical training (still ongoing) and academic study. My niche in the team was initially difficult to discover, but with the support and encouragement of my colleagues it is now well established. I work with the guidance of consultant colleagues and enjoy the role very much indeed. It has helped our department to improve the patient pathway through our now, much busier clinics.'

Nicky Cornelius, Clinical Lead Radiographer and Advanced Practitioner for Lung Cancer at Lincoln



'I seemed to have reached the ceiling within the clinical field and the management route was not my preferred option. The development of the Consultant role is a major advance for therapy radiographers and gives me the opportunity to apply for an exciting new post which will recognise my clinical skills and experience, and which both acknowledges autonomy for therapy radiographers and recognises the contribution radiographers can make towards modernising the NHS.'

Celia Craven, Advanced practitioner in Computed Tomography at St James Hospital Leeds



'The rapidly increasing demand for CT scanning and the shortage of radiologists recently led to an innovative local solution. After 20 years experience in CT, I have developed my role to report on the full range of adult head scans. Patients return to the ward with the substantive report in their notes which removes many delays. I regularly take part in audit and case review, and teach other staff in the specialism. The new role is both challenging and satisfying, improves the service to patients and releases the consultant radiologist to deal with more complex cases.'

Delivering Education and Training for Advanced Practitioners

- 4.18 The project has identified a number of individuals considered to be demonstrating skills associated with advanced practice as described in the 4-tier definitions and indicators. The approaches to developing the underlying skills and knowledge requirement varied within the development sites and depended upon the availability of suitable post graduate modules.
- 4.19 A range of accredited postgraduate courses are available to support the radiographer in developing their practice to an advanced level. Some of the modules relate directly to clinical skills development while others develop the knowledge base and research skills of the individual relevant to their particular area of specialist practice.
- 4.20 Education providers are responding to clinical service needs by developing new courses to underpin the skills of practitioners at all levels. Validation and accreditation of such courses will require the university to relate course outcomes to the occupational standards.
- 4.21 Some of the more innovative roles in clinical practice were underpinned by clinical teaching and supervision by clinical staff representing the multiple disciplines involved in service delivery. The methodology employed in such clinical skills development generally paralleled the medical model of observed and supervised practice.

Consultant Practitioners¹⁵

- 4.22 Consultant job descriptions must be developed as a response to service need. The process of identifying a role for a consultant practitioner is rigorous. Criteria for Consultant practice were first outlined in *Meeting the Challenge: A Strategy for the Allied Health Professions* and reflect the guidance presented in the Advance Letter (PTA) 2/2001

Breast screening

A recent survey breast screening units, undertaken by the NHSBSP, demonstrated that the principle of consultant practice was strongly supported.



Julietta Patnick,
Director of the NHS
Cancer Screening
Programmes

'An increasing number of radiographers are making a valuable contribution to the NHS Breast Screening Programme as advanced practitioners. As expansion of the programme continues, I look forward to the emergence of a consultant role within the NHS Breast Screening Programme.'

Radiotherapy

The first consultant role in radiotherapy was developed and agreed in March 2003 and the recruitment process is underway.

Other radiotherapy development sites are progressing with the identification of consultant roles.



Jacqui Smith, Radiotherapy
Manager, Lincoln

'It has long been the focus at Lincoln to consider doing things differently to improve patient care. For three years the service has been without an Oncologist with a special interest in lung. This has resulted in lack of Oncologist input for the lung multi-disciplinary teams and long waiting lists for radiotherapy treatment. The introduction of a Consultant Radiographer for lung palliative care will improve the patient pathway and reduce waiting times without compromising on quality. As a core member of the lung MDT the Consultant radiographer will have the opportunity to demonstrate expert clinical practice that will include prescribing the radiotherapy regime. Although the first of it's kind I believe this post demonstrates the possibilities that the future holds for therapy radiographers.'

Clinical imaging

A consultant post has been developed in Neuroradiology, post-embolisation follow up at one of the clinical imaging sites.

Several other clinical imaging sites are in the process of developing and submitting proposals for consultant roles.

The Radiology Manager at the Development Site

Patients will be referred to the consultant practitioner after the procedure rather than to a Neurosurgeon. The Consultant will be responsible for directing the care of the patient during the two year follow up period including requesting further procedures, interventions that are thought necessary. Strengths of this development include the fact that it will be applicable to other Regional Neurosciences Centres. Additionally, the concept of a Consultant Radiographer managing a patient caseload and determining future investigation and care can be extrapolated to a number of other areas within Radiology.

Delivering Education and Training for Consultant practitioners

- 4.23 The unique design of consultant radiographer roles will require a diversity of skills and competencies. It is essential that the individual post holder is supported in a process of the evaluation of their current skills and the identification of their training and development needs.
- 4.24 The consultant role requires not only specialist and expert clinical skills but also leadership qualities, research and staff developments abilities. Consultants would normally be expected to be working at Masters level and many will have, or will achieve, Masters Degrees or Doctorates. Other supporting processes could include the leadership development programmes clinical research development and training, clinical skills development.

5 Occupational standards

5.1 The decision to link the introduction of the 4-tier model to the development of occupational standards was taken at the start of the project. This was based on the following factors:

- The focus on skills and competences and lifelong learning;
- Service redesign to empower the workforce;
- Developing career pathways and benchmarks;
- Ensuring staff were competent to extend their skills into new roles;
- The need to modernise education and training.

5.2 The Department of Health therefore commissioned Skills for Health, the Sector Skills Council to develop a competency framework, based on the development of occupational standards, for breast screening, radiotherapy and clinical imaging services.

What are Occupational standards?

5.3 Occupational standards are statements of competence and are written to measure performance outcomes.

Competence is
'The ability to apply knowledge, understanding and skills in performing to the standards required in employment. This includes solving problems and meeting changing demand.'
Review of the 100 NVQs – Gordon Beaumont 1996

5.4 Traditionally occupational standards have been used in award frameworks such as the development of National Vocational Qualifications (NVQs). In 1995 it was recognised by the NHS Executive that occupational standards had a wider strategic role and were a useful tool in the development of human resources.

5.5 Occupational standards are based on functional analysis. They are written as outcome statements and describe best practice for what needs to happen in the workplace. They are not concerned with particular tasks or who undertakes the tasks. At the same time they also identify the knowledge and skills required to achieve the standard.

Margaret King, Patient Representative on the
Radiotherapy Project
'Patients are not concerned with the job title of those who treat them, providing they are appropriately trained and that adequate safeguards and supervision are in place.'

5.6 One of the strengths of occupational standards is their ability to be used as a common language. This means they can be used to determine where different groups of staff share common functions and also common knowledge and skills. Conversely they can also demonstrate where there is a need for unique or specialised knowledge or skills.

Developing the occupational standards

- 5.7 Both functional and occupational mapping are prerequisites for the development of national occupational standards.
- 5.8 Development sites from each of the three domains of breast screening, radiotherapy and clinical imaging were visited to identify the scope of clinical practice and all the functions undertaken within the service. This process helped to develop the functional map which in turn identified the occupational standards that already existed and those that required development.
- 5.9 Occupational mapping took place across the three service areas. Occupational maps identify the characteristics of the workforce, the work roles, and future demands and pressures on the service. The occupational maps reaffirmed staff shortages affecting service delivery.
- 5.10 Technical working groups were formed from multi professional teams from the development sites in each of the three projects. The technical working groups met regularly over a period of six to nine months to advise on the content of the occupational standards.
- 5.11 Steering groups and reference panels were established by Skills for Health to review the occupational standards as they were developed and to help ensure that they reflected best practice and were fit for purpose.
- 5.12 The new occupational standards, in final draft form, have been completed and are now subject to UK wide consultation.¹⁶ Full details of the occupational standards are available on the enclosed CD Rom and at www.skillsforhealth.org.uk
- 5.13 Occupational standards development was prioritised to meet the immediate needs of the service. Some residual work remains, and plans are being considered to address outstanding issues.



Heather Lawrence, Chief Executive, Chelsea and Westminster NHS Trust and Chair of steering groups and reference panels says

'As a Chief Executive, I believe that the development of occupational standards will assist us in continuing to provide excellent clinical care, and support staff development across all grades. This will ensure that all staff are trained to deliver the best level of clinical care to our patients.'

Field Testing

- 5.14 It was possible to take advantage of the progress made within the breast screening project to undertake further testing of the occupational standards for advanced and consultant practice. The field-testing process provided an opportunity to test the occupational standards in practice and to draw from the experiences of implementation.
- 5.15 The field-testing demonstrated that it was possible to undertake work-based assessment on the full range of occupational standards but this required a flexible approach. The learning acquired from the field testing can help support the process of implementation.¹⁷

Breast screening Field Testing Sites

Cambridge Breast Screening Service
 Humberside Breast Screening Service
 Leicester Breast Screening Service
 Northampton Breast Screening Service
 N. Lancashire and S. Cumbria Breast Screening Service
 Oxford Breast Screening Service
 Pennine Breast Screening Service
 Portsmouth Breast Screening Service
 South Birmingham Breast Screening Service

¹⁶ Appendix 2 List of new occupational standards.

¹⁷ Appendix 7 Outcomes of field testing.

Informing education and training design with occupational standards.

- 5.16 The project has tested the concept that education and training must be based on occupational standards to ensure that the individual has been appropriately educated and trained for their role. The skills and knowledge required to undertake a range of functions has been identified and provides a further benchmark against which education programmes can be assessed for the purpose of “fitness to practice” and “fitness for purpose”. The occupational standards inform curriculum and syllabus design and can be used to develop assessment strategies and performance management processes.
- 5.17 Traditionally, occupational standards have not been used as the basis for professional courses, but have appeared extensively within the NVQ framework. In future, education and training programmes at all levels of practice will be assessed against the appropriate occupational standards as part of the accreditation process.
- 5.18 The new occupational standards for the radiotherapy and radiology domains can help to inform the delivery of in house training programmes and provide a basis for curriculum design. They also provide a template for measuring the rigour of the clinical function, and the essential theoretical knowledge required to perform the function, safely, effectively and efficiently.

6 Supporting the Development of the Workforce

- 6.1 The *NHS Plan* outlined the policy for modernising education and training of the health care workforce in order to widen access, improve recruitment and retention and facilitate career development.
- 6.2 *Working Together – Learning Together* expanded on the development of a skilled workforce to support changes and improvements in patient care. The document stresses the need to develop the concepts of:
- flexible access to education programmes for health professionals;
 - life long learning;
 - multi-disciplinary learning and working;
 - maintaining and extending skills development through continuing professional development*.

This policy was further reinforced by *HR in the NHS Plan*.

Education and Training

- 6.3 National implementation of a 4-tier model will require considerable expansion of education and training opportunities to support these new roles and working practices. New ways of working will also demand more flexible approaches to education and training incorporating multi- disciplinary leaning and developing a culture of lifelong learning. A comprehensive analysis of workforce education and training needs would allow for the commissioning of education programmes at all levels to support new ways of working.
- 6.4 One of the commitments of the *NHS Plan*, is to ensure that staff without a professional qualification will have access to appropriate training or an NHS learning account. The education and training support available for this workforce has traditionally been through National Vocational Qualifications.
- 6.5 The NVQ route offers a valuable opportunity for staff to build on their experience in the workplace and develop competencies and skills. It also provides a pathway to career progression and the opportunity to take the next step on the Skills Escalator. The use of the Diagnostic and Therapeutic Support NVQ can help to form a potential progression route for existing radiography support staff to develop into the role of an assistant practitioner.
- 6.6 Radiographers have been extending their roles supported by in house clinical training, profession specific courses and more recently, postgraduate education programmes for several years. The demand for such skills development has hitherto been on an ad hoc basis with the provision of underpinning education programmes being provided in response to demand or a perceived need.
- 6.7 Occupational standards have not traditionally been used as the basis for professional courses but have appeared extensively as the underpinning for the NVQ framework. In future, education and training programmes at all levels of practice will be assessed against the appropriate occupational standards as part of the accreditation process. Also where clinical “gold standards” exist, these too will be incorporated into education and training programmes as part of the process of assessment of clinical practice.

- 6.8 Work based assessment of the occupational standards for all four tiers can be achieved through a variety of methodologies within both locally delivered and academic programmes.¹⁸

Preceptorship

- 6.9 Preceptorship is a short-term process of support and guidance offered to a qualified individual during the early stages of a new or significantly different role. The preceptorship process continues until confidence and independence is measurably assured.

A model of preceptorship has been tried and tested within the skill mix projects.¹⁹

Clinical Supervision

- 6.10 Clinical supervision is an ongoing process by which the qualified independent practitioner benefits from peer support, review and guidance directed towards maintaining and developing the individual's excellence and independence in a particular role. The process should be continuous and focuses primarily on the applied practical experience of the independent practitioner. A healthcare practitioner may both receive and provide clinical supervision in accordance with role and experience.

A model for clinical supervision has been developed as part of the skill mix projects.²⁰

Continuing professional development

- 6.11 Continuing professional development (CPD) is essentially a private activity encouraging personal commitment to maintaining competence in the current role and preparing for professional advancement. The individual may draw on the CPD portfolio when preparing for appraisal. It is a lifelong process of continuous learning arising from structured reflection on current practice, career and personal aspirations.

For state registered practitioners there is a professional requirement to maintain competence to practise and a CPD portfolio.

Other policy initiatives which may influence learning methodologies

- 6.12 The proposal to establish an NHS University (NHSU) will enable all healthcare workers to pursue life-long learning by accessing education and training in support of their clinical practice. In developing core, transferable skills relevant to their clinical role, the individual will be able to evaluate and improve their practice, ultimately contributing to improvements in patient care and service delivery.
- 6.13 The Foundation degree provides the individual with core skills that can be applied within a variety of health care settings. The skills are transferable allowing the individual to pursue their career development through different routes. Foundation degrees provide a mechanism to introduce a potential healthcare worker to a wide range of opportunities for development as a health care professional thus resulting in widening access to professional education and increasing the potential for retention of the workforce
- 6.14 The Leadership Centre for Health established in 2001 as part of the Modernisation Agency, will support career development and progression through a framework that identifies core leadership values and skills. There is an expectation that the Leadership Centre will work in collaboration with the NHSU to provide support for professionals wishing to develop their skills to enable them to contribute and participate at a strategic level.

18 Appendix 7 Outcomes of Field Testing.

19 Appendix 5 Preceptorship.

20 Appendix 6 Clinical Supervision.

Report Conclusions

From the skills mix projects the following are the key factors identified/conclusions drawn:

- the 4 tier model can be implemented successfully in the fields of diagnostic and therapeutic radiography. The model is already being implemented in other breast screening, imaging and radiotherapy departments across the NHS;
- the model can provide an additional workforce to deliver the service and offer rewarding careers and life long learning for all practitioners;
- occupational standards should ultimately ensure that education providers deliver programmes that, although employing differing methodologies, achieve nationally agreed outcomes;
- patient satisfaction has been maintained whilst introducing new ways of working;
- staff can be successfully trained in house against the occupational standards.

Learning from the projects

- offering opportunities to gain qualifications to existing support staff, such as radiographers helpers, can prove to be an investment for the future;
- all staff development should be continually supported by preceptorship, clinical supervision and continuing professional development;
- the knowledge and skills framework of Agenda for Change complements the 4-tier model and will provide a comprehensive remuneration process;
- Staff attitude surveys demonstrated that
 - improved career pathways will increase job satisfaction and contribute to recruitment and retention in imaging and therapy departments
 - staff need to feel informed and involved in the process of change in workforce structure.
 - the training of assistant practitioners and student radiographers simultaneously requires careful planning.

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Appendix 1: Four Tier Definitions and Indicators

Definitions of the four tiers

Assistant Practitioner:

An assistant practitioner performs protocol-limited clinical tasks under the direction and supervision of a State-registered practitioner.

Practitioner (State registered*):

A practitioner autonomously performs a wide-ranging and complex clinical role, is accountable for his or her own actions and for the actions of those they direct.

Advanced Practitioner (State registered*):

An advanced practitioner, autonomous in clinical practice, defines the scope of practice of others and continuously develops clinical practice within a defined field.

Consultant Practitioner (State registered*):

A consultant practitioner provides clinical leadership within a specialism, bringing strategic direction, innovation and influence through practice, research and education.

A professional regulated by the various Acts and Orders which ensure the public have access to and are treated by health professionals who are qualified and competent.

Indicators to the four tiers

Indicators	AP	P	Adv P	CP
1 Regularly undertakes clinical work	✓	✓	✓	✓
2 The scope of clinical practice is constrained to protocol	✓			
3 The scope of clinical practice is informed by protocol		✓	✓	✓
4 Acts on the authority of a State-registered practitioner	✓			
5 Takes responsibility for own actions	✓	✓	✓	✓
6 Engages in continuing professional development (CPD)	✓	✓	✓	✓
7 Is State-registered*		✓	✓	✓
8 Works autonomously within the ethical framework provided by own profession's rules of professional conduct		✓	✓	✓
9 Competent to safely perform activities which do not vary significantly from protocol	✓	✓	✓	✓
10 Competent to safely perform activities that routinely demand complex analysis or significant variation from protocol		✓	✓	✓
11 Competent to safely perform activities that routinely demand complex analysis, synthesising prior knowledge and extensive practical experience			✓	✓
12 Variations from protocol are referred for advice or action to a State-registered practitioner	✓			
13 Significant variations from protocol are referred to an advanced or consultant State-registered practitioner		✓	✓	✓
14 Determines (with peers as appropriate) clinical strategy for complex variations from protocol				✓
15 Practice is subject to clinical supervision	✓	✓	✓	✓
16 Contributes to the preparation of new or revised clinical protocols		✓	✓	✓
17 Prepares new or revised clinical protocols			✓	✓
18 Critically evaluates evidence to define the scope and standards of clinical practice				✓
19 Supervises assistant practitioners, unqualified staff, peers and colleagues of junior rank or less experience		✓	✓	✓
20 Authorises and is responsible for clinical activity not covered by current protocols			✓	✓
21 Is responsible for the continuous development of an aspect of clinical practice			✓	✓
22 Uses specialised knowledge to advise others on the effective delivery of an aspect of clinical practice			✓	✓
23 Expert in a clinical specialism, bringing innovation and influence to clinical leadership and strategic direction				✓
24 Integrates research evidence into clinical practice.			✓	✓
25 Utilises exceptional skills and advanced levels of clinical judgement, knowledge and experience to direct effective clinical governance				✓
26 Promotes quality in assessment, diagnosis, clinical management and evaluation, delivering improved outcomes for patients and developing the specialism				✓
27 Works across a range of service delivery structures to influence decision making				✓
28 Exercises autonomy to highest level, typically having clinical responsibilities beyond immediate team and environment.				✓

Appendix 2: List of new occupational standards

Breast screening

- Position woman and produce basic radiographic images of the breast
- Examine screening mammography images for presence of abnormalities
- Perform ultrasound examination of the breast and associated structures
- Undertake X-ray guided interventional breast procedures
- Direct and interpret mammographic examination of the breast

Radiotherapy

- Mark up a treatment area for a patient without the use of imaging
- Mark up a treatment area for a patient using a simulator
- Undertake treatment verification using a simulator
- Undertake treatment verification using mega-voltage equipment
- Define radiation treatment volumes for isodose planning
- Perform simple treatment calculations
- Produce an isodose treatment plan
- Check and approve an isodose treatment plan
- Clinically authorise and prescribe radiation treatment
- Deliver external beam megavoltage radiation
- Deliver external beam kilovoltage radiation

Clinical imaging

- Produce radiographic images of the appendicular skeleton for diagnostic purposes
- Produce radiographic images of the chest and thorax for diagnostic purposes
- Produce radiographic images of the spine and pelvis for diagnostic purposes
- Produce radiographic images of the abdomen for diagnostic purposes
- Produce radiographic images of the skull for diagnostic purposes
- Produce radiographic images for diagnostic purposes using mobile x-ray equipment
- Undertake an ultrasound examination of the abdomen to form, or assist in forming, a diagnosis
- Undertake an ultrasound examination of gynaecological structures to form, or assist in forming, a diagnosis

- Undertake an ultrasound examination to determine and monitor pregnancy
- Undertake an ultrasound examination of the heart to form, or assist in forming, a diagnosis
- Undertake an ultrasound examination to form, or assist in forming, a diagnosis of vascular disease
- Undertake an ultrasound examination of selected musculo-skeletal anatomy to form, or assist in forming, a diagnosis
- Produce C.T. scanning images for diagnostic purposes
- Produce C.T. scanning images of the brain for diagnostic purposes
- Produce M.R. images for diagnostic purposes
- Produce images using static image intensifier equipment
- Direct and report on fluoroscopic examination of the lower G.I. tract using contrast media
- Direct and report on fluoroscopic examination of the lower G.I. tract using contrast media
- Direct and report on contrast swallow using fluoroscopy
- Direct and report on contrast meal using fluoroscopy
- Direct and report on small bowel enema examinations using fluoroscopy and contrast media
- Direct and report on video fluoroscopic examinations of the oro-pharynx and oesophagus using contrast media
- Direct and report on defaecating proctography using fluoroscopy
- Produce images using mobile image intensifier
- Interpret and report on plain radiographic images of the appendicular skeleton
- Interpret and report on plain radiographic images of the axial skeleton
- Interpret and report on plain radiographic images of the chest
- Interpret and report on plain radiographic images of the abdomen
- Introduce and remove a rectal catheter
- Establish intravenous access and administer fluids for use during imaging procedures

Appendix 3 Occupational Standards identified from Diagnostic and Therapeutic NVQ

Group B										Group A				Mandatory				Unit Number				
Z8	Z7	NC8	NC7	NC4	CL2	CU7	CU6	CU5	X12	X22	Z1	X21	X20	CU2	CU9	CU1	CL1	O2				
																				Bolton	Breast Screening	
																						Cambridge
																						Coventry
																						Derby
																						Humberside
																						Leicester
																						Northampton
																						Lancs. & Cumbria
																						Oxford
																						Pennine
																					Portsmouth	
																					Selly Oak	
																					Addenbrookes	Radiotherapy
																					Derby	
																					Lincoln	
																					Maidstone	
																					Newcastle	
																					Nottingham	
																					Preston	
																					Sheffield	
																					Leeds	Clinical Imaging
																					Macclesfield	
																					Newcastle	
																					Northumbria	
																					Nottingham	

Appendix 4: Summary of staff attitude surveys

Staff Attitude Surveys

In order to support the work of the radiography skills mix projects, staff attitude surveys have been undertaken across the three service areas. The Breast Screening survey was undertaken by the Survey & Statistical Research Centre, Sheffield Hallam University'. The radiotherapy and clinical imaging surveys were undertaken by Rae Wallin Ltd. Each survey produced detailed results, a summary of which follows.

Overall, the majority view was that the new service delivery model has the potential to improve career opportunities for staff, It is also demonstrated that the belief that the new way of working in radiography would not have a detrimental effect on the quality of care or the safety of the service.

Initially, there was some evidence of lack of understanding about the project aims. Project team members made increased efforts to visit departments, meet with clinical staff, increase communication through progress reports and clarify the project aims as widely as possible. Greater clarity about the project was demonstrated in the second survey. All surveys emphasised the need to involve staff in the change process.

Some reservations were expressed which centred around the additional pressure on clinical staff to support the training of assistants, the clinical placements of undergraduates, the lack of clarity around roles, the risks of staff exceeding their competence in new and extending roles and a possible devaluing of the current radiographer role.

There was also concern expressed that the recruitment of trainee assistants could have a negative impact on the recruitment of students to undergraduate radiography. These issues were explored by the Society of Radiographers and external consultants in separate workshops for trainee assistants and student radiographers.

Subsequent recruitment of students suggests that the project has not had a negative impact and that the recent movement of assistants into radiography degree courses is widening access to professional education and training.

Relevant comments from the surveys have been passed on to the Society of Radiographers and other organisations which may be in a position to enhance monitoring of training placements to ensure any potential negative impact on recruitment to undergraduate courses is minimised.

In the radiotherapy project, where preceptorship has been tested, responses showed overwhelming support for its benefits, although this was tempered by concerns over the ability of the clinical staff to manage the process due to time pressures.

Staff views have changed over time and latterly the majority believe that the status of radiographers would improve and the use of radiographer expertise would increase.

Following detailed review of the survey findings, it is felt that most concerns will be addressed through the above and through continued involvement of clinical staff in the process.

Appendix 5: Preceptorship

A preceptorship model was devised and tested as part of the work of the skill mix projects; this document provides a brief outline of the model.

Key Statements to define Preceptorship:

- Preceptorship is a short-term process of support and guidance offered to a qualified individual during the early stages of a new or significantly different role.
- Preceptorship is applied as an individual engages in a new role/practice, continuing until confidence and independence is measurably assured.

Preceptorship plays a different, yet complimentary role, to Clinical Supervision. Whereas Clinical Supervision is an ongoing supportive process throughout a practitioner's career, Preceptorship is a stand-alone process offering a short-term period of support and guidance to all practitioners at specific points during their career. Importantly the process of Preceptorship, as with Clinical Supervision is about enhancing and maximising skills for the benefit of the patient, and the individual.

The key elements of the Preceptorship model were identified as:

- **Support and Guidance from a named preceptor.**

A preceptor is an experienced practitioner, usually from the clinical area of the practitioner, possessing good interpersonal skills, able to reflect on their own experiences and understand the practitioner's position in their new role, and has the ability to act as a valuable source of help both professionally and personally.

- **The development of a detailed progressive set of development goals for each practitioner.**

A set of generic goals were identified to assist with this process and a preceptorship evaluation grid was designed and tested which enabled the Preceptor and the practitioner to independently assess and record progress during the Preceptorship period. Refinement of the model was possible as testing took place across both the Radiotherapy and Clinical Imaging Projects.

An Introduction to the Clinical Supervision Process

Stage 1 Induction

Whilst this early stage concentrates on an introduction to the working policies of for example a new department, or work area and its techniques, an important element is the introduction of the practitioner to a named preceptor. The development of a partnership at this point is key to the success of the process and helps to establish confidence and understanding between the practitioner and the preceptor.

Stage 2 One to one development

This stage focuses upon the development of skills related to specific aspects of the practitioner's clinical work. The preceptor's role is to support the practitioner in the clinical setting as required, the preceptor might work directly with the practitioner to achieve this. The preceptor and the practitioner should also meet regularly for discussion, on a one to one basis, away from the clinical setting to reflect on the new experiences, to review progress and to begin to identify learning goals jointly.

Stage 3 Preceptorship leading to Clinical Supervision

The goal of this stage is for the practitioner to work towards attaining the set learning goals identified in stage 2 which are further developed as the practitioner moves further into stage 3. The learning goals are designed to build confidence and independence. The aim is for the preceptor to continue to meet regularly with the practitioner to discuss progression, to review and to set new learning goals until the practitioner is confident within their new role. Emphasis should be placed on clinical skill development but may also be upon other the development of organisational and managerial skills, depending upon the practitioner's role. Once there is agreement that the learning goals of preceptorship have been achieved and that the practitioner feels and is confident in their new role, the practitioner will move towards receiving the ongoing support provided by Clinical Supervision, contributing to their ongoing professional development.

Documentation

Documenting the evidence around the attainment of the identified goals is essential during the preceptorship period. Reflective diaries are recommended for this purpose and will provide the basis for continuing professional development requirements and for ongoing Clinical Supervision.

Appendix 6: Clinical Supervision

A Guidance Document

Clinical supervision is

‘A term used to describe a formal process of professional support and learning which enables individual practitioners to develop knowledge and competence, assume responsibility for their own practice and enhance consumer protection and safety of care in complex clinical situations. It is central to the process of learning and to the expansion of the scope of practice and should be seen as a means of encouraging self assessment and analytical and reflective skills.’

NHS Executive 1993

This document sets out the principles of Clinical Supervision. It has been prepared to support the Radiography Skills Mix Report and the development of the 4-tier service delivery model.

The full clinical supervision model, including supporting documentation, will be available at www.doh.gov.uk/radiography

1. The Principles of Clinical Supervision

It is acknowledged that all healthcare practitioners must only undertake work for which they have been appropriately trained. The onus is on individuals (and their management) to determine whether they are competent to undertake each aspect of work rather than the responsibility for the work done being determined by the position held or by staffing structures.

‘Part of competence to practice is accepting responsibility and being able to justify one’s own practice.’

College of Radiographers March 2002

‘An accountable person does not undertake an action merely because someone in authority says to do so. Instead, the accountable person examines a situation, explores the various options available, demonstrates a knowledgeable understanding of the possible consequences of options and makes a decision for action, which can be justified from a knowledge base.’

(Marks-Maran 1993)

The aim of Clinical Supervision is to provide an underpinning framework to support individuals practice throughout the entire breadth of their career. As such it is a formalised supporting mechanism enabling the development of skills and abilities of each individual practitioner. It is distinct from and should not be confused with managerial supervision.

Clinical Supervision, together with education and training, continuing professional development and lifelong learning are important factors contributing to the overall development of the workforce within the Clinical Governance framework.

Clinical Governance is defined as:

‘An initiative to assure and improve clinical standards throughout the NHS. This includes action to ensure that risks are avoided, adverse events are rapidly detected, openly investigated and the lessons learned, good practice is rapidly disseminated and systems are in place to ensure continuous improvements in clinical care.’

(DoH 1999)

Key Statements to define Clinical Supervision:

- Clinical Supervision is an ongoing process by which the individual benefits from support, review and guidance directed towards maintaining and developing the individual's excellence and independence in a particular role.
- Clinical Supervision should be continuous and focuses primarily on the applied practical experience of the independent practitioner.
- A healthcare practitioner may both receive and provide clinical supervision in accordance with role and experience.
- Clinical Supervision should not be confused with supervision in the more general sense; it does not define or constrain the practice of the individual.

It is important to acknowledge that all practitioners should receive both Clinical Supervision and Preceptorship during their careers through an appropriately facilitated framework. Both play different yet complementary supporting roles. Clinical supervision is a continuum whereas preceptorship is a stand-alone tool. Preceptorship offers a short-term process of support and guidance to all practitioners during the first months of a new or significantly different role and as such can therefore be applied at intermittent stages when embarking on new roles and or practices(Appendix 5).

The goal of a clinical supervision framework is to provide support to enable smooth progression for all practitioners throughout their lifelong career. Clinical Supervision aims to reduce anxiety in new roles and more importantly, to provide all practitioners with the opportunity for reflective practice. This may assist the practitioner in moving from defensive practice to defensible practice by providing the opportunity and support to critically evaluate difficult situations, clarify the reasons for the actions taken and help produce clear evidence for documentation of the risk benefit analysis for the final decision.

For example, there will be times for all practitioners at every level of practice when they will be faced with unusual, difficult or complex situations where they may need to seek advice, on the best way forward, from a more experienced colleague. The implementation of a clinical supervision framework will ensure that the process can be appropriately facilitated.

‘This relationship involves the supervisor applying knowledge and experience to assist colleagues to develop their practice, knowledge and values. This relationship will, therefore, enable practitioners to establish, maintain and improve standards and promote innovation in clinical practice.’

www.clinical-supervision.com

What Clinical Supervision offers the practitioner?

Clinical supervision offers a formalised opportunity to:

- reflect on practice: openly, safely and honestly;
- consider future development needs (in conjunction with an appraisal system);
- develop and improve practice;
- improve the service delivery to patients;
- be professionally supported throughout their career;
- identify and share best practice.

1. The process of introducing a Clinical Supervision framework

There are many different models and approaches to clinical supervision. The most commonly used is the one to one session, with a trained supervisor. It is likely that the model chosen will work best when the supervisees and supervisors are involved with the local implementation plans, and account is taken of the specific needs of the local situation.

a. Local Implementation

- Support for the introduction of the process at Trust level is important. Clinical Supervision will make an important contribution to the Clinical Governance Process.
- Clear leadership at team level is vital to ensure that all practitioners are fully involved in local discussions. This should commence immediately with all relevant parties contributing to the planning and implementation processes. Selecting a champion from amongst the team to lead the process is key.
- Clinical Supervision must be developed to meet the local needs of all practitioners and must be supported by agreed implementation plans taking into account the practice of all the practitioners it will support.
- Communication of key messages is vital during the implementation planning process. Emphasis must be placed upon the fact that Clinical Supervision is about the development of practice and skills and not on finding fault with practice: in this respect a clinical supervision framework does not serve as a management tool.
- Careful consideration regarding the time commitment for the entire process is requisite. Outcomes from the process must be thoroughly considered and justified and then protected time must be made available for all practitioners. An assessment of the implications of this must be made prior to implementation to highlight additional resource requirements.
- Whilst clinical supervision is not a management tool systems should be developed to appropriately link Clinical Supervision to clinical governance, continuing professional development and systems of appraisal.
- In the longer term a tool should be devised to assess the effectiveness of the process to the organisation.

b. Education & Training To Support The Clinical Supervision Process

- Specific training is required to ensure a common understanding of the purpose and process of clinical supervision
- High quality training is essential to develop all practitioners and ensure maximum benefit is gained from the process.

- All participants will require training, supervisors, supervisees and managers. The training can be the same for all groups, or adapted to meet specific local need.
- Clinical Supervision skills can be developed in either an academic or work based situation.
- Clinical Supervision skills must be regularly updated.

c. Practical Issues to consider

- ***Frequency***

The decision on frequency of clinical supervision needs to balance the ideal with what may be realistically achieved locally. As emphasised earlier Clinical Supervision is not a one off process, it is a continuum throughout a practitioners career. As such the frequency should be informed and agreed by the supervisee and the supervisor. It is likely that the practitioner's role and experience will influence the frequency of meetings.

- ***Location***

The location should be jointly agreed by both parties, and importantly quiet, and free from distraction.

- ***Protecting time***

Commitment to punctuality of date and time is paramount by both the supervisor and supervisee.

- ***Documentation***

Documentation is important, both to focus the session and to provide evidence for evaluation of clinical supervision. It will also provide evidence for continuing professional development and may on occasions be useful in justifying clinical decisions.

The layout and content of the documentation used should also be discussed and agreed locally.

- ***Ethical issues***

Ethical issues need to be addressed to ensure that there is a balance between confidentiality and protection of the public. Both participants must agree clear boundaries to the confidentiality of the meetings. Importantly professionals need to work within the Codes of Conduct issued by their relevant professional bodies and that practice must be with due regard to the law.

There should be a contract, which makes clear that the supervisor may be required to release information if the supervisee is proposing any illegal or unethical practice or is refusing to act on advice to address issues, which could result in unsafe practice.

2. Clinical Supervision across the 4-tier model

Irrespective of role for each of the four tiers, (assistant practitioner, practitioner, advanced practitioner and consultant) clinical practice should be subject to clinical supervision. For any of the levels of practice the supervisor should normally be someone who is senior and/or more experienced than the supervisee.

It may be assumed that practitioners will begin as novices in a given tier, progress to proficient practice, with experience, and finally reach a level of expert practice.

- ***Assistant Practitioners***

A State Registered Practitioner will generally provide Clinical Supervision.

- ***Practitioners***

The Practitioner will have progressed through the novice stage whilst in preceptorship and should be confident about engaging in clinical supervision as they progress through proficient and into expert phases of their career.

- **Advanced Practitioners**

It is likely that a suitably qualified experienced member of the multidisciplinary team will provide clinical supervision.

- **Consultant Practitioners**

A newly appointed Consultant Practitioner may require more intensive clinical supervision at irregular intervals, as new or complex situations arise. The frequency should be negotiable and determined by the supervisee.

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Appendix 7: Outcomes of field testing in breast screening services

1. This appendix provides details of the learning from the field-testing of four of the occupational standards developed for breast screening services. Whilst the project concentrated on the breast screening services it is clear that the issues arising from the assessment of the occupational standards will be applicable across all three skill-mix projects.

Background

2. Nine NHS Breast Screening sites were identified to participate in the field-testing to ensure that the occupational standards were fit for purpose in the workplace. In particular the nine sites were asked to assess:
 - Performance criteria: when taken together did the performance criteria completely describe what had to be done to achieve the specific outcome;
 - Knowledge: did the knowledge statements describe the full range of knowledge essential to be competent to the standard;
 - Range: did the range statements accurately describe all the variations in which the performance criteria would be applied;
 - Assessment: were the standards assessable
3. The sites recommended a number of changes and additions to the performance criteria, knowledge and range statements which were passed to Skills for Health to take forward.
4. The sites were using a variety of methods to assess the occupational standards and they had an understanding of the processes involved in gathering portfolios of evidence. Whilst there was a general consensus that the standards were assessable it was felt that there were difficulties with the existing vocational work-based system that needed to be addressed if the use of occupational standards in higher-level practice was to become readily accepted.

The NVQ assessment system

5. NVQs are assessed in the workplace. The responsibility for the NVQ vocational work based assessment system falls to specific Sector Skills Councils, working in partnership with Awarding Bodies. The Qualifications and Curriculum Authority (QCA) oversee the system. There is usually an agreed assessment strategy developed for each NVQ.
6. The responsibility for quality assuring higher education learning outcomes falls to the Quality Assurance Agency (QAA). The project team recognised that it would take national negotiation between these two organisations along with statutory and professional bodies, purchasers and providers of educational programmes to agree a system of assessment that would meet wider needs. Work is ongoing to develop a quality framework for HE programmes.

7. The NVQ assessment system uses assessors who are responsible for assessing candidates against the NVQ. In addition it has a system of internal and external verification to ensure the quality and standardisation of assessment. Assessors and verifiers must themselves be assessed as competent in the different levels of assessment and there are NVQs that meet this need.
8. Candidates collect evidence of their competence against the different occupational standards within the NVQ and these are kept in a portfolio of achievement. A candidate will only be awarded their NVQ when the assessor, internal and external verifier sign off the portfolio.
9. There are rules for the collection of evidence but essentially most evidence is collected through direct observation of the candidate by the assessor. Witness testimony is allowed from others who are working with the candidate but most NVQ assessment strategies recognise that it is not good practice to rely solely on witnesses. This is one of the major problems with the NVQ system because it does not recognise the diversity of professional practice and multi disciplinary team working.

Assessing Occupational Standards

10. Occupational standards are also assessed in the workplace. They focus on the demonstration of competence against performance criterion and include the assessment of knowledge and understanding in the context of work-based practice. They also assess an individual's ability to solve problems and meet changing demands.
11. However there is a need to recognise the role of academic programmes in the development and accumulation of the knowledge base and in providing practitioners with a foundation of knowledge from which to build. It is essential that the knowledge statements within occupational standards are used to inform education and training programmes and that these are approved appropriately by the statutory and professional bodies, and commissioners of education.

Other forms of assessment

12. Academic programmes offered in higher education have robust systems to assess learning outcomes within the academic award framework. Traditionally the framework for assessing advanced or higher-level learning outcomes within the workplace has been incorporated into clinical assessments.
13. All state registered staff undergo some form of clinical assessment. This tests understanding of knowledge and theory in the context of clinical practice. In addition the QAA benchmark statements and the forthcoming proficiency statements contain learning outcomes, which are both academic and work related. Whilst these are not yet linked directly to the assessment of occupational standards it does mean that professionally qualified staff will be able to draw on previous experience and expertise in assessing performance.

Conclusions

14. The project concluded that it was important to use the NVQ system of assessment for those staff that were working towards an NVQ. However it was felt that this system is generally unable to address the depth and breadth of knowledge and evidence based practice that accompanies advanced and higher-level working. Therefore there needs to be a different approach to assessment of learning outcomes that recognises the different strands and characteristics of accumulation of academic knowledge, vocational learning, and the assessment of theory, knowledge, understanding and practice in the workplace.

15. The project demonstrated that a flexible approach to gathering and assessing evidence is needed. This should include evidence gained during:
 - In house training.
 - Clinical supervision.
 - Supervised practice.
 - Set questions.
 - Reflective diaries.
 - 360° interviews.
 - Peer review.
 - Audit and research.
 - Portfolio building.
 - External Examiners.

16. It is also important to ensure the all members of the multi disciplinary team should be involved in the assessment process. Preceptorship, clinical supervision and supervised practice are all areas where the practitioner has to demonstrate competence. These systems will provide excellent opportunities to gather evidence towards competence and for members of the team to be involved in judgements of assessment.

Appendix 8: Glossary of terms

1. Role

- 1.1. The defined responsibilities, activities, competencies and experience that determine an individual's scope of practice and their place in the organisational hierarchy.
- 1.2. The competence to practise in a defined role requires inclusion of theoretical and practice based learning and professional experience.

2. Accountability

- 2.1. The route of reporting to superiors must have due regard to the 4-tier roles and responsibilities of the practitioner. Whereas the practitioner's mix of duties may include activities associated with several tiers, it is the highest level activities that determine to whom the individual reports.

3. Responsibility

- 3.1. An individual is responsible for his or her own actions and of others acting under the individual's direction. In this context, defined responsibilities, agreed between employer and practitioner, are essential measures for determining the highest tier in which the practitioner operates.
- 3.2. The precise mix of defined responsibilities will vary with the role and local circumstances, but should reflect the rigour of the tier in which the practitioner operates.

4. Competencies

- 4.1. Competencies are the skills, knowledge and attributes (mental and physical) necessary to perform an activity or role.

5. Experience

- 5.1. Knowledge acquired through observation, practice, research and experiment is essential in determining the suitability of an individual for a role. CPD is a prime tool for guiding the practitioner in gathering appropriate experience and for recording evidence of the extent and currency of that experience.

6. Knowledge

- 6.1. Knowledge, however acquired, contributes to the experience and competencies of the individual. The accumulation and application of an increasing breadth and depth of knowledge is essential to progress through the tiers. CPD is a focused approach to acquiring knowledge to direct the individual's career development.

7. Theoretical learning

7.1. The academic learning necessary to undertake a role or task.

8. Practical training

8.1. The developed physical skills and competencies necessary to undertake a role or task.

9. Practical experience

9.1. The knowledge, understanding and practical ability *acquired over time*, which is essential to a role or task.

9.2. The practical application of theory to complex and/or unusual clinical situations and settings

10. Induction

10.1. A process that prepares the new recruit (irrespective of profession, role or status) for safe and productive employment in a particular organisation and environment.

10.2. Typically induction aims to instil a clear understanding of the organisation's structures and priorities, focusing on issues such as health and safety, security and record management; the organisation's facilities, culture and philosophies and good staff conditions, relations and efficiency.

11. Preceptorship

11.1. A short-term process of support and guidance offered to a qualified individual in during the early stages of a new or significantly different role.

11.2. The process should continue until confidence and independence is measurably assured.

12. Clinical supervision

12.1. An ongoing process by which the individual benefits from support, review and guidance directed towards maintaining and developing the individual's excellence and independence in a particular role.

12.2. Clinical supervision should be continuous and focuses primarily on the applied practical experience of the independent practitioner.

12.3. A healthcare practitioner may both receive and provide clinical supervision in accordance with role and experience.

12.4. Clinical supervision should not be confused with supervision in the more general sense; it does not define or constrain the practice of the individual.

13. Continuing Professional Development (CPD)

13.1. CPD is essentially a private activity encouraging personal commitment to maintaining competence in the current role and preparing for professional advancement. The individual may draw on the CPD portfolio when preparing for appraisal.

- 13.2. A lifelong process of continuous learning arising from structured reflection on current practice, career and personal aspirations.

14. Appraisal

- 14.1. A periodic shared evaluation of an individual's performance, skills, competencies and experience associated with a role. It is key to defining ongoing training and development needs.

15. Training and development

- 15.1. Formal, employer-led processes that ensure the individual acquires and maintains the skills and competencies appropriate to a role.
- 15.2. Formal education and instruction of an aspirational nature directed towards personal career goals.

16. Independent practice

- 16.1. The status of an individual competent and prepared to accept full responsibility for all aspects of the scope, delivery and outcomes of practice. Relevant practical experience and underpinning knowledge are essential elements of independent practice.

17. Supervision

- 17.1. In accordance with all applicable legislation and agreed protocols within a framework of accepted practice, this is employer-led, ongoing direct or indirect oversight of professional activities.

18. Mentoring

- 18.1. A continuously available and essentially private process of guidance and support, often with relevance to the broader aspects of the individual's role.
- 18.2. Mentoring stands independent of other practices. It emphasises psychological well-being rather than focusing on clinical practice.
- 18.3. In some clinical disciplines, mentoring has a teaching connotation. Thus there may be confusion in terminology across the wider health care sector.



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32090 1p 3k May 03 (STE)
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