
Second phase evaluation of the introduction of Radiography Assistant Practitioners in Imaging Services in Scotland

Final report to NHS Education for Scotland
(NES)

Dr Linda Miller, Institute for Employment Studies

Dr Richard Price, University of Hertfordshire

Ben Hicks, Institute for Employment Studies

Tony Higgs, University of Hertfordshire

May 2011



ies

Institute for Employment Studies

Sovereign House

Church Street

Brighton BN1 1UJ

UK

Telephone: +44 (0)1273 763400

Email: askies@employment-studies.co.uk

Website: www.employment-studies.co.uk

Copyright © 2011 Institute for Employment Studies

IES project code: 2273

Institute for Employment Studies

IES is an independent, apolitical, international centre of research and consultancy in HR issues. It works closely with employers in all sectors, government departments, agencies, professional bodies and associations. IES is a focus of knowledge and practical experience in employment and training policy, the operation of labour markets, and HR planning and development. IES is a not-for-profit organisation.

University of Hertfordshire

The University of Hertfordshire is an independent Higher Education Corporation established under the terms of the Education Reform Act (1989). It is the UK's leading business-facing University and an exemplar in the sector. It is innovative and enterprising and challenges individuals and organisations to excel. With a student community of over 24,500 including more than 2,000 international students from over eighty five different countries, the University has a global network of over 165,000 alumni.

Acknowledgements

The authors are indebted to Maria Murray, Julie Ferrier and Iain Colthart at NES for their support throughout.

We owe a particular debt of thanks to all the Assistant Practitioners, managers and radiographers for the time they gave to be interviewed and for their participation in the surveys. We would also like to thank Alex Bailey and Allyson Bailey at Lothian and Forth Valley and Dr Helen Allbutt at NES for the extensive amount of time they spent in advising us on the permissions needed in order to survey patients as part of the case study visits. We would also like to thank staff at the six Boards who were involved in approving the case study visits and the survey questionnaire and arrangements. As we gave an assurance of anonymity to the six participating departments we are unfortunately unable to name you.

Last but by no means least at IES we would like to thank our colleagues Gill Brown and Karen Patient for their customary excellent work in preparing this report and the survey questionnaire. Thanks are also due to Andy Davidson who managed the online surveys on our behalf.

Glossary of Terms

A&E	Accident and Emergency
AAA	Abdominal Aortic Aneurysm
AfC	Agenda for Change
AP	Assistant Practitioner
Cert HE	Certificate of Higher Education
CINAHL	Cumulative Index to Nursing and Allied Health Literature
CoR	College of Radiographers
CR	Computed Radiography
CT	Computed Tomography
DCAQ	Demand, Capacity, Activity and Queues
DMMI	Diagnostic Monthly Monitoring Information
ECG	Electro Cardiogram
GI	Gastro Intestinal
HCSW	Health Care Support Worker
HNC	Higher National Certificate
MRI	Magnetic Resonance Imaging
MSK	Musculoskeletal
NES	NHS Education for Scotland
OM Orbits	Occipito-mental Orbits
OPT/OPG	Orthopantomography
PDPR	Personal Development and Performance Review
PGC	Postgraduate Certificate
QA	Quality Assurance
RTT	Referral to Treatment
SCoR/SOR	Society and College of Radiographers/Society of Radiographers
SEHD/SGHD	Scottish Executive Health Department /Scottish Government Health Department
SQA	Scottish Qualifications Agency

Contents

Executive Summary	v
1 Introduction	1
2 Literature Review: the background to the present study	3
2.1 Background to the Assistant Practitioner role	3
2.2 The Four-tier model and the Assistant Practitioner role	6
2.3 Current status	6
2.4 Conclusions	13
3 Interviews with imaging managers	14
3.1 Rationale, workforce planning and changes to the staff establishment	15
3.2 The role of the Assistant Practitioner and their impact on work teams, teamwork and departmental flexibility	21
3.3 Impact on service capacity, quality and costs	26
3.4 Further developments	31
3.5 Other comments	35
3.6 Conclusions	38
3.7 Summary of findings	41
4 Surveys of radiographers, assistant practitioners and colleagues	43
4.1 Demographics	43
4.2 Training	44
4.3 Mentoring	46
4.4 Undertaking mentoring	50
4.5 Supervision	51
4.6 Impact	56
4.7 Further progression of Assistant Practitioners	64
4.8 Mentoring the second cohort of trainee Assistant Practitioners	66
4.9 Conclusions	67

4.10	Summary of findings	70
5	The case studies	72
5.1	Impact	72
5.2	Development and role extension for radiographers	80
5.3	Is there any scope for further role extension for Assistant Practitioners?	87
5.4	Conclusions	92
5.5	Summary of findings	94
6	Patient satisfaction	96
6.1	Quality of experience	97
6.2	Comparison of radiographers and Assistant Practitioners	97
6.3	Other comments	98
6.4	Conclusions	98
6.5	Summary of findings	99
7	Conclusions, summary and recommendations	100
7.1	Conclusions	101
7.2	Recommendations	105
7.3	Final Comments	110
	References	111
	Appendix 1: Initial telephone interviews discussion guide	114
	Appendix 2: Case study discussion guide – Manager	119
	Appendix 3: Discussion guide for Radiographers	123
	Appendix 4: Discussion guide for Assistant Practitioners	125
	Appendix 5: Receptionist request letter	127
	Appendix 6: Consent forms	128
	Appendix 7: Patient survey	130

Executive Summary

This report sets out the findings from the second round evaluation of the impact of introducing Assistant Practitioners into Diagnostic Radiography services in NHSScotland. The training programme for the Assistant Practitioners had been introduced as a result of a scoping exercise undertaken by NHS Education for Scotland (NES) in 2004 which had found a lack of appropriate educational opportunities and pathways for support workers. Three training programmes were developed: two Higher National Certificates (in Diagnostic Imaging and Radiotherapy) and a Certificate in Higher Education. The programmes commenced in January 2007 and departments were funded by NES in collaboration with the Health Delivery Directorate to support trainee Assistant Practitioners undertaking the programme. The funding also allowed employing departments to arrange backfill to cover for the time the trainees spent out of the department and for the mentors whilst they were undertaking their mentor role.

The Assistant Practitioners completed their training in 2009 and in 2010 NES reported the outcomes of a first round evaluation. Although all respondents – Assistant Practitioners, Managers, Mentors and Educationalists – were positive about the programme, the feeling was that it was too early to detect any real impact on departments.

For this reason NES commissioned a second round of evaluation which would focus on impact on departmental working arrangements, quality and efficiency. Career progression for Assistant Practitioners was to be a central strand of the research.

The Institute for Employment Studies (IES) in partnership with the University of Hertfordshire (UH) were commissioned by NES to undertake the evaluation and the work was conducted between September 2010 and March 2011. The evaluation consisted of the following components:

- Literature review

- Interviews with Imaging Department Managers at pilot sites
- Online surveys of radiographers, Assistant Practitioners and non-radiographer colleagues
- Case study visits to six sites

The main findings are reported separately for each strand of the research and then as a set of general conclusions and recommendations. The outcomes were as follows:

Interviews with managers (Chapter 3)

- The Assistant Practitioners posts had been introduced at a time at which there were many other factors also leading to changes. This had made it difficult to gauge or attribute impact.
- Although introduction of the Assistant Practitioners had allowed staff to be released for training and work in the specialist modalities, this had been part of departmental planning at only a minority of sites.
- Reductions in establishment had taken place. These were mainly attributed to the economic situation and were seen as being unrelated to introduction of Assistant Practitioners. Some departments had increased in size, prompted mainly by the need to meet Referral to Treatment standards.
- While some departments found the supervisory requirements had led to additional pressures on staff, other sites had found ways to address the issue and consequently were using their Assistant Practitioners more flexibly.
- Some departments had provided further training for their Assistant Practitioners which had extended the use these departments made of these posts.
- The majority of managers reported that the costs of examinations had reduced. Where re-organisation had led to role substitution this had led to a decrease in staff costs.
- The majority of managers believed that quality of the service had stayed the same or improved since introduction of the posts and many were keen to extend the scope of practice of the Assistant Practitioners.

The surveys (Chapter 4)

- The majority of Assistant Practitioners would recommend the training to a colleague and the largest single benefit cited of becoming an Assistant Practitioner was increased job satisfaction.
- The majority of Assistant Practitioners appreciated the support they received from their mentors. Just over half felt that this support needed to come from a radiographer as an Assistant Practitioner would be able to give only limited support. Radiographers' opinions were similarly divided on this issue.
- The majority of radiographers who mentored Assistant Practitioners had not been allocated any time for seeing their mentees. Two-thirds mentored two or more trainees. A minority had been given training for the mentor role.
- The majority of radiographers who had supervised Assistant Practitioners said that it had encouraged them to reflect on their own practice but a quarter found it led to increased pressure. Amongst radiographers who had not experienced much additional pressure there was a significant correlation between the extent to which they found supervising rewarding and the extent to which they had reflected on their own practice; this relationship was not found however amongst those who were more pressurised.
- Only one-fifth of radiographers believed that introduction of Assistant Practitioners had led to any work re-organisation. Where this had led to a change, radiographers largely noted the replacement of radiographers by Assistant Practitioners on rotas, and the need for attention to supervisory arrangements when planning rotas.
- Despite this, just under half of the responding radiographers believed that Assistant Practitioners had led to improved teamwork and helped improve workflow. A majority of radiographers felt there had been no change in patient throughput, although around one-fifth felt it had increased.
- Only one-fifth of radiographers reported that introduction of Assistant Practitioner posts had led to them having any additional time for training and development, and fewer than one-fifth of radiographers felt it had led to any opportunities to move into advanced practice.
- Whilst the Assistant Practitioners were interested in receiving further training to help them progress, fewer were interested in progressing into training to become a radiographer. This was mainly because they were happy in their current positions, but was also related to loss of income and a feeling, in some cases, that they were too old.

The case studies (Chapter 5)

- The case study sites confirmed that Assistant Practitioners can help improve patient throughput. This is largely due to expertise built up through repetition of a limited set of tasks. Capacity and flexibility can also be increased.
- The issue of supervision was again raised and this appears to have caused more problems in some departments than others. In particular some departments had elected to provide training for Band 5 radiographers with more than six months' experience. This had gone some way towards resolving supervision capacity issues. Another site ensured all requests were pre-justified in order to smooth workflow and minimise the need for Assistant Practitioners to seek out radiographers. However, at some sites the supervisory challenges appeared to derive mostly from some radiographers' attitudes.
- Information from the case studies confirmed that there is no clear answer regarding the impact of Assistant Practitioners on departmental costs. Where they have been employed as supernumeraries they add to overall costs but contribute to a lowering of unit costs for X-rays. Where Assistant Practitioners have been substituted for a radiographer then this leads to savings at a departmental as well as unit cost level. There has however been no consistent approach to deployment models.
- Not all radiographers had seen the anticipated increase in opportunities for CPD. Mostly this was attributable to the prevailing economic climate and staff shortages. Where introduction of the Assistant Practitioner posts had been seen to lead to more CPD opportunities for radiographers, they were more positively-disposed towards introduction of the posts.
- Communication had been central to successful implementation.
- The case studies confirmed the earlier findings that many radiographers had not received any training for their additional mentoring or supervisory duties and had not been allowed any dedicated time for these roles. This had made it difficult for those radiographers to give the Assistant Practitioners the time they felt was needed.
- Assistant Practitioners were keen to expand their scope of practice but there were factors which limited progress on this: scope of practice guidelines, the lack of suitable training and inability to release their time were the main three. However, managers were also aware that it would not be politic to move Assistant Practitioners into areas of practice such as ultrasound or CT while they had radiographers unable to gain experience in these areas. Where there were training opportunities it was seen as advisable to offer these to radiographers first.

- In common with the survey results (and with earlier reports to NES), few of the Assistant Practitioners were keen to consider training to become a radiographer.
- The case studies revealed continuing issues related to professional role boundary disputes, with some radiographers resenting the introduction of Assistant Practitioners.

The patient survey (Chapter 6)

- Some patients were not able to discriminate between radiographers and Assistant Practitioners.
- The majority of patients said that Assistant Practitioners had introduced themselves and then had treated them with respect and dignity and had answered their questions well. There was very little difference in the ratings given for the two staff groups.
- Patients who had been to the department previously were invited to compare their experience on the two occasions. Three-quarters felt that their treatment had been the same on this occasion as previously and a quarter felt it was better; no-one said it was worse.

Conclusions and recommendations (Chapter 7)

- Introduction of the Assistant Practitioners has had no detrimental impact on quality and there is some evidence that service has improved. The majority of the patients who responded to the survey and who had visited the case study departments previously believed that their treatment was as good as before and some felt it was better than previously. There was no indication that the images taken by the Assistant Practitioners were any more likely to need repeating than those of radiographers. Managers reported that error rates had not increased.
- Assistant Practitioners were pleased they had taken advantage of the opportunity to take the HNC and found their new jobs very rewarding. They would be interested in taking up any further opportunities to develop their scope of practice, were this feasible. However, few are interested in training to become a radiographer.
- Whether the introduction of the Assistant Practitioners had led to more effective skill mix in general, and more involvement of radiographers in advanced practice in particular, depended on the numbers of staff and the ways in which the Assistant Practitioners were deployed in the department. In some smaller departments the current guidance on supervision had led to more difficulties in releasing staff for training than previously. In large departments

while the introduction of an Assistant Practitioner may have led to CPD opportunities for one or two people, the majority of radiographers had not benefited. However, the research had taken place at a time of economic difficulties and these too were acknowledged to have impacted on the extent to which departments had been able to invest in training after introducing the Assistant Practitioners.

- It is difficult to give a straightforward conclusion regarding the economic effectiveness or cost-efficiency of introduction of the Assistant Practitioners because this depends on the workforce model in place in the department. In some departments Assistant Practitioners had been introduced as supernumeraries; where this had happened, departmental costs had gone up whilst unit costs per image had gone down. Some departments had introduced Assistant Practitioners as substitutes for radiographers who had left, and in these departments there were overall cost-savings on staff establishment.

Recommendations

- The research team found it difficult to obtain hard data to use in assessing the cost-effectiveness. We therefore **suggest** that, if money is awarded in future for an initiative that is expected to lead to service improvement, workforce modernisation and/or cost efficiencies, then applicants should be asked to outline first, the ways in which they expect the role to impact within their department, and second, the data that they will provide to demonstrate impact.
- Communication appeared to have been central to successful introduction of these posts. We **recommend** that any future funding aimed at bringing about workforce change should ask for a communication plan as part of the application process.
- Mentoring and supervision have been central to the successful training and deployment of these posts. The surveys suggest that those who did receive training coped better with mentoring and supervision and found the roles more rewarding. We **recommend** that more research would be useful on this point, in particular to clarify the types of training best suited to supporting staff in these roles. Where programmes specify the need for support roles (supervisory or mentoring) then we would **recommend** that funding bodies consider asking for development plans for staff asked to undertake these roles in any future funded initiatives. Again, this could be requested as part of the initial application package for funding.
- There is some confusion amongst managers over current Society and College of Radiographers policies and their status and requirements, in particular those relating to who may supervise Assistant Practitioners and potential for

extending the roles of Assistant Practitioners. There is also some level of agreement amongst managers regarding what are viewed by many as unreasonable restrictions within current policy regarding these issues. However, caution has to be taken to ensure that patients are not put at risk and it is important for there to be consistency on such issues. We therefore **recommend** that NES encourages discussions between managers and the Society and College of Radiographers to explore the possibility of a review of policies regarding supervision of, and scope of practice for, Assistant Practitioners and any implications for further training.

- Some sites have developed training programmes to equip Band 5 staff to supervise Assistant Practitioners. It would be **helpful** if further information could be made available about these programmes so that some consensus regarding acceptable levels of training can be reached.
- Similarly, should agreement be reached regarding further role development for Assistant Practitioners it would be **helpful** if NES could facilitate a meeting of managers at which they could agree priorities for development, so that they might then approach education/training providers and achieve some economies of scale in commissioning such training¹. Patient safety needs to be a priority where further role extension for Assistant Practitioners is considered and some agreement on standards for further training would help reduce risks.

¹ We understand that NES was in the process of developing a Professional Development Award (PDA) while this work was ongoing; the award will be submitted for validation in the near future.

1 Introduction

In 2004, NHS Education for Scotland (NES) undertook a scoping exercise which examined role development for radiographers and support workers in Scotland. One finding was the lack of appropriate educational opportunities and pathways for developing support workers into Assistant Practitioners (NES, 2004). In response to this the then Scottish Executive Health Department (SEHD) commissioned the Scottish Qualifications Agency (SQA) to develop two Higher National Certificates (HNCs) in Diagnostic Imaging and Radiotherapy to provide a development route to help support workers progress into the AP role. The HNCs were approved by the College of Radiographers (CoR) in June 2006 and initiated in January 2007. In addition, a Certificate in Higher Education (CertHE) course was offered at the Robert Gordon University.

NHS Education for Scotland (NES) in collaboration with the Health Delivery Directorate funded 41 support workers across the ten territorial health boards to enable them to complete one of three Assistant Practitioner programmes. From January 2007 some 34 trainee Assistant Practitioners undertook the HNC programmes as a two year day release course at Stow and Dundee Colleges while a further seven undertook the Certificate in Higher Education (CertHE) course. All 41 trainees successfully completed the programmes (in 2008 and 2009) with all but one subsequently being appointed as a Radiography Assistant Practitioner.

Given the substantial financial investment from the Scottish Government Health Department (SGHD) via NES it was of interest to determine the impact of the investment and the introduction of the Assistant Practitioner posts. The first phase of the evaluation included both diagnostic and therapeutic Assistant Practitioners and reported exclusively on the HNC programmes at Stow and Dundee Colleges which were completed in January and February 2009 respectively. While the first phase of the evaluation demonstrated that the educational programmes had met their aims by providing development pathways that provided a route to up-skill support workers and equip them to move into the Assistant Practitioner roles, managers in the participating departments felt that it was too early to gauge the

impact of the changes in radiography practice at that time. This was in part due to the levels of supervision that the APs still required and a lack of evidence at that point.

By 2010 the first tranche of Assistant Practitioners had been in post for a year and NES therefore felt that an appropriate time had elapsed for impact to have become evident and therefore commissioned the second phase of the evaluation. Phase two of the evaluation was to focus on the diagnostic radiography Assistant Practitioners' progress by charting service impact, patient experience, and future career aspirations.

In July 2010 NES issued an invitation to tender and the project was awarded to the Institute for Employment Studies and the University of Hertfordshire. The project commenced in September 2010 and the methodology agreed with NES consisted of the following components:

- A brief summary of the research literature on assistant practitioners
- Interviews with imaging service/radiology managers and requests for performance data for their departments
- Surveys of radiographers, assistant practitioners and other colleagues
- Case study visits to six sites, (selected for evidence of impact and also for their ability to illustrate implementation issues)
- A patient survey on service quality at the case study sites, and
- Analysis and reporting

This report is the final report of the second phase evaluation. The structure is as follows:

- Chapter two reports the literature review
- Chapter three reports on the interviews with managers
- Chapter four reports the outcomes from the surveys
- Chapter five reports on the case studies
- Chapter six reports the outcomes of the patient survey
- Chapter seven presents a synthesis of the emerging issues, evidence of impact and conclusions.

Details of the method and procedure for the various research components are given in each chapter as appropriate. Details of discussion guides etc. are given in appendices at the end of the report.

2 Literature Review: the background to the present study

The work commenced with a review of literature setting out the developments that have led to introduction of the assistant practitioner role and the issues that have emerged since then. A search was undertaken using the Cumulative Index to Nursing and Allied Health Literature (CINAHL) as well as literature that was available from our previous work in this area. It should be noted that the introduction of Assistant Practitioners gained ground more rapidly in England than in Scotland (see Miller, 2011). Given the lag in Scotland embracing Assistant Practitioner posts there are consequently fewer articles at present relating to developments in Scotland and therefore much of the literature, and hence the review, focuses on developments in England. The introduction of Assistant Practitioners in radiography was one of the earliest of these initiatives in Scotland, but over the past year there have been increasing numbers of initiatives introducing Assistant Practitioners in nursing and other allied health professions across Scotland as part of the redesign of services (see Miller, Robinson and Butler, in progress).

2.1 Background to the Assistant Practitioner role

The workload placed on radiology departments has continued to increase in recent years for two main reasons: firstly the rapid progress in imaging technology and the Government reforms to health, and in particular cancer, services.

In England, figures from the Department of Health (2009) revealed an overall increase of 22 per cent in imaging activities between 1995 and 2008. Increases in plain X-ray examinations have constituted a relatively small part of this overall increase (13 per cent); most growth has been seen in other imaging modalities: MRI (147 per cent increase), ultrasound (47 per cent), the use of radioisotopes (25 per cent) and CT (17 per cent) (Department of Health, 2009).

In Scotland there has also been rapid growth in imaging modalities and numbers of examinations, with concomitant increases in size for many imaging departments. Radiographers currently account for nearly a third of all Allied Health Professionals (29.1 per cent). In keeping with trends seen elsewhere, 'conventional' X-ray imaging is reducing as a proportion of their work. Figures show that CT, Gamma, MRI and Ultrasound accounted for a third of Scottish Radiology expenditure in 2010, with ultrasound being the second most widely-used technology (see Table 2.1).

Table 2.1: Scottish Radiology Services 2010

Scottish Radiology services, 2010	£	% of total spend
CT Scanner	325,064	9.9
Gamma Camera	47,937	1.5
MRI	148,793	4.6
Ultrasonics	535,722	16.4
Other Radiology (includes 'conventional' X-rays)	2,212,377	67.7
Total expenditure	3,269,893	

Source: Information Services Division Scotland

A Diagnostics Collaborative Programme was launched in 2006 to use service redesign to improve patient experience and reduce access times to diagnostic services (Scottish Government, 2011). There has been a year on year increase in the number of examinations undertaken in Scotland, with the exception of the year 2007/08, when a reduction of 2.0 per cent in number of examinations undertaken was seen (Table 2.2).

Table 2.2: Scottish Radiology Services expenditure and examinations 2005-2009

Radiology	2009	2008	2007	2006	2005
Total expenditure (£000s)	£230,169	£207,882	£178,860	£165,141	£161,930
Number of examinations	3,124,541	2,854,186	2,911,207	2,999,785	2,730,140

Source: Information Services Division Scotland

In England, in parallel with the technological revolution there were other changes to the National Health Service which go some way towards explaining why England was quicker to adopt Assistant Practitioner roles than either Scotland or Wales. Beginning in the early 1990s and stimulated initially by the White Paper 'Working for Patients' (Department of Health 1989) a number of initiatives were proposed to make the health service more responsive to patient need, devolve responsibility to local level and allow hospitals to apply for self governing or Trust status. A key purpose was the reform of NHS management along business lines to provide better value for money. It is this that appears to have driven much of the

later development work leading to the introduction of Assistant Practitioners in England.

Alongside these more general reforms, other Government reforms in England such as the NHS Plan (Department of Health 2000) and the NHS Cancer Plan (Department of Health 2004) served to place an increased demand on radiology departments in particular. In Scotland too a raft of policies focussed on service improvement was introduced: *'Our National Health: A plan for action, a plan for change'*, published by the Scottish Government in December 2000; *'Cancer in Scotland: Action for Change'* and *'Cancer in Scotland: Radiotherapy Activity Planning 2011-15'*, both published by the Scottish Government in 2006; the *'Better Health, Better Care: Action Plan'*, published in 2007 and the 18 weeks Referral to Treatment (RTT) standard introduced in 2008. This led imaging departments to look for ways to meet the new targets for ensuring that patients were seen within specified times following referral. It is anticipated that there will be a stepped reduction of diagnostic waiting times over the next few years.

Although technological progress together with Government reforms has led to a rise in both demand for imaging services (and more recently the time within which elective appointments must be met), growth in the numbers of radiologists has failed to keep pace with this increase. Given the history of increasing demands on radiology services it is unsurprising therefore that other means have been sought by which to expand the service to meet these increasing demands on the service. One early prediction was that expansion of imaging technology would impact on radiographer roles and lead to extension of their activities into areas traditionally the responsibility of radiologists (Barnevald Binkhausen, 1992) and indeed evidence of this rapidly started to emerge. By 1995 Paterson had found increasing numbers of examples of overlaps between the roles of radiologists and radiographers (Paterson 1995). Data suggested that some radiographers had extended role activities into areas such as intravenous injections, ultrasound reporting, barium enemas and 'red dot' schemes. Whilst in many NHS hospitals this became regarded as standard practice it was not widespread across the UK. Therefore in 1995 the Audit Commission called for 'radical rethinking' of the way in which technological and clinical innovations in radiological services were handled.

Despite the evidence of radiographer role extension, there were few attempts to introduce a framework to support and recognise the developments in imaging practice until Evans (1999) described a framework that had been introduced within the breast screening service and which subsequently became known as the 'four tier structure.' This model was initially introduced just within the breast screening service; however, following a Radiography Skills Mix report

(Department of Health Learning and Personnel Development Division 2003) it was introduced within diagnostic and therapeutic radiography as well.

2.2 The Four-tier model and the Assistant Practitioner role

The four-tier model (which was subsequently re-named the Career Progression Framework) aims to maintain and develop practice standards, promote new roles, extended roles and advanced practice as well as improving recruitment and retention by widening routes of access to clinical careers (NES, 2006; CoR 2007). The intention of the model was to encourage the development of multidisciplinary teams which are defined by their skills and competencies required for a service rather than their professional name or discipline.

The four levels of the model represent increasing levels of competence and responsibility within such a multi-disciplinary team: the Assistant Practitioner, the Practitioner, the Advanced Practitioner and the Consultant Practitioner (Department of Health 2003). The Assistant Practitioner position was defined in the Skill Mix document (Department of Health 2003) as someone who:

'... performs protocol-limited clinical tasks under the direction and supervision of a state registered practitioner'

The role of the Assistant Practitioner therefore exists at a sub-professional tier but differs from that of a general support worker in that their duties require them to perform limited clinical imaging examinations or treatment procedures in concert with, and under the supervision of HPC-registered Radiographers. These procedures vary in accordance with locally identified needs but are confined to standard examinations or treatments carried out on ambulant adult patients, and conducted in accordance with locally agreed protocols (CoR 2003).

2.3 Current status

The Assistant Practitioner role was introduced into the radiography field for three predominant reasons: to address staff shortages, improve patient care and management and to provide career progression for support workers. The literature was reviewed in order to explore the extent to which the Assistant Practitioner role is helping to achieve these aims and to identify potential issues, such as barriers to implementation/roll-out, which will need to be explored further in the evaluation.

2.3.1 Staff shortages

The Assistant Practitioner role was designed to assist radiographers and therefore free up their time and allow them to extend their role into some of the tasks traditionally undertaken by radiologists. With a reduced level of administrative work and/or less need for radiographers to take on the more routine tasks it was envisaged that this would give radiographers more time to undertake the more specialist roles. In turn this would enable radiographers to help make up for some of the staff shortages seen amongst radiologists. This was viewed as particularly cost effective given the difference between the pay of radiologists compared to radiographers.

A recent Scope of Radiographic Practice report by Price et al. (2008) indicated that Assistant Practitioners are now present in most departments in the UK. The report found that over half of responding sites (63 sites, 58 per cent of the 108¹ responding sites) reported that they employed Assistant Practitioners, with a total of 185 Assistant Practitioners in post at that time; the number per site ranged from one to seven with a mean of just under three per department. At the time of the survey, five of the hospitals in Scotland that replied to the survey (28 per cent) reported that they had assistant practitioners in post. All of the hospitals within the east of England, the east midlands, the south west and the west midlands reported having Assistant Practitioners in the radiology department. London was the area in England with the lowest proportion, with only 45 per cent of their hospitals employing Assistant Practitioners. Three of the seven hospitals in Wales from which managers responded had Assistant Practitioners in post (43 per cent).

These recent data showed there had been a steady increase in Assistant Practitioners over those reported in earlier studies (see, for example, Price and Le Masurier, 2007). In line with this the numbers of Advanced Practitioners and Consultant Practitioners had also risen during the same period, from 623 to 885 and 6 to 18 respectively when comparing the data from the two studies.

These data suggest that introduction of the career progression (Four-Tier) framework is well underway and the role of the Assistant Practitioner is becoming more established as part of managers' strategies for addressing the issue of staff shortages.

In further support of this, a more recent qualitative study by Price and Miller (2010) undertook an exploratory case study approach to understand the impact on two NHS Trusts that had adopted the Four Tier framework and employed Assistant Practitioners, Advanced Practitioners and Consultants. Introduction of

¹ Note that 18 of these responses (16.7 per cent) came from hospitals in Scotland

the Assistant Practitioner role had significantly freed up the time of more senior radiography staff and aided the staffing shortages at this level. It had also helped to reduce costs and improved patient care and management. One trust interviewed felt that the introduction of the Assistant Practitioner had benefited the trust and in the present financial climate they felt they could use a lot more assistants. One consultant interviewed stated:

'We need a lot more assistant practitioners as there is scope to use them in many more areas in the department. With appropriate training there is a role in ultrasound, mammography, in-theatre, in nuclear medicine, CT and MRI'

This suggests that while the role of Assistant Practitioner had helped alleviate some of the problems associated with staff shortages in the two case study departments there is scope for further role expansion.

The way in which deployment of Assistant Practitioners may be affected by the overall staffing establishment in a department is illustrated by two studies. The first, a study by Forsyth (2003) showed a strong field of applicants for Assistant Practitioner vacancies in radiotherapy, with few vacancies; soon after this a report on the National Health Service Breast Screening Programme (NHSBSP) by Nickerson and Cush (2004) noted few problems in recruiting to the Assistant Practitioner role and found that only a minority of units had unfilled vacancies. However, Nickerson and Cush also found there were no consultant positions within the units, although there were significant numbers of Advanced Practitioner posts. The Assistant Practitioners had been trained in order to allow the Advanced Practitioners to spend more time to undertake activities such as performing mammograms and breast ultrasound.

With workload likely to increase in future years, an increased focus on cost-efficiency and staffing levels in the NHS unlikely to rise, there is likely to be an even greater need for more Assistant Practitioners in the future.

2.3.2 Improved Patient Care and Management

One of the benefits anticipated from introduction of the Assistant Practitioner role is that it would help in delivering timely care to patients and, by releasing radiographers to acquire additional clinical skills bring a greater benefit for patients in the long run. There is some evidence in support of this. Introduction of the Four Tier system and Assistant Practitioners has been found to help to reduce patient waiting times and improve patient services (Woodford 2005; Nightingale and Hogg 2003; Campbell et al. 2000; Craven 2003). The freeing up of consultants' time by the downwards delegation of more routine tasks, had led to greater job satisfaction for the Consultants who also reported that they had more time to devote to other aspects of patient care (Campbell et al. 2003). The more recent

study by Price and Miller (2010) found that introduction of Assistant Practitioners had significantly freed up the time of more senior staff and aided the staffing shortages at this level, helping to reduce costs and improve patient care and management.

However, while papers have started to consider the ways in which Assistant Practitioners may impact on quality of care (through their impact on departmental functioning) there have been only a handful of articles looking at their direct impact on patient experience. The work of Kessler and his colleagues (Kessler et al., 2010) looking at the impact of Health Care Support Workers on patient experience appears to be the only report that has asked patients directly about their experiences with different staff groups, with the outcomes suggesting patients were entirely happy when seen by Health Care Support Workers. The survey work undertaken by Kessler therefore informed design of the patient survey approach adopted in the later stages of the work reported here.

2.3.3 Career Progression

A third aim of introducing the Assistant Practitioner posts was to provide career progression and development for support workers. Prior to implementation of the four-tier model, the only option for career progression for support workers was to undertake professional courses and obtain the appropriate academic qualifications. However, some support workers may have the necessary personal attributes and life experience to become a clinical professional but are unable or unwilling to take the academic route for reasons such as financial constraints, time etc. The Assistant Practitioner tier provides a first rung on the ladder to a health profession career.

Introduction of the Assistant Practitioner position as a career progression tool had both its supporters and its critics who recognised the benefits and the potential hazards which it could bring to the radiography profession. During its initial introduction there were many sceptics such as Jordan (2002) who felt that the Assistant Practitioner role would reduce the power of the radiographer, their Trade Union and the professional body. Similar to the power struggle which occurred between radiologists and radiographers, White (2002) felt that radiographers would be unwilling to relinquish some of their duties to Assistant Practitioners as had been the case for some radiologists in relation to radiographers in the past. White felt that there would need to be full support by all professionals for the advancement of the radiography practice for the posts to succeed.

In 2003 the Society and College of Radiographers (SCoR) published documentation describing the scope of practice, accountability and education

requirements of Assistant Practitioners through a National Occupational Standards document. In the same year the Department of Health (2003) conducted a series of workshops with radiography staff in relation to the introduction of the Assistant Practitioner, and found that many held initial reservations regarding the clarity of roles and fears for the possible devaluing of the current role of the radiographer. The Department of Health study concluded that the majority of radiographers felt that the status of radiographer would improve. However, more recent literature has also suggested that prejudice towards the Assistant Practitioner role still exists. The Scope of Practice Report by Price et al. (2008) found that there was still resistance in some quarters to the idea of the four-tier structure and the Assistant Practitioner role. One radiographer felt that the Assistant Practitioner position was encroaching on the radiographer role and they found it *'worrying that Assistant Practitioners were not HPC registered but expanding their role into traditional radiography duties.'* It was felt that the position of Assistant Practitioner had served to blur professional roles and there were fears that it could devalue the radiographer and radiologist professions.

Despite such issues, there have also been many advocates for the introduction of the Assistant Practitioner position as a career progression option for lower qualified individuals. Bull (2003) stated that the issue of assistants was *'a positive step forward in an attempt to increase recruitment into the workforce by widening access to those without the traditional qualifications.'* Work by Wivel (2001) found that individual trusts reported an abundance of interest in advertised posts for Assistant Practitioners and it was likely that some of these would continue their training and become registered practitioners. This is strengthened by evidence discussed before which suggested a recent increase in the rise of Assistant Practitioners (Price et al. 2008).

Opening up development opportunities for support workers is likely to have a positive impact on the role. Research by Hancock et al. (2005) examined the role development of healthcare assistants and found that when they were provided with development programmes the assistants displayed a number of positive changes in their skill and knowledge development, confidence levels, initiative and job satisfaction. Their development encouraged them to take a more holistic approach to patient care which would inevitably benefit the patient in the long run. Although this is not specific to support workers in radiography it is likely that many of the benefits can be transferred.

The first phase of the evaluation of the Radiography Trainee Assistant Practitioner's Programme (NES 2010) has also shown the potential benefits for Assistant Practitioners. The majority of the trainees undertook a Higher National Certificate in Diagnostic Imaging or Radiotherapy, with trainee Assistant Practitioners being required to attend college one day per week during the

academic year, supplemented by two days work based learning. The trainees undertook their normal duties as helpers or assistants during the rest of the week. It was found that following this standardised, accredited training, trainee Assistant Practitioners' levels of performance and confidence in their own abilities increased. This was coupled with an increase in the acceptance and development of the role of trainee Assistant Practitioner within the department. There were also benefits to the department such as more flexibility in tackling service demands and perceived improvements in team working and patient experience.

2.3.4 Facilitating the development of Assistant Practitioners

There is evidence from areas other than radiography that point to the additional work that may be needed in order to facilitate the development of Assistant Practitioners. Pratt (2008) reported on the implementation of Assistant Practitioner Foundation degrees at Newham University Hospital Trust. Many issues needed to be overcome in order for students to obtain the greatest benefit from the Assistant Practitioner Foundation degree in nursing. Pratt found that many of the students were working within areas which were not beneficial for their development. Discussions with ward managers and mentors and the matching of learning outcomes to the curriculum were required to ensure that students were rotated into the correct environments to allow them exposure to new practices and skills and enhance their development. Pratt also devised a skeletal job description (approved by Agenda for Change) which identified the tasks a qualified band 4 Assistant Practitioner would have to undertake within clinical practice, so that students' learning and development could then be geared towards this.

The students were also made supernumerary and sponsored by clinical areas. Their supernumerary status allowed them to follow patients from the initial presentation in A & E through investigations and right up to admission to the ward. This enabled them to observe how smooth and uncomplicated the patients' pathway should be from A & E to hospital admission. The Assistant Practitioners were also given mentors and allocated support time with them.

Pratt found that both the students and practitioners in the clinical areas in which the Assistant Practitioners worked felt that the foundation degree had prepared the students well for the Assistant Practitioner role. The evaluation also showed that Assistant Practitioners were functioning, in the manager's eyes, at a level higher than they expected from them. One of the fears over the introduction of the Assistant Practitioner role is that they might be carrying out tasks for which they were unqualified. However, as Pratt suggests, if dedicated training and support is given to them, then Assistant Practitioners can function at a higher level than is expected of them and may be able to take on other more specialist roles in a range of departments.

One important aspect which was highlighted in the Pratt article was that of the role of mentors and the benefit they can provide for their students. However, more recent research has also highlighted the advantages that the mentoring relationship has for supervisors. This finding is supported by other similar research that has examined clinical supervision. The first round evaluation of the Radiography Trainee Assistant Practitioner's Programme (NES 2010) found that mentors received many personal benefits from working with trainee Assistant Practitioners which included appreciation of feedback from trainee Assistant Practitioners and a sense of reward and achievement in seeing the trainees successfully complete the programme. Mentoring had also meant that several mentors had to reassess their theoretical and technical skills and refresh as appropriate in order to explain certain aspects clearly to their supervisee. This in turn had helped to enhance their teaching and mentoring skills. A paper by Colthart et al. (2010) based on the first round evaluation examined this issue in more depth and reported that although mentoring had provided a number of challenges (including an increase in workload), the experience had enhanced radiographers' teaching and mentoring skills and contributed to their Continual Professional Development. Mentors felt that the programme had a positive effect on team working and had been beneficial for patient care.

Williams and Irvine (2009) found, similarly to others, that there were perceived positive effects on clinical supervision through promoting clinical governance (Winstanley & White 2002) and improving the quality of patient care (Walsh et al. 2003). The Williams and Irvine (2009) study revealed that while nurse clinical supervisors generally valued the opportunity to undertake clinical supervision the study also highlighted the need for formal support, in the form of mentoring or clinical supervisors' support groups, to be given to nurses taking on a supervisory role to enable them to support their supervisee effectively and promote their learning.

Although not all of these studies are specific to radiography or to Assistant Practitioners in radiography, there appear to be many general lessons emerging regarding training and mentoring that may be more widely applicable. While there is evidence to suggest mutual benefits for both supervisors and supervisees if the correct amount of time and support is given to develop the relationship, research could be conducted to further explore the benefits and potential barriers of the mentoring relationship, given its centrality to most models of Assistant Practitioner development.

2.4 Conclusions

Although the Assistant Practitioner's role was initially met with caution, the role was viewed as necessary in order to deal with the increasing demands and workload placed upon radiologists and in turn radiographers. Since its introduction, the Assistant Practitioner's role has become more widely accepted and now potentially provides a career development pathway for support workers. With the workload of radiologists and radiographers continuing to increase within an economically stringent environment there is likely to be a greater need for Assistant Practitioners over time in order to help deliver services cost-effectively. However, in order to do this more research needs to be conducted to identify the benefits that Assistant Practitioners can bring, firstly, for the profession as a whole (through mentoring, freeing up radiographers time) and also for the service delivery, patient care and management.

Evaluation of the impact of introducing the Assistant Practitioner role is a key part of the research that is needed. This was the topic of the current study. The research sought to build on the earlier evaluation by seeking evidence of impact at departmental level as well as looking at the career opportunities the Assistant Practitioner role provides. It also sought to add to the very small number of studies that had explored the patient viewpoint.

3 Interviews with imaging managers

In the early stages of the research telephone interviews were undertaken with imaging managers at the participating sites. These initial interviews aimed to:

- Introduce the research team to the managers and explain the objectives of the work
- Discuss the ways in which Assistant Practitioners have been deployed in their departments, any changes to departmental structure and the outcomes in terms of changes to departmental functioning
- Identify the types of data/information the department itself is collecting, analysing and monitoring regarding impact of introduction of the posts
- Explore the managers' perspective on the extent to which introduction of the Assistant Practitioners posts have impacted on quality, skills mix and departmental flexibility and efficiency (cost-benefits)
- Request the managers' support and assistance in publicising and encouraging response to the online survey of Assistant Practitioners and their colleagues;
- Explore their attitude to the possibility of the site being one of the six case study sites to be visited later in the work.

The interviews were undertaken by telephone using a semi-structure discussion guide. The discussion guide was designed to elicit an initial overview of the nature of the changes made to accommodate, and subsequently to build upon, the Assistant Practitioners posts and to seek information regarding their impact on clinical effectiveness and efficiency within the department. As part of this we explored the extent to which managers had data available that might inform the evaluation.

The discussion guide is shown at Appendix 1.

An initial email to introduce the team was sent to all managers at imaging departments that had had Assistant Practitioners in Cohort 1. All but one email elicited a reply. Of the replies, one reported that they no longer had an Assistant Practitioner. All other sites agreed to participate: several offered to organise a group interview via speaker phone. In total, 12 individual and 4 group interviews were conducted.

The interviews in general took between 20 and 45 minutes to conduct, with the researcher taking notes as the interview progressed. Permission was requested at the outset, and in all cases given, for the interviews to be recorded to assist with note-taking. All interviews were recorded and transcribed.

Below we summarise the broad categories of responses gained from the managers in response to questions drafted in line with the aims stated above. Strictly speaking this was part of the qualitative, rather than the quantitative element of the work; however, as almost all the managers (or their deputies) were contacted and interviewed this effectively amounts to a census of managers from the entire sample of participating sites. Therefore where several people have made similar points we provide examples across the range to indicate the extent of agreement. Similarly, where a minority of people have disagreed with the main views expressed, we report examples of the comments made to show the nature and extent of disagreement. However, given that some interviews were group interviews, and some managers represented several sites, we have not reported the actual number of positive or negative answers received.

3.1 Rationale, workforce planning and changes to the staff establishment

Within the literature there are several arguments made for introducing Assistant Practitioner posts: one is that they may take on some of the lower level tasks from the 'Agenda for Change' Band 5 tier of the workforce and above, and by doing so release the time of these higher grade staff to focus on activities requiring higher level skills; a second argument is that where the Assistant Practitioner takes on a sufficient proportion of these lower level tasks then this may enable the hospital to reduce the number of staff at the higher grade and make cost savings (see Price and Miller 2010). Where a hospital is able to both make cost savings whilst enabling its higher grade staff to develop more advanced skills then it can be seen that this is a 'win-win' situation.

For this reason the interviews asked managers about their planning with regard to staff numbers at the time of planning the introduction of the Assistant Practitioner. The interviews explored whether there had been any explicit rationale for taking up the offer of the Assistant Practitioner, whether there had

been any planning to reduce staff numbers or whether the intention had been to release higher grade staff either for training or for work in more advanced areas.

It should be noted first that the Assistant Practitioners posts had been introduced at a time at which there were many other factors also leading to changes. Prime amongst these were the service improvements being demanded to meet the 18 week Referral To Treatment target and (in accident and emergency) the 4 hour wait target.

While at several sites introduction of the Assistant Practitioners had allowed staff to be released for training and work in the specialist modalities, at only a few sites did this appear to have initially been part of departmental planning ahead of introduction of the posts. Only a minority of sites appeared to have begun by thinking through the way in which the posts would be incorporated within departmental work arrangements, rather than simply seeing them as an additional pair of hands to supplement capacity.

3.1.1 Workforce planning

Only a minority had actively planned for a change to workforce numbers and profile. Just one manager explained how they had considered the way in which the Assistant Practitioners would be incorporated within the workforce as a whole prior to introducing the posts:

'On this site, I have tried to take an holistic view, my attitude was that if we were going to introduce APs then we needed to look at the workforce as a whole. Therefore, alongside introduction of the APs we introduced three MSK reporting radiographers (Band 7) one chest interpreting radiographer (Band 7) and one in upper and lower GI...The AP posts were part of our thinking and planning.'

In one site the offer of funding for the Assistant Practitioner post had occurred at a time when a new CT scanner was being introduced. In this case, the AP had been part of the business planning that had been prompted by this event:

'The business case for the introduction of the AP was that we were getting a completely new modality with the CT scanner. Therefore there was a need to get some CT skills on board in the team. We increased establishment of radiographers by one but the AP was [intended] to relieve another radiographer from within the department so they could work within CT.'

Here, their later experience led them to believe that, should they lose a member of staff in the future, the presence of the Assistant Practitioner might now help them to cope with any reduction to the radiography staffing:

'We felt that once the scanner had bedded in, because we had the AP functional and qualified, that if a vacancy arose, we felt that we could manage again with [just] five radiographers as the CT service job is really only part time.'

Mostly though managers did not report any real planning for how the Assistant Practitioners(s) would be incorporated into their current or future workforce plans:

'There was no planning at all before hand on how the introduction of the AP may affect numbers.'

3.1.2 Workforce numbers

Reduction in workforce establishment (numbers of registered staff) is often cited as a reason for transferring tasks to lower level staff. In other words, the reduction in numbers of higher level staff is offset by delegation of some of their tasks to lower level staff. In such cases task delegation may be part of workforce planning. However, difficulties in recruitment can also lead to a shortfall in staff at higher levels and such cases, too, the reduction in capacity of higher grade staff can lead to consequent downward delegation of tasks to lower grade staff. This can lead to tasks being delegated downwards from medical personnel to other registered staff, or from registered staff to staff at lower levels in the Agenda for Change staffing levels. There was an example of role extension amongst radiographers at one of the participating pilot sites, but this was related to radiologist capacity rather than to introduction of the Assistant Practitioner:

'We have introduced reporting radiographers but this is not due to the AP. This is due to a lack of radiologist's capacity.'

In general, where staff numbers in the imaging departments had changed, this was thought to be mostly unrelated to introduction of the Assistant Practitioner posts. Two main factors were identified: firstly, the recruitment of additional staff to enable the department to meet targets and/or service needs; and secondly, reductions in staff due to the more recent economic climate. At the sites where staff numbers had increased any chance of seeing cost savings were dashed by changes that had in fact increased their salary bill:

'The numbers have increased overall. This was to meet waiting time targets. It was across the board but primarily Band 6s. They increased by around 2 or 3 at each site. We received additional money to support this increase.'

'We gained additional posts in order to meet waiting time targets.'

'Numbers have changed; they have gone up due to the new services in place. No direct change due to the AP.'

Elsewhere, staff numbers had been reduced, but this was because of reduced funding for the department.

'Yes [the numbers changed] but it wasn't as a direct result of APs being introduced, it was more as a result of the current financial position. [Interviewer: So I guess that means you've had a reduction in staff?] Yes. We did not plan any change in numbers at time APs were planned and introduced.'

Where staff numbers stayed the same as before the department was offered training for the Assistant Practitioner(s), the status of the employee had changed from Health Care Support Worker to Assistant Practitioner (with a concomitant promotion from AfC Band 3 to Band 4); therefore at these sites, too, the total salary bill had increased slightly as a result of introduction of the Assistant Practitioner posts:

'They changed their status once they were qualified. So the staff and salaries have pretty much remained the same, apart from the qualified APs going up a band from 3 to 4.'

'The AP was in the Workforce Planning so as soon as they had had the AP training it was known that we would lose an assistant who they won't replace and also lose a radiographer who they probably won't replace.'

However, some managers had been required to find the costs of the Assistant Practitioners through salary savings elsewhere:

'Yes we lost a Band 6 radiographer and then employed a Band 4 and the rest went to savings. ... it was a direct result of the introduction of the AP as this was the only way that this could be funded... it was the only way that we could fund the AP as it had to be done within existing resources.'

'We were aware they would be coming through and would be able to do some of the work. It allowed us to employ fewer radiographers, probably around two, one at each site.'

Therefore a range of different situations relating to staff establishment and staff costs was seen across the departments. There was no clear, unambiguous indication that cost savings had been made, except in a minority of sites.

3.1.3 Planning the introduction of the Assistant Practitioners posts

While a few of the sites had actively planned these changes ahead of introduction of the Assistant Practitioner posts, at other sites the changes had evolved once the Assistant Practitioners were introduced. While few had not thought at all about how the posts would be deployed, it was clear that in a majority of cases there had not been very much planning ahead of their introduction.

At one site introduction of the Assistant Practitioners post had followed on from a full scale review of their functioning. The paragraphs below come from the interview with the manager at this site:

'Over last two to three years we have had a complete review of radiographer staffing levels to run the department to see the work done and where the department is going in the future. We looked at the skills we had within the department and then completely redesigned job descriptions and roles and organisational change process to fit in with this.... We had planned for changes in staff levels as we wrote new job descriptions and looked at skill levels.'

'At the time we introduced the APs we were looking at the four tier system. Then the funding became available to allow progress on the Assistant Practitioners. It allowed us to do that, and now we have the AP role embedded we need to look at training for the advanced practice role now. Radiographers with a role in ultrasound, barium enemas - that was the rationale behind introduction of the Assistant Practitioners role. It was to provide opportunity to advance the radiographer's role. We had been slow, we need to look at the advanced practice role [now].'

'Because it is such a big workforce with high turnover of staff it has enabled us to take this approach. We recruited eight Band 5s this year, twelve the year before, fourteen before that. It allows us to plan more regarding what they do with the vacant posts. So we developed the plans for change within the radiography establishment.'

Others however had planned the use of their Assistant Practitioners only to a limited extent or within a limited setting, as illustrated by these comments from two managers:

'The plan was always to have that staff group [radiographers] competent as CT is no longer [considered to be] a specialised mode... the modality needed to be part of any X-ray department. So that's always been a factor ...and perhaps at the beginning we were always aware that if that person could be freed up it would give us another [radiographer] to be a trainee [in CT].'

'Only in the sense of the CT. We used the rota to plan out specific duties and roles for the AP because they were bringing other skills from their imaging assistant job with them. We wanted to be able to clearly define when the AP needs to be completely available for the job and when they could fit in the other duties such as the chaperoning and paper work. This was the plan but in reality she does everything all the time! It's difficult to explain how we work because it is so different all the time and everyday.'

Elsewhere there had been limited planning and the extent to which their deployment could evolve had been limited by the requirements set out in the Assistant Practitioners' scope of practice.

'Some of it was planned, some of it just evolved. We are limited by the scope of practice, we have to sign off their images. They don't do children under twelve, pregnant women, work on trolleys. So that limits us slightly.'

The supervisory requirements had affected some departments more than others. Comparing the next two extracts from interviews it is clear that while some departments have found the supervisory requirements led to additional pressures on staff in terms of the amount of organisation required, other sites had found a way to address the issue and so were using their Assistant Practitioners more flexibly.

'It has had an impact for [my colleague] as she has to make sure that the AP is supervised by a Band 6 radiographer all the time. Instead of having two Band 5s have to have a Band 6 and a Band 4. This means it takes more organising and [she] has to watch which members of staff are off and when they are off so that the correct supervision and support can be given to the AP. The Band 5 can definitely work more independently but the Band 4 can't because of the restriction that the Society has put on them which is strictly followed by the department. I know that some hospitals do not do this but this department makes sure that they do as it is a necessity from a legal point of view. If there are any mistakes made then insurance will only cover it if a Band 6 that was doing the supervision.'

'We changed [the arrangements] slightly. We thought we would leave the supervision to the Band 6s but skill mix was an issue so we introduced the [supervision] competencies at that point and we changed the scope of practice to allow the Band 5s to supervise. And that gave us a lot more flexibility in the department. We could not supervise them properly just with the Band 6s.'

'They are mainly supervised by Band 5s, we allow this when they are one year post-qualification. Some Health Boards require it to be a Band 6. But we felt the scope of practice for Assistant Practitioners was very limited, and with shift breaks it can be difficult to get a Band 6 supervising, so as long as the Band 5 has one year's experience we think it is ok to supervise them. And you should remember that the Band 5s supervise undergraduate students too.'

3.2 The role of the Assistant Practitioner and their impact on work teams, teamwork and departmental flexibility

3.2.1 What do Assistant Practitioners do?

The Assistant Practitioners reported upon in this study primarily work in general radiography, with outpatients and GP referrals. Some were working in dental units undertaking standardised techniques such as orthopantomography and cephalometry. While in some hospitals they play a more general role in the department, other sites were careful to maintain a boundary between the work of the Assistant Practitioners and the HCSWs:

'They help patients, look after patients, they are involved in the day to day throughput of x rays [ie, patients] in the department.'

'They assist at radiologists' clinics and assist in CT and have a chaperone role for ultrasound and ECG as well as anything else that needs doing on the clinical side. This is everybody's role but it usual falls to the AP.'

'They do everything within the AP scope of practice but never asked to do basic assisting at Band 3 always do work at Band 4 level.'

Some sites had provided training additional to that given in the initial Higher National Certificate in order to expand their role, and others were keen to see the Assistant Practitioners expand their role further:

'We have provided some additional training in modified techniques for the two qualified APs on [anterior-posterior] chests. It is a 'big win' to do [these]. And in the A&E dept they do a lot of poly-trauma, multi-trauma, they will work with the radiographer taking (overall) responsibility, but having somebody trained to know where to position the tube, the collimation side of it. So instead of having a [AfC Band] 5 and a 6 we might have a 6 and a 4 or a 4 and a 5. It has greatly expanded our flexibility.'

'They do general radiography and adapted techniques such as GP referrals at the moment but I would like to expand that scope of practice to include imaging. The department is writing up a protocol for this at the moment.'

The main restrictions on Assistant Practitioners' scope of practice relate to the ability to authorise or request the initial examination, sign off the images taken, and give information to patients regarding the clinical outcomes. This impacted on the extent to which these roles could provide departments with additional flexibility; this is examined in the next two sections

3.2.2 Role substitution and extension within the team

In the majority of departments the Assistant Practitioners had taken on some of the bulk of the routine X-ray work that had primarily been undertaken previously by radiographers in Band 5 or 6. In some departments radiographers in Band 7 were also involved in the more routine X-ray work, and so they too had had some of this work taken off their hands. As a result, there was evidence from some sites that radiographers had been able to concentrate to a greater extent on the more highly-skilled specialist activities:

'[Taken on some of the work of] a Band 6 radiographer. The AP is a godsend in this sense as it has freed up the radiographers from some of these duties and has allowed them to carry out other work which they are qualified to do.... Having an AP is almost like having another radiographer because she is extremely capable. It has released the radiographers to run CT and this is a slight increase in skills. It's difficult to put a figure on the proportion but I would agree that there has been an increase in the proportion of time which radiographers are able to carry out higher skilled activities.'

'Since the AP [post was introduced] it has encouraged the Band 6 radiographers to work at a more senior level. Band 6 radiographers have more responsibility for supervising and quality checking images. These tasks are seen as higher skilled and valued activities. Proportion of time has shifted more towards undertaking higher skilled activities than it was previously.'

'To some extent but radiographers are still doing out of hours stuff, the trauma cases and are still doing some of the GP referrals. It has had some effect. They do spend more time on more complex activities.'

'Band 5 or 6 in that general work area there is not much of a distinction between the 5s and 6s. But once the Band 5s have become practitioner status in that area there's a lot of ward stuff and GP stuff and ...the AP can take a lot of the workload there.'

As the last of the above interview extracts shows, there was still the requirement for radiographers to undertake non-complex X-rays out of hours, as the Assistant Practitioners were only working 9 – 5. This was because of the requirement for them to be supervised; where there is only one radiographer on duty (as in out of hours work) this could cause some difficulties and so most sites had restricted Assistant Practitioners' work hours to the times when there were more staff available.

At some sites introduction of the Assistant Practitioners appeared to have had only limited impact.

'Radiographers still do the [the things] they did before. No scope in the hospital for them to specialise in other things. Radiographers are doing pretty much the same and still devoting the same amount of time to the same tasks.'

'No change in balance of radiographers work. No, they still do all the same work they did before, in the same proportion.'

Where the Assistant Practitioners appear to have added particular value has been in allowing the release of radiographers to undertake more training in specialist areas. A large proportion of managers alluded to this particular benefit.

'With the introduction of the AP one of the radiographers had been able to undertake a supporting role for the sonographer. We would not have been able to afford luxury of all the study time and commitment that has taken if we had not had the AP in place as too many radiographers and hands on people were very busy. Also it would have been desperate if radiographers were sick or were on leave. From this perspective it has allowed us to develop other staff professionally and allowed them to take on other roles.'

'The roles that radiographers take on now are higher skilled roles. Since we've had the scanner we've had to get people skilled up in CT. [Having the AP has] allowed us to put radiographers through their PGC....We would not have been able to do this if we had not had the AP role. We have been able to put two radiographers through.'

'It's allowed us to start training Band 5 radiographers in CT. These tasks are higher skilled than what they would have done before and more skilled than the AP role. It is difficult to quantify the proportion of the time. It's something that we always wanted to do, to re-skill the radiographers but not been able to do. It's good to have the APs along to allow us to do this.'

'Allowed more radiographers to be trained in the complex modalities. MRI and CT techniques are becoming more common, we knew it was the direction of travel that departments were going in. we needed the backfill to allow us to train people.'

'It has allowed more of the Band 6s to do CT training. We always had plans for Band 5s to do CT but because the Band 6s are the staff group who cover the on call we have had to stop it and discontinue the training. But it has allowed us to get those people more adequately trained.'

'We were told we could introduce one AP and we used this to introduce protected study time. All staff should have half a day a month. Some months we miss it but yes we have virtually introduced this. Just the one post doesn't really cover all the staff but it does help so that many of them get their allocated protected time.'

'It has allowed more Band 6s to train to do special procedures. We employed more Band 6s (because of the additional funding) and allowed more of the radiographers to train to work in other modalities. The two modalities in which they mainly work are MR and CT – with CT this is because it's a 24/7 service. It gives us more flexibility.'

In the next section we set out further evidence for the impact of introduction of the Assistant Practitioner roles on flexibility within departments.

3.2.3 Impact on departmental flexibility

One of the issues of interest was to discover whether availability of the Assistant Practitioners had led to any increase in flexibility, in terms of operational/staffing arrangements or their ability to release staff for development. Again there was a range of views, with some sites seeing the Assistant Practitioners as having a large impact on flexibility:

'Definitely. We have just a small team and it means that with only one radiographer on duty with the AP then it is possible to keep two rooms going. Before, it would have just been the radiographer on their own doing everything that came through the door.'

'Having the Assistant Practitioners has allowed us to be more flexible. Flexibility is the key. The other [hospitals in this region] would agree. We are more flexible with staffing levels at the clinical areas within the department for example instead of three radiographers manning a specific area we now have two radiographers + one AP and this has allowed us to send the radiographers to be trained in other modalities.'

'Absolutely. It has freed up a lot of staff to do other things. APs also contribute towards the QA programmes as well. I am responsible for overall QA on equipment, with other staff responsible for portable equipment, CR, stats etc. They then ensure that the other junior staff undertake the QA. You then enter the data into a programme and it tells you if you are ok.'

There were differences in the way in which sites had dealt with limitations in the scope of practice. Some sites commented on the restricted nature of the tasks that could be undertaken, for example:

'It has helped slightly but her scope of practice is limited so the benefit is small. It has freed up a radiographer to carry out other tasks which the AP can't do.'

However, as reported in the earlier section 'What do Assistant Practitioners do?', one department had provided additional training in appendicular radiography and chests after the Assistant Practitioner had qualified, which they felt had given

them a 'big win', enabling the department to make far more use of their Assistant Practitioners than would otherwise have been the case.

3.2.4 Impact of the Assistant Practitioners role on work teams and teamwork

The Assistant Practitioners had fitted in well within the imaging teams, although it should be remembered that in all cases they had already been employed within the departments. However, moving into the higher Band position had nonetheless has some impact on the other members of the team and their work practices:

'Yes, all staff appreciate the team work ethic. ...In A&E they have a team that comprises care assistant, AP, radiographer, senior radiographer, reporting MSK radiographer. There is a broad spectrum to what the team is, it promotes more of a team-based approach.'

'Yes it has given the department a different dimension rather than increased flexibility [Interviewer: Could you explain what you mean by 'different dimension'?] The department functions in a slightly different way to which it did previously. This is different and more cost effective as APs do not get paid as much as radiographers.'

There were suggestions too that because the radiographers now had to think about the quality of the X-rays taken by the Assistant Practitioners and discuss quality issues with them this had led to an increase in 'reflective practice' within some departments.

'I think the APs have done very well with the course and their clinical skills are excellent. They have made the radiographers pull their socks up a wee bit. And I think also, because the radiographers are having to assess their films and have a discussion around that, and they probably wouldn't have done that before, and so I think that in general that has improved their knowledge and skillbase because of it.'

'There has been some increase in the standards [of the radiographers]. They have been 'looking to their laurels' to make sure they have been doing everything up to scratch. [Interviewer: You mean because they know they are being watched as a role model by the APs?] Yes, because the APs are learning by example. It is great to see the impact it was having on our staff, they really pulled their socks up, getting involved in development.'

'We've never had any comeback about image quality, no issue where the AP film has been questioned..... Yes it's been very positive. It's developed the idea of reflective practice.'

3.3 Impact on service capacity, quality and costs

3.3.1 Service capacity

It was particularly difficult for managers to estimate the extent to which introduction of the posts had impacted on service capacity. This was because their introduction had come at a time when there had been many other changes arising from efforts to meet the 18 week and 4 hour targets. In addition, some of the increase in capacity could arise indirectly from introduction of the posts; therefore, while managers felt that the posts had helped, they found it difficult to quantify the extent of their impact:

'This is hard to quantify as this is subject to Government targets to meet waiting times. Services in general have had to increase to meet these targets and so it is hard to state whether then introduction of the AP has led to this increase in capacity or whether it is due to the Governments agenda. [So] it is not a true reflection of what the AP has done. The methodology to increase capacity was already there before the introduction of the AP. However the introduction of the AP has allowed radiographers to undertake training in CT and this may have led to an increase in capacity but it is still very early days to assess and quantify this.'

'Yes, but it is tied in to the wider developments....based on having three APs we will have 30 sessions a week of AP work and they can provide the cover that allows the reporting people to work an additional 14 sessions a week. Introduction of the APs has also made it easier to meet the four hour waiting time target in A&E'

'The problem is ...the wider changes arising from the increased funding for staff to meet waiting time targets – there was a lot of money for increased staffing. Part of that helped us to get radiographers when we needed more, and the fact that we could get the APs helped us make more effective use of the staff..... Capacity has increased but it is not just about the APs it's about the other changes.'

'The impact has been on waiting times – we have increased our capacity, activity has gone up but it is more of a holistic increase. There is increased capacity because of having the reporting radiographers as well. The activity has been increasing on average five per cent a year.'

'Since the AP posts were introduced the 18 weeks RTT target has been introduced. We have needed to increase the modalities we offer and extend the working day. Having the APs allowed us to do that.'

The difficulty in recognising and gauging impact is illustrated in the following interview extract, in which the manager began by saying that the Assistant Practitioner had had no impact on service capacity, but then said that the Assistant

Practitioner had helped the department to cope with increasing workload with no further increase in staff numbers.

' [It has] made delivery of service more streamlined but not had an effect on the capacity available due to other pressures which have happened at the same time such as an increase in the CT and MRI scanners which has meant an increase in procedures and workload. The AP has helped to deal with the increase in workload.'

It can be seen that in this particular instance the manager appears not to have decided on what impact the Assistant Practitioner has had. This is because of other pressures in the department and the difficulty at this stage of analysing the direct impact of the assistant. As a consequence it would seem to result in some contradiction. For example, they start out by saying there has been no impact on service capacity but then say that the Assistant Practitioner has helped them cope with the increase in workload, which implies increased capacity. This extract therefore suggests that while at the time of the interview the manager had not thought through the various factors contributing to workload and service capacity, there had in fact been increase in workload and the extra capacity provided by the Assistant Practitioner had helped them keep pace with it without a staffing increase.

The extent to which other imaging staff were able to take advantage of any freeing up of their time was dictated by the situation prevailing locally. Where there were constraints on training funds this limited the ability of managers to arrange training to support skill development amongst the radiography team:

'In terms of patient capacity [ie, throughput] there has been no real change to the department. Before the work that the radiographer did is now carried out by the AP. Although the introduction of the AP post was supposed to free up radiographers, the department does not have the finance to support them at a higher level. If someone is working at a higher level then they have to be employed at a higher level. It is occasionally better to employ a radiologist rather than employ a radiographer at Band 7.'

However, again there was a range of views. At least one manager felt that service quality would have declined without the help of their Assistant Practitioner, while others were unconvinced of their impact; again this was often to do with lack of data available to demonstrate impact:

'If we had not had the AP we may have had to close a room and so the waiting times would have gone up.'

'No. it's quite a hard thing to prove. I think maybe had we looked at the data from when they started to train and qualify then we might have been able to show some

change. [Interviewer: You mean that you would have needed to collect data, and you didn't, so you can't do that now?] Yes.'

Also, the way in which Assistant Practitioners were deployed could affect a manager's ability to gauge impact. At one hospital the Assistant Practitioners were deployed across two sites at the time of the interview and the manager felt it would be easier to gain a view once they were consolidated on one site in the coming year.

'Difficult to answer. There are two departments. It is brilliant to have those extra bodies but it's difficult to assess because of the layout. Next year we may have more of a handle on this when we are all on one site.'

It should be recognised that where Assistant Practitioners and radiographers were dealing with accident and emergencies it was impossible to estimate impact, as staff were required to deal with however many people presented in a day. However, across the board few managers had access to – or collected - the type of data that would help in estimating impact on service capacity.

'It has been of value but I could not quantify what it has meant for us. Because radiographers are on call, it's been invaluable that he has been around and a standard factor in the daily throughput of the work but I can't say if I've got any feelings about the advantages, I feel there are but I couldn't quantify what they are....we could do with a spread sheet tracking the activities.'

There was just one example where the department had the type of data that could be used to calculate changes in service capacity, but this was due to the particular interest of one staff member:

'We have one radiologist who is good with computers and has developed an in-house statistical package so that we can look at what our wait times are. So we use that to micro-manage on a day to day basis. We have had visits from other centres to see if they use or mimic it. We micromanage, because they changed the DMMI¹ requirements in August and while previously we just had to get the patient imaged, now we have to get them imaged and a verified report out: for things like MRI it's 21 days, so there has been a lot of work with the radiologists and the department team to micromanage the waiting times to minimise the patient times. The radiologists get an email every day to tell them what needs to be reported, so they can keep up to date. But to be honest I would not say the Assistant Practitioners have a role in that. There's a lot of work going on with the management team to manage the waiting times. But I suppose in a way though if you've got a qualified AP then that's released a radiographer so we've got a different skill mix.'

¹ Diagnostic Monthly Monitoring Information

Although this department did have data available on service capacity they had not attempted to estimate impact of introduction of the Assistant Practitioner posts and, in common with many of the other managers, they felt that impact on service capacity had been largely through release of a radiographer for higher-added-value activities.

3.3.2 Service quality

Again there was a range of views regarding impact of the Assistant Practitioners on service quality, but a much larger proportion of the interviewees felt that the Assistant Practitioners had helped bring improvements:

'Yes. We have now made a really slick walk in service which was not the case before the AP.'

'More streamlined service which has contributed to better patient satisfaction and fewer complaints than before.'

'No change at all. The waiting time has decreased due to the initiatives rather than AP.'

Perhaps most importantly, even where managers could not point to improvements to service quality, they felt that equally, there had been no negative impact either:

'No improvement but importantly there has been no deterioration either.'

'Waiting times have come down. There has been no real impact on quality but no detrimental impact of their introduction either.'

Again, though, the extent to which managers felt they could comment was limited by the availability of data:

'Service quality has improved. But it is anecdotal evidence, radiographers set up a 'bar' while the APs were in training, regarding level of quality, and the APs have not dipped below this.'

There was a suggestion that Assistant Practitioners improved the quality of the patient experience because they gave more continuity of contact between visits:

'There have definitely been improvements in service quality. As the AP only works within three areas they will work better by protocol and be able to work closer to the scope of practice. This has meant that they are able to give better attention to patient care than a radiographer who is passed between 15 different sites and does a range of jobs.'

One manager suggested that the Assistant Practitioner had had an indirect impact through the involvement of other staff in their training:

'Every department is always striving to raise the quality but I don't see how one AP can have an impact...except that the staff have been involved in his training and that helps you have highly motivated staff because they always have their 'training hat' on'

In general then, the important issue was that service quality had been maintained and in several cases the view was that the Assistant Practitioners had contributed to improvements in service quality.

3.3.3 Salary costs

While the attainment of salary cost containment may not be a rationale for introduction of the posts nonetheless evidence of cost-efficiencies and salary savings can contribute towards the business case for further roll-out of such an initiative.

'Yes. The costs have been reduced since the AP role.'

'Whereas before we had three radiographers working now we would have two radiographers and one AP.'

' [There have been] changes in the grade of staff that undertake the work. When I was making a business case for the ten posts I did think that I could fill [some of the] whole time equivalents with APs. This has knocked the costs of examinations down because they are being undertaken by lower grade staff.'

'Yes it provided a reduction in salary for the same service and savings for local reinvestment.'

At some sites the Assistant Practitioners had replaced more expensive posts and so savings had been achieved through role substitution:

'Funding for the re-organisation of the bandings was through loss of other radiographer staff posts. It has all been funded within the total staff budget envelope. We had three vacant Band 5 posts and used these to create one Band 7 and one AP post.'

'No change to the number of patients can see or imaging that can undertake. The AP has directly replaced a Band 6 radiographer so have really just dropped one for one. Saved the radiology manager money though.'

Elsewhere though there had been some increase in salary costs, due to the Assistant Practitioners being upgraded after completing their training, and

because in some cases the radiographers had been able to take on additional responsibilities and hence been promoted:

'Yes there was a regrading from Band 3-4 for the AP once they were qualified. As we have been able to develop some of the radiographers professionally ourselves one of the radiographers has been promoted to a Band 7.'

'The salary costs have remained fairly similar. When an Assistant becomes fully trained their salary will go up however their pay will still remain below the grade of a radiographer (who you may lose by doing this).'

3.4 Further developments

3.4.1 Impact on progression of other staff

One of the ways in which role substitution is believed to benefit departments is by freeing up other staff to take up further training, leading to further service improvements and facilitating introduction of the four tier structure. Indeed some of the earlier comments pointed to this being an outcome in the trial sites. However, some managers saw that there had been wider benefits to their department arising from the developments:

'Some staff [have] been able to train further. I feel that had over last four years there has been a vast investment in professional training which we have been able to take advantage off, thanks to money becoming available. If you can provide people with post grad training and development then it improves their job satisfaction and their willingness to stay with the department. We have had a fairly static workforce for a long time which is great in a place like this as it is unexpected.'

'We have 20 sessions of APs and from April/May it will be 30, so we have the flexibility to pull people back and forwards and give opportunities to them because we can backfill with APs. We don't have APs working weekends at the moment, it tends to be 9-5 when we have a lot of other staff around to supervise. It is a softly softly approach but it is giving me a lot more freedom to send people on other projects, quality, etc., do a bit of procurement, etc. The opportunities at [name of previous employer] gave me the skills to do this.'

'The other thing is parallel MR sessions, we've given a commitment for a trainee MR person too it gives us a bit of flexibility there, we would not have to backfill that person as long as a supervisor was there to justify [the Assistant Practitioner's] X-rays.'

However, elsewhere local economic conditions had limited the extent to which managers were able to provide the additional training that would enable further role development amongst the radiographers:

'No. No further training within the current climate as we do not have the finances to do this'

'There have been no other impacts on the progression of other staff as feel do not have the finances to assist with any training.'

In some cases introduction of the Assistant Practitioners had led to the introduction of supervisory responsibilities amongst staff who had previously had no line management responsibilities and was freeing up time for them to become involved in quality audits. Introduction of the Assistant Practitioners had allowed the manager to include more of the radiographers earlier in audit and quality issues too:

'The important thing is they have to understand that they have responsibility for the Band 4s. It is not a case of giving them a job and walking away. Band 5s had not previously have been responsible for people management. But this is now made clear in their PDPRs, it specifies what their communication strategy should be, it prepares them for managerial responsibility. It is encouraging staff to look forward, to contribute to departmental development... We are engaging with the Band 5s earlier than previously about hierarchy management. They are involved in procurement, not in terms of looking at contracts but in making a clinical assessment of equipment, they contribute to what the clinical assessment should be. We are engaging with more junior staff than we would have done before. And also getting the Band 6s involved, give them more managerial responsibility. So that they are doing things that are more equivalent to what a graduate would do in other professions, for example in the army graduate recruits would have immediate responsibility for people management.'

Mentorship has been very good for some of the radiographers, there has been a lot of teamwork and it has been a very positive thing for the department as a whole as well as [allowing] advancing the role for others. There was some resistance in the first place but once they got their heads around it they were fine. The APs were mentored by Band 6 and above. [The Band 6s] received some training from colleges for the mentorship – Stow, Glasgow and Dundee.'

However, not all radiographers felt comfortable with being asked to take on supervisory responsibilities:

'We did not fully understand how it was going to work. We had been planning for it but we had difficulty on delivering it because the radiographers have been there for some time so hard for them to make the change to work in a different way. This is due to the fact they have not been used to working in a supervisory position so it is uncomfortable for them to work in this way.'

This possibly points to the need for more widespread access to training in mentorship and supervision for the radiographers involved in supervising junior staff.

The extent to which radiographers were able to benefit from development opportunities was also affected by the extent to which other gatekeepers allow role re-assignment. Two of the managers reported that radiologists had resisted attempts to expand radiographers' roles, much in keeping with what has been reported in previous research on radiographer role extension:

'[There has been] no direct effect on [radiographers'] progression due to the radiologist's unwillingness to allow this to happen. ...Radiologists have a professional issue where they come from a different career background to radiographers. Introducing role development for radiographers has an impact on the way radiologist would work, much the same as AP and radiographers. Radiologists feel uncomfortable with this and so are not as willing to let this happen.'

'Yes. radiologists feel threatened. I have been taking a softly softly approach over the past 3-4 years. [Radiographers] now provide 16 reporting sessions a week which is equivalent to two radiologists and this impacts on their [radiologists'] recruiting campaign. Their argument for why radiographers should not do reporting is that they are less value for money, because a MSK radiographer will report 60 films a session [a half day] while a radiologist will report 80. But if you compare the pay of a Band 7 radiographer with a radiologist, proportionally they are better value.'

3.4.2 Further progression for Assistant Practitioners

One of the reasons for training Health Care Support Workers (especially at times of difficulty in recruitment of professional groups) is that potentially they may provide an additional source of recruits to professional programmes. While this may not be so relevant at a time in which the NHS is facing workforce cuts nevertheless it is of interest to determine whether providing training for such workers encourages them to consider further progression. Managers were therefore asked if they had discussed any further training or progression opportunities with their Assistant Practitioners. Some managers were trying to find ways to extend the scope of practice for the Assistant Practitioners:

'Yes trying to use the SQA to increase the scope of practice of the AP. Using horizontal PDA for all APs so as to increase their scope of practice.'

'Yes we have AP meetings. The two currently have only been practicing for 18 months. Need to 'walk before you run', get established and confident in what you are doing and then review. They had their first review at 6 months, that was when I introduced the AP chest training. There will be further development for them, but I

am thinking in terms of the concerns raised, you have to be clear about what is lateral development and what is more upwards. You can do a lot but they can't go upwards as that would be a Band 5 and you want a radiographer at Band 5 not an AP.'

The second interviewee quoted above had already taken steps to extend their scope of practice but was keen to head off any idea that Assistant Practitioners could be used as substitutes for radiographers. Any further extension needed to be carefully planned with consideration of the supervisory and insurance issues, and cannot simply be rushed through to save costs:

'You need to change the culture before you can change any further, before you start talking about should they be in CT or MR. It is a big challenge and I am not ready for it yet. We have widened their scope, it will continue a bit at a time but the big issue is putting them into other modalities – I am not ready or clear on the tack I will take. Although our workforce planners see it as a potential cost saving and would like to see many more of them but they don't understand the supervisory issues, the implications for our indemnity insurance. It would be seen as not practicing safely.'

Others would be keen to encourage their Assistant Practitioners but in many cases the Assistant Practitioners themselves were either satisfied with their current position or reluctant to go further as it could mean leaving employment for some years:

'Yes. She is so good that I would be delighted if she did the higher National. At the moment she is delighted she has done what she has. She was top of the class for everything and is satisfied with that at the moment. She is a mature student and has not been to school for 20 years or so just wanted to prove she could do it still.'

'Yes. They are keen to do some progression but are reluctant to train as radiographers. This is a confidence thing and also due to the time and energy which it will take. They know they will need to do further training. I plan to encourage them to take on the task though if they are keen to do it.'

'One has already gone into radiography training. One is approaching 50. If she had been a few years younger and not had a family, which makes it difficult to give up a salary, she probably would have gone to university. But the difficulty is not having a salary coming in.'

'I have, but his concern is that because he is an employee he has never had to take time off to study. He is not prepared to go to college [to study for a degree] as he would have to go full-time.'

There was also a view that any expansion should be into new areas, rather than in general radiography:

'Would like to see more APs in the future at the hospital but probably not in general radiography practice. It would have to be in ultrasound or the breast unit or Head CT unit. These are areas for progression. For the head CT we have an on call department/rota which APs are not allowed to do.'

Some of the managers were limited and frustrated either by the local conditions (which restricted further development for radiographers and progression into advanced practice posts) or by the current scope of practice agreement for Assistant Practitioners:

'We have had staff in training to take on extended role and to do reporting but no [advanced practice] posts have been offered for that so we are stymied. It all seems to be coming in at the bottom and we are not getting any of the more extended role posts that we would like.'

'With one, yes. I would like them to go into CT but they are not allowed to do exposures in CT. They can only assist. They could help set things up, hand out questionnaires to patients but the radiographer would have to take responsibility. I believe there is an advanced course that the APs could do but then they would not be able to do exposures except for when directly supervised¹ by radiographer. It is not allowed by the SoR. The APs have been trained to do some tasks repeatedly every day. It would be helpful if they could have more variety, if they could go around the different modalities. They are getting fed up and bored. But the work they do has to be done within the externally-imposed constraints.'

3.5 Other comments

The managers were largely positive about the role that the Assistant Practitioners were playing in their departments. Although there were issues at some sites with supervisory arrangements the managers were pleased with the new posts and wanted to retain them:

'The AP is a very valuable role and the department would not wish to see itself without one in the future..... This has given the APs a potential career structure. APs were in helper roles previously and so it has given them a chance to progress from helper to AP.'

¹ Note, Society regulations do allow indirect supervision.

However, as noted, for some the supervisory issues were currently insurmountable. Elsewhere, the current staffing levels were appropriate for their needs and so they were not contemplating training any more:

'Department was asked if wanted to send people on to cohort 2 training but said no as needed someone to be able do everything rather than just some of the work. Do not have the funds to do this in the current time as when employ people need them to be able to do everything rather than just certain parts.'

'Found the AP to be beneficial but there is not really scope for more than one in a department this size.'

Some were particularly grateful for the funding and felt the developments had come at just the right time:

'Appreciative of the opportunities to access funding especially for projects. Great there has been this focus on radiography and it is extremely timely as it is really needed. The picture was looking grim before but this has helped to keep the morale here pretty high.'

The scepticism of staff had been overcome and many radiographers were now convinced of the benefits of the role and now were hopeful of further developments:

'Before the introduction of the AP there was a lot of scepticism about the role and value of the AP. However they are now very welcome. The thinking before was that if somebody wants to take an X-ray then they should go off and get a degree. People were unsure of those people who did not go through the same system as everybody else. Now the other members of staff would encourage more APs in areas such as CT and are aware of the value they can bring.'

'Originally the team as a whole were sceptical, they were apprehensive about the introduction. They were apprehensive about supervision, apprehensive that they [the APs] might be seen as a cheap alternative to Band 5s. That fear has been dispelled and radiography staff generally appreciate how valuable they are, in terms of the day-to-day running.'

The earlier sections revealed that many managers struggled to find ways to utilise Assistant Practitioners effectively, in particular having concerns about providing appropriate levels of supervision (although in part this was also attributable to different policies being in operation at the different Boards). Approaches to supervising and mentoring the Assistant Practitioners varied across the different sites, with some supervisors received training for this role, others not. In addition, while some sites were actively seeking ways to involve Assistant Practitioners in a wider range of tasks and in different situations/work arrangements, many felt

stymied, often attributing the barriers to the policies either of the local Board or of the Society and College of Radiographers. The interviewee who had done the most to reconfigure the way in which their team operated following introduction of the Assistant Practitioner posts had had the advantage of prior training in workforce planning and modernisation, and had taken a holistic approach to thinking through the requirements to make introduction of the posts maximally effective:

'My holistic approach stems from fact that I worked in workforce planning previously ... and have also been involved in the earlier workforce modernisation developments.'

This was the manager who had taken the decision to start including all the radiography team in quality audits and clinical assessment and departmental development. Clearly, having experience in workforce planning and development and developing new ways of working gives managers a real advantage when it comes to implementing new roles. However, even here the manager was struggling with further planning, as there was no guarantee that there would be further funding available to allow the development of staff into advanced practice positions:

'I sold the developments to radiographers as a supporting project and providing opportunities for other staff to progress as a result..... But I am now struggling with succession planning. We have two people currently in training in MSK but there is no indication yet as to whether there will be posts in musculoskeletal for them. But my view is you have to have these people coming through the ranks. What we have to communicate to the staff is that 'We will support you and we will support you to train and to find a job', but in the short term this is something we intend to do, we cannot promise them a (advanced practice) post immediately after training. You have to be clear not to give a mixed message to them or to the radiologists. It's a lot harder than the previous developments and there is a question about how long the radiographers will wait. So this is the second phase, trying to communicate my aims and getting people to understand [the big picture]'

It is clear that perceptions of fairness will underpin radiographers' responses to such initiatives in the longer term; if they develop their skills but are denied access to posts that would provide fair recompense then they may be less happy to participate in further training and skill developments.

There were, on occasions, allusion to Society of Radiographer requirements or 'the law' that some managers felt impacted upon their ability to utilise Assistant Practitioners. However, from what other managers said, it appeared that some of these beliefs were erroneous. For example, we were told of one site that had provided training to enable their Band 5 radiographers to supervise the Assistant Practitioners, yet another said:

'[There needs to be] Change in Society [of Radiographers] legislation¹ such as a Band 5 of two years qualified being able to support an AP. Within the department now we have Band 5s who have been qualified for 30 years but under law² they are not allowed to supervise an AP. Providing the superintendent is confident that the Band 5 is competent to carry out the supervision tasks then I do not see why these people cannot supervise the AP. This will enable more Band 6 radiographers to be freed up to carry out additional tasks. Until this changes then we cannot progress Band 6. With introduction of the AP it has meant that I have had to plan more rigorously on where I place people within the department.'

3.6 Conclusions

3.6.1 Deployment

The benefits of introducing Assistant Practitioners were beginning to be seen. However, the extent of benefit realised related to the way in which they were being deployed. Deployment depends firstly on the supervision, size of the department, location(s) of departments and managerial planning. Taking these in sequence:

Supervision

The arrangements for supervision vary across hospitals, with some differences being dictated by different health boards. Some sites were restricting supervision to radiographers in Bands 6 and over while others had delegated this responsibility to radiographers in Band 5, reasoning that if they were deemed capable of supervising students then they were able to supervise Assistant Practitioners. However, the availability of supervisory staff also relates to the next two issues: size and location of department.

Size of department

Whilst proportionally a small department may benefit more from introduction of another member of staff, it is more constrained by the availability of staff to supervise the Assistant Practitioner, especially where supervision is restricted to higher Band staff.

¹ The interviewee means Society policy, rather than UK legislation

² As before, the interviewee means Society policy, rather than UK legislation

Location of department

Many of the hospitals at which the Assistant Practitioners were employed were located over several sites. There are two issues: firstly, where an Assistant Practitioner is located at just one site (or unit) then the impact may be confined just to that part of the workforce or department overall; and secondly, this may lead to further constraints upon the staff available for supervision. In both cases this may subsequently impact on the extent to which the new role(s) can bring benefits for the department or staff as a whole and in particular the release of staff for training.

Managerial planning

In some cases it appeared there had been little prior planning regarding the way in which the new posts would be utilised once introduced into the teams, nor any thought regarding the way in which other team roles might need to change in order to maximise the use the departments could get from the new posts. In many cases, it appeared that managers had thought of Assistant Practitioners as 'more of the same' or possibly a 'reduced radiographer' and had limited their planning solely to thinking about supervision and (often consequent upon that) hours of work.

Only a minority had thought through the issues of task re-allocation and re-profiling the workload of higher level staff and actively planning to ensure that a greater proportion of their time was spent engaged in higher added-value activities (or training for higher level activities). Where this had happened however, greater value was seen, as well as more development of the department as a whole. Where this was seen most strongly was in the case of the manager who had a background in workforce planning and development and new ways of working.

This serves to emphasise the fact that introducing new roles into departments cannot in and of itself have very much impact other than through supplying 'another pair of hands'. To gain maximum benefit the work of the team as a whole needs to be reviewed and re-profiled and thought given to the ways in which role substitution and role enhancement can be used to make the team maximally effective. Additional training for new supervisory roles may need to be provided ahead of introduction of the new posts. However, managers have not necessarily been trained in workforce planning and development. The one manager who had gained experience in this area had subsequently taken a far more holistic view than others taken the decision to start including all the radiography team in quality audits and clinical assessment and departmental development. That is not to say that other managers had not subsequently utilised the additional capacity to train their radiographers in extended role activities and in some cases to gain

promotion for them. However, this had been more ad-hoc, with such developments evolving as the Assistant Practitioners bedded in and began to free up radiographer capacity; having experience in workforce planning and development and developing new ways of working appears to give managers a more strategic 'take' on developing their teams and implementing new roles.

Where funding streams are offered in future where there is some intention that the end result is a change in staff utilisation arrangements, then the funding body should consider asking for a workforce plan outlining future utilisation of staff. While in this case it may have been outside NES's specific remit as a body concerned with education to request such information, nonetheless the programme was developed as part of an initiative aimed at helping with workforce modernisation and funded by the Scottish Government. Since presumably some changes to the workforce were intended to be brought about as a result of the programme, it would be reasonable for such an information requirement to be set out as part of the application process.

NES might also wish to consider commissioning development programmes to help improve managers' skills in workforce planning and development to help support workforce modernisation attempts. It should be remembered that most managers' post-registration development will largely have been in clinical topics; it should not be surprising to find then that they may have need of support to develop strategic managerial skills.

3.6.2 Measuring impact

Many, in fact the majority, of the managers were unable to provide figures relating to capacity or throughput of patients. The majority of managers only had data available for MR, CT and Ultrasound, as these are the three modalities for which they are required to report data under the DCAQ (Demand, Capacity, Activity and Queues) system. In most cases the Assistant Practitioners were not working in these areas (although capacity may have been increased by more radiographers being released for training in these modalities).

It should be noted that NES will not be directly funding any more dedicated Assistant Practitioner programmes¹. However, there is a general point to be made here regarding assessing the impact of future funding programmes. Where it is expected that funding opportunities will have an impact on departmental performance, then it would be advisable to ask departments for relevant baseline data (in the current case, this could have been data relating to capacity/throughput

¹ Funding will be available on a competitive basis to all Allied Health Practitioners and potentially future trainee Assistant Practitioners could access funding through this mechanism

in the areas in which the Assistant Practitioners would be working) as part of the initial application process, with agreement to submit statistics on departmental performance/capacity at an agreed frequency (eg six-monthly intervals) being required before funding is agreed.

3.6.3 Progression

At the moment it is still early days and most of the Assistant Practitioners were pleased simply to have attained their HNCs. However, some managers would like to see their Assistant Practitioners progress further, and there are several issues at present likely to constitute obstacles to further progression.

The first is the availability of a part-time progression route from the HNC for those who wish to become a radiographer. Many of those who had trained as Assistant Practitioners had family responsibilities and were not in a position to give up full-time work; this effectively closed the door to any hopes of future progression.

Secondly, there appears to be a range of views regarding the potential for lateral development. One manager had introduced some additional training post-qualification for their Assistant Practitioners and believed this had brought real added value to the department; others however felt that the Scope of Practice prohibited any further developments for the Assistant Practitioners.

There is clearly some confusion over the extent to which the Society's policies genuinely prohibit any further development. Managers as a group may wish to collectively discuss these concerns with the Society of Radiographers and seek further clarification on this point. Where further development is permissible, it would be useful for NES to draw managers together to facilitate discussions regarding the areas in which further development support is required; this would enable them to approach colleges and other training providers to start discussions on commissioning programmes of use across sites employing Assistant Practitioners and enabling some degree of cost reduction for the programmes.

3.7 Summary of findings

- The Assistant Practitioners posts had been introduced at a time at which there were many other factors also leading to changes. This had made it difficult to gauge or attribute impact.
- Although introduction of the Assistant Practitioners had allowed staff to be released for training and work in the specialist modalities, this had been part of departmental planning at only a minority of sites

- Reductions in establishment had taken place. These were mainly attributed to the economic situation and were seen as being unrelated to introduction of Assistant Practitioners. Some departments had increased in size, prompted mainly by the need to meet Referral to Treatment standards
- While some departments found the supervisory requirements had led to additional pressures on staff, other sites had found ways to address the issue and consequently were using their Assistant Practitioners more flexibly.
- Some departments had provided further training for their Assistant Practitioners which had extended the use these departments made of these posts.
- The majority of managers reported that the costs of examinations had reduced. Where re-organisation had led to role substitution this had led to a decrease in staff costs.
- The majority of managers believed that quality of the service had stayed the same or improved since introduction of the posts and many were keen to extend the scope of practice of the Assistant Practitioners.

4 Surveys of radiographers, assistant practitioners and colleagues

Three online questionnaires were designed for distribution to Assistant Practitioners, Radiographers and non-radiographer staff (Radiologists, Nurses, Healthcare Support Workers and Clinical Service Managers) working within the participating Imaging Service Departments throughout Scotland. The questionnaires were worded slightly differently for each group, but were designed in the main to ascertain their views on Assistant Practitioner training, mentoring and supporting Assistant Practitioners and of the impact the Assistant Practitioners may have had within their departments. The questionnaires predominantly focussed on those Assistant Practitioners who were trained within Cohort 1, although the radiographer questionnaire concluded with three questions regarding their experiences of mentoring and supporting Cohort 2 trainee Assistant Practitioners if applicable. Departmental managers distributed the emails containing the survey links to their staff. It should be noted that almost all managers commented that it was very unlikely that colleagues other than radiographers (such as nurses or radiologists) would respond and this was borne out by the very low response rate from this group of participants. Therefore this chapter reports primarily the outcomes of the Radiographer and Assistant Practitioner surveys and adds comments from other staff in only a few sections.

4.1 Demographics

A total of 17 Assistant Practitioners completed the questionnaire survey and from these, 16 had been employed within the NHS before they began their Assistant Practitioner training. All of the Assistant Practitioners worked within the health care profession beforehand either as Health Care Support Workers (9) or Radiography/ Imaging Assistants (8).

A total of 74 radiographers completed the questionnaire survey. The grades at which they were employed ranged from 5 to 8b although the vast majority of them

were at either grade 6 (57 per cent) or 7 (28 per cent). Table 4.1 illustrates that the respondent radiographers worked across a range of areas (rather than specialising in just one) with Main X-ray department being the most frequently-reported area (76.7 per cent and 60.3 per cent for computed radiography and digital radiography respectively), followed by A & E (74 per cent) and the Mobile Unit (54.8 per cent). Fewer radiographers were employed within MRI (13.7 per cent), Ultrasound (11 per cent) and Nuclear Medicine (2.7 per cent) areas. Others fields which radiographers worked within included; cardiac, mammography and theatre.

Table 4.1: Areas in which the responding radiographers worked

In which area(s) do you work?	Frequencies	
	N	% of Cases
Main X-ray department (computed radiography)	56	76.7
A&E	54	74.0
Main X-ray department (digital radiography)	44	60.3
Mobile unit	40	54.8
CT	33	45.2
Main X-ray department (plain film radiography)	23	31.5
MRI	10	13.7
Ultrasound	8	11.0
Nuclear medicine	2	2.7
Other	14	19.2
Total	284	

A total of 18 non-radiographers working within the Imaging Service Department at eight of the sites responded to the questionnaire. These included: Reception staff (3), Imaging Department Assistants/Health Care Support Workers (6), Radiologists (5) and Nurses (4).

4.2 Training

This section focuses on Assistant Practitioners views of the training they received before they qualified and how useful it has been for the duties they currently undertake within the department.

Table 4.2 shows that the current role of many of the Assistant Practitioners is primarily to assist the radiographers in undertaking more complex examinations and X-rays (82.4 per cent) whilst also carrying out other duties associated with patient care (76.5 per cent). A majority of Assistant Practitioners also take their own X-rays and this tends to be in computed (70.6 per cent) and digital radiography (64.7 per cent) with just under half of the Assistant Practitioner

respondents undertaking plain film radiography (41.2 per cent)¹. Two of the Assistant Practitioners also carry out other tasks which include clerical duties and assisting a radiographer at a satellite hospital.

Table 4.2: Main responsibilities/activities within the department now

	N	% of Cases
Assisting radiographers with more complex examinations/modalities	14	82.4
Accompanying patients from the waiting area to the imaging room	13	76.5
Explaining what will happen during the X-ray/other examination	13	76.5
Taking X-rays (computed radiography)	12	70.6
Processing X-ray films	12	70.6
Taking X-rays (digital radiography)	11	64.7
Acting as a chaperone	7	41.2
Taking X-rays (plain film radiography)	7	41.2
Other	2	11.8
Total	91	

All Assistant Practitioners have been undertaking their assigned activities since they qualified and all but one of them felt that the Higher National Certificate Training Programme had provided them with sufficient preparation and training in order to do this. One Assistant Practitioner said that they would have appreciated more training within anatomy and positioning to better prepare them for the tasks which they now undertake.

Table 4.3: Benefits of the training programme

Response	Number of respondents
Job satisfaction	7
Learn and earn	3
Rewarding	2
Career progression	2
Varied work	1
Total	15

The survey for Assistant Practitioners concluded by asking whether they would recommend the training course to their colleagues and whether with hindsight

¹ Note that these figures reflect mainly on the technology available rather than Assistant Practitioner training or responsibilities.

they would change anything about the course. All but one of the Assistant Practitioners said that they would recommend the training programme to a colleague. Open ended responses from the Assistant Practitioners were grouped into themes and are summarised in Table 4.3 above. It can be seen that the main perceived benefit of the training programme was that it had provided the Assistant Practitioners with further job satisfaction and a chance to learn new topics while still earning a wage. For the Assistant Practitioners who were older and had family commitments, the chance to continue to earn money while progressing in their career was a great advantage. Unfortunately the Assistant Practitioner who stated that they would not recommend the course to a colleague did not give an explanation as to why.

Suggestions for improving the course included: allowing more time to complete the assessments or reducing the amount of assessments, removing some of the unnecessary modules and focusing on those which were more relevant to the job, having more relevant material to radiography rather than generic material on Assistant Practitioners and limiting the amount of time spent on patient care and replacing this with more learning on films. One Assistant Practitioner gave a lengthy explanation on what could be changed about the course which is illustrated below:

'There are a lot of things I would change. Personally I feel we deserved more than an HNC for the amount of work we had to do. A lot of the course was not appropriate I felt for the role we provide within the hospital as it was merely altered from a physiotherapy or nursing course. The course was very poorly organised initially. The radiographers were not the best at teaching, there was a lot of wasted time. If I am entirely honest it is a shame that this questionnaire was not sent out as we finished the course as all the problems with it were very fresh in my mind, I have no doubt I had a lot more to say then... perhaps I have mellowed in the time since I qualified.'

4.3 Mentoring

This section explores the views of Assistant Practitioners towards the mentoring they received during their training and establishes whether this is still ongoing now they have qualified. In addition to this, it also examines radiographer's opinions of mentoring Assistant Practitioners and highlights what activities this involved.

4.3.1 Assistant Practitioners' views

All of the Assistant Practitioner respondents received mentoring whilst they were training to become qualified, as required by the HNC course and the Society of

Radiographer guidelines. Table 4.4 shows that the majority of the mentoring involved assessing the Assistant Practitioners' performance and providing coaching and guidance on work related tasks and study. Less emphasis was placed on providing encouragement and emotional support to the Assistant Practitioner. Although this may be needed by the Assistant Practitioner (as many tend to be slightly older and have been out of education for many years¹) it is perhaps not surprising, as those mentoring Assistant Practitioners may feel more confident in providing guidance on issues they are comfortable with (eg work related) rather than the more emotional support which involves a different skill set; one that is perhaps not learned naturally during their usual job role.

Table 4.4: Main activities of mentors - Assistant Practitioner views

	N	% of cases
Assessing your performance	16	94.1
Coaching you in or demonstrating work-related tasks and activities	15	88.2
General support for your learning, advice and guidance on how to study	12	70.6
Encouragement and emotional support	11	64.7
Total	54	

Note percentages sum to more than 100 per cent as the question was multiple response.

Eleven of the Assistant Practitioners were allocated time specifically with their mentor to aid their studying while six were not. All of those people who were allocated time with their mentor reported that they received particular benefits while they were studying. There were two people who felt that the mentoring had not provided any particular benefits for them while they were studying and both of these had not been given allocated time to work with their mentor. Four Assistant Practitioners said that despite the fact they had not received any allocated time with their mentor they had still felt there had been some benefits: while there was no significant difference between those who received allocated time with their mentor and whether they reported any particular benefits or not, nonetheless the results tend to suggest that Assistant Practitioners are more likely to report benefits from mentoring where they felt they were given sufficient time to work one to one with their mentor.

The types of benefits reported by the Assistant Practitioners tended to focus primarily on general support and guidance during their studies, as well as the offering of expertise and knowledge to explain work related tasks in greater detail. This resulted in building their confidence and understanding in the role which

¹ and from the earlier managers' comments some found the return to studying relatively stressful

they were undertaking. Some sample quotes from the responses are illustrated below:

'I had someone to go to for support and to discuss any difficulties I had during my studies.'

'I was very lucky to have the support of all my colleagues but having a mentor just gave me extra support/assistance/advice & encouragement.'

'Shadowing a mentor is very important to building confidence by learning their expertise.'

'She (mentor) expanded on things I may not have fully understood at college. She was someone I could go to with any problems I was experiencing at work and she was a link between college and the radiographers I would with.'

Of the 17 Assistant Practitioner respondents, eight had received other forms of support within the department while they were studying. This tended to be from other radiographers within the department, their colleagues or course tutors. One of the Assistant Practitioners who did not receive allocated time with their mentor and did not describe any personal benefits of having a mentor, said that they had received support generally from all of the radiographers within the department and this gave them the advice and guidance needed during their training. Only one Assistant Practitioner said that they had not had any allocated time with their mentor while they were studying or any other additional support available to them if required.

Since qualifying, only three of the Assistant Practitioners continue to have the support of a mentor and for two of these people, it is the same mentor who supported them during their training. Since the Assistant Practitioners qualified, the mentors continue to be used by all of them for support and coaching of work related tasks, guidance on studying, assessment on their performance and also encouragement and emotional support. All of the Assistant Practitioners stated that this ongoing support provided them with the appropriate guidance, support and evaluation they needed to carry out their job successfully now they were in post.

4.3.2 Radiographers' views

Twenty seven radiographers mentored Assistant Practitioners from Cohort 1 during their training. Of these, four radiographers had mentored one Assistant Practitioner, 15 had mentored two and eight had mentored three. Analysis showed that of those radiographers who mentored Assistant Practitioners, the higher proportion of them were Band 6s (56 per cent) or Band 7s (33 per cent). Just two Band 8a (7 per cent) had mentored Assistant Practitioners and none from

Band 8b. Surprisingly, one Band 5 radiographer had mentored an Assistant Practitioner (as this is against Society of Radiographers guidance; note though that this also emerged in a number of case studies). Typically this is restricted only to those Band 5 radiographers with adequate experience within their role and who have undertaken a programme to equip them with mentoring skills.

Table 4.5: Main activities of mentors - radiographers' views

	N	% of cases
Coaching the trainee in or demonstrating work-related tasks and activities	26	92.9
Encouragement and emotional support	23	82.1
Assessing their performance	23	82.1
General support for trainee's learning, advice and guidance on how to study	20	71.4
Other	2	7.1
Total	94	

As the table shows, the majority of radiographers who mentored Assistant Practitioners were involved in all of the pre-defined activities within the questionnaire. Again though, the majority (92.9 per cent) of the radiographer support comprised of demonstrations of work-related tasks and activities. Just over two thirds of the radiographers felt that they provided encouragement and emotional support to the trainee Assistant Practitioner as well as support around their work and overall performance.

Only seven of the radiographers (27 per cent) reported that they had been given allocated time within their workload for contact with their mentees. Nineteen radiographers (70 per cent) have continued to provide mentoring support to the Assistant Practitioners even though they have now qualified. The table below examines the responses of those radiographers who mentored the Assistant Practitioners during their training and continue to mentor them now they have qualified. It highlights how the support they offer has changed since the Assistant Practitioners qualified.

Table 4.6: Type of support provided to Assistant Practitioners during and after training

Type of support	Whilst AP was in training		Now AP qualified	
	N	%	N	%
Coaching the trainee in or demonstrating work-related tasks and activities	17	89.5	14	73.7
General support for trainee's learning, advice and guidance on how to study	14	73.7	17	89.5
Encouragement and emotional support	16	84.2	13	68.4
Assessing their performance	16	84.2	12	63.2
Other	2	10.5	2	10.5

Table 4.6 illustrates that once the Assistant Practitioners have qualified the radiographers' mentoring efforts tend to be focussed more on general support for the Assistant Practitioners' further learning, advice and guidance on work tasks/activities (89.5 per cent compared to 73.70 per cent previously). Fewer radiographers provided coaching for the Assistant Practitioners on work-related tasks and providing them with encouragement and emotional support or assessments on their performance once they have qualified. This would be expected once Assistant Practitioners have successfully completed their training and feel more comfortable within their job role and the tasks they are required to undertake.

4.4 Undertaking mentoring

This section explores whether qualified Assistant Practitioners would be willing to undertake certain aspects of mentoring trainee Assistant Practitioners and examines the views of radiographers to establish where Assistant Practitioners could provide support for trainees.

Assistant Practitioners were asked whether they would be willing to undertake a mentoring role for trainee Assistant Practitioners if the policy changed in the future to allow them to do so (currently it is only radiographers who are allowed to do this). The verdict here was very mixed with eight (47.1 per cent) of the Assistant Practitioners saying yes and nine (52.9 per cent) of the Assistant Practitioners saying no. Interestingly, when the radiographers were asked the same question, their opinions were also evenly divided, with 30 radiographers (42.9 per cent) saying no, (ie, that all of the roles need to be undertaken by radiographers) and 40 (57.1 per cent) of radiographers saying that some of the components could be undertaken by Assistant Practitioners.

Table 4.7: Tasks which qualified Assistant Practitioners could undertake to support Assistant Practitioners in training

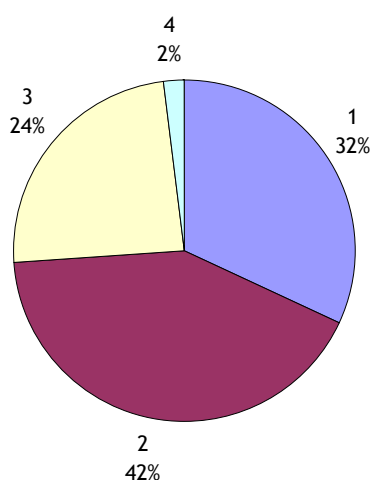
Tasks which qualified APs could undertake to support APs in training	N	% of cases
General support for their learning, advice and guidance on work tasks/activities	11	84.6
Encouragement and emotional support	11	84.6
Coaching them in or demonstrating work-related tasks and activities	3	23.1
Assessing their performance	2	15.4
Other	1	7.7
Total	28	

The table shows that the radiographers who believe that qualified Assistant Practitioners could contribute towards the mentoring of trainee Assistant Practitioners think that the two main areas where this would be feasible would be in offering general support for their learning, advice and guidance on work related tasks and activities and providing them with encouragement and emotional support. As encouragement and emotional support was one of the areas for which slightly fewer Assistant Practitioners said they had had support from their mentors when (compared to other aspects) then this may point to an approach which would work well in the future. Qualified Assistant Practitioners have first hand experience of the training programme and will be aware of the stresses which accompany the learning process and therefore it is likely they could provide advice and support on how to cope and manage the workload and the additional emotional stressors. It may be that in addition to a radiography mentor that future cohorts of trainee assistant practitioners have a 'buddy' qualified Assistant Practitioner too.

4.5 Supervision

This section focuses on the supervision which the radiographers and to some extent the non-radiographer staff provide the Assistant Practitioners once they have qualified. It explores the tasks which they supervise the Assistant Practitioners with and any benefits this has contributed to radiographers' personal development.

Figure 4.1: Number of qualified Assistant Practitioners whom the radiographers supervise/manage



Source: IES and UH survey of radiographers 2010-11

A total of 51 radiographers (71 per cent) have responsibility for supervising or line managing an Assistant Practitioner within their department. The pie chart shows that the majority of radiographers supervise/manage either one or two Assistant Practitioners (32 per cent and 42 per cent respectively) although some supervise three (24 per cent) and a small minority (2 per cent) supervise four.

Radiographers were asked about the areas of work in which they supervise the Assistant Practitioners and Table 4.8 shows their responses. A total of 48 radiographers indicated the tasks in which they supervise the AP. For each case they indicated whether the Assistant Practitioners undertook the task with direct supervision from the radiographer or whether the Assistant Practitioner provided support to the radiographer so they could carry out the task. Table 4.8 shows the areas of work which the Assistant Practitioners undertake directly within the department under the supervision of radiographers; as might be expected the most frequent area of work is general radiography of digital, computed or plain film (100 per cent of the respondent radiographers) followed by AP chest (39.6 per cent) and OM orbits for foreign body (16.7 per cent). A total of 24 radiographers also indicated the tasks which they undertook with the support of the Assistant Practitioner. The most frequently-reported activities were AP chests (75.0 per cent), lateral skulls (29.2 per cent), general radiography of digital, computed or plain film (20.8 per cent) and OM orbits for foreign body (20.8 per cent). A small number of Assistant Practitioners also assisted radiographers in a range of other activities such as Barium enemas and Fluoroscopy.

Table 4.8: Areas in which radiographers supervise the work of Assistant Practitioners

Areas in which radiographer supervise the work of APs	AP undertake directly		AP support radiographer	
	N	% of cases	N	% of cases
General radiography digital /computed /plain film	48	100.0	5	20.8
Dental orthopantomograms	2	4.2	2	8.3
Barium enemas	1	2.1	4	16.7
CT	1	2.1	1	4.2
Fluoroscopy	1	2.1	3	12.5
Ultrasound	1	2.1	1	4.2
OPG	2	4.2	3	12.5
OPT	2	4.2	1	4.2
AAA	1	2.1	1	4.2
Lateral skulls	6	12.5	7	29.2
OM orbits for foreign body	8	16.7	5	20.8
AP chests	19	39.6	18	75.0
MRI	1	2.1	0	0
Radionuclide imaging	1	2.1	0	0
Total cases	48		24	

A total of 15 (31 per cent) of the 48 radiographers indicated that they had received some form of training prior to undertaking their supervisory responsibilities. These ranged from half day or full day courses/workshops at local colleges where they were given information on Assistant Practitioner courses and what was expected of them, to being given guidelines to read in their own time. Six said that they were given no training or information at all regarding the trainee Assistant Practitioners and that they would have benefited from seeing the Scope of Practice for the Assistant Practitioners and having the examinations that they (the Assistant Practitioners) were required to undertake being outlined to them from the outset.

Where training was not provided, radiographers relied on the skills they had developed whilst working with trainee students and learnt the rest of what was expected of them while supervising. Also, a small number of radiographers felt that they did not need any training at all in order to supervise the Assistant Practitioners, revealing that some radiographers do not view mentoring as a particularly skilled role, or at least, one that does not require any skills over and above their usual work-related knowledge. Some quotes from the questionnaires which illustrate these points are outlined below:

'As a DMM and an MSK reporting radiographer I do not feel I needed training. Also we have students in the department.'

'No specific level of mentoring identified, all staff unsure of level or depth of expertise expected from Practitioners. Very definite guidelines to follow for Student Radiographers, for first cohort, staff felt as though they were learning on the job.'

'In the beginning I was unsure as to which examinations the assistant practitioners were allowed to undertake.'

'Initially I was not aware how much was expected of me. I was in charge of an A&E dept and found the commitment was too great. I have now retired and work part time and have more time to spend with APs.'

The radiographers were asked to what extent supervising Assistant Practitioners had placed pressure on their own work, how much they had found supervising Assistant Practitioners to be a rewarding experience and whether it had allowed them to reflect on their own practice. Table 4.9 shows that generally the radiographers found the supervision to place only 'a little' more pressure on their work, which in return resulted in either 'a little' or 'quite a lot' more rewards from the experience as well as the benefits of allowing them to reflect on their own practice either 'a little' or 'quite a lot.'

Table 4.9: Reactions to mentoring: pressure, rewards, reflection

Response	Pressure on work		Rewarding experience		Reflection of own practice	
	N	%	N	%	N	%
Not at all	13	26.0	5	10.2	8	16.0
A little	23	46.0	15	30.6	19	38.0
Quite a lot	10	20.0	17	34.7	18	36.0
A great deal	4	8.0	12	24.5	5	10.0
Missing response	24		25		24	
Total	74	100.0	74	100.0	74	100.0

To establish whether there were any relationships within these responses, values were assigned to each of the responses options ('not at all' = 1, 'a little' = 2, 'quite a lot' = 3 and 'a great deal' = 4) and a set of Pearson Product Moment correlations was calculated. The correlations indicate that there was a significant inverse relationship between the extent to which radiographers felt pressure from their supervisory responsibilities and the extent to which they found the experience rewarding (ie, those who felt more pressured found mentoring less rewarding: $r = -.319$, $N = 49$, $p = .025$). Those who found supervision a rewarding experience

were significantly more likely also to have reflected on their own practice ($r = .426$, $N = 49$, $p = .002$).

The group was then split into those who reported experiencing high levels of pressure or not. When the findings are examined separately for those who reported experiencing pressure or not, it can be seen that pressure appears to mediate the relationship between finding supervision rewarding and reflection on practice: for those who reported increased work pressure, there is no significant relationship between the rewards of supervision and reflection on practice ($r = .21$, $N = 13$, $p = n.s$) but for those who did not feel pressurised there was a significant and positive relationship between these two variables ($r = .462$, $N = 36$, $p = .005$).

While analysis showed no significant differences in the level of pressure experienced by those radiographers who received training for their supervisory responsibilities and those who did not, nor in how rewarding they found the experience or the amount they reflected on their own practice, the consistent trend across these measures was for more of those who had received training to report having felt less pressurised, to have found their supervisory responsibilities rewarding and to have reflected more.

Table 4.10: The impact of training on pressure, supervisory rewards and reflection

		No pressure (%)	A lot of pressure (%)	Total (N)
Training	Yes	80.0	20.0	15
	No	69.7	30.3	33
		Little/No reward (%)	Great reward (%)	
Training	Yes	26.7	73.3	15
	No	46.9	53.1	32
		Little/No reflection (%)	Great reflection (%)	
Training	Yes	40.0	60.0	15
	No	60.6	39.4	33

Therefore while no significant relationships were established here, nonetheless the pattern of results suggest that there may be some benefits from training and that some form of training would be beneficial in future for those involved in supervising Assistant Practitioners. It would be useful if further work could evaluate the effectiveness and relative value of the different courses available (ie half/full day training courses).

A total of 11 (61.1 per cent) non-radiographer staff employed within imaging departments worked directly with the Assistant Practitioners. Their responses

indicated that they largely help the Assistant Practitioners with the reporting of plain film images, advising them on technique and helping them to deal with difficult X-rays or patients.

4.6 Impact

This section explores the views of both the radiographers and the non-radiographer staff working within the imaging department on the impact Assistant Practitioners have had in their respective departments and on the career development of those who they support.

4.6.1 Re-organisation of duties

Table 4.11: Re-organisation of duties in department following introduction of Assistant Practitioner posts

	N	%
Yes	15	21.4
No	55	78.6
Total	70	100.0
Missing	4	
Total	74	

Just over one-fifth of radiographers believed that there had been a re-organisation of duties within their department since the introduction of the Assistant Practitioner posts. These re-organisations tended to involve a change to the rota system, where Assistant Practitioners were placed alongside radiographers with some radiographers being shifted on to other rota systems for the more specialist tasks. It also meant that the rotas had to be better planned in order to ensure that an Assistant Practitioner was always supported by a radiographer. However this did mean that for some departments, where they used to have two radiographers working together, they now had a radiographer and an AP. The introduction of the Assistant Practitioners also enabled some of the radiographers to train and specialise in other areas such as CT, where previously the department would not have the time available or adequate numbers of staff to allow them to do this. Selections of some of the quotes from the questionnaire responses are given below.

'Assistant practitioners on departmental rota in place of radiographer.'

'Freed up a member of staff to carry out other tasks such as CT scans.'

'Freed up radiographer's time in main department to support running of our new CT service.'

'Had to ensure there were plenty of qualified staff around to supervise in order to make the AP feel valued and not a nuisance.'

'More coordination over break times and staff rotas to ensure AP and students were not left with a single radiographer band 6.'

'Qualified APs are on the departmental rota in place of a radiographer and radiographers taken off rota to put elsewhere.'

'Re-organise justification of request cards, and all images produced by Practitioners need to be checked by Senior Radiographer before sending to PACS.'

'Rooms that usually had 2 Radiographers working in them, often now have 1 and an AP.'

'The rota was made up to ensure I was given time with AP or changed as hoc to cover any areas in her training.'

The four non-radiographer staff who said there had been a re-organisation of duties and working arrangements since the introduction of the Assistant Practitioners also agreed with the radiographers on the impact they had. Examples they gave were that they had more staff to conduct X-rays within the general department, the rota now needed to be more carefully planned to ensure that Assistant Practitioners were continually supported, and they could now have a radiographer and an Assistant Practitioner working together in certain areas instead of two radiographers which had previously been the case. They also expressed a couple of different views to the radiographers in addition to the ones highlighted above. These were concerned with the fact that patients now had to be advised that there may be a delay in them being examined (although no clear reason was stated as to why this was the case) and that Clinical Assistants now had to cover for the Assistant Practitioners shifts when they were carrying out X-rays. This would probably mean that their workload would increase.

4.6.2 Impact of introduction on radiographers' and other staffs' jobs

A total of 39 (55.7 per cent) radiographers and five (27.8 per cent) non-radiographer staff said that the introduction of the Assistant Practitioner had had an impact on their job. The responses from both sets of professionals were mixed, with some indicating positive impacts and others more negative impacts. The positive impacts tended to revolve around freeing up more time for the radiographers to enable them to take on their own further personal development and being able to use them to help relieve the workload of radiographers and therefore some of the stress associated with this. A number of radiographers also commented that as the Assistant Practitioners they worked with were excellent at their job, they could be relied upon more than some of the Band 5 radiographers

when producing X-ray images and these personal and professional skills they possessed helped to improve the departments as a whole.

'Allows a greater flexibility for CT scans and help within the X-ray department'

'Helped me to learn, and assisting with day to day X-ray examinations'

'It has helped relieve the stress of a busy main department by reducing workload.'

'Made it more rewarding and good to have help from someone who knows what they are doing and why in certain areas.'

'The AP is excellent and often can be relied on more than other new band 5's. When I work with her I know I can ask her to do examinations and she will do them correctly.'

'They are all fantastic, they contribute personally and professionally. We depend on their skills when there are staff shortages. Our dept. would be worse of without them. They are a 100 pre cent asset to us.'

'Made me rethink my opinion of having AP's - which had been fairly negative prior to this.'

The negative responses were generally around the fact the radiographers spent more of their time supervising the Assistant Practitioners and justifying their films rather than actually carrying out any imaging work themselves. In addition it also often meant that radiographers have less interaction with the patients as they spend the majority of their time supervising Assistant Practitioners or students. By having to continually supervise the work of the Assistant Practitioners it has meant that radiographers' workloads have increased and this in turn appears to have resulted in higher stress levels, particularly during busy days. The stress levels are further exacerbated by the fact that radiographers are still responsible for the work of the Assistant Practitioners and so if it is not carried out correctly than it could have severe consequences. Other detrimental impacts highlighted were the fact that the rotas had to be carefully planned, in order to ensure that Assistant Practitioners were always supervised and this took up a lot more of the radiographers' time; in addition a lot of their time is now taken up with mentoring and teaching duties. One radiographer said that the Assistant Practitioner was not being used correctly within their department and was conducting modified technique X-rays. This had increased the workload for themselves and their colleagues but would also put them in a difficult position if something was to go wrong. Clearly we are unable to ascertain the veracity of this, but it possibly indicates that SCoR guidance should be re-issued to all sites to ensure there is clarity.

Finally a few of the of non-radiographer staff commented that the Clinical Support Worker posts from which the Assistant Practitioners had been recruited were still to be filled. They also stated that the patient waiting times within the department had increased since the Assistant Practitioner qualified and they did not appreciate having to notify patients of these delays in being seen.

'The three clinical support worker posts (from which they were appointed) were not filled.'

'Waiting times for patients lengthen and we must explain about any hold ups.'

'APs have been used as fully qualified radiographers throughout the department and this has increased the workload for myself and my colleagues greatly. The limitations of the AP's role are not put into practice as they do modified technique X-rays etc.'

'Have to justify and check images for APs while doing own patients. Always have to make sure a band 6 radiographer available to work with AP.'

'If the dept is busy, then I have to stop my work to check a film done by an AP so it can impact times'

'Interruptions to own work to check APs work/request cards. At times reduces my ability to work as checking multiple AP's work/request cards.'

'Sometimes, when staff is short it is more stressful and time-consuming to supervise both Assistant Practitioners and student radiographers. Its very worrying for Radiographers, if something goes wrong, The registered Radiographer would be responsible.'

'Teaching and mentoring takes a large chunk of time away from other duties, especially in small busy department.'

'When they are working with me, I have to justify the requests and check final images, whereas if working with a radiographer they would do that them selves, also as they can not X-ray all patients I sometimes have to take over, or a patient has to wait until I am free.'

4.6.3 Team work

Table 4.13 shows the extent to which radiographers and other staff believed that Assistant Practitioners had impacted on the team work within their department. A total of 34 (47.9 per cent) out of 71 radiographers and 6 (35.3 per cent) out of 17 non-radiographers believed that introduction of the Assistant Practitioners had impacted on team work. The open responses given by these respondents were grouped together and placed into themes and are shown in Table 4.12 below.

Table 4.12: Impact of Assistant Practitioner on the team

Impact of Assistant Practitioner on the team	Number of responses
Improve team work	14
Better workflow/better sharing of workflow	6
Increase the skill mix	4
Decrease team morale	3
Increased need for supervision which is time consuming	3
Restricted work tasks	2
Improve skills of the team members	2
Better organisation of rotas	2
Total	35

The table indicates that generally Assistant Practitioners are viewed as having had a positive impact on the team in which they work. Many commented how it had helped to improve the team work and morale within the team which in turn helped to increase the workflow. In addition to this it had also helped other members of the team to up skill into different and more specialised areas and this had resulted in an increase in the skill mix available. By other team members having to teach the Assistant Practitioners and check the work they produce, it helped to improve their skills at justifying films and their understanding of why they carry out certain procedures.

Where people reported negative impacts this tended to be due to the fact that the workload had increased and due to the restricted tasks which Assistant Practitioners can carry out. This meant that other team members had to cover the Assistant Practitioners' work. As a result this increased team members' workloads and therefore decreased team morale. There was also a feeling that some of the radiographers did not appreciate the Assistant Practitioners' position and therefore created a hostile environment when working with them. It was noted that this was even more prevalent in situations when qualified radiographers were still struggling to find jobs.

4.6.4 Work patterns

A total of 23 (33.3 per cent) out of 69 radiographers and 5 (29.4 per cent) out of 17 non-radiographers felt that the Assistant Practitioner had impacted on work patterns within the department. Again, the open responses given by the radiographers and the non-radiographer staff were grouped together and placed into themes and illustrated within the table below.

Table 4.13: Impact of Assistant Practitioner on work patterns

Impact of Assistant Practitioner on work patterns	Number of responses
Radiographer supervision at all times	7
Relieved work flow and stress	6
More flexible department	5
Less flexible department	3
Lose radiographers or the skills they possess	2
Allow team members to rotate	1
Total	24

Table 4.13 shows that of the 23 people who believed that the Assistant Practitioners had had an impact on work patterns within the department, the most frequent impact arose from the need for continual supervision from senior members of staff (seven responses). This meant that the more senior radiographers spent a lot more of their time supervising Assistant Practitioners rather than carrying out X-rays. On particular days if a department was short of supervising radiographers there has to be more awareness of work patterns and how supervision for the Assistant Practitioners is to be arranged. These impacts also need to be taken into account during breaks to ensure that Assistant Practitioners are always supervised correctly, when some radiographers have left. Three people felt that these restrictions had made departments less flexible in the work they can carry out and people commented that if an Assistant Practitioner cannot carry out an X-ray or needs to wait for a qualified radiographer to supervise them, then this can impact on the patient out flow.

In contrast to this however, a number of responses highlighted the positive impact which the Assistant Practitioner has had on the work patterns of the department. With the addition of an extra member of staff it has helped to relieve the work flow and the stress associated with this (6 responses) and it has allowed departments to be more flexible in meeting their demands. With the introduction of the Assistant Practitioner to conduct general X-rays, radiographers can spend more time on the specialist X-rays. Other respondents said that the introduction of the Assistant Practitioner had allowed them to free up radiographers and begin early and late rotas in order to meet the demands of the hospital and the patients and create a more flexible department (five responses).

4.6.5 Patient throughput

Table 4.14: Impact of Assistant Practitioner on patient throughput (capacity)

Response	Radiographer response		Non-radiographer response	
	N	%	N	%
No change	51	72.9	11	64.7
It has increased	15	21.4	6	35.3
It has decreased	4	5.7	0	0.0
Total	70	100.0	17	100.0
Missing	4		1	
Total	74		18	

Table 4.14 shows that around three-quarters of the radiographers and two thirds of the non-radiographers believed that introduction of the Assistant Practitioner had led to no change in patient throughput. Those who did feel there had been some impact mainly saw this as positive, leading to an increase in capacity and flow of patients. The reasons given for this increase tended to be the fact that departments now had an extra pair of hands to help them cope with the workload. Also respondents stated that as Assistant Practitioners tend to work in only one area, they have become highly specialised and so can carry out the work more quickly than a newly qualified radiographer, as these tend to work across a number of different areas.

Where respondents have stated that patient through flow has decreased, they suggest this is due to the fact that Assistant Practitioners' work continually needs to be justified and when a qualified radiographer is not available to do this, then it can slow the patient throughput down.

4.6.6 Personal development

Respondents were asked whether introduction of the Assistant Practitioners had allowed them to move into or concentrate more on advanced practice activities. Table 4.15 summarises their responses.

Table 4.15: Impact of introduction of Assistant Practitioner on advanced practice

Response	N	%
Yes	13	18.6
No	57	81.4
Total	70	100.0
Missing	4	
Total	74	

The figures suggest that only 13 (18.6 per cent) radiographers have been able to move into or concentrate on advanced practice, duties or roles since the introduction of the qualified Assistant Practitioners. The group of radiographers that has benefited most has been those in Band 6: around one-fifth of respondents in this band had been able to move into or take on more advanced practice activities, compared to 15 per cent of those in Band 7 and (apparently) none in Band 5 (Table 4.16).

Table 4.16: Impact of introduction of Assistant Practitioner on advanced practice for the different grades of staff

Grade of radiographer (Band)	Has having Assistant Practitioner allowed you any additional time to move into advanced practice/duties/roles?		
	Yes (%)	No (%)	Total (N)
5	0.0	100.0	7
6	22.5	77.5	40
7	15.0	85.0	20
8a	100.0	0.0	1
8b	0.0	100.0	1

Where radiographers have had the chance to develop due to the introduction of the Assistant Practitioner, they said that this had been in the areas of CT, chest reporting, ultrasound and MRI. Another radiographer said that they had been able to undertake a master's degree, although they provided no further information as to the subject. Finally a radiographer stated that although they had not been able to undertake any advanced practice it had freed up time which allowed them to focus more on rotas and paperwork to enable the department to run smoothly.

Table 4.17: Impact of introduction of Assistant Practitioner allowed you more time for training and development?

Response	Having Assistant Practitioner allowed you any additional time for training and development?	
	N	%
Yes	14	20
No	56	80
Total	70	100
Missing	4	
Total	74	

Table 4.17 reveals that only fourteen of the responding radiographers (20 per cent) had been able to use any time freed up by having an Assistant Practitioner in post for their own training and development. Those who had undertaken further training and development reported that it was generally in the areas of CT, MRI or chest imaging. Others have used the time to undertake university courses or carry out their Radiation Protection Supervisor duties.

4.7 Further progression of Assistant Practitioners

This section examines the views of Assistant Practitioners on their willingness for further progression and the likely barriers they may face. The section concludes with their current job satisfaction since qualifying as an Assistant Practitioner.

Just under three-quarters (12, or 70.6 per cent) of Assistant Practitioners had received an appraisal or personal development review since qualifying as an Assistant Practitioner. Of these, eight (66.67 per cent) had discussed career development options with the person who appraised them. One Assistant Practitioner said, in an open text response, that these discussions tended to focus on expanding their role and scope of practice with the appropriate training. Areas for expansion which were discussed had been plain film work and conducting X-rays on those between the ages of 12 and 16. One Assistant Practitioner said that they had also discussed the various pathways through which they might become a radiographer.

Regardless of whether they had discussed their career, thirteen of the seventeen Assistant Practitioners who responded (76.5 per cent) were interested in further progression opportunities if these were to be made available.

Table 4.18: Progression preferences amongst Assistant Practitioners

How would you like to progress?	Responses	
	N	% of cases
Undertake more training to enable you to do more in your current role	11	84.6
Train to become a radiographer	3	23.1
Other*	2	15.4
Total	16	123.1

Table 4.18 shows that the preference of the majority of the Assistant Practitioners (11, or 64.6 per cent) would be to undertake further training to enable them to carry out more duties within their current role. Only three of the Assistant Practitioners said they would like to train to become a radiographer in the future. All of these said that if it was possible to study for a radiography degree part time then this is something which would interest them. Of those two who ticked 'other' in the table, one stated that they would like to undertake in-house training and CPD to develop further and another stated that they were perfectly happy in their role at the moment and just wanted to learn to do their current job to the best of their ability.

Only six (35.3 per cent) of the 17 Assistant Practitioners said that there may be potential barriers for them to overcome in order to develop further. Reasons given were financial constraints, family commitments and age. Only one Assistant Practitioner felt that the radiographers would be a barrier and added that they (radiographers) would be likely to feel aggravated by Assistant Practitioners taking over any more of their job roles.

Assistant Practitioners were also asked if their job satisfaction had increased since qualifying as an Assistant Practitioner. Their responses are shown in Table 4.19:

Table 4.19: Job satisfaction amongst Assistant Practitioners

Response	Do you feel your job satisfaction has increased since you qualified as an AP?	
	N	%
Yes, quite a lot	3	17.6
Yes, very much	14	82.4
No	0	0.0
Total	17	100.0

The data show that all of the Assistant Practitioners felt that their job satisfaction had increased since qualifying as an AP, with the great majority saying it had

increased a great deal. This suggests that the course was a very worthwhile one from their point of view and provided them with the career advancement they needed and a way to increase their job satisfaction.

4.8 Mentoring the second cohort of trainee Assistant Practitioners

This section explores whether any of the radiographers who mentored the first cohort of trainee Assistant Practitioners are mentoring the second cohort and whether anything has now changed the second time around. Of the responding radiographers seventeen were mentoring trainees in the second cohort.

Table 4.20: Progression preferences amongst Assistant Practitioners

Are you mentoring one or more of the Cohort 2 trainee assistant practitioners?		
	Frequency	Valid %
1	8	17.8
2	7	15.6
3	2	4.4
no	28	62.2
Total	45	100.0
Missing	29	
Total	74	

They were asked their views on whether there were any differences between the first and second cohort and a number of differences were highlighted. These included the fact that the first cohort all came from a healthcare background whereas the second cohort are from more varied backgrounds. This has meant that many of them need much more training on their patient skills and team working skills. One radiographer commented that the course now appeared more structured and was easier for all of the staff within the department as they realised what was now expected of them while another said that their department had learned from the previous cohort regarding how to go about training the Assistant Practitioners. This respondent said *'we now have clearer outlines for the trainees and only allow them training with GP patients which limits how many views or complex care patients they come in contact with. Previous trainees were allowed to help with inpatients and clinics'*. Departments have learned from their past experiences and are now using this knowledge to help them in training the second cohort. By expanding on this knowledge it is hoped that the training of the second experience of this cohort

will be even better than the first and this will provide more benefits for the Assistant Practitioners in training and the department as a whole.

4.9 Conclusions

From the closing free response comments on each of the three questionnaires (Assistant Practitioners, Radiographers and non-radiographers) and the analysis of the data, there is a general feeling that the introduction of Assistant Practitioners has been fairly successful. For the Assistant Practitioners it has provided them with career progression which has led to improved job satisfaction and, for some, a willingness to advance to become radiographers themselves. Radiographers in the main have benefited from mentoring and supporting the Assistant Practitioner and a few of them have been able to advance their own careers, although admittedly it appears that more needs to be done by departments to fully realise this potential¹. Mostly, radiographers believe that the Assistant Practitioners have made an impact within their departments by strengthening imaging teams and improving team work. They have also contributed to an increase in the workflow and patient throughput by providing an additional pair of hands and by enabling a better skill mix to be developed so that departments are better placed to meet the demands placed upon it. A sample of comments on the benefits of Assistant Practitioner training and the positive benefits which Assistant Practitioners have had within the departments are illustrated below:

'I really like my job, my confidence has grown since starting & completing the course. I am also extremely grateful for the opportunity to do the course, meeting new people & I thoroughly enjoyed the challenge of undertaking something new.'

AP

'In being an assistant practitioner I had the best possible training anyone could hope to ask for by mentoring and learning from radiographers. I love the new role that I have trained as I have more responsibilities and more contact with the public for and through sheer determination one day I hope to be a qualified radiographer.'

AP

'It has made me feel that I am a very important part of the multi-disciplinary team in the radiology department. I am encouraged by all the positive feed back about my work and I have a lot of job satisfaction and thoroughly enjoy my new role. I look forward to coming to work everyday.'

¹ Note that this issue is addressed in more detail in the following chapter.

AP

'The training I got was great. All radiographers really encouraged me.'

AP

'Assistant Practitioners have been a welcome addition to our department.'

Radiographer

'My experience of APs has been very positive, but this is mainly due to our APs being very keen and able members of staff.'

Radiographer

'Teaching the student Practitioners has been rewarding. It is always stimulating to have students in the department.'

Radiographer

'They are fantastic! They are such a pleasure to have in our department and they should all be able to have fast track radiography degrees so that their pay reflects their workload.'

Radiographer

'During the time we have had two APs working as part of our team here we have gone through a period of staff shortages eg people have gone on to promoted post or have been off on maternity leave. Where vacancies have existed there have been associated recruitment delays that have been out of our control. As a result the APs have been a valuable addition to the team but long term it has been harder to evaluate their impact.'

Non-radiographer

Despite these positive comments there are still a number of areas which need to be addressed within departments in order that the full potential of Assistant Practitioners can be realised. One of the main areas during this first round of training was the need for training to be provided to radiographers on the scope and role of the Assistant Practitioner to allow them to better understand the tasks which they can undertake how to support Assistant Practitioners in training . However, this is likely to be far less of an issue for subsequent training rounds.

One of the issues to emerge from the surveys (and to which we return in the next chapter) is the need for Assistant Practitioners to be continually supervised, which requires rigorous planning of the rota to ensure. For this reason it is also important for departments to not take on too many Assistant Practitioners, as some radiographers reported there could be a detrimental impact on the radiographers

who are required to supervise the work of the Assistant Practitioners – especially if just one person is responsible for supervising all of them. Departments need to make sure there are adequate numbers of radiographers to support the APs as well as other trainee students and newly qualified radiographers. It is also important to not lose sight of the need to offer development to the more experienced radiographers to allow them to move into advanced roles and maintain (or increase) their job satisfaction. Throughout the analysis it was clear that radiographers and non-radiographers still have reservations about the Assistant Practitioner posts and a number of these comments are illustrated below.

'Although I support the introduction of assistant practitioners in our department I feel the workload and capacity has not improved as assistant practitioners have replaced fully qualified radiographers. As all work needs to be supervised this is very time consuming for us. Also as a relatively newly qualified radiographer I feel in some modalities assistant practitioners are a challenge to me progressing into CT for example where courses have been advertised for assistant practitioners to participate in CT imaging when I am not getting the same opportunities as a radiographer.'

Radiographer

'APs very reluctant to listen to the advice of a Radiographer and in particular a Radiographer younger than them or within the 1st few years post qualification. I am over two years qualified and have experienced APs ignoring my advice then asking someone more senior who gives the same answer. APs very huffy!'

Radiographer

'As Assistant practitioners are not registered, the responsibility lies with the Radiographer for the examination. I do not find assistant practitioners any more help than Radiographic helpers as I have to check their work as well as my own. If the department is short staffed and you are left with only Assistant Practitioner the workload is very heavy as there are so many examinations the Assistant Practitioner can not perform.'

Radiographer

'Initially there were too many AP's training at one time and not sufficient radiographers to supervise, it was seen as a cost saving exercise rather than for the benefit of staff or patients.'

Radiographer

'It took some time to fully develop their role in the department and produce a definite outline of what they could do in our department I feel it should have been more clear what they covered in their course.'

Radiographer

'Our department is now trying to substitute radiographers for APs! We have six APs - too many for the number of radiographers signed off to mentor them. Now on weekend shifts if management can't get three radiographers to cover 9-5 they are accepting an AP. An AP does not equal a radiographer; they require constant supervision and can not undertake mobile or theatre work. Saying all this I do believe they are of value in the correct area ie minor injuries, GP, outpatients not say A&E where most work is trolley and requires adaptive technique in this case all they can do is process cassettes and this is a waste of their skills.'

Radiographer

'I feel the radiographer's time would be better spent X-raying patients rather than checking the work of someone less qualified.'

Non-radiographer

'They are very pleasant to patients and can do technically good studies but are slower to train and lack confidence. I think with time each individual will make useful contribution, but it does require more sustained input.'

Non-radiographer

4.10 Summary of findings

- The majority of Assistant Practitioners would recommend the training to a colleague and the largest single benefit cited of becoming an Assistant Practitioner was increased job satisfaction.
- The majority of Assistant Practitioners appreciated the support they received from their mentors. Asked whether support could be given to trainees by qualified Assistant Practitioners, just over half said that this support needed to come from a radiographer and that an Assistant Practitioner would be able to give only limited support. Radiographers' opinions were similarly divided on this issue.
- The majority of radiographers who mentored Assistant Practitioners had not been allocated any time for seeing their mentees. Two-thirds mentored two or more trainees. A minority had been given training for the mentor role.

- The majority of radiographers who had supervised Assistant Practitioners said that it had encouraged them to reflect on their own practice but a quarter found it led to increased pressure. Amongst radiographers who had not experienced much additional pressure there was a significant correlation between the extent to which they found supervising rewarding and the extent to which they had reflected on their own practice; this relationship was not found however amongst those who were more pressurised.
- Only one-fifth of radiographers believed that introduction of Assistant Practitioners had led to any work re-organisation. Where this had led to a change, radiographers largely noted the replacement of radiographers by Assistant Practitioners on rotas, and the need for attention to supervisory arrangements when planning rotas.
- Despite this, just under half of the responding radiographers believed that Assistant Practitioners had led to improved teamwork and helped improve workflow. A majority of radiographers felt there had been no change in patient throughput, although around one-fifth felt it had increased.
- Only one-fifth of radiographers reported that introduction of Assistant Practitioner posts had led to them having any additional time for training and development, and fewer than one-fifth of radiographers felt it had led to any opportunities to move into advanced practice.
- Whilst the Assistant Practitioners were interested in receiving further training to help them progress, fewer were interested in progressing into training to become a radiographer. This was mainly because they were happy in their current positions, but the potential loss of salary and length of training were also major factors.

5 The case studies

Case study visits were undertaken to six sites selected on the basis of the initial interviews with managers. NES agreed the final selection of sites with the research team. While all the sites were viewed as being good practice sites, they were also viewed as having shown varying degrees of impact, from high through medium to moderate. The sites were therefore selected to represent these different levels of impact and to enable the investigation of the factors that mediate impact.

Sites were invited to participate with an assurance of anonymity and all agreed. It was confirmed with NES that ethical approval was not required for the work, but that research or organisational approval would be required. An application was made for research/organisational approval to each of the Boards in which the case study sites were located and in each case was granted.

The case study visits were conducted during late January and February 2011. Each case study consisted of an interview with the manager, several radiographers (a mix of those with and without responsibility for supervising the Assistant Practitioner(s)), a mentor of the Assistant Practitioner(s) and the Assistant Practitioner(s) themselves. Interviews were recorded and transcribed. The discussion guides used in the interviews are shown at Appendices 2, 3 and 4.

5.1 Impact

In this first section we consider the qualitative evidence for the impact that introduction of these posts had had in the six case study sites. In this section we report on the radiographers', managers' and Assistant Practitioners' views (including those radiographers who acted as mentors) of the extent and nature of impact within the departments. We also consider the way in which the introduction of Assistant Practitioners has impacted on task distribution within the department and the implications for the individual's own work.

It is worth noting at the outset that many radiographers interpreted this question as meaning any negative impact, responding by saying there had been no negative impact, the Assistant Practitioner had fitted into the team with no problems, or had assumed their work with no negative impact on the department. In other words, one of the key issues for departments was that staff on a lower band than a registered radiographer had taken on X-raying duties with no detrimental impact.

However, over and above this, many of the radiographers at these sites believed that the Assistant Practitioners had had a decidedly beneficial impact on the department, impacting on capacity and workflow:

'Yes. We all work as a team and [because] all are included it means the workflow has improved.'

Mentor

'AP are conscientious and work to the guidelines and so helps in the delivery of general X-rays and getting through the work.'

Mentor

' [They] perform the easier examinations and get that work load out of the way so radiographers can do the more complicated X-rays such as the trauma patients and paediatric patients..... there are positive and negatives for having the APs.'

Radiographer

'She has hit the ground running as if there was another radiographer. The area where she works is very busy and so she just gets on with it and it is very useful to have..... she is better than a newly qualified radiographers. Perhaps my expectations were lower than they should have been but I think she has been working better than I had expected she would.'

Radiographer

Some noted that because the Assistant Practitioners regularly undertake a limited range of tasks, they can become extremely adept at these:

'Due to their limited scope of practice they tend to do the same X-ray exams again and again which makes them very adept at carrying them out and probably better than some of the radiographers at carrying out those examinations.'

Mentor

'Not huge impact but it's definitely helped the department as there is another body and as long as there is another radiographer checking their image then it is another member of staff which we can use. So it helps by having another member of staff. This has a knock on effect to patients who are now getting X-rayed quicker.'

Radiographer

'Building capacity in terms of radiography availability in the department. APs increase capacity as there are more hands to get the work done. We are introducing the recommended 4 tier radiography structure and this is way to take forward. It's a more efficient way of working.'

Manager

In addition their people skills were usually good because of their previous experience working as Health Care Support Workers:

'They have got used to working with people directly and so better at dealing with people and better at working in a team and speeding things along. They understand the working practices of the department as they worked there beforehand and trained there and so they can speed up the processes.'

Mentor

'The AP communication with patients is very natural and so this has had no impact on patient. Also because they are more mature they are very good with patients.'

Mentor

Although the pace of throughput for the more routine tasks had increased in some departments, it was less clear whether this had resulted in a better quality or more 'joined up' service. At some sites the service continued as before, but with an Assistant Practitioner replacing a radiographer:

'Not necessarily more streamlined because if it was not an AP doing the job it would be a radiographer. As it is an AP there still needs to be someone there to supervise them to make sure the work done is to a good standard. So it does not make it more streamlined.'

Radiographer

The requirement for radiographers to supervise the Assistant Practitioners had led radiographers at some sites to give a more cautious estimate of the extent of impact:

'I think they have had a positive effect on the way we work as they work very hard but it's different as we do have to check their films and justify their cards. There are fewer radiographers now working in the department so APs fill the gap. [This puts] more responsibility on your shoulders as you're responsible for your work and the AP's work. It can be difficult especially when you are busy but that is due to staffing within the department.'

Radiographer

'There are advantages and disadvantages. As a member of staff they are good to have there but ... [it's] not like having another radiographer. So although they are part of the team they are not really an extra member of staff as they have to be supervised at all times.'

Radiographer

However, radiographers felt that there were problems with determining the precise extent of impact that Assistant Practitioners had on work flow or capacity because different types of work were now undertaken by the different staff groups, with radiographers taking on the more complicated tasks. This could leave radiographers feeling that their own work might not be adequately recognised:

'The workload you are left to do takes longer and it is not always appreciated especially when you have to check the AP work as well. The AP then is able to do three X-rays in the time it takes you to do one and so it looks as though the AP is doing more work than you are but this is not the case.'

Radiographer

In general, where the Assistant Practitioners had been used to release radiographers for further development, this had been in CT and MRI, although there was more limited mention of ultrasound. Next we consider whether introduction of the Assistant Practitioner posts brought financial benefits to the departments.

5.1.1 Financial benefit

In the early stages of the work (in the interviews with departmental managers) it was hard to obtain hard evidence for the cost-effectiveness of the initiatives, because departments do not appear to collect or report the types of information that would enable such calculations to be made. However, it should be noted that, in several of the case study departments, the Assistant Practitioner had replaced a radiographer, either in rostering arrangements or as a member of the staff establishment. In these situations they appear at the very least to have allowed the same level of service to be delivered more cost-effectively.

' [It meant that] instead of employing another band 5 we could take in a band 4. We are sending more people on the course in March as we see it to be a good financial saving...the AP works in one area unlike the radiographers who move around the different areas. If you work on one job all of the time then you become very efficient at doing that job.'

Manager

'Yes they are cost effective as they are paid less than a radiographer. They will speed up the service as they work very hard. It is cost efficient as the AP is band 4 and radiographers are band 5/6. It has possibly increased the efficiency of the department, in terms of patient turn around, [although other changes may] explain some of the increase in efficiency.'

Manager

'It's more cost effective. You've got experienced people working as a radiographer. Instead of having a band 5 you are getting one on band 4 which is doing an excellent job.'

Radiographer

'Very valuable members of staff who help you and work back to back. It makes the room more used and you're putting double the work through as you could on your own for less of the cost. So it is cost effective and helps patients get through the department quicker. However when you are short of staff then it can slow down the flow as they are always looking for a qualified radiographer to sign off their work.'

Mentor

The last comment notes the impact on room utilisation. This had been one of the sets of data we had hoped to be able to collect to support the evaluation, but this data is only collected for the more specialist modalities. This comment suggests that there may be additional benefits for some departments. However, this may depend on layout and staffing arrangements and would need quantitative data in order to be able to demonstrate this with any certainty.

These initial extracts from the interviews indicate the way in which various factors can influence the ease of incorporation of the Assistant Practitioners into the radiography team, the impact they could have and the extent to which they were accepted. Mostly the radiographers believed that the Assistant Practitioners made a positive contribution to the department. However, the increase in supervisory requirements could cause additional work for radiographers; in some cases the anticipated development for radiographers had not materialised. As a result, at some sites the introduction of Assistant Practitioners had led to resentment amongst some staff members. In the following sections we explore these issues further.

5.1.2 Staffing and supervision

When Assistant Practitioners are introduced into departments there are two broad staffing options for managers. Either they can be employed as supernumeraries,

(ie in addition to the current staff establishment), or as substitutes for radiographers (that is, role replacement).

Where the Assistant Practitioners were viewed as having replaced radiographers this was more likely to lead to resentment and could be exacerbated if there were any further staff shortages. However, where the number of radiographers remains constant (or any staff shortages are seen as temporary or not the responsibility of the manager) and the Assistant Practitioner works within the established team then there is less likelihood of their introduction leading to resentment; in such situations they are often viewed as being of particular use when there are *subsequent* short term staff shortages eg due to illness or holiday leave.

'In the department we may be short staffed and radiographers can get taken away, so it is good to have the AP there. We're lucky with the two APs we have as they are good workers and were beforehand when they were helpers.'

Radiographer

'We are short staffed and so it is good to have her. It's better for the students as well, as she can help them and advise them.'

Radiographer

The initial intention had been for the introduction of these posts to lead to the release of radiographers' time to undertake 'extended role' or advanced practice activities. However, many of the interviewees pointed instead to the time they needed to spend in supervising the assistants. For more senior staff the introduction of lower band staff may lead to particular challenges in arranging rotas to ensure that supervision is available from a suitable member of staff at all times:

'In the morning I spend more time making sure that the skill mix is even. In the past this was not a problem as everybody could do everything but now I need to be much more wary of who is where and whether APs are being supervised or not. It's added more work to me personally. But I do enjoy working with them and I do like the training aspect. I do not see it as a negative thing.'

Radiographer

'When we are short staffed then it can be a problem as they have to be fully supervised and their work has to be checked. You always need to make sure that a radiographer is around to supervise them and so you have to work out when people go on breaks and make sure that the AP is supervised.'

Mentor

Care has to be taken when arranging work rotas to ensure there will be sufficient radiographers on duty to ensure continuity of supervision. In general, larger departments have an easier time in this respect, as there are usually sufficient staff around to share supervisory duties. However, size of staff establishment is not the only factor of relevance in planning supervision: room layout also plays a part when considering rota arrangements:

'The layout of the department allowed us to do this. Usually we would have four radiographers in two rooms but we were able to reduce that down to three radiographers and an AP and this meant that the other radiographer could then be trained up in MRI. ...the only issue is they have to be supervised so you need two radiographers and one AP as the AP need to be covered if the radiographer goes to lunch. Manager, medium impact site.'

Manager

This manager also acknowledged that they had had concerns at the outset regarding the supervisory arrangements; they had also heard of another site that had decided against taking on an Assistant Practitioner for this reason:

'We were a bit scared by it as we did not know how would pan out but it has gone well. A smaller hospital I know are not that keen as they don't see the advantage due to the supervisory element of the AP.'

Manager

The need to ensure adequate supervision requirements is important, and not just because of the requirements set out in the Society's policies. Although most people found the Assistant Practitioners were helpful at times of staff shortage, others said it was at those times that there could be particular problems with supervisory arrangements:

'I'll be doing one job and then have to go and help them with checking the X-ray. You're getting two done at the same time but it can dig into your own time. It has added to my own workload. This is the only negative.'

Radiographer

'I feel I assist them rather than they assist me. I find my job is more to assist them. Especially when we are short staffed. If it's just me and a band 5 and an AP then I just check their films rather than do my own work.'

Radiographer

While it may be difficult to believe the last claim here – that checking AP's films renders a Band 6 radiographer unable to undertake any work – nonetheless it can be seen that where radiographers are asked to take on additional responsibilities –

and particularly where they feel these to be unwarranted - this can lead to resentment and, in some cases, active hostility towards the Assistant Practitioners. On the whole, such resentment amongst radiographers was confined to just a few people at a minority of sites. However, at its worst, resentment can lead to teamwork breaking down. Assistant Practitioners in two departments reported their experiences:

'I find myself on my own a lot which I do not feel is appropriate. I then have to go and look for someone. ... Radiographers are in the room and they will finish their patient and they will know that I am an AP but rather than waiting for me to finish which will only take 2 minutes, so they can check my film, they just leave and so then when I have finished I have to go and find them and leave the patient waiting.... Sometimes I'm almost in tears with one of the radiographers as she refuses to check films and sign cards or would just throw it at you. She is evidently not happy about Assistant Practitioners.'

Assistant Practitioner

'At the start a couple of people did not want anything to do with the APs. They said they would not check the card and the film. They stated that it was nothing personal but it really felt like it was as you knew that they did not want you in the department. It can be a struggle when only one person in the department would sign your card if the others refused to. The AP was sold as a way to speed up the work but it is not the case when you have got a radiographer in the department who does not want to work with you and so you have to wait for one to come along and sign your image for you. You feel more of a burden than a benefit.'

Assistant Practitioner

There were some suggestions for ways in which the supervisory problems could be reduced. To minimise workflow disruption arising from delays while imaging requests were justified, in one hospital the radiographers tried to ensure that all requests were justified when the requests arrived in the department, so that as soon as the Assistant Practitioner was available all the documentation was in order and they could take the next patient straight into the X-ray room. At another site, an Assistant Practitioner said it was difficult to see why in-patients should have to wait for the image to be signed off, when it would be relatively easy to arrange the return of these patients to the department in the (relatively unlikely) event of their X-ray needing to be re-taken. This would reduce the delays for in-patients at least, if not for out-patients.

5.2 Development and role extension for radiographers

Agreeing the benefits for radiographers at the outset appears key to successful introduction of the Assistant Practitioner role and to effective implementation of the four stage career progression framework. As one of the earlier quotes indicates, at one site substitution of one of four radiographers with an Assistant Practitioner had allowed a radiographer to be trained up in MRI. In another site a radiographer pointed to the fact that the introduction of Assistant Practitioners had allowed several staff to undertake additional training:

'I would not have gone on to do chest reporting if we did not have APs and this is not just me but three other members of staff as well.'

Freeing up of radiographer time to undertake further development and career progression had been an implicit component of the four tier career progression model. However, the evaluation took place at a time of economic recession and some of the sites had been hit harder than others, losing staff and making it difficult to replace the lost staff or release those in post for further training. In addition, in some sites radiologists continued to pose a barrier to advancement. Therefore, radiographer resentment arose out of a failure of anticipated development to materialise, and although the radiographers recognised that this was largely due to external events nonetheless they felt let down at the way events had played out. Two sets of quotes are shown below; one from a site at which there had been significant reduction in radiographers as well as other difficulties which had impacted on development opportunities; at the second site, the Assistant Practitioners had been introduced as supernumeraries and continuing professional development opportunities had been maintained:

Site 1:

'The difficulty has been to try and release the radiographers from their usual duties to go on the further training, I am trying to release the funding to support them in their further training, also radiological support for them has been a major barrier to their progression.'

'There are fewer radiographers in the department now. No development is planned. This is due to staffing as they cannot allow anyone off.'

'Not had the time to develop in my role as I am dedicating that time to help them. There is no time being created to allow me to develop. AP has not worked in the way it should have. Since AP introduction it has not freed up anytime for me to do things as you can't leave them alone. Even if you go into a room they still need to come and find you. They tend to do all the independent patients with good mobility and we have to X-ray those with more specific needs as the AP cannot do this. You yourself are getting left with the more complicated and complex stuff rather than

the work being shared out generally..... I thought the AP would be a good thing initially but I don't think that now. I think it has been to the detriment of my own career. I feel that when I work in the area of radiography that they are in, I feel like their assistant rather than them assisting me.'

'They're in the job to free up our time as a radiographer but does it free up our time, that is the real thing? Sometimes it does free our time up and others it does not.'

'No, no opportunity for staff at all. The only training we get is half day induction into student mentoring. I feel doubtful we would get study leave to go on any training anyway.'

Site 2:

'Department is proactive with education and have CPD every week for an hour. AP contributes to that. AP is a benefit to the department and it is an extra body which frees up more time.'

'Some were wary but we have been doing some of the radiologists' job and many have been on injection courses so we have been moving up. I have not had a problem with it so it has been helpful having [the Assistant Practitioner] here.'

'When the AP was there I could do more professional development as they would do more of the work and reduce the workload so you are less busy yourself.'

'People were apprehensive at the start but everyone has got to grips with it now and radiographers have realised that they have been given the opportunity to go on and advance into barium rooms etc.'

It can be seen from these two accounts that where the introduction has offered radiographers the opportunity of further development they are more welcoming towards the Assistant Practitioners. However, the amount of impact on individual radiographers is likely to vary according to size of staff establishment and their distribution across sites. As the manager at one large site commented, where there is a large staffing establishment then any benefits are likely to be seen by only a minority of staff – with large numbers of professionally qualified staff the extent of any impact arising from the introduction of one or two Assistant Practitioners is going to be negligible. In such situations, realistically only a minority of radiographers - one or two selected individuals - might benefit from the Assistant Practitioners releasing their time to allow them to participate in further training. It should be noted that, in the initial interviews, one manager had addressed this by cascading training and responsibility for audit down through all of the radiographers.

The economic climate was also impacting on managers' ability to release radiographers for further development. At one site, while there had been some

initial release for training in advanced practice, the worsening economic climate had led to some staff not being replaced, and there had therefore been a halt to any further development:

'It allowed radiographers to develop but now we need to concentrate on developing more advanced practitioners as this is the area we have not fulfilled as well and we have stumbled a bit. This is probably due to the economic situation and not having the money.'

'The radiographers would do CT or MRI and that was the plan but we're short staffed at the moment so they can't really afford to do it. But that is the long term plan.'

Where the department is short-staffed this means that the remaining radiographers have to give more of their time to supervising the Assistant Practitioners, which in turn made it more difficult for any radiographers to be released for training.

'I have not attended any further training since the AP introduction. I can't do anything else as they still have to be supervised.'

One key message is that if Assistant Practitioners are introduced in parallel with staff reductions (either planned or as a result of cuts forced by economic circumstances) then this may not allow radiographers to be released for further development. This in turn is likely to reduce the likelihood of these roles being fully accepted by radiographers. As one manager noted, in order to ensure that all staff are able to benefit:

'You need to get the right mix though. The workforce planning needs to be good.'

5.2.1 Inter-role relationships and fears

Several interviewees noted that there had been some scepticism in the beginning from the radiographers about the Assistant Practitioner roles but over time this had tended to diminish. While examples of outright hostility, as in the Assistant Practitioner account above were a minority, nonetheless many interviewees alluded to initial hostility at the outset towards the introduction of these roles, but felt that over time this was diminishing. Often it was felt that some people simply did not like change:

'It is a new thing and people are against it.'

Aside from a general resistance to change there appeared to be two main reasons for the resentment that was seen: first, a view that only radiographers are properly qualified to undertake X-rays, and secondly a fear that more widespread

introduction of Assistant Practitioners may lead to a reduction of employment opportunities for radiographers.

'Initially it was very mixed as they felt that their jobs were being threatened'

'Some staff were not very keen. They thought no one but radiographers should X-ray patients. They feared for their jobs and they thought it was a way of getting in someone cheaper to do their job.'

'There are no jobs for student radiographers and I would be nervous in taking on any more AP knowing what the job situation is out there at the moment. I do not think that APs should be employed in these positions when there are radiographers who are looking for jobs.'

' [We have taken on] no new members of staff and I would be worried that APs may be taken on in the future over newly qualified radiographers. APs should not be taken on in preference to somebody who has gone to university and trained for four years to become a radiographer. There is a fear that as money becomes tighter then this will be the way forward for many hospitals and this should not be the case. The AP is there to assist the radiographer to do their job rather than being taken on in place of them.'

However, there is an overlap here of concerns about planning for the future imaging establishment (and whether there are longer term plans to further reduce the numbers of radiographers) but also with the issue of development opportunities. One interviewee pointed to the need to balance the progression opportunities at both ends of the banding structure:

'At the top end we need to make more opportunities for radiographers to move up. I don't think there are as many options at the top as there are at the bottom for APs to move up. At the moment it may become bottom heavy and this is something which needs to be monitored.'

Any perception that development is being focused on Assistant Practitioners as a priority group over radiographers is likely to be detrimental to relationships between radiographers and Assistant Practitioners.

5.2.2 Communicating the changes

Where the introduction of Assistant Practitioners had had most impact and encountered the least resistance the managers had pursued a clear communication strategy and had ensured that radiographers were aware of how they would benefit from the changes. One of the managers had been aware that there had been some element of scaremongering and gossip between radiographers in other hospitals ahead of implementation. To ensure that implementation went well in

this department the manager had taken care to communicate the developments well initially and as a result all staff in this department had been very positive towards the Assistant Practitioner:

'As it was a new territory we did not want to go on a gungho process and as part of the larger process we wanted to see how it would impact on advanced practitioners.... I did not want it appear like a threat to the radiographers and it would have if we had brought in a lot of new staff very quickly and not explained the functions which they would have within the department.'

'I did presentations to all staff around the 4 tier system and the AP and advanced practice and professional responsibility. The Health Professions Council have lots of policies and procedures about what is expected of professional staff registered with them. They state that [members of the health professions] should have a responsibility to share their knowledge and so we used this as an angle and said that professionally they expect you to do this and share your knowledge.'

In addition this manager had offered to talk to people individually and emphasised that this was not a one-sided approach but would have an impact across all bands: the idea was to allow them all to have the opportunity to develop.

'We communicated it very well. I'm very pleased at how it went. The APs are completely valued. Some of the [radiographers say] that they are like old school radiographers as in the 80s the training was not a degree but a diploma and vocational and a lot of people can reflect back on those times.'

As a result, in this department the roles had been introduced with few problems:

'We were all made aware of what was happening and why. There was enough information given to us about it. We have had no conflict whatsoever here. The APs were employed here beforehand as helpers and so were known in the department and therefore there was no conflict between the APs and the radiographers or the APs and the students. Staff have accepted this is the way forward for us now so they can proceed with their career.'

Similarly, in the other high impact department development for radiographers had been one of the main drivers for the initiative; the other had been as a strategy to improve retention of the lower grade staff and reduce turnover and recruitment costs:

'The department had been getting busier and always had regular turnover of staff... I did a workforce plan which included an imaging assistant. Often could recruit locally as this was a popular post, but people tended to go on to do other things though and only hang around in the post for a year at most. Even though we did

not suffer too much long term vacancy it would take three months turn round between losing someone and getting someone else in post.'

'So when the [NES] funding became available it seemed the post was right for clinical development if you had the right person in it and we did. We were trying to expand the modalities that the department had to offer and this all happened around the same sort of time. We'd been trying to raise funds for a CT scanner for [the hospital] and the public raised the money. So we thought it would be good to train the imaging assistant to become an AP to allow a radiographer to go round to the CT department without having to take on extra radiographers.'

In other sites, too there had been a clear communication strategy from the start and at those sites the Assistant Practitioners reported a more positive reception:

'We were kept aware of what was going on and given information about the post within the department.'

'From the word go the whole team has been fantastic and embraced me as a member. When I trained I heard stories of hospitals not wanting APs but all the radiographers I have worked with have been great. Nothing has changed and we all work as a team. There is no difference between me and them.'

Elsewhere, though, communication had not been a part of the initial strategy, which meant there had been problems:

'The first cohort was perceived negatively by a number of the radiographers as there was a feeling that the APs were going to take their roles. There was an element that they did not know what an AP would do and how much supervision would be required. We had to give them the information as to why these training positions came available and the move into the four tier structure that was taking place. It was all about educating them in these areas. The opportunity for radiographers to train and up-skill and carry out some of the roles which a radiologist usually carries out. This leaves some of the basic skills which can be carried out by the APs. There was more of a drip feed of this information to the radiographers rather than setting up a formal meeting where all of this information was discussed.'

These two examples point to the value of having a clear communication strategy from the outset to prevent fears arising in the first place.

5.2.3 Supervisory arrangements

Initially the agreement with the Society was that the radiographer responsible for checking an Assistant Practitioner's image would be a Band 6. In some departments this had caused difficulties, because either staffing establishment or rostering arrangements meant there might not be a Band 6 radiographer available.

'There was seldom a band 6 radiographer in the building so it was very frustrating to get them to check it.'

Because of the problem this caused for departments, some had subsequently decided to allow Band 5s to undertake supervision. Five of the case study sites had adopted this decision locally (the sixth had no Band 5 staff). The departments that had taken this decision had imposed various restrictions: for example one site had reached an agreement that Band 5s with one year's experience could supervise Assistant Practitioners, another had specified six months' experience before a radiographer could undertake this role:

'We had to ask Band 5s to do this, so it was quite controversial. We now have something set out to say that [an experienced] Band 5 can check but new Band 5 radiographers cannot. They have to be qualified for 6 months.'

It should be noted that while all five of the case study sites with Band 5 staff had taken the decision to allow them to supervise Assistant Practitioners it was clear from the earlier interviews and survey stages of the research that elsewhere there were mixed views on this point.

5.2.4 Mentors' experiences

At each site mentors were interviewed about their experiences of supporting the Assistant Practitioners. A focus here was to discover more about the training that the mentors had received to help them in performing this role and whether they had been formally allocated any time in which to support the Assistant Practitioners.

Practice varied between the sites regarding whether the mentors were given formal training. Some managers felt this to be a useful part of professional development for the radiographers:

'They learned more about mentoring. They went on a training course and so it was a learning curve for them and helped them to develop themselves professionally.'

Others had been selected on the grounds that they were already a mentor for student radiographers and so it made a certain amount of sense for those individuals to take on the mentoring role for the Assistant Practitioners, too. Even where people had some prior experience, often they would have liked more training before taking on the role:

'I would have preferred some training to know what was needed and to set things up...I have worked with students for a long time so I knew these aspects but I would have liked more training and information on their role and where they were fitting into the department.'

However, at several sites radiographers commented that they had not been allowed time to spend in these mentoring duties, and in some cases this proved to be a demanding role.

'A few times I had to speak to the manager to get more time with the AP as I worked in all modalities so I did not see her as much as I should have. If I did it again I would ask for more time to have to mentor them.'

'It was difficult to give them the time they needed to get them through the training. I had to make the effort to make the time to see them as it was not allocated to me. Sometimes it was in my lunch time or quite often it was after 5 o'clock. There was no official allocated time for me to help them with their training. At that time both APs had no experience of working with computers and one was doing everything long hand and they would not have got through the course if they had done it this way. I had to go all the way back and get them used to computer skills. A lot of the APs are older people are not used to computers so you had to bring them up on this. It added quite a lot to my job.....'

In combination with the suggestion from the survey that those radiographers who had received training reported less stress and more rewards in undertaking their mentoring role, the case studies indicate that more support needs to be provided for radiographers in mentoring roles in future.

5.3 Is there any scope for further role extension for Assistant Practitioners?

There appear to be three 'push' and 'pull' factors that are currently interacting to determine the extent to which departments are considering extending the practice of Assistant Practitioners: first is the ability of the Assistant Practitioners and the desire of managers to ensure that their jobs should not be unduly repetitive; second is the desire of radiographers to move into areas of extended practice, and the extent to which Assistant Practitioners would be seen as competing for, rather than assisting with, these roles; and third is the need for Assistant Practitioners to be available to backfill where managers are able to send their radiographers for additional training, which may limit the time available for Assistant Practitioners to engage in further training and development. There had apparently been a discussion between the managers and the Society and College of Radiographers regarding the areas into which Assistant Practitioners might be allowed to expand and what they should be allowed to do. Managers and other radiographers could see a range of other areas in which the Assistant Practitioners could – potentially – work:

'It would be helpful if they were able and wanted to progress to doing AP chests and patients who come from the wards who you need to X-ray in chairs or on trolleys. It

would be good if they could train to do that. It would make a big difference in this department as we have a lot of inpatients in this department. It would also be useful if they could do skull work and would bring in OPT and dental work.'

'They are also keen to develop further into other areas of radiography and we are keen to support that with the right training and managed in ordered way. There is potential in the barium rooms and we are thinking how we could facilitate and support them. We have to agree scope of practice change on this with the AP and put into place local training programmes, and we have sufficient numbers to relieve them from their duties so they can undertake the training.'

As ever, of course, these decisions were being played out against the backdrop of the current economic situation, and this was likely to be the key determining factor for the immediate future:

'There will be a move [with] the radiographers going into further development for their skills and so we will need to back fill those positions. Also finances will play a large impact. So for example the APs could be involved in CT but they can't push a button or position the patient. [The Society] is saying that the APs need to go on a course in order to be able to do this but the courses are very expensive and there is nothing on them which we cannot do in house at this department. The radiographers never had to go on a course and they received their in house training so it is strange that the [Society] are saying this. The AP had a lot of CT in their course and I could not understand why they were given this if they did not want them to expand into these areas in the future. Also, the radiographers are worried because they want to protect their jobs and they don't think that APs are capable of carrying out the CT.'

Several of the Assistant Practitioners were interested in moving into other areas of work: CT, MRI and mammography were all mentioned. In addition, many referred to the restriction that prevented them from working with under-16s. However, while staff could see that it would be useful to have Assistant Practitioners trained in these areas, there was some hesitation at agreeing this move:

'At the moment we are looking at [personal development review] for them and setting up academic and clinical training to extend the role into OPG radiography, AP chest, and also CT and MRI, but I am not too sure how I feel about this one.'

Interviewer: Why is that?

It's an area where I struggle getting my radiographers rotated into and they work 24/7. All that the APs would be able to do is a plain head but the radiographers would be allowed to do a lot more and be in there on a lot more regular basis. It'd

the same with MR as we struggle with the huge waiting times on this and the training for the area is very hard and I am not sure they would cope.'

However, even if the current limits to their scope of practice were to change, it was likely that the Assistant Practitioners would encounter the same problem as that faced by the radiographers: the opportunity to attend the necessary training.

'I am happy doing what I'm doing but it can be quite frustrating at times especially when I want to develop. The department is very short staffed at the moment and myself and my colleague wanted to go to an AP training workshop but we were not allowed as they could not cover the staff that they would be losing for the day. It's a shame because we need to keep up to date with the knowledge and new developments. The department want to let me go but don't have the staff. They're looking at employing more staff but not at the moment.'

'There have been emails about potential further training and I may be interested but I would need to change my scope of practice more. I know they want me to go on to OPT and Dental and I would like to do it as it would give me something else to my belt. But at the end of the day we are not getting paid to do all of the same things as a radiographer so I have to think about that. The pay does not reflect what they want us to do.'

One of the reasons for introducing the Assistant Practitioner role was to provide a career path for individuals in the lower bands. However, some of the radiographers noted that the Assistant Practitioners were effectively still stuck with no real opportunity for further progression, albeit at one band higher than before. To progress further they would need to train as a radiographer, which would mean a return to full-time education for three years: the two years' training they had undertaken on the HNC gave them only one year's advanced standing on the four year radiography degree programme. While a few of the Assistant Practitioners had opted for this route¹, these were mainly the younger ones; for older people three years without pay was not a feasible option. The feeling that they were now too old, or had too many financial responsibilities, to return full-time to college was mentioned by the majority of the Assistant Practitioners interviewed:

'No I really enjoy where I am and really enjoy basic radiography. Maybe in the future but at the moment I am happy doing what I am doing.'

¹ In the initial interviews with managers only one reported having had an Assistant Practitioner progress onto the radiography degree, although we understand that two have registered on the programme.

'I am 37 with three kids and so it is quite a lot of pressure and you do not get paid a wage for it. If I could get a wage to do it then it is something which I would definitely take up.'

'No I was lucky to do the course I did as I did not have to give up working. I think I am too old to do the radiography training. The role which I am doing at the moment I really enjoy and so I have no wish to move into being a radiographer just yet. I would like to do the best I can in the role I have got rather than go on and do radiography.'

'I did think about it but now I am 45 would not like to go back to school again. At the minute I am happy with what I do and don't think I can give up my job and go back to university. If the course gave you two years on the degree then it would make such a difference and then I might consider going to train as a radiographer. I am doing more than some of the second and third year students.'

'No I'm too old. I would not like to study again especially when you have a family and have to give up your job as it would affect me financially.'

'People have said that I should [train as a radiographer] but I have family commitments and my children are all young and family is more important for me. Maybe in another few years when they are older then I may consider it but at the moment I am not considering it.'

5.3.1 Who should mentor? The Assistant Practitioner view

Assistant Practitioners were asked whether all of the mentoring role needed to be undertaken by radiographers, or if some aspects could be undertaken by qualified Assistant Practitioners. While some people felt that some support could be provided by Assistant Practitioners, mostly the view was that this role should remain with the radiographers.

'Hard to say, there is option for both. The AP could do some training and young students could shadow us but we can't tell them how to do anything. If students can't get mentors all the time then they can end up with the AP. I think we have enough experience to be included in the mentoring but not to do all of it.'

'I don't mind mentoring or helping but I think it should be carried out by a radiographer as they are more experienced. It is a security thing as well.'

'I think a qualified radiographer needs to do it all as they have been doing the job a lot longer and have the experience. I would be willing to give advice but not mentor.'

'No I think it has to be a radiographer that does it all. At university you receive the in-depth knowledge and so you need the in-depth experience which a radiographer provides as a mentor.'

5.3.2 The training provided for Assistant Practitioners

An initial intention had been to gain more feedback on the training that had been provided for the Assistant Practitioners, with the understanding that this would be used to feed forward into further course development. However, it emerged during the interviews that the programme for Assistant Practitioners had been revised between the first and second cohort. Given that we did not interview the current Trainee Assistant Practitioners about the revised programme we are unable to say whether the comments made by the current Assistant Practitioners have been acted on, or if the changes relate to other parts of the programme.

One change has been to shorten the programme from two years to 18 months, although the content remains unchanged. In terms of content, the qualified Assistant Practitioners complained about too much time being spent on psychology and what might be termed the 'health promotion' aspect of the programme. They said, perhaps correctly, that Assistant Practitioners in radiography are in less of a position to advise patients on healthy living than are other health professionals. Similarly, while some understanding of communication processes and the information needs of patients is essential, from the Assistant Practitioner comments it sounded as if the psychology component was perhaps over-extended.

However, at the same time, it should be noted that several of the mentors and the Assistant Practitioners commented on the Assistant Practitioners' lack of experience with computers and the amount of support that the mentors needed to give the Assistant Practitioners. Given the focus these days on study skills for most first year undergraduates and the age profile of the trainee Assistant Practitioners, it seems a surprising oversight that support in this basic area was left in the main for mentors to provide. It is to be hoped that with the ongoing development and improvement of the programme the issue of IT support and instruction in word processing and information searching will be addressed at an early stage of the course.

In addition, one radiographer commented that, at the outset of the training for the first cohort, there had been too little information available for all concerned:

'There should be more information and communication on what should be expected on both sides; the radiographer and the AP. The AP should know how the course is structured up front and what they need to be achieving so the radiographers can help them develop and achieve their aims. ...If we know what they are doing at a

particular time in the course then we can help them and prepare them when they get back to that learning aspect of their course.'

It is to be hoped that the nature of the changes to the programme have been communicated to those departments who currently have cohort 2 trainees in training.

5.4 Conclusions

The case studies suggested that introduction of the Assistant Practitioners had either helped to maintain the service at reduced cost, reduced the unit cost of examinations or increased the speed of throughput of patients. Many radiographers saw the Assistant Practitioners as being equally skilled to a radiographer in undertaking routine X-rays, and indeed some suggested that there was no need for Assistant Practitioners' images to be checked. The fact that they repeatedly undertake these routine tasks means that they can become extremely proficient and fast. Radiographers also pointed in many cases to the competent way the Assistant Practitioners deal with patients and their good patient care skills developed over the many years that most of them had spent in a support role in the department.

In some sites Assistant Practitioners had been substituted for a radiographer within rostered teams: in other words, role substitution had taken place, leading to more cost-effective service delivery. Supervisory requirements limited the extent to which they could be deployed; typically at least two radiographers needed to be rostered to ensure that supervision of the Assistant Practitioner could be maintained across the working day.

Mostly they had been welcomed into the radiography team, and many radiographers spoke warmly of their competence. However, at half the sites there had been an initial negative response towards the idea of the Assistant Practitioners, but this had largely resolved over time once the radiographers had realised how good the Assistant Practitioners were. However, at some sites there had been outright hostility and a refusal by some radiographers to work constructively with the Assistant Practitioners.

Several factors determined the extent to which the radiographers accepted the Assistant Practitioners. First, there is the 'quid pro quo' aspect: part of the thinking in introducing the Assistant Practitioners was to release radiographers to train for advanced practice. However, several interviewees questioned what radiographers had in fact gained from the changes. In some cases the anticipated development opportunities had not happened: either because the department has lost staff and cannot therefore release radiographers for training; or because of cutbacks in funding (and decisions not to replace radiographers who had left).

Second, there are fears amongst some radiographers that Assistant Practitioners will, with time, replace radiographers to a greater extent. Thirdly, amongst a minority of radiographers (and at a minority of sites) there was a view that being required to supervise the work of the Assistant Practitioner (and in particular, to justify films and sign off their images) impeded the radiographers' ability to perform their own work.

Perhaps unsurprisingly, communication appears to be central to smooth introduction of the Assistant Practitioners within departments. Some managers had a clear communication strategy from the outset; at others – in the words of one senior radiographer- there had been a 'drip feed' of information only after an initial negative response from the radiographers to the initiative.

One key message then is the need for a clear communication strategy – and clear communications – from the outset. Secondly, if subsequent staff loss/reductions lead to a temporary hold on training, then it would be helpful for managers to indicate clearly the reasons for the suspension of training and what the intentions are when times improve.

Where possible, it is advisable to provide training as widely as possible, to ensure that all radiographers feel that the introduction of the Assistant Practitioner posts have been to everyone's advantage. Where this is not possible then managers would be wise to ensure that some form of development is available to the rest of the team, even if this might not extend to release radiographers to attend off the job training (for instance, some sort of cascading of non-imaging responsibilities).

There is one rather perverse aspect of these findings. Radiographers appear to fear for the future of radiography jobs, and yet some have been refusing to undertake supervisory duties – the very thing that reinforces the differentiation between the radiographer and Assistant Practitioner and effectively – at present – guarantees the need for radiographers.

It should also be noted that individuals in the first cohort of Assistant Practitioners were already based within these departments before they began their training, and worked with many of the radiography staff beforehand in their previous role as a Support Worker. This is likely to have helped with the transition to Assistant Practitioner as the radiographers already knew them, even if they did not agree with the introduction of the post in principle. Given the hostility expressed towards some of these individuals, even though they were known to the radiographers and were recruited because they were viewed as good workers, it will be interesting to see what reactions the second cohort of Assistant Practitioners receive, given that some of these are being recruited outside of the hospital with no healthcare experience, and especially if the radiographers are still

yet to realise any benefits and personal development opportunities from the introduction of the first cohort.

It also has to be acknowledged that one of the rationales for introducing Assistant Practitioners is to enable role substitution, at least to some extent, and in so doing enable more cost-effective delivery of services. All the evidence points to lower band staff being a key part of service delivery in the future. Ensuring that services are delivered as cost-effectively as possible will make existing staffs' jobs more secure in the future – especially if they are needed in order to ensure supervision of the lower band staff grades. However, if the introduction of increasing numbers of lower band staff is to be achieved less contentiously in future then there needs to be greater attention paid to the introduction process, employee relations and ensuring that individuals have equitable access to development opportunities.

5.5 Summary of findings

- The case study sites confirmed that Assistant Practitioners can help improve patient throughput. This is largely due to expertise built up through repetition of a limited set of tasks. Capacity and flexibility can also be increased.
- The issue of supervision was again raised and this appears to have caused more problems in some departments than others. The majority of case study departments had elected to provide training for Band 5 radiographers with a specified length of experience: in some cases six months' experience, in others one year. This had gone some way towards resolving supervision capacity issues. Another site ensured all requests were pre-justified in order to smooth workflow and minimise the need for Assistant Practitioners to seek out radiographers. However, at some sites the supervisory challenges appeared to derive mostly from some radiographers' attitudes.
- Information from the case studies confirmed that there is no clear answer regarding the impact of Assistant Practitioners on departmental costs. Where they have been employed as supernumeraries they add to overall costs but contribute to a lowering of unit costs for X-rays. Where Assistant Practitioners have been substituted for a radiographer then this leads to savings at a departmental as well as unit cost level. There has however been no consistent approach to deployment models.
- Not all radiographers had seen the anticipated increase in opportunities for CPD. Mostly this was attributable to the prevailing economic climate and staff shortages. Where introduction of the Assistant Practitioner posts had been seen to lead to more CPD opportunities for radiographers, they were more positively-disposed towards introduction of the posts.

- Communication had been central to successful implementation.
- The case studies confirmed the earlier findings that many radiographers had not received any training for their additional mentoring or supervisory duties and had not been allowed any dedicated time for these roles. This had made it difficult for those radiographers to give the Assistant Practitioners the time they felt was needed.
- Assistant Practitioners were keen to expand their scope of practice but there were factors which limited progress on this: scope of practice guidelines, the lack of suitable training and inability to release their time were the main three. However, managers were also aware that it would not be politic to move Assistant Practitioners into areas of practice such as ultrasound or CT while they had radiographers unable to gain experience in these areas. Where there were training opportunities it was seen as advisable to offer these to radiographers first.
- In common with the survey results (and with earlier reports to NES), few of the Assistant Practitioners were keen to consider training to become a radiographer.
- The case studies revealed continuing issues related to professional role boundary disputes, with some radiographers resenting the introduction of Assistant Practitioners.

6 Patient satisfaction

As part of the case study visits a patient satisfaction survey was distributed to patients on the day of the study. The questionnaire was based on one designed by Kessler, Heron, Dopson, Swain and Janet Askham (2010) in evaluating the impact of Health Care Support Workers in the NHS and a copy can be found in Appendix 7. Questionnaires were distributed to patients on behalf of the research team by the Imaging Department receptionists (Appendix 5 shows the letter to receptionists and Appendix 6 shows the information and consent form for patients); patients had the choice of either completing it on site and returning it through a post box provided at Reception, or of taking it home to complete and then returning it using a FREEPOST address. Fifty questionnaires were distributed at each site.

A total of 51 completed questionnaires were received from patients who visited five of the six sites¹. Two thirds of patients had been sent by their GP for an X-ray; others had attended because they had appointments for an X-ray or for CT, MRI or Ultrasound. Just over half (53 per cent) were female and just under half (43 per cent) were male; two did not answer this question. Forty-six per cent were aged over 55, 37 per cent were aged between 36 and 55 and the remainder were aged between 18 and 35.

Patients were asked who had performed their examination that day; of the 27 who answered this question, a third could not tell and a further 11 per cent said they did not know. Of those who could tell who they had seen on the day, five said they had been seen by an Assistant Practitioner, six by a radiographer and four by a radiologist.

¹ Note that it is not possible to give a response rate as we do not know how many questionnaires each receptionist distributed during the session or day.

6.1 Quality of experience

Just over half, 57 per cent, had visited the department previously, and of these, just over 60 per cent had visited within the last six months. Patients who had visited the department previously were asked to rate the quality of their experience today and on the previous occasion. There was no significant difference between the assessments given of the visits, which were generally rated as between 'excellent' and 'good'.

The majority of those who met an Assistant Practitioner during their visit said that the Assistant Practitioner had introduced themselves, taken them into the X-ray room and explained what would happen. The majority of patients either strongly agreed or agreed that the Assistant Practitioner had explained everything very well, answered their questions clearly and treated them with dignity and respect, and the majority said they felt able to explain my concerns to the assistant practitioner. Patients were asked the same questions about radiographers and again a majority of those who saw a radiographer either agreed or strongly agreed with these statements.

6.2 Comparison of radiographers and Assistant Practitioners

Patients' ratings of how well they felt that the Assistant Practitioners and radiographers had explained things to them; answered their questions clearly; treated them with dignity and respect; and whether they felt able to explain their concerns were compared for the two staff groups. The ratings were very similar for both staff groups and are shown in Table 6.1. A score of 4.0 equates to 'agree' and a score of 5.0 equates to 'strongly agree'; therefore these scores indicate an average rating slightly above agree for each of these statements.

Table 6.1: Patient views of Assistant Practitioners and Radiographers

	Assistant Practitioners	Radiographers
The assistant practitioner/radiographer explained everything very well	4.0	3.9
The assistant practitioner/radiographer answered my questions clearly	4.1	4.2
The assistant practitioner/radiographer treated me with dignity and respect	4.3	4.2
I felt able to explain my concerns to the assistant practitioner/radiographer	4.1	4.4

Those patients who had visited the department previously were asked whether they felt their treatment today had been the same as on their last visit, worse or better. The great majority (76 per cent) of the 26 people who answered the question said that their treatment had been the same; the remainder (24 per cent) said it was better. No-one said it was worse.

6.3 Other comments

Patients were invited to give comments at the end of the questionnaire. Their comments are shown below and the broad consensus appears to be that they were very happy with the service they received:

'Friendly and courteous'

'Although I was not aware of the qualifications of the person who carried out my X-ray, the procedure was fast, efficient and a pleasant experience.'

'Prompt, efficient - no complaints'

'Waiting time has improved'

'Excellent treatment'

'Didn't have to wait long and all staff pleasant'

'It is an excellent hospital. Very pleasant and helpful staff.'

'It was quick and easy.'

'Quick and efficient.'

'Don't know who it was but I was dealt with efficiently and professionally.'

And lastly, it is not just the radiographers and Assistant Practitioners who received compliments:

'Your reception staff are wonderful - very helpful and cheery'

6.4 Conclusions

It should be noted that only a small number of patients returned their questionnaires and not all of these had been seen by an Assistant Practitioner. In addition, a significant number did not know if they had been seen by a radiographer or an Assistant Practitioner. This is not intended as a criticism of the staff – the most likely explanation is that patients' attention is focussed very much on other matters when they enter a hospital.

It is important to point to the limitations of any conclusions that can be drawn on the basis of this small sample. However, that said, it does appear that the great majority of patients were satisfied with their treatment, irrespective of whether they had been seen by a radiographer or an Assistant Practitioner. The most important point to note is the finding that patients believed that the service they received was equally as good, or better, quality as on previous visits.

6.5 Summary of findings

- Some patients were not able to discriminate between Radiographers and Assistant Practitioners.
- The majority of patients said that Assistant Practitioners had introduced themselves and then had treated them with respect and dignity and had answered their questions well. There was very little difference in the ratings given for the two staff groups.
- Patients who had been to the department previously were invited to compare their experience on the two occasions. Three-quarters felt that their treatment had been the same on this occasion as previously and a quarter felt it was better; no-one said it was worse.

7 Conclusions, summary and recommendations

The aim of the second phase evaluation was to gain evidence of impact of introduction of the Assistant Practitioner roles. In particular, the research sought evidence relating to the key themes from the NHS Scotland Quality Strategy, which are: quality, effective skills mix, Assistant Practitioner career aspirations and financial benefit. These are defined as follows:

1. Quality, viewed as consisting of six strands:

- **Person centred:** Staff/patient perspective (measures); patient complaints, satisfaction
- **Safe:** review of protocols; measure of error rates;
- **Effective:** Clinical effectiveness; audits
- **Efficient:** Productivity (is time released); patient throughput; impact on wait times
- **Equitable:** equity of access; AP services offered to relevant patient groups no matter their physical / mental needs etc
- **Timely:** awareness of time taken to undertake procedures; responsive to patient needs

2. Effective skills mix, and whether Assistant Practitioners were freeing up radiographers to do more complex work resulting in:

- Further radiography progression
- (improved) Team working

3. Assistant Practitioner career aspirations – extension of scope of practice; further study; Assistant Practitioner role Learning facilitator
4. Financial benefit
 - Cash out of the system
 - Cost avoidance as a result of change

The research consisted of an initial literature review; interviews with managers across all but one site at which the Assistant Practitioners were employed; surveys distributed to all sites at which manager interviews had been conducted; and case study visits to six sites. We summarise the overall findings and then set out our conclusions.

7.1 Conclusions

7.1.1 Quality

It is clear from the manager interviews, case study interviews and the patient survey that there has been no detrimental impact on quality of service and there is some evidence that service has improved. The majority of the patients who responded to the survey and who had visited the case study departments previously believed that their treatment was as good as before and some felt it was better than previously. There was no indication that the images taken by the Assistant Practitioners were any more likely to need repeating than those of radiographers.

There was a view from the managers and some radiographers that patients were seen more quickly and if anything had a more 'joined up' service than before. However, in assessing this we were limited by the fact that departments tended not to have relevant data available: while they are required to provide monitoring data on Demand, Capacity, Activity and Queue (DCAQ) these data related primarily to areas in which the assistant practitioners mostly did not work: MRI, Ultrasound, CT. The Assistant Practitioners tended to work in general X-ray for which the majority of departments did not report statistics and could not provide figures. It is worth noting that in one department an individual had developed a software package to allow them to monitor throughput and micromanage staff deployment, but the fact that they had taken it upon themselves to do so only serves to emphasise the lack of data available before they undertook that development. One site did provide some data on patient throughput, but there had been other developments at that site that made interpretation of this evidence difficult.

In addition, the Assistant Practitioners had been introduced at a time when departments were being required to respond to the Referral to Treatment targets and in some cases this had led to increases in staffing in order to address waiting lists and times. Some sites had undergone major re-organisations and had invested in new equipment also. Therefore it was difficult to attribute improvements in waiting times or increases in patient throughput to the introduction of Assistant Practitioners with any confidence. However, the evidence points to their introduction having had no detrimental effect either.

7.1.2 Assistant Practitioner career aspirations

All of the Assistant Practitioners were pleased that they had taken up the option to train as an Assistant Practitioner. The majority were also keen to undertake more training to enable lateral moves into more specialised areas: dental and CT were two of the modalities identified. At present though there is uncertainty regarding what is permitted and what training would be needed.

Only a minority of those who responded to the survey wanted to train to move on and become a radiographer¹. The three year training programme² and the loss of a salary during that period were strong disincentives. However, it appeared that it was the extended training period more than the salary loss that was the real barrier: when we asked if they would be interested in a part-time radiography degree programme, should one be available, just three said they would. For most, the HNC had provided them with sufficient additional skills and opportunities and they were happy in their new roles. Many felt they were too old to commence further study.

Some radiographers noted that, although the Assistant Practitioner posts had been envisaged as a step on a progression pathway for lower grade staff, the Assistant Practitioners could not progress beyond Band 4 because of the lack of progression pathways in the absence of a degree-level qualification in Scotland other than the radiography degree which provides eligibility for registration with the Health Professions Council³.

¹ Just one had registered on the Radiography degree at Stow College.

² One year's advanced standing or credit is awarded for attainment of the HNC – equivalent to attainment of year 1 of a 4 year Honours degree in Scotland.

³ Note that at some universities in England Foundation degrees are available which make progression to a full degree easier; this might provide a model for future developments should NES wish to explore progression issues further. Certificates of Higher Education (which a small number of Assistant Practitioners took instead of an HNC) might also provide a better progression pathway. This would need further investigation.

7.1.3 Effective skills mix

Introduction of the Assistant Practitioner posts is a key component of the four tier career progression framework in radiography. The idea is that Assistant Practitioners will free up radiographers to undertake more complex work resulting in further radiography progression and improved team working. This had happened in some, but not all, departments. Where this had happened, radiographers were quick to point to the fact that the Assistant Practitioners had enabled their release for further development to equip them to move into areas of advanced practice. Where this had not happened, some radiographers had become disillusioned as a result.

The extent to which the deployment of one or more Assistant Practitioners could serve to release radiographer time depended on the number of staff overall and the way in which staff were deployed around the department or across sites. Staff shortages – and subsequent decisions not to replace any departing staff in light of the financial situation at the time of the study – also played a part. The need for Assistant Practitioners to be supervised by a qualified radiographer could, perversely, serve to reduce the potential for release for training where there was a shortage of radiographers.

Some radiographers felt that if they had to supervise Assistant Practitioners they could do no work of their own. This is hard to believe, and one would wish to think that managers would notice such changes in behaviour and act to address the situation. While the supervisory requirement does lead to problems in some departments, there are ways in which the potential 'log jams' can be ameliorated: for example, one department arranged to have all requests justified as soon as the request was received, to avoid a delay while the Assistant Practitioner sought a radiographer to agree the examination. An Assistant Practitioner suggested that, for in-patients at least, allowing them to return to their beds instead of waiting until a radiographer could sign off their X-ray (as they could easily be recalled in the rare event of an image being unsatisfactory) would improve patient throughput, and this seems a sensible idea that departments might wish to consider.

Some of the accounts of behaviour by some staff who were opposed to the introduction of Assistant Practitioners appeared unprofessional at least. Refusing to sign off images or 'disappearing' from a room when it is likely an image will need checking in a few minutes' time so that a patient can go home is not just unprofessional but shows a real disregard for the patient's experience. There was a feeling that the situation was gradually resolving, with many of the people who objected to the Assistant Practitioners leaving, but ideally this situation should be

addressed by managers. One manager had pointed to the standards set out by the Health Professions Council to emphasise the responsibilities that registered staff had to share knowledge and had subsequently used the introduction of the Assistant Practitioners as a way of introducing more managerial responsibilities for staff in general; this would appear to be a sensible approach that more managers could adopt.

7.1.4 Financial Benefit

It was very hard to find any empirical evidence for the cost-effectiveness of introducing the Assistant Practitioners. Again, this was largely because the data for which managers are required to report data (the DCAQ data) relate primarily to areas in which the assistant practitioners mostly do not work: MRI, ultrasound, CT. The Assistant Practitioners tended to work in general X-ray for which the majority of departments did not report statistics and could not provide figures.

Nonetheless several managers did speak of, for example, rostering three radiographers and an Assistant Practitioner, or of replacing three vacant Band 5 posts with a Band 7 and an Assistant Practitioner post, or even replacing a Band 6 with an Assistant Practitioner post.

In these sites there has clearly been a cash benefit, even taking into account the costs of upgrading the Assistant Practitioners from a Band 3 to Band 4. However, at some sites the Assistant Practitioners were upgraded at the same time as additional staff were taken on to address backlogs, and so in those sites there is no obvious saving – except inasmuch as they would probably have had to take on another radiographer had they not trained the Assistant Practitioner.

7.1.5 Summary of findings against the three key quality strands

In the table below we summarise the evidence under the three key quality strands of primary interest to NES.

Table 7.1: Summary of impact on quality

Quality strand	Evidence
Person centred	<p>The patient survey demonstrated that patients believed service quality had been maintained at its previous level in the period since the Assistant Practitioners were introduced; a sizeable proportion believed service quality had improved.</p> <p>The survey and case study interviews indicated that staff at some sites believed that introduction of the Assistant Practitioners had increased through-flow of patients, although some disagreed with this.</p> <p>The case study interviews indicated that the Assistant Practitioners become very skilled in their circumscribed area of activity. Their previous experience as HCSWs had equipped them well to interact with patients.</p>
Safety	<p>At no site was there any report of error rates increasing. Managers reported that it was rare for images taken by Assistant Practitioner to need to be repeated.</p>
Effectiveness	<p>There is some evidence that introduction of Assistant Practitioners had enabled more efficient room/equipment usage. There is also some limited evidence of the use of Assistant Practitioners to release radiographers for additional training/extended role activities.</p>

In addition to the evidence against these three key quality issues there was also some evidence of impact on cost-effectiveness. Assistant Practitioners have enabled departments to obtain reductions in the cost per unit for examinations. However, given the variations in workforce arrangements, and in particular the use of Assistant Practitioners as supernumeraries in some sites, it is not possible to say conclusively that the initiative had led in all cases to cost-reductions in staffing costs.

7.2 Recommendations

In this section we set out our list of recommendations to NES and the radiography profession and more widely to bodies charged with funding workforce development initiatives.

7.2.1 The value of data

The first point to make is the lack of hard data available with which to clearly demonstrate the value of these posts¹. One possible remedy is to recommend that, where public money is awarded for such initiatives in future, managers are told of the data they will be required to provide for evaluation purposes at the time the funding offer is made. However, this seems a somewhat draconian approach, and it would be hard to find a set of data that would be appropriate for all departments.

We therefore suggest that, if funding is awarded in future for an initiative that is expected to lead to service improvement, workforce modernisation and/or cost efficiencies, then applicants should be asked to outline first, the ways in which they expect the role to impact within their department, and second, the data that they will provide to demonstrate impact. This would have the benefit of ensuring that managers think through the potential impact – and the means or mechanism of impact – at the outset, and also serve to ensure that appropriate data are collected from the outset. It should be noted that this applies to all funding initiatives intended to bring about workforce change, irrespective of funding body/source, rather than solely to NES.

7.2.2 Communication of change

Implementation has obviously progressed better at some departments than others. Communication is key to this. Where managers had a clear communication strategy from the outset – and also made explicit what the radiographers would gain from the arrangements – the implementation went more smoothly. Where there is a drip feed of information there is room for rumours and hostility to grow. One manager had from the outset used the introduction of the Assistant Practitioners to start delegating down more managerial activities to their radiographers in order that their staff should get experience of these types of responsibilities. This person believed there was a relatively low adoption of managerial roles amongst graduates in the health sector compared to graduates elsewhere and saw this as an opportunity to redress the situation locally. Implementation had gone well at this site and the Assistant Practitioners had encountered none of the hostility experienced by their counterparts elsewhere. Although this manager had subsequently used the Assistant Practitioner initiative to release specific staff for advanced practice training, they had ensured that all staff gained some form of development through this cascading process. It is

¹ While NES has routinely collected monitoring data, these have not included the types of performance data we had sought as part of this work.

tempting to speculate that in some other departments, had the supervisory responsibilities been presented as an opportunity to gain more managerial experience, radiographers might not have reacted so badly to the requirement for them to supervise the Assistant Practitioners.

It would therefore be beneficial if a communication plan could be requested as part of the application process for funding in future. Again, this is a recommendation for all bodies involved in funding workforce change/modernisation initiatives, rather than specifically for NES.

7.2.3 Training

It is noteworthy that only a minority of radiographers had had training in either mentoring or supervision prior to taking on these roles. The surveys suggest that those who did receive training coped better with these roles and found them more rewarding. **We recommend that** more research would be useful on this point, in particular to clarify the types of training best suited to supporting staff in these roles. Where programmes specify the need for support roles (supervisory or mentoring) and dependant upon the outcomes of any further research commissioned NES then we would **recommend** that funding bodies consider asking for development plans for any support roles (supervisory or mentoring) required as part of any future training initiatives. Again, this could be requested as part of the initial application package for funding. for staff asked to undertake these roles in any future funded initiatives.

7.2.4 National policies, local decisions

There were many comments on the extent to which the Society and College of Radiographers 'legislated' or set rules and we have noted earlier in this report the fact that such language is inaccurate. The Society sets national policy and gives guidance, not rules or laws; however, given the status and esteem of the Society it is unsurprising that radiographers treat any policy recommendations as tantamount to 'law' for their profession.

The Society has published a Scope of Practice document on the work of Assistant Radiographers and has also given guidance on who may supervise an Assistant Practitioner. The guidance on supervision indicates that only radiographers at Band 6 or above should supervise.

Two of the main issues that emerged during the case study visits were questions regarding whether Band 5s could supervise Assistant Practitioners or not, and what would be required in order for Assistant Practitioners to expand their scope of practice.

Supervision

Taking up the issue concerning supervision first, some departments had said that it was 'not possible' for Band 5s to supervise Assistant Practitioners. However, the initial interviews with managers and the case study visits indicated that at some sites at least, experienced Band 5s were supervising Assistant Practitioners.

To clarify the situation sites were re-contacted following the case studies. These follow-ups confirmed that some sites had taken local decisions to allow Band 5s to supervise. One department's argument was that if Band 5s were sufficiently qualified to supervise student radiographers, they should be capable of supervising qualified Assistant Practitioners. Another argued that to automatically allocate a role based on a banding (rather than experience) implied a narrow view of responsibility and said that many of their Band 5s had gained exceptional experience over several years of working and had undertaken supervisory and assessment programs to supervise and assess undergraduate students. Such individuals were often employed as a Band 5 on returning to work after career breaks and had taken a Band 5 job due to there being no senior posts available at the time.

That site believed that the current policy did not reflect the skills and qualities held by many Band 5 radiographers and unfairly excluded them from the supervisory role. This site had therefore developed competencies describing the role of supervision and had taken a decision locally to allow Band 5s to supervise Assistant Practitioners after training to the competencies. Training in supervision was restricted to Band 5 staff with a minimum of six months' experience.

Set against this, other sites complained about the restrictions (but did not challenge them) while others referred to sites at which such policies had been adopted as being 'in the wrong'. There is clearly a great deal of confusion on this point amongst managers and other radiographers at the moment.

While it could be said that it is the role of the Society to lead, rather than follow, opinion, the interviews suggest that current Society of Radiographers' policy regarding supervision is out of step with the majority view of radiography managers on this point. There is therefore a need for policy review and clarification on this point. **We therefore recommend** that NES encourages discussions between managers and the Society of Radiographers to explore the possibility of such a review. In the interim **it might be helpful if further clarification** could be issued on this point. It would also be useful if information about the training programmes that have been designed to equip Band 5 radiographers with appropriate supervisory skills could be **placed in the public domain** (via the NES or Society and College of Radiographers websites, perhaps) to ensure that any other training meets the same standards as a minimum.

Extending Assistant Practitioner Scope of Practice

Similarly, there seems to be a groundswell of enthusiasm amongst managers to provide further training for their Assistant Practitioners and again a wide range of beliefs as to what is allowed (or not) by the Society's Scope of Practice. There was much interest at some sites in extending these roles: in particular, dental X-rays^{1,2} and CT were mentioned frequently. In relation to CT in particular, if it is the case, as argued by some interviewees, that this is becoming seen as a 'basic' imaging modality then it would appear logical to assume that this could be an area for future Assistant Practitioners to participate in directly.

Again, however, it appeared that there was confusion regarding what was 'allowed' and disapproval of some developments that were believed to have taken place. One comment received during the survey was that '*The limitations of the Assistant Practitioner role are not put into practice as they do modified technique X-rays etc.*' – in other words, resentment that, at some sites, Assistant Practitioners were undertaking tasks seemingly outside the perceived remit as set out in Society policy. Again, some sites had introduced training programmes on a local basis in order to extend the Assistant Practitioners' scope of practice.

As with the supervision issue it is not the detail of the areas of role extension that is of interest here so much as the need for clarity regarding what can – and equally, should not – be done; it appears that sites are starting to negotiate individual arrangements to further develop their Assistant Practitioners on an ad hoc basis. It is not for the current research to take a view on whether such developments sit within what is approved by current policy, but it would certainly be helpful to have more clarity on this point. **We suggest that more information** could be gathered on the extent of role extension, and the means by which such development is provided, so that a decision can be made as to whether this is in line with policy and so should be supported (and, perhaps, publicised) or is discouraged. This would enable more information to be placed in the public domain to allow clarification and (should such developments be supported) to enable others to follow suit, should they wish.

There is also the question of who would provide any further training for the Assistant Practitioners, given that there are relatively small numbers of Assistant

¹ As an aside, it should be noted that at one hospital in England at which Assistant Practitioners undertake dental x-rays the consultant asks for the Assistant Practitioner out of preference, because the Assistant Practitioner works consistently in this area but the radiographers rotate, hence the Assistant Practitioner has much more hands on experience and retains these skills.

² It should also be noted that dental X-rays were specifically mentioned in the initial monitoring reports submitted to NES in the earlier round of the evaluation (McLean and Colthart, 2008)

Practitioners across Scotland but a relatively wide range of areas into which managers were keen to see them expand. If it is agreed that role extension for Assistant Practitioners is possible, **we suggest it would be helpful** if NES facilitated a meeting of managers at which they could agree priorities for Assistant Practitioner development, so that they might then approach education/training providers and achieve some economies of scale in commissioning such training¹. Patient safety needs to be a priority where further role extension for Assistant Practitioners is considered and some agreement on standards for further training would help reduce risks. Review of the Assistant Practitioner Scope of Practice may be advisable.

7.3 Final Comments

In summary, then, there is evidence of improvements in capacity and the potential for increased cost-effectiveness through the use of Assistant Practitioners. However, it is acknowledged that there were limitations to the data available. In particular the quantitative data we had hoped to collect on efficiency were largely unavailable. Nonetheless important lessons have emerged from this evaluation that point to ways in which any future waves of workforce modernisation and of any evaluation of such initiatives might be helped to proceed more smoothly.

¹ We understand that NES was developing a Professional Development Award (PDA) while this work was ongoing and this will be submitted for validation in the near future.

References

- Audit Commission (1995), *Improving Your Image: How to Manage Radiology Services More Effectively*, London, HMSO
- Barneveld Binkhuysen, FH (1992), 'Impact of PACS on radiologists' daily work in western countries', *IEE Journal on Selected Areas in Communications* 10:7, pp.1158-1160
- Bull S (2003), 'Skill mix in radiography', *Synergy*. September 7-11
- Campbell J, German L, Lane C, Dodwell D (2000), 'Radiotherapy outpatient review: a nurse led clinic', *Clinical Oncology*. 12:104-107
- Colthart I, McBride M & Murray M (2010), 'Mentoring assistant practitioners – The radiographer's perspective', *Radiography*, 6: pp. 223-229
- College of Radiographers (2000), *A strategy for the Education and Professional Development of Therapeutic Radiographers*. CoR October 2000
- Craven C (2000), 'Radiographer reporting: CT head scans', *Synergy*. November, pp. 15-19
- Department of Health (2009), *Imaging and radiodiagnostic activity, 2008/09*.
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_065946
- Department of Health (2000), *A health service for all talents: developing the NHS workforce: a consultation document on the review of workforce planning*. London
- Department of Health (2004), *The NHS cancer plan and the new NHS: providing a patient centred service*. London
- Department of Health (2000), *The National Health Service Plan, a plan for investment, a plan for reform*. London

- Department of Health (2002), *Meeting the challenge a strategy for the allied health professionals*. London
- Department of Health (2003), *Radiography Skills Mix- A report on the four-tier service delivery model*. London
- Evans S (1999), 'The NHS Breast screening programme'. *Synergy*, May 12-13
- Forsyth L (2003), 'Assistant training, a local approach to a national initiative', *Synergy*. December: 7-10
- Hancock H, Campbell S, Ramprogus V & Kilgour J (2005), 'Role development in healthcare assistants: the impact of education', *Journal of Evaluation in Clinical Practice*. 11(5), pp. 489-498.
- Jordan (1992), 'Why radiography should be undertaken by radiographers', *Radiography Today* 58(660), pp. 27
- Kessler I, Heron P, Dopson S, Magee H, Swain D and Askham J (2010), *The Nature and Consequences of Support Workers in a Hospital Setting*. Final report. NIHR Service Delivery and Organisation programme
- McLean, F, Colthart, I (2008) *Developing the Radiography Assistant Practitioner Role in NHS Scotland: overview of monitoring reports*. Edinburgh: NES
- Miller L (2011), *The role of Assistant Practitioners in the NHS: factors affecting evolution and development of the role*. A Skills for Health Expert Paper. London: Skills for Health
- Miller L, Robinson D, Butler M (in progress), *Rural and Urban issues in delivery of health services in Scotland* (work for Skills for Health, currently in progress)
- NES (2006) *Role Development for Radiographers and Radiography Support Staff within Scotland*. Edinburgh: NES
- NES (2010), *Evaluation of the Radiography Trainee Assistant Practitioner's Programmes*.
- Nickerson C and Crush S (2004), *New ways of working in the NHS Breast Screening Programme. Second report on implementation*. NHS Cancer Screening Programmes
- Nightingale J and Hogg P (2003), 'The gastrointestinal advanced practitioner: an emerging role for the modern radiology service', *Radiography* 9(2), pp. 151-160
- Paterson A (1995), *Role development towards 2000*. College of Radiographers
- Pratt G (2008), 'Implementing the assistant practitioner foundation degrees', *British Journal of Healthcare Assistants*. Vol. 2 no 1

- Price RC and LeMasurier SB (2007), 'Longitudinal Changes in Extended Roles in Radiography: a new perspective', *Radiography*, 13, pp. 18-29
- Price R, Vosper M, Heasman F, Edwards H, Miller L, LeMasurier S, Herbland A, Todd A (2008), *Scope of Radiographic Practice*. Hertfordshire: UH
- Price R and Miller L (2010), *An evaluation of the impact of implementation of consultant practitioners in clinical imaging*. Report to the Society of Radiographers
- Scottish Government (2011) *Diagnostics Collaborative Programme: Delivering Better Patient Care in Diagnostics*. Scottish Government website: Publications. Accessed 11.03.11
- Society and College of Radiographers (2007), *The Scope of Practice of Assistant Practitioners in Clinical Imaging*. College of Radiographers. London
- Society and College of Radiographers (2003), *A Curriculum Framework for Radiography*. College of Radiographers. London.
- The Society of Radiographers (2003), *The Scope of Assistant Practitioners in Clinical Imaging*. Society of Radiographers. London
- Walsh K, Nicholson J, Keough C, Pridham R, Kramer M and Jeffrey J (2003), 'Development of a group model of clinical supervision to meet the needs of a community mental health nursing team', *International Journal of Nursing Practice* 9, pp. 33-39
- White P and McKay J (2002), 'Guidelines and legal requirements, which inform role expansion in radiography', *Radiography* 2002, 8, pp. 71-78
- Williams L and Irvine F (2009), 'How can the clinical supervisor role be facilitated in nursing: a phenomenological exploration', *Journal of Nursing Management*. The Authors Journal Compilation, pp. 1-10
- Winstanley J and White E (2002), Clinical Supervision: models, measures and best practice. *Nurse Researcher* 10 (4), pp. 7-37
- Wivel G, Denton ERE, Eve CB, Inglis JC and Harvey I (2003), 'Can radiographers read screening mammograms?' *Clinical Radiology*, 58, pp. 63-7
- Woodford A (2006), 'An investigation of the impact/potential impact of a four-tier profession on the practice of radiography – A literature review', *Radiography* 12 (4), pp. 318-326

Appendix 1: Initial telephone interviews discussion guide

Initial contact will have been through email, with appointment to speak being subsequently agreed.

Confirm it is still convenient for them to speak. Thank for agreeing to speak to us.

General introduction (recap of information given in email) and explanation of the objectives of the work):

In these first interviews with managers we are aiming to understand how Assistant Practitioners have been deployed in imaging departments and the ways in which managers feel that this has impacted on departmental effectiveness and quality. We'd also like to discuss with you whether you are collecting any data or information the department regarding impact of introduction of the posts that might feed into this evaluation. At the end of the interview I'll give you some further information about how the rest of the evaluation will proceed.

1. First, I'd like to start by asking how many Assistant Practitioners you have in post?

Are all of these from the cohort that qualified in 2009? Have they all remained in post? If no, why is this?

Do you have any cohort 2 APs in training at the moment? (ie, any follow-on cohort)

2. Next I'd like to get an idea of the numbers of other staff you have in your department.

Radiographers at band 5?

Radiographers at band 6?

Radiographers at band 7?

Consultant radiographers?

Radiologists?

Any other staff in your department who work with the imaging team?

3. Have these staff numbers changed at all since you introduced the assistant practitioner grades? (Note for interviewer: this was in 2007, with APs qualifying in 2009)

Radiographers? (check grades)

Advanced practitioners?

Consultant radiographers?

Radiologists?

4. Was this as a direct result of introduction of the AP posts? (get details if yes)
5. Did you plan for any change to other staff numbers at the time at which you were planning to introduce the AP post? (get details if yes)
6. Now I'd like to get an idea of the types of work that the APs are involved in. First, can you describe for me the main areas (eg plain film, ultrasound) in which the APs now work?
7. And can you tell me the main activities or tasks in which the APs are involved? (If not clear from previous answer, follow up with: Do all APs do those activities or just those in certain areas of work?)
8. Who would previously have undertaken that work, before you introduced the APs?

If radiographers would previously have done these posts, follow up with:

Has the balance of activities undertaken by radiographers therefore changed since the AP posts were introduced? How have they changed? Do you consider these to be higher skilled or higher value activities? (Try to get info on what proportion of time has now shifted to higher skill activities)

9. Did you plan these changes in work allocation prior to agreeing introduction of the AP roles?

If yes, get details

If no, ask: Did you plan these changes afterwards, or did they just come about gradually during the time in which the APs were in training?

10. Have these changes in task allocation led to any changes in the way in which your team as a whole works?

Were these changes in team working arrangements planned or have they just arisen as a consequence of the other changes?

11. (If not mentioned in previous answer) Has there been any impact on other staff, such as radiologists?

12. My understanding is that Imaging Departments in Scotland are required to provide monthly data on Demand, Capacity, Activity and Queues (Researcher: this means volume of referrals; numbers of sessions/staff available; actual number of sessions conducted; and waiting lists). Can I check that my understanding is correct?

We are obviously keen to identify and analyse hard data that will enable us to provide real evidence of the benefits of introducing these posts into imaging departments. Would it be possible for you to provide us with copies of the data for your department for the years: 2006 (ie, the year before the training for APs commenced), 2007 – 2008 and for 2009 and 10?

13. Do you think there have been any identifiable changes to the capacity of your department (eg in terms of the numbers of patients you are able to see or the number of imaging events you can undertake per day or week) since the AP posts were introduced?

14. Do you feel there have been any identifiable improvements to service quality in your department since the AP posts were introduced?

If yes, Can you tell me the sorts of quality improvements you've seen? What is the nature of data or evidence you collect on this? If necessary, use prompts: patient complaints, satisfaction, error rates, clinical effectiveness/audits, wait times

15. Do you feel there has been any impact on flexibility within your department since the AP posts were introduced?

If yes, can you describe the differences you've observed? In what ways has your team or department become more flexible?

15. Has there been any change in the overall salary costs for your department since introducing the AP posts? What has been the extent of that change?

Might it be possible for you also to provide me with overall wage costs for your department for the years since 2006? (try to get either before-after costs for wage envelope or percentage change, with either pre- or current wage envelope).

Thank you, that would be very helpful.

16. [Only for any who indicate they do not have data or evidence on capacity/throughput, quality or wage costs, - NB this is unlikely, given the reporting requirements – or on salary, ask if they collect any other information that might be useful as part of the evaluation. Re salary, ask if there is someone else in the hospital – HR or payroll – who might be able to provide that information]
17. Have you had any discussions with your APs about further progression? If yes, what are their views? If no, do you have any plans to encourage further progression?
18. Have there been any other impacts on progression of other staff (band 5 and above) arising from introduction of these posts? (If they ask such as what, say, for example freeing up staff time to take on extended role activities and/or further study)?

Thank you for being so generous with your time today. I've finished my questions, but I'd just like to spend a couple of minutes longer telling you about the rest of the evaluation. In the next few weeks we will be running online surveys for the staff of the participating departments and I wonder if we might be able to ask for your assistance in publicising the survey amongst your staff? What we would like you to do is to forward emails on our behalf – the email will contain the link to the survey site. We will draft these emails for you and would like you to email them on to your staff. There will be one questionnaire for the assistant practitioners themselves, one for their radiographer colleagues and one for clinical staff (that is, radiologists, nurses and any other professional groups who work directly with your team). Would you be happy to do that for us? **NOTE TO RESEARCHER:** note that NES has an expectation that they will co-operate with the evaluation, as a condition of receiving funding. If they are unwilling to cooperate, let LM know. Re timing, it is now unlikely to go out until early November now, perhaps last week in October. For any who are likely to be absent, ask if there is someone who could forward it to staff while they are away.

And lastly, later on in the year (possibly December this year but more likely early 2011) we will be conducting case study visits to six of the sites at which the assistant practitioner posts have been introduced. At present we can't say which ones this will be – but I wonder whether you would be willing, in principle, to host a case study, should we select you as one of the sites we'd like to visit later on?

NOTE TO RESEARCHER: a case study would consist of an IES researcher visiting the department over the space of a day/day and a half and undertaking interviews with their APs, other radiographers, the interviewee and/or the AP's line manager,

and with one or two of the radiologists in the team. We would also be seeking to distribute paper questionnaires to patients at reception, subject to receipt of ethics clearance. Each interview is likely to last between 30 minutes and 45 minutes, arranged to fit in with individuals' availability.

Note any comments about times that might be more favourable for them.

Thank and close.

Appendix 2: Case study discussion guide - Manager

Researcher instructions: Write in details of department here before visit (get from initial interview)

Number of sites they operate over:

How many APs? 1 2 3 4

How many radiographers:

Check supervisory arrangements – supervised by B6/B7 only, or B5?

What areas are their APs working in? Just plain film radiography (or equivalent) or any specialist areas?

Explanation of the project has already been given and they have been involved in arrangements for visit. Therefore there is no need for extended introduction to the work. Main thing at outset is to thank them for arranging the visit and then to recap the reasons for these follow-up visits and what we hope to achieve from the work as a whole:

- We chose the case study sites primarily on the basis that they had identified interesting outcomes from introducing the assistant practitioners or ways in which they have used these posts
- But also, because in some cases they have raised issues around either the deployment of assistant practitioners or identified issues that made it difficult to assess the impact that their introduction had had on the department.
- In the case study components we are trying to get more of an understanding of what it was that made introduction of the AP roles 'work' in their department

or conversely what factors have led to introduction of the role having less impact than you'd expected

Give assurances about anonymity. While we want to use the information they give us, there is no intention to identify anyone. The interview notes will only be seen by the research team. Can we have permission to record? The recording will only be used by the interviewer as a backup in case of any query over notes.

5. I'd like to start by asking you to cast your mind back to when you first heard about the funding that was going to be available to develop the assistant practitioner roles and to provide training. Could you tell me what your first thoughts were about how you might use these roles? Did you have an immediate idea of how such posts might fit in and work within your department or team? What sort of role did you see them fulfilling at that point?
6. Did you discuss the option (of training HCSWs to become APs) with anyone in Finance or at directorate level? What were the main things you considered in that discussion?
7. Were you involved in any discussions at NHS Board level about workforce modernisation or workforce development before or while you were considering introducing the assistant practitioner posts? (if yes, what was the nature of these discussions?)

Have you been involved in any discussions about this since then?
8. Were you required to make a business case to the hospital before you applied for the NES funding? (if yes, what were the main components?)
9. How did you agree the job description for the assistant practitioner roles? Who was involved? Did you discuss this with the local Board?
10. How did you decide how many trainee posts to apply for in the first funding round? What were the main factors that affected your decision?
11. How did you select the people to put forward for the assistant practitioner training? Do you think that any of your HCSWs would **not** be capable of undertaking the training to become an Assistant Practitioners? How did you decide this?
12. Since the APs completed their training and started working at that level, has there been any difference between your initial expectations about the sorts of work that the APs would do and the ways in which they would help within service delivery and the way that things have worked in practice?

13. If yes, how are they actually being used now – what’s the main difference between your original ideas about how you would deploy them and how they are being used around the department now?
14. Has there been any change to the ways in which your team works as a result of their introduction?

Edit the next question in line with original interview notes for each case study site:

15. Originally the APs were viewed as most likely to be employed in

- plain film radiography (within agreed protocols)
- mammography

As part of the original application you were asked to demonstrate that the most appropriate area within which this qualified person would work has been considered. What area or areas did you identify at that point?

Has this changed at all?

16. Do you envisage them moving into and other areas of activity?

If yes, which areas? When is this likely to happen? Will you be providing any additional training to support that extension into new areas?

If no, why is that? Are there any particular barriers? [If there are issues around protocols/ where they are allowed to work/do, where do these issues arise? Do the restrictions originate with the territorial health boards, with NES or with SCoR?]

17. In your application for the funding for training and backfilling the APs you were also asked to give an assurance that an appropriate skill mix would be maintained within the clinical area and that you’d give feedback on skill mix. What did you think were the key aspects of the skill mix you required in order to successfully incorporate the AP into your team? Have your views on the requirements changed since introducing the posts? Have there been any changes in terms of skill mix since the AP qualified?
18. Overall, has their introduction had as much impact as you’d originally expected, about the same, or more than you expected? (If less or more) Why is that?
19. Has anything limited the impact of the APs with in your department, or prevents them having more impact than they currently do? (if interviewee is unsure/seeks guidance re what relevant issues/factors might be, suggest: physical layout/supervision issues; size of department (eg only a few APs in a large department), protocol issues, staff resistance)

20. Any guidance you'd give to other hospitals considering introducing APs – anything you wished you'd known or thought about at the outset?
21. Any other comments you'd like to make on APs?

Appendix 3: Discussion guide for Radiographers

Thank, recap the purpose of the work – for NES, who funded the roles, they are looking for evidence of impact. They may have participated in survey, in which case we thank them for that. Purpose of the case study interviews is to get more qualitative information about how the APs work within the team structure in departments and what helps them be fully utilised and what else might increase impact.

Give assurances about anonymity. While we want to use the information they give us, there is no intention to identify anyone. The interview notes will only be seen by the research team. Can we have permission to record? The recording will only be used by the interviewer as a backup in case of any query over notes.

Band: How long employed as a radiographer:

1. Could you describe your role to me? Do you work in a team, or more or less on your own? Do you work with an AP?

If yes, Is that as part of the team or do you have any responsibilities for supervising the APs?

If yes, what does this involve?

2. Have the APs had any impact on the way in which the team works as a whole? Have they had any impact on the way in which tasks are shared out between the team?
3. Has introduction of the AP posts had any impact on the way in which your own work is organised (or the way in which you organise your own work)?

Has there been any change in the balance of your activities since the APs qualified? Do you tend to spend more time now on certain activities?

(If yes) how did that shift come about?

Have you been able to take advantage of any more professional development activities since the APs were introduced? If yes, can you explain that to me?

(If no examples given above) Can you think of any changes made because of introduction of the AP posts that have led to the service becoming more streamlined or cost-effective?

Did any other changes have to take place in order for this to come about?

4. Are there any other ways in which APs could be used in order to either improve the service that's offered, or to help make service delivery more cost-effective?

Are there any constraints on that happening?

5. Use these questions only if they have not really come up with any comments concerning these issues previously:

Did they have an expectation of how the AP posts would work within the team once introduced?

Did introduction of the AP posts 'work' – have the sort of impact that was expected?

Did they work in the way in which they had expected them to?

Did anything help with introducing/using or deploying the posts?

Did anything constitute a barrier to introducing/using the posts?

What about the future – are there any implications for future skill mix?

6. Any other comments you'd like to make about the impact of introducing the APs?

Thank and close.

Appendix 4: Discussion guide for Assistant Practitioners

Thank, recap the purpose of the work – for NES, who funded the roles, they are looking for evidence of impact. They may have participated in survey, in which case we thank them for that. Purpose of the case study interviews is to get more qualitative information about how the APs work within the team structure in departments and what helps them be fully utilised and what else might increase impact.

Give assurances about anonymity. While we want to use the information they give us, there is no intention to identify anyone. The interview notes will only be seen by the research team. Can we have permission to record? The recording will only be used by the interviewer as a backup in case of any query over notes.

How long employed as a HCSW prior to becoming trainee AP:

1. Could you describe your role to me? What are the main ways it has changed from when you were a support worker?
2. Are you doing the sorts of things you expected to be doing when the opportunity to train as an Assistant Practitioner was first mentioned to you?
3. Are there particular people you work with, or would you say you work more as a member of a team rather than just with certain people?
4. Do you have one person as your direct line manager, or are you supervised by whichever of the radiographers are on duty with you? (Check if it is just people band 6 and above, or band 5s involved as well)
5. Do you feel that the way in which the team works has changed since you qualified as an AP at all? If yes, could you describe those changes to me?
6. How did you feel about the initial training to become an AP? Did it cover broadly the right areas? Was it about the right amount of information?

7. Have you had any further development in the year or so since you qualified? What was that focussed on? Was it provided in-house, or externally? (Get details).

And are you using those additional skills now?

8. Are there any areas of work you would particularly like to move into, or are you happy sticking with the area of work that you're involved in now? (if they ask want an example, suggest ultrasound or some other mode of imaging work). Is there anything that prevents you moving into any different areas of work? (if yes, what is it that prevents you)
9. Do you think you'll stay in the AP role? Have you considered training to become a radiographer? (If yes) Are you likely to do this? If no, is there a particular reason for that?
10. Did anything or anyone help you decide to undertake the training to become an AP?
11. Were there any particular barriers to becoming an AP or to working as an AP once you'd qualified?
12. Can you think of any things that APs could do, or ways in which they could work, that would bring particular benefits for imaging departments. Would anything need to change for that to happen?
13. Thinking about the mentoring you received when you were training, do you think it requires a radiographer to undertake all of the role, or are there some aspects that an AP could do?
14. Is there scope for more APs to be employed, do you think?
15. Are there any other comments you'd like to make about your experiences while in training or since qualifying?

Thank and close

Appendix 5: Receptionist request letter

Dear Receptionist

Patient survey taking place in this department today

We would be very grateful if you could help us while our researcher (Ben Hicks) is on site today. Ben is interviewing staff as part of our programme of work evaluating the impact of introduction of the assistant practitioners on behalf of NHS Education for Scotland. We are also conducting a patient survey as part of the same study. The study has received approval from your hospital.

We would be very grateful if you could help us in distributing the survey. If you are willing to help it will involve giving each patient a copy of the briefing and sign-up sheet as they arrive. This sheet asks the patient if they are willing to participate in the survey. If they are willing to take part they should sign the permission slip and give it back to you and you will then need to give them a copy of the survey. That's all that is involved.

We have provided a labelled box for patients to post their completed surveys in. We'd be grateful if you could place this somewhere prominent on the reception desk. Our researcher, Ben Hicks, will collect the surveys from the box along with the sign-up sheets when he leaves.

Many thanks indeed for your help with this work.

If you have any queries please speak to Ben or phone me on 0207 104 2076

Best wishes

Dr Linda Miller

Senior Research Fellow

Institute for Employment Studies

Appendix 6: Consent forms

Would you help us by completing a short survey?

We are currently looking at the impact of changes that have been made to the staffing in this department. We would therefore like to hear about your recent hospital experience in the Radiology (X-Ray) Department here. The survey asks you about your experiences here today in this department and any previous visits you may have made to this department

It is voluntary

While we would be very grateful for your assistance, you do not have to take part if you do not wish to.

Who will see my answers?

Nobody except the research team will see these questionnaires. Nobody in the hospital will see the completed questionnaires. **You will not be identified at any point in the research** and your answers will not affect your care in any way.

What do I have to do?

If you are happy to take part, please fill out the questionnaire that the receptionist will give you. You should do this after your appointment has ended. You have two choices:

- you can complete it here, after your appointment has finished, and post it in the posting box here in reception (it is labelled 'Survey Postbox')
- alternatively you can complete it at home and then post it back to us for free using the FREEPOST address.

Thank you very much indeed for your assistance with this work

If you are willing to take part please complete the form overleaf and hand it to the receptionist - they will give you a copy of the questionnaire.

I have read the description of the research and am happy to take part in the survey. I understand that this is voluntary and that I do not have to take part if I do not want to.

I understand that I will not be asked to give any details on the questionnaire that will identify me and no-one at the hospital will see my answers. This form is being used to ensure that patients are sure of their rights and my details given here will not be linked to the questionnaire in any way.

Your name:.....

Your signature.....

Date:

Now please hand this to the receptionist. Thank you

Appendix 7: Patient survey

Confidential to the Institute for Employment Studies

Why am I being asked to complete this survey?

We would like to hear about your recent hospital experience in the Radiology (X-Ray) Department at this hospital where you might have had an X-ray or other examination such as an ultrasound scan, magnetic resonance imaging scan (MRI) or computed tomography (CT) scan.

What is this survey about?

This survey asks you about your experiences here today in **this** department and any previous visits you have made to **this** department

Who is carrying out the survey?

The survey is being carried out by researchers at the Institute for Employment Studies and the University of Hertfordshire.

Who will see my answers?

Nobody except the research team will see these questionnaires. Nobody in the hospital will see the completed questionnaires. **You will not be identified at any point in the research** and your answers will not affect your care in any way.

What do I need to do?

Please answer the questions as fully as you are able by placing a tick in a box, circling a number or writing in the spaces provided. There are no right or wrong answers – what is important to us is that we hear your views.

You can either fill in the questionnaire after you have had your examination today, and post it in the box on the reception desk; or you can complete it when you get home and send it to us free of charge by posting it in an envelope to:

FREEPOST RSCH-EZUT-TUYS
Institute for Employment Studies
Sovereign House
Church Street
BRIGHTON
BN1 1UJ

Thank you!

About your hospital visit today

1. What was the reason for your visit today? [tick box options plus other]

My GP sent me for X-ray

I had an appointment to have:

- X-ray MRI scan
- ultrasound scan CT scan
- Other (please write in)
- Don't know

2. Have you ever been to this hospital for an examination in **this department** before?

- Yes ⇒ go to question 3 No ⇒ go to question 7

3. When did you last come into **this department** for an examination (so far as you can remember)?

- Within the past six months Over a year ago
- Within the past year I can't remember

4. When you visited this department **last time**, what did you think about the quality of service you received?

- Excellent Good OK, no real views Poor Bad

5. When you visited this department last time, do you know who carried out your examination?

- An assistant practitioner A radiologist A health care assistant
- A radiographer A nurse I don't remember
- I could not tell who the different staff were Other, please write in

.....

6. Thinking about your experience today, what did you think about the quality of service you received?

- Excellent Good OK, no real views Poor Bad

The information you received today

The NHS believes that patients should be informed about the staff who work with them during a visit. The next questions ask you about whether you were given appropriate information during your visit.

7. Thinking about your visit today, do you know who carried out your X-ray or other treatment/examination? (please tick all that apply)

- An assistant practitioner A healthcare assistant I don't know
- A radiologist I could not tell who the different staff were
- A radiographer Other (please write in)

.....

8. If you were seen by/talked to/examined by a **radiographer** at any stage in your examination, how did you know they were a radiographer?

- I was told by the radiographer
- I was told by the receptionist
- I was told by another member of staff
- I could tell by the name badge
- Other (please write in)
- I saw pictures of the staff on a notice board
- I was told in the appointment letter
- I already knew how to tell the difference
- I can't remember/don't know

.....

9. If you were seen by/talked to/X-rayed by an **assistant practitioner** at any stage in your visit today, how did you know they were an assistant practitioner?

- I was told by the radiographer
- I was told by the receptionist
- I was told by the assistant practitioner
- I was told by another member of staff
- I could tell by the name badge
- I saw pictures of the staff on a notice board
- I was told in the appointment letter
- I already knew how to tell the difference
- I can't remember/don't know
- Other (please write in)

.....

Your care/treatment today

Thinking about the care you received from the various individuals you met today, please answer the following questions.

If you met an **assistant practitioner**, please answer questions 10 and 11

If you met a **radiographer**, please answer question 12

If you met an **assistant practitioner and a radiographer**, please answer questions 10 11 and 12.

10. If you met an **assistant practitioner** today, what did they do? (Please tick all that apply)

- Introduced themselves to you
- Took you from the waiting area to the imaging room
- Introduced you to the radiographer
- Explained what was going to happen
- Took an X-ray of you
- Assisted the radiographer while the radiographer examined you
- Other (please describe)

.....

11. To what extent do you agree or disagree with the following statements about the **assistant practitioner** that you met today:

1 Strongly disagree 2 Disagree 3 Don't know 4 Agree 5 Strongly agree

N/A not applicable

Please circle one number from 1 - 5 for each of the statements below or N/A if the statement is not applicable to you:

The assistant practitioner explained everything very well	1	2	3	4	5
The assistant practitioner answered my questions clearly	1	2	3	4	5
The assistant practitioner treated me with dignity and respect	1	2	3	4	5
I felt able to explain my concerns to the assistant practitioner	1	2	3	4	5

12. To what extent do you agree or disagree with the following statements about the **radiographer** that you met today:

1 Strongly disagree 2 Disagree 3 Don't know 4 Agree 5 Strongly agree

N/A not applicable

Please circle one number from 1 - 5 for each of the statements below or N/A if the statement is not applicable to you:

Thinking about **radiographers**:

The radiographer explained everything very well	1	2	3	4	5
The radiographer answered my questions clearly	1	2	3	4	5
The radiographer treated me with dignity and respect	1	2	3	4	5
I felt able to explain my concerns to the radiographer	1	2	3	4	5

If this is the only time you have been to this department, please go to question 14. If you have visited this department before, please answer question 13.

13. Overall, thinking about the last time you came into this department and your visit today, do you feel that the treatment you received was:

- The same as last time
- Better than last time
- Worse than last time

14. Do you have any other comments you'd like to make about your experiences today?

.....

.....

15. Lastly, just a few questions about you

Are you: Female? Male?

What is your age range? (Please circle)

18 - 25 26 - 35 36 - 45 46 - 55 56 - 65 65 - 74 75+

16. What is your ethnic group?

Choose ONE section from A to E, then tick the appropriate box to indicate your cultural background

A White

- Scottish
- Other British
- Irish
- Any other White background, please write in

B Mixed

- Any Mixed background, please write in

C Asian, Asian Scottish or Asian British

- Indian
- Pakistani
- Bangladeshi
- Chinese
- Any other Asian background, please write in

D Black, Black Scottish or Black British

- Caribbean
- African
- Any other Black background, please write in

E Other ethnic background

- Any other background, please write in

Thank you for completing this questionnaire

Now please either post this questionnaire in the collection box on the reception desk or you can complete it when you get home and send it to us free of charge by posting it in an envelope to:

FREEPOST RSCH-EZUT-TUYS
Institute for Employment Studies
Sovereign House
Church Street
BRIGHTON
BN1 1UJ
