The introduction, deployment and impact of assistant practitioners in diagnostic radiography in Scotland

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Abstract

This article describes the outcomes of an evaluation of the impact of introducing assistant practitioners (AP) roles into imaging departments in 13 of the 14 NHS Boards in Scotland.

Between 2006 and 2009 some 34 individuals were trained as APs in diagnostic radiography with 33 subsequently taking up AP posts. In 2010 NHS Education for Scotland commissioned an evaluation of the impact brought about through introduction of the diagnostic imaging AP role in imaging departments.

The research found that a minority of the managers had considered the workforce implications of introducing the new roles or the supervisory arrangements that would be required. In some sites implementation of the roles had resulted in the release of radiographers for additional training and higher-level activities, but in others financial constraints had limited such initiatives. Managers believed that APs had helped maintain or improve service capacity and quality.

Key words: Assistant practitioner, diagnostic imaging, Career Progression Framework; new ways of working, scope of practice.

Introduction

As part of realising new ways of working, the 4-tier model or Career Progression Framework (CPF) was introduced, with assistant practitioners (APs) at Band 4. The Department of Health (DH) defined an AP as someone who '… performs protocol-limited clinical tasks under the direction and supervision of a state registered practitioner'[1]. Procedures vary with local needs but are confined to standard examinations carried out on ambulant adult patients and conducted in accordance with locally agreed protocols[2]. Introduction of the AP role was designed to free up radiographers' time and allow them to take on some of the tasks traditionally undertaken by radiologists. In addition, it was expected to improve retention of those in support roles by providing a career development pathway [3, 4].

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 APs[5]. In response, the then Scottish Executive Health Department commissioned the Scottish Qualifications Agency 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.

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 AP programmes. From January 2007 some 34 trainee APs undertook the HNC programmes as a two year day release while a further seven undertook the Certificate in Higher Education course. All 41 trainees successfully completed their 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 it was of interest to determine the impact of the investment and the introduction of the AP posts. The first phase of the evaluation included both diagnostic and therapeutic APs and reported exclusively on the completed HNC programmes. 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 facilitate the move into the AP roles, managers in the participating departments felt that it was too early to gauge the impact of the changes 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 APs had been in post for a year and NES 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 APs 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 was agreed with NES. This paper

reports the outcomes of the interviews with imagine department managers undertaken as part of that work.

Procedure

As the work was classified as 'audit' ethical approval was not required. Imaging managers at pilot sites within 13 of the 14 Health Boards were contacted and a telephone interview was requested. All but one – at a hospital where the only AP appointed had left – agreed to be interviewed. Interviews were conducted by telephone, using a discussion guide to direct the conversation. At twelve sites the interviews were with individuals, at two sites two people participated and at another two, three people participated. For the interviews with two and three individuals a speaker phone was used. In total, 18 people took part in the interviews. The data were analysed thematically, with the data and themes being reviewed by two of the researchers to ensure consistency.

Results

A minority of sites had begun by considering the way in which the posts would be incorporated within departments or had planned for the change to workforce numbers and profile. At only one site had introduction of the AP's post followed on from a full review of functioning and staffing levels: they had examined the skills within the department and on that basis re-designed job descriptions and roles and undertaken an organisational change process in line 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 for APs and we now have the AP role embedded but we need to look at training for the advanced practice role for radiographers with a role in ultrasound, barium enemas - that was the rationale behind introduction of the AP's role. It was to provide opportunity to advance the radiographer's role.'

At another the offer of funding for the post had occurred at a time when a CT scanner was being introduced:

'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 the establishment of radiographers by one but the AP was [intended] to relieve another radiographer from within the department so they could work within CT.'

Mostly, though, managers did not report any real planning for how the APs would be incorporated into their current or future workforce plans or how they would be deployed:

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

Once in post, managers found that the extent to which they could deploy APs was limited by the requirements set out in the Society and College of Radiographers scope of

practice. The main restrictions related to APs being unable to authorise ('justify') the initial examination, sign off the images taken, or give information to patients regarding outcomes. Radiographers are required to agree the work, supervise APs and communicate with patients following their procedure. This impacted on the extent to which AP roles provided departments with flexibility. In some departments the supervisory requirements led to additional work for managers in terms of the planning needed to arrange rosters while the supervision requirements had in some cases led to additional pressures on staff.

'It has had an impact. We had to make sure that the AP is supervised by a Band 6 radiographer all the time. Instead of having two Band 5s we have to have a Band 6 and a Band 4. This takes more organising. We have to monitor which members of staff are off so that the correct supervision and support can be given.

The difficulties in rostering staff had largely derived from the requirement of some Health Boards that supervision had to be undertaken by those at Band 6 and above. However, in other Boards managers had found ways to address this issue and this had enabled those sites to use APs more flexibly.

'They are mainly supervised by Band 5s, we allow this when they [the Band 5s] are one year post-qualification. Some Health Boards require it to be a Band 6. But we felt the scope of practice for APs 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.'

Some departments, however, had found the supervisory issues insurmountable and this had restricted their use of the role.

Role extension within the team

In the majority of departments APs had taken on some of the more routine work previously undertaken by radiographers in Band 5 or 6 and occasionally Band 7. At some sites this had allowed radiographers to spend a greater amount of their time on specialist activities or had allowed the release of radiographers to undertake further training in specialist areas:

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.'

At other sites, however, introduction of the APs had had only limited impact:

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

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

There were also differences in the extent to which introduction of APs had enabled departments to release radiographers for further training, with this often being dictated by the economic situation. While some managers had benefitted from the further development they could offer their radiographers once APs were in post, at others the economic downturn had limited the extent to which managers had been able to fund additional training to support skill development and progression opportunities amongst the radiographers:

'The roles that radiographers take on now are higher skilled roles. Since we've had the scanner we've had to get people skilled 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.'

'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'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.'

'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 I feel we do not have the finances to assist with any training.'

Where training was potentially available, the financial challenges limited the freedom managers had to promote any radiographers who took on additional responsibilities:

'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.'

Not all managers had considered the support that radiographers might need to help them adjust to new ways of working. One had found it difficult to persuade longer-term staff 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 because the radiographers have been there for some time so it was hard for them to make the change to working 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.'

Overall, across pilot sites there had been gaps in the planning for deployment of the new posts. There had been limited opportunities to 'reward' radiographers with training for extended imaging roles and little consideration of the need for training in mentorship and supervision for the radiographers who would be involved in supervising APs.

Impact on departmental flexibility

Given the different extents to which introduction of the AP roles had helped release radiographer time for development, it was unsurprising to find differences in the extent to which introduction of APs had enabled increased flexibility in staffing in various departments. While several sites had found that the APs had a large impact on flexibility,

others said that the restricted nature of the tasks undertaken by APs meant that the new roles had brought limited benefits.

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

'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.'

Whilst proportionally, small departments stood to benefit more from introduction of another member of staff, they were also more constrained by the availability of staff for supervision. This was especially the case where supervision was restricted to higher band staff.

Service capacity and quality

Many of the managers had expected introduction of APs to help them achieve increases in service capacity, through two routes. First, where APs had been introduced as posts additional to the original staff complement it was expected that this would increase the numbers of basic examinations that could be undertaken. Secondly, increased capacity could arise through radiographers having time freed up by the APs which could be used for more complex examinations or examinations involving other modalities, thus increasing the numbers of more complex procedures the department could offer.

Managers found it difficult to estimate the extent to which introduction of the posts had actually impacted on capacity, for several reasons. First, few had access to, or collected, data that would help in estimating impact. Therefore, while managers *believed* that the posts had helped increase capacity, they found it difficult to quantify the extent of the impact and benefits brought about by the changes. There was just one example where data was collected that could be used to calculate changes in capacity, but this was due to the particular interest of one staff member who had developed software to track wait times. While this department did have data available on capacity they had not attempted to estimate the impact of introducing AP posts. In common with many other departments, they felt that the main impact had derived largely through release of a radiographer for higher-added-value activities.

To add to the challenge of calculating the impact of AP roles on capacity, introduction of the posts had come at a time when there had been many other changes underway, including efforts to meet the 18 week and 4 hour targets. This made it particularly difficult to gauge what improvements were due to the AP roles and which were attributable to other changes.

In keeping with the challenges in estimating impact on service capacity managers found it difficult to point to specific data that would enable them to make a firm judgement of the impact of APs on quality. Nonetheless, a large proportion of the interviewees believed that APs had helped deliver improvements:

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

There was a suggestion that APs 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.'

There were suggestions that because radiographers had to think about the quality of the images taken by APs and discuss quality issues with them this had led to an increase in 'reflective practice' and an increase in quality within some departments.

'The APs have done very well with the course; their clinical skills are excellent. They have made the radiographers pull their socks up a wee bit. I think, because the radiographers have to assess the AP's films and have a discussion around that. They probably wouldn't have done that before, that has improved their (radiographers') knowledge and skill base because of it.'

While managers' ability to form a firm view on service capacity was constrained by lack of hard data, the most important point to make here is that, across departments, managers believed that service quality had not been compromised by introduction of the lower-band staff. In several cases the APs were believed to have contributed to improvements in quality.

Cost efficiencies and cost-effectiveness

While salary cost containment may not be a major reason for introducing AP posts, nonetheless evidence of cost-efficiencies and salary savings can contribute towards the business case for further roll-out of such roles. It was difficult to gain a clear-cut view in terms of cost efficiencies because of the different staffing models in place. In some departments APs were introduced in part as substitutes for radiographers, in others they were introduced as additional to radiographers. These two models have different cost implications. Additionally, there had been some increase in salary costs due to the APs being upgraded after completing their training; in some cases radiographers had been released to take on higher level responsibilities, which led to promotion to a higher band.

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

Set against such costs, patient throughput had increased. Therefore in some departments where introduction of AP posts had led to an increased staff complement (and increased salary costs) this had nonetheless led to a fall in the average unit cost per examination:

'There have been changes in the grade of staff that undertake the work. When I was making a business case I thought 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.'

The range of staffing models within departments that had taken on APs, combined with the lack of data made it difficult to provide a clear cost-benefit analysis of their impact.

Communicating and managing change

The research revealed that many managers struggled to find ways to utilise APs effectively, with the main concern being the provision of appropriate supervision. Approaches to supervising and mentoring APs varied across different sites, with some supervisors receiving training and others not. While some sites were actively seeking ways to involve APs in a wider range of tasks many felt hindered, often attributing the barriers to the policies of either the local Board or the Society of Radiographers. Some managers noted that while there had been some initial cynicism from their radiographers, most felt that this had disappeared once the APs were in post.

The manager who had done most to reconfigure the way in which their team operated following introduction of the AP posts had had training in workforce planning and experience of workforce modernisation developments. He felt that this had given him an advantage when planning change. He had taken a holistic approach to thinking through the requirements to make introduction of the posts maximally effective. Even here, though, the manager was struggling with further planning, as there was no guarantee of additional funding for the development of staff into advanced practice.

'I sold the developments to radiographers as a supporting project and providing opportunities for staff to progress …..I am struggling with succession planning. We have two people currently in training in musculo-skeletal reporting but there is no indication as to whether there will be posts for them. My view is you have to have people coming through the ranks. We have to communicate to staff that we will support you to train and to find you a job'. In the short term this is something we intend to do but 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 underpin radiographers' responses to such initiatives in the longer term; if they develop additional 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.

Discussion and conclusions

The AP posts had been introduced at a time of great change; this made it difficult to gauge or attribute impact. Although introduction of the APs had allowed staff to be released for training and work in specialist modalities, this had been part of planning at only a minority of sites. While in some cases some reductions in establishment had taken place, these were mainly attributed to the economic situation and were seen as being unrelated to introduction of APs. Some departments had increased in size, prompted mainly by the need to meet Referral to Treatment standards.

Managers were largely positive about the contribution of APs to their departments. Although there were issues at some sites with supervisory arrangements the managers generally were pleased with the new posts and wanted to retain them. The extent to which benefits were realised was determined by the way in which the roles had been deployed, and this depended on supervision, size of the department, their location and extent of managerial planning.

Arrangements for supervision varied across hospitals, with some differences being dictated by different health boards' policies. Some restricted supervision to radiographers in Bands 6 and over while others had decided they could safely delegate this responsibility to radiographers in Band 5, reasoning that if they were deemed capable of supervising student radiographers then they were able to supervise APs. The size and location of department influenced ease of supervision, with difficulties being exacerbated where supervision was restricted to higher band staff and/or across multiple sites.

While some departments found the supervisory requirements led to additional pressures on staff, others had found ways to address the issue and consequently were using their APs more flexibly. A few departments had provided further training for their APs which extended the use made of these posts.

Often it appeared there had been little prior planning regarding the way in which the new posts would be deployed, nor regarding the way in which other team roles might need to change in order to maximise the benefits gained from new posts. Only a minority thought through the issues of task re-allocation and re-profiling the workload of higher level staff, or had actively planned how to ensure that a greater proportion of radiographers' time would be spent engaged in higher added-value activities or training for higher level activities.

Where this had happened, greater value had been seen, as well as more development of the department as a whole. This was seen most strongly where the manager had a background in workforce planning. This served to emphasise the fact that the introduction of new roles cannot in and of itself have much impact other than through supplying 'another pair of hands' unless the work of the team as a whole is 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. Preparation for new supervisory roles may need to be provided ahead of introduction of the new posts.

That is not to say that other managers had not subsequently utilised the additional capacity to train radiographers in extended role activities and in some cases to gain promotion for them. This tended, however, to be more ad-hoc, with such developments evolving as the APs bedded-in and began to free up radiographer capacity. This suggests that experience in workforce planning and developing new ways of working can give managers a more strategic 'take' on developing teams and implementing new roles.

The majority of managers reported that the costs of examinations had reduced. Where re-organisation 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 although most of the managers struggled to quantify the impact of change. Often this was because they did not have appropriate data. Even where data

were available that might provide evidence of impact, often they remained unanalysed. While this may be understandable given today's pressures, nonetheless, the suggestion was that introduction of these posts did enable cost savings and it would be valuable to have stronger grounds for such claims when making the case for future staffing decisions.

There is often criticism of attempts to make the NHS more cost-efficient. Several managers pointed to savings being used for local re-investment in the service rather than contributing to overall cuts, with radiographers being released to train for work in other modalities and/or advanced practice. Some managers had not been able to fund such developments, and it emerged in the later stages of the work that many radiographers were resentful because they had not seen this type of benefit. In most cases lack of funding for training and promotion appeared to have more to do with local economic conditions, specifically the financial position of their hospital, rather than anything to do with introducing APs.

Perceptions of fairness and equity in treatment are key to acceptance of such initiatives, especially where it requires some individuals to take on additional work, such as supervision. Given that radiographers were unable to access training because of financial constraints it is unfortunate that data that could point to departmental cost-savings arising from introduction of APs were not collected and analysed. Evidence of cost efficiencies would be a good basis on which to make an application for further advanced training for radiographers.

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