



The reporting radiographer's role: a contemporary insight

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Abstract

The aims of this study were to determine how the skills of reporting radiographers are being utilised and how reporting radiographers fulfil their mandatory Continuing Professional Development (CPD) commitment. Data were collected via an anonymous postal questionnaire from qualified diagnostic radiographers who were working in the NHS and who had successfully completed a post-registration qualification in radiographic reporting. There was a total return of 81 questionnaires. The majority of reporting radiographers report for at least half a day per week with a small number undertaking this role for the entire week. For most respondents qualifying as a reporting radiographer had a positive effect on their grade however a substantial proportion stated that their grade had not changed. Most of the respondents were audited on a regular basis with peer review being more prevalent than review by radiologist. Reporting radiographers were actively engaged in reported related CPD with study days and activities in journals being more popular and e-learning the least preferred. The ability of reporting radiographers to undertake both reporting and image acquisition roles means they are a versatile workforce that has a positive impact on service delivery. Reporting radiographers are highly motivated to maintain their skills, develop their knowledge base and extend their role.

Introduction

Radiographer reporting is well established in the United Kingdom. In the past fifteen years many radiographers have undertaken post graduate education in radiographic reporting with courses now extending beyond appendicular and axial imaging. This postgraduate education has been expensive both in terms of money and time. The aim of this education has been to increase the number of reporting radiographers and thereby improve the service provided for patients.

Audits between 1985 and 1995¹⁻³ showed that patient images were remaining unreported for extended periods, often beyond the time that a report would have

been useful to decision making. Reporting radiographers were introduced to enable the provision of timely reports. Recent research demonstrates that radiographers make a significant contribution to the reporting of imaging studies⁴ and this has a positive impact on service delivery and patient care, and was perceived by both radiographers and emergency department clinicians as a benefit to patients, emergency department clinicians and the hospital organisation.⁵

There is no evidence of work having been carried out to determine if those radiographers who successfully attended such reporting courses are actually employed in the extended role, and, if they are, for what proportion of their time. There are many research studies

demonstrating the effectiveness and accuracy of radiographers providing written reports on skeletal images,⁶⁻⁸ however, there are no studies which set out to determine the role that reporting radiographers undertake in their departments and if they are being used effectively.

Since the mandating of Continuing Professional Development (CPD) for all professionals registered with the Health and Care Professions Council, radiographers had their initial audit of CPD in Jan 2010. There have been few studies exploring what radiographers do to fulfil their CPD commitment. A study of Ghanaian radiographers⁹ concluded that there was a poor level of awareness of CPD which may have been linked to their limited access to peer reviewed journals and other CPD resources. A study carried out in a single UK radiography department¹⁰ concluded that although radiographers felt that CPD was important, on average they spent less than 4 hours of their own time per month on CPD activities, the author concluded that CPD activities should be free of charge, of short duration and preferably in the lunchtime. Neither of these studies looked specifically at how reporting radiographers undertook CPD. This study will address how reporting radiographers are carrying out CPD, how their skills are maintained and how they are developed with new and changing fields as well as if their CPD activity is related or not to their reporting role.

Aims

The aims of this study were to determine how the skills of reporting radiographers are being utilised and how reporting radiographers fulfil their mandatory Continuing Professional Development (CPD) commitment.

Methods

It was decided that an anonymous postal questionnaire would be able to meet these aims on a national scale. An initial discussion with a small number of reporting radiographers highlighted key concerns and these together with additional questions reflecting the aims of the study were used to compile the questionnaire which comprised both closed and open questions. Ethical approval was obtained from the National Research and Ethics Service (REC ref no. 10/H0701/66). Following a

pilot of the questionnaire by five radiographers no changes were required.

A database of 81 acute NHS trusts in England was compiled following random sampling of a database of acute Trusts (n=175). Applications were made to the research and development committees of the sample sites. Following approval, the Radiology Services Manager in each hospital was sent a letter of invitation and survey packs for their reporting staff containing questionnaires and participant information sheets. They were asked to identify radiographers working in their department who met the inclusion criteria and distribute a survey pack to these staff. Radiographers included in the study were those who had completed a postgraduate course in appendicular and/or axial reporting. Following completion, the survey was placed in a sealed envelope, handed back to the manager and returned to the researchers together with a short form stating how many packs were handed out.

Apart from some demographic data, such as how many years the respondents had been qualified as radiographers and how long they had been qualified to report images, the majority of data comprised open ended questions and descriptive items.

Analysis of the qualitative data was carried out by the two researchers who independently devised themes for the qualitative analysis using open coding, thus minimising researcher bias. As the quantitative data were non-parametric the inferential statistic used to gain information on comparisons of distribution was and on differences between groups was Mann Whitney U.

Results

Some hospitals were unable to provide R&D support and study permission was gained from fifty sites. Fifty survey packs were sent out, a total of 109 questionnaires. There was a 60% response rate from the hospitals (n=30) resulting in a 74% total return of questionnaires (n=81).

The length of time that respondents had been qualified as a radiographer ranged from 4-40 years with a mean duration of 21 years. All respondents held appendicular skeleton reporting qualifications and the mean duration that respondents held these qualifications was 9.3 years with a range of 1-18 years. The length of

time qualified to report axial skeleton images was slightly shorter at 8.6 years again with a range from 1-18 years. Axial reporting qualifications were held by 70.4% of the respondents. Chest reporting qualifications were held by 14.8% of respondents with a mean duration of qualification of 6.7 years with a range from 1-15 years.

Almost all respondents were reporting on appendicular skeletal images at the time of the survey (96.3% $n=78$), and all of those qualified to undertake axial skeletal reporting (70.4% $n=57$) were doing so. Although 12 (14.8%) of the respondents were qualified to report chest images, only 7 (8.6%) were undertaking this role at the time of the survey. Other more specialised roles were also undertaken by a small number of reporting radiographers with 4 reporting on CT heads and 3 on imaging of the lower GI tract.

Restrictions on patient types were placed on 84% ($n=68$) of the respondents with 39 respondents not reporting on images of private patients and 24 not reporting on paediatric examinations. Five respondents also reported a restriction on reporting on images from general practitioner referrals.

The majority of respondents (64.2%, $n=52$) worked in a full-time capacity, working 37.5 hours per week. A further 13.6% ($n=11$) worked for 30 hours per week, equating to 4 days per week.

One third of respondents stated that reporting accounted for 50% or more of their working hours per week. The modal response to this question was 20% which would equate to one day per week if the respondent were working 5 days per week. A small number of respondents, 6.3% ($n=5$) were in the reporting role for 90% or more of their working hours.

Eighty-five percent ($n=69$) of respondents confirmed that they had protected reporting sessions. The average number of protected sessions per week was reported as a mode of 2 with a mean of 3.4 sessions. A majority of respondents (56.8%, $n=46$) stated that they were occasionally switched from their protected reporting sessions to fill other radiographic roles due to staff shortages with a smaller number (11.1%, $n=9$) reporting that this was a regular occurrence.

With the exception of one paediatric radiographer, all respondents who were currently reporting stated that they were performing cold reporting for an emergency department, that is, reporting that

occurs sometime after the patients attendance, with just over half of these also performing hot reporting, immediate reporting whilst the patient is still in attendance, for the same area. In addition to emergency department reporting there was a wide variety of GP and out-patient clinic reporting undertaken by a minority of respondents (GP $n=18$; OP $n=18$).

Respondents were asked to indicate whether they were currently engaged in reporting images and only 2.5% ($n=2$) said that they were not currently reporting, although a further 7.5% ($n=5$) of respondents indicated that they were reporting for less than 10% of their time. When asked if they were currently reporting on images from all areas in which they were qualified, for example, appendicular and axial skeleton, 57.5% ($n=46$) stated that they were using all of their skills, leaving 42.5% ($n=34$) saying that they were not utilising all of their skills. Those respondents who were reporting solely on appendicular skeleton were significantly more likely to state that they were utilising all of their skills (χ^2 ; $p=0.001$).

Respondents were asked whether their reporting role had impacted upon their grading. A positive impact, that is they had been promoted to a higher band, was reported by 65% of respondents ($n=52$), with 23.8% ($n=19$) stating that there had been no impact upon their grade. A small number of respondents (6.3%, $n=5$) stated that there was no promotion for them as they were already on a higher banding before commencing their reporting role. Two respondents (2.5%) stated that they had not had a change of banding but they were given additional pay for their reporting sessions.

Analysis of the data regarding positive impact upon grading revealed that those respondents with a greater percentage of their time spent reporting were significantly more likely to have been promoted (Mann Whitney, $p=0.043$) as were those respondents with a greater number of protected reporting sessions (Mann Whitney, $p=0.017$). A further factor that significantly affected grading was possessing qualifications to report other areas in addition to appendicular skeleton. Those possessing an axial skeletal reporting qualification were significantly more likely to have been promoted (χ^2 , $p=0.03$).

When respondents were questioned about conflicts with staff that they experienced due to their reporting role 38.8% ($n=32$) stated that they had

experienced conflict due to the reporting role. Respondents reported past conflicts that were now resolved as well as those conflicts that were continuing. The conflicts were with a wide range of staff groups. Of the respondents who reported conflicts 74% ($n=23$) stated that these were with radiologists. A further 19% ($n=6$) of respondents reported conflicts with referring doctors and surgeons. Conflicts with other referrers, such as physiotherapists and Emergency Nurse Practitioners (ENP), were reported by 6% ($n=2$) of respondents. One respondent stated that they had experienced conflict with their non-reporting radiographer colleagues. Other respondents spoke of the positive relationships that they experienced with other staff, including some who helped to train ENPs and physiotherapists in image evaluation and those who regularly discussed cases with radiologists and other doctors.

A formal auditing of radiographers work was reported by 76.6% ($n=59$) of respondents. Discrepancy meetings were attended by 9% ($n=7$) of reporting radiographers. Some respondents (7.8%, $n=6$) stated that they were both formally audited and attended discrepancy meetings. In all, this meant that 84.4% ($n=65$) respondents underwent a formal audit at least on an annual basis.

Frequency of audits was variable with the most popular response being annually (52.6%, $n=30$). One third of respondents (33%, $n=19$) stated that they were audited at least 4 times each year with 21% ($n=12$) undergoing monthly audit.

The person responsible for undertaking these formal audits was a reporting radiographer for 55% ($n=39$) of the respondents, with a consultant radiologist auditing the remaining 45% ($n=32$).

The majority of respondents (57.9%, $n=44$) stated that reporting activity made up at least 50% of their CPD activity with 10 respondents (13.2%) claiming 90% or more of their activity as reporting related. Just over a quarter of respondents (26.3%, $n=20$) stated that they split their CPD activity equally between activity which was directly related to reporting and other activity. A further 13.2% ($n=10$) stated that none of their CPD activity linked to reporting activity, although two of these respondents were not currently undertaking any reporting in their professional role and therefore might not be expected to include reporting in their CPD portfolio. Of the remaining 8 respondents who did not include

reporting as part of their CPD activity 5 were being audited on an annual basis, with 3 undertaking audit on an irregular basis.

The most popular strategy to meet development needs was attending study days, with 85.2% ($n=69$) of respondents using these. The next most popular strategy was using CPD activities in professional journals, 69% ($n=56$) of respondents reported this. The strategy that was least popular, although still used by 53% of respondents ($n=43$) was e-learning.

Discussion

Role progression/extension

For many years radiographers and radiologists have undertaken quite separate roles; radiographers acquired images, radiologists interpreted them. The progression of interventional therapeutic techniques in the 1990s led to role extension for radiologists and a subsequent difficulty in meeting the needs of the imaging service in providing timely reports for basic imaging procedures. In response to this situation role extension for radiographers was initiated as a solution for the provision of timely reports. This resulted in a workforce made up of two professional groups both of which now had image reporting as part of their role.¹⁰

The majority (93.7%; $n=76$) of respondents integrated their reporting activities with radiographic roles. For a small minority (6.3%; $n=5$) this role extension has become their entire role.

Historically, concern was expressed that the extended role of reporting would take radiographers from their role in image acquisition adversely affecting service delivery.¹¹ Responses show that reporting on one day per week is the most common pattern for radiographers suggesting that they are involved in image acquisition for the remaining time.

Working hours in Reporting

There is a wide range in the number of hours spent in reporting per week. Involvement in reporting activities was stated by 97.5% ($n=78$) with the majority of them undertaking this role for at least half a day per week. It has been suggested that a half day per week was

the minimum engagement necessary to maintain these skills.¹²

The modal response (18.8%; $n=15$) showed respondents reporting for 20% of their working hours. This equates to one day per week, the remaining hours therefore being available to undertake other radiographic roles.

The results show that the reporting radiographers are an extremely flexible workforce, which can, and do, move seamlessly between their reporting role and other radiographic duties.

Protected Sessions

Where radiographers are reporting, the majority (85%; $n=69$) have protected sessions, the modal value being two per week. This introduces the concept of these radiographers as 'reporters' whose contribution in this role is vital to service delivery. On occasions, radiographers are removed from their reporting role to meet other demands of service delivery reinforcing the versatility of the reporting radiographer.

Use of Skills

Respondents who are only trained in appendicular reporting felt that all of their skills were being utilised. Those respondents who considered they were not using all of the skills in which they had been trained were those who had qualified in reporting skills beyond the appendicular skeleton.

The reasons for this under-utilisation of skills are unclear but may be related to grading and salary and there continues to be controversy about the type of reporting that radiographers should be allowed to undertake.¹³

Radiographers in this study who have extended their reporting skills beyond appendicular skeletal reporting into the axial skeleton state that a higher percentage of their working hours are spent in the reporting role. Those working in that extended reporting role would appear to be at least meeting, if not exceeding, the suggested minimum half a day per week.¹² If radiographers are prevented from utilising their skills then these skills may be lost. The regeneration of lost

reporting skills would have training and cost implications.

Grading

Grading for most respondents was positively affected by the addition of reporting to their work role. The reporting radiographers for whom this was not the case continued to provide this extended service without financial recognition. The addition of a further qualification in reporting, namely axial skeleton was strongly linked to an increase in grading.

Where it is not financially desirable to employ more staff in higher grade bands and/or would negatively affect the departmental structure, then limiting the number of reporting radiographers qualifying in additional reporting roles beyond appendicular could provide a radical solution to a potential staffing overspend.

Conflict

Most of the respondents stated that they were not experiencing conflict in the workplace due to their reporting role, however some reported historical conflicts that had since been resolved. Indeed, some respondents felt that past conflicts that had now been resolved fostered positive relationships with staff.

For those who did experience conflict, most of this was with radiologists. Sadly, this is a continuing theme. This concurs with previous studies which have found that radiologists were the most likely professional group questioned to have negative perceptions of reporting radiographers¹¹ and showed that the lack of support from radiologists was still being experienced by reporting radiographers some years later.¹⁴

A study of all consultant radiologists in Scotland found that 63% expressed concern that radiographers' role development into reporting would impact on specialist registrar training. In addition, 45% were concerned about the dilution of their own skills base.¹⁵ This may explain some of the reported conflict between reporting radiographers and radiologists.

Audit and CPD

For the vast majority of respondents audit was being undertaken regularly, but for a small minority this was somewhat haphazard. Concern about the image reporting skill level was not expressed, however, confirmation of this skill level via audit needs to be regularly undertaken.¹²

Peer review by reporting radiographers at audit was reported more frequently than review by radiologist. This practice has been supported in a study as showing that the review process is a learning experience for both the reviewer and the reviewee.¹⁶

Reporting radiographers are actively engaged in continuing professional development with reporting related activities being prominent for most respondents. Study days and CPD activities in journals are the most popular forms of activity but e-learning was the least popular means of undertaking CPD. This agrees with a previous study where reporting radiographers stated that they did not value e-learning strategies as they lacked the necessary face-to-face contact with experts in the field.¹⁷

Conclusions

Radiographer reporting came about because of the need for timely reports that radiologists were unable to carry out because of their own role extension. The integration of reporting and radiography roles creates a versatile member of the workforce. This positively affects service delivery, contradicting expressed concerns that it may have negative impacts.

Although there is a wide range, the majority of respondents undertake this role for at least half a day a week. The norm is for reporting radiographers to have protected sessions showing that this role has become an integral part of service delivery. When removed from these protected sessions it is to meet other aspects of the service thus reinforcing the versatility of the role. Reporting radiographers qualified in appendicular skeleton were utilising their skills fully however those with further reporting skills often found these to be under-utilised.

Some conflict continues to arise at local levels, mostly with radiologists, although there is evidence of resolution over time. Reporting radiographers are highly

motivated to maintain their skills, develop their knowledge base and extend their role.

Limitations of the study

Difficulty with gaining permission from some sites to undertake the study may have led to data from some of the sample being missed. The overall 74% response rate suggests the data are both reliable and valid.

Recommendations

Radiographers should continue to be supported in their reporting role within their clinical departments thus ensuring further development of this highly versatile section of the workforce. Reporting radiographers showed a preference for attending study days over e-learning methods in order to meet their CPD requirements and this would suggest that support is also required from education providers to enable development and extension of skills and knowledge.

Finally, support and recognition from radiologists, where this is not currently established, would enable the reporting radiography workforce to fully utilise their skills to enhance service delivery and provide a better experience for those who use the service. Discussions at local level are possibly the best method of promoting this enhanced support.

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