

# Implementing Advanced Practice in Diagnostic Radiography: the Scottish Perspective

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## Background

Health care imperatives in Scotland generally align with the rest of the UK in terms of demographic change and the challenges of cost effectiveness, however health and social care policy in Scotland is fully devolved, including control of workforce development and resource allocation<sup>1,2,3</sup>. These vary from the rest of the UK largely through a less commercialised, more traditional environment with a consequent implication for service development<sup>3</sup>. A UK wide perspective cannot therefore provide information of strategic value to stakeholders in the delivery of diagnostic imaging services in Scotland.

There is a dearth of literature specifically focussed on the Scottish situation. Existing material tends to be dated or unpublished, however the clear message is that the implementation of radiographer advanced practice in Scotland lies significantly behind England<sup>4</sup>. Eg, in 2002, Price et al<sup>5</sup> identified comparatively low participation rates in 'the extent and scope of changes to radiography practice'. More recently Price et al<sup>7</sup> and Snaith and Hardy<sup>6</sup> identified lower participation rates in Scotland, indeed Snaith and Hardy identified seven out of twelve Health Boards in Scotland in which radiographers undertook image reporting, compared with ten out of ten English regions.

## Aims and objectives

To scope the nature and implementation of diagnostic radiographer advanced practice throughout Scotland including:

- Establishing a resource to inform policy and strategic planning at local and national level.
- Inform the development of education strategy to underpin the implementation of existing and projected government policies.
- Provide an enhanced understanding of the facilitators and barriers to enabling advanced or extended scope practice.

## Method

A two stage method was adopted:

**1.** Quantitative questionnaires were sent to: strategic radiology service managers in each of the 14 Scottish Health Board areas; lead radiographers within every imaging facility across Scotland, including NHS acute and community hospitals (N= 111), Private hospitals (N= 10) and minor injury units (N= 60). The sample included children's hospitals and sites where specialist imaging is undertaken, eg breast imaging. Data was subject primarily to descriptive analysis, however non-parametric inferential tests were carried out to compare disciplinary or geographical groups.

**2.** A purposive sample of Stage 1 participants (n=8) were invited to take part in a semi structured telephone interview that explored in more detail, responses to the questionnaire. The sample included a geographical spread and a variety of service formats. An additional selection factor was where there was identified an atypical workforce profile or skill mix. Qualitative framework analysis<sup>8,9</sup> was undertaken enabling familiarisation; identification of a thematic framework; indexing; charting; and mapping and interpretation.

Ethical approval was obtained, confirming compliance with data protection and anonymity requirements.

## Discussion

There is evidence of a wide scope of practice across Scotland and this is accompanied by commitment and optimism for future development. The extent of implementation is highly variable where some sites have in place extensive, coherent frameworks, whilst others have limited or no provision. The relative proportion of most activities in the overall spectrum is as might be expected and there are examples of highly specialised work being undertaken independently. It is interesting to note however that almost all roles are in some locations being overseen by radiologists. This seems to question the prospects of tangible service benefit. Finance remains a significant issue in enabling developments, as is professional opposition in some areas, though this should be seen in the context of general positivity expressed by stakeholders. Although implementation of advanced practice in Scotland remains behind that of England, development shows evidence of increasing pace.

Table 1

Area	No.
Audit	159
IV Canulation	152
Supp. Prescribing	1
Research	0
Ug Students	74
Radiog. led IVU	11
Radiog led CT	5
CT Head Reporting	6
Radiog led MRI	0
App. Reporting	15
Ax. Reporting	13
Chest Reporting	1
Paed Reporting	5
Dexa	2
Ba Enema	7
Other	6

## Results

Data were obtained from n=13 Health Board areas which included representation of all types of clinical setting and imaging modalities. The outcomes have been heavily abridged into the following categories:

**Drivers:** Predominantly seen by strategic managers as a route to maintaining or enhancing service quality.

Operational change is encouraged primarily by managers, radiographers and radiologists.

Radiographers are identified as positively engaged with advanced practice options.

**Inhibitors:** Predominantly related to finance and professional demarcation issues, primarily on the part of radiologists.

Finance: Primary difficulties with backfilling of posts during training and the issue of protected pay for some staff members.

**Workforce:** 4 tier career structure is in place in all but two sites, however in all sites there is clear evidence of commitment to extended scope practice in some form.

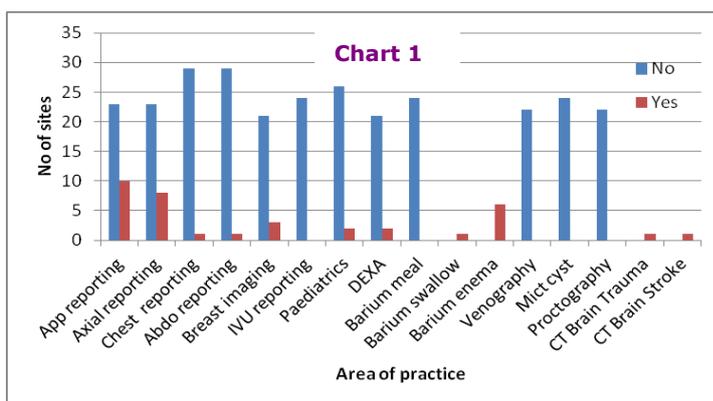
Advanced and consultant practitioners undertake a wide range of practices, predominantly in Ultrasound, trauma, plain film and specialist areas such as breast imaging.

Industrial relations issues had arisen in some areas, but were not experienced as obstructive.

**Service benefit/cost effectiveness:** 52% of strategic manager respondents identified defined service benefits from implementation of the 4 tier career structure.

**Table 1:** Participants in relation to scope of practice

**Chart 1:** Reporting independent of radiologist confirmation



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