



# Radiographer-performed stereotactic needle core biopsy: Making a difference

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## KEYWORDS

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**Abstract** This case study describes a qualitative investigation of the experiences of 14 experienced mammography radiographers who successfully undertook a formal programme of education and training in stereotactic needle core biopsy (SNCB) of the breast. They now routinely perform SNCB within symptomatic and screening breast services in a variety of NHS hospitals across the country.

All 14 radiographers completed a semi-structured postal questionnaire approximately six months after the end of the course.

A tentative theory derived from the data suggests that the professional challenge associated with radiographer-performed SNCB builds personal confidence and effects positive change. Three main categories emerging from the data – challenge, confidence and change are underpinned by two main themes – educational, professional and service drivers that promote the realisation of goals and vision; and personal, peer and external motivation sustained by respect, recognition and reward.

SNCB role extension as explored in this study is having a positive and transformational impact on patient users of breast diagnostic clinical services and on the professional health carers providing them. The key drivers for this as identified in the study are a formal educational experience, professional role extension opportunities and the NHS modernisation process. The participants experienced positive change as individuals and as professional breast cancer multidisciplinary team members. Academic and financial rewards, respect and recognition from colleagues across professional disciplines and from patients, were key motivators that sustained the process.

This study indicates that radiographer-performed SNCB can help deliver the NHS Plan and the NHS Cancer Plan and in doing so has the potential to improve the working lives of health care professionals and ultimately to improve the quality of care for patients.

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## Introduction: the case study approach

This report relates to a qualitative investigation of the experiences of a group of radiographers trained in mammography who learned to perform stereotactic needle core biopsy (SNCB) of the breast. A 'case study' approach is adopted, describing a single educational intervention with 14 participants, and as such we make no claim that our findings are generalisable. However, we believe the observations, analysis and descriptions of the participants' experiences illustrate several general principles that are potentially of interest to the wider breast imaging service and its staff. The value of any case study is its ability to link observation to action – this 'case' is offered in the hope that the insights gained might contribute to favourable change beyond the immediate contextual settings from which they were derived.<sup>1</sup>

## Background: the problem

The NHS Cancer Plan<sup>2</sup> proposed that increasing the number of radiographic views used for prevalence (initial) screening in the NHS Breast Screening Programme and extending the programme to cover a wider age range of women would help achieve further reductions in breast cancer mortality. From the outset, it was recognised that such strategies would require capacity building in diagnostic imaging services. In addition, the multi-professional diagnostic imaging workforce recognised that this would not simply mean 'more people to do more work' but that 'new ways of working' would be needed and that creative and inventive approaches to skills mix would be required.<sup>3</sup>

Establishment of new roles and implementation of innovative models of service delivery have allowed radiographers working in breast services to undertake some imaging and image-guided tasks traditionally performed by their medically qualified colleagues, the radiologists. Many of these initiatives have involved enhancement and expansion of the role of senior, more experienced radiographic staff and have been underpinned by appropriate education and training. The associated published evidence tends to concentrate on clinical outcome measures whereas this report focuses on professional and organisational outcomes.

## Intervention: the solution

Fourteen radiographers experienced in mammography undertook a formal programme of education and training in stereotactic needle core biopsy (SNCB) of the breast. The design and assessment of the course, delivered over 9 months as a 20 credit stand-alone M level module by the University of Bradford, has been described previously.<sup>4</sup> Most participants had no previous formal experience of higher education. After successfully completing the academic award the radiographers returned to a variety of NHS hospitals across the country and now routinely perform SNCB in at least five symptomatic and 10 breast screening centres in 12 different institutions.

In order to evaluate the long term and wider impact of their education and training experience, all 14 radiographers completed a semi-structured postal questionnaire approximately six months after the end of the course. This was considered an

extension of normal curriculum evaluation and thus did not require formal ethical approval; participants were made aware that an analysis of the questionnaire findings would be submitted for publication and were informed that return of the questionnaire implied consent for this.

A modified 'open' style of questioning was used; most questions required a simple 'yes/no' response followed by a free-text explanation (Box 1). The narrative data provided in these responses have been analysed using the coding principles of grounded theory.<sup>5</sup> The themes and categories generated in the analysis have been incorporated into a theoretical framework adapted from Dearnley<sup>6</sup> and are discussed. Original quotations from the participant data are given in italic script.

## Results: making a difference

Radiographer-performed stereotactic needle core biopsy is making a difference. The difference observed after the participants had experienced the training process and incorporated their new skill into routine practice has personal, professional and service dimensions. The tentative theory derived from the data suggests that: the professional challenge associated with radiographer-performed SNCB builds personal confidence and effects positive change.

The three main categories emerging from the data – challenge, confidence and change are underpinned by two main themes – educational, professional and service drivers that promote the realisation of goals and vision; and personal, peer and external motivation sustained by respect, recognition and reward (Fig. 1).

### Drivers for change: achieving goals and realising vision

#### The formal education process

Although radiographers enrolling on the SNCB module '*have worked in breast (services) for (many) years*' they invariably qualified with the Diploma of the College of Radiographers (DCR) and '*hadn't done any further study since*' the SoR Certificate of Competence in Mammography. Since they often had little experience of the current postgraduate education process and some had no '*experience with the use of computers or academic writing*', they found '*to proceed to Master's level ... was very difficult*'.

They felt that '*it was a challenge... to meet the 80% success rate*' required in the performance audit component of clinical assessment and were acutely aware of the '*commitment and effort required to achieve success*' as it was '*not a foregone conclusion that you would pass*'. Although they found '*the academic side of the course a challenge*' achievement of the academic goal gave the radiographers '*confidence in (their) own skills and abilities*'. The formal opportunities to engage with problem-based learning afforded by the academic setting and participating in group activities with colleagues from other hospitals gave the radiographers '*more knowledge and more confidence*' and enabled them to realise changes back in their own departments that involved '*breaking new ground... and looking at best practice*'.

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