# Implementing a mammography quality assurance programme to improve technical image quality and reduce technical repeats

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### PURPOSE

Introduction and purpose: A significant variation in mammography technical repeat rates and image quality, by hospital and by mammographer, was observed during peer review visits undertaken to breast services within our network of hospitals.

### METHODS

An action plan was developed to enable the implementation of the quality assurance programme and included the following;

- appointing a group lead QA mammographer
- establishing a buddy system
- ensuring staff are suitably trained, including holding, or working towards, a postgraduate certificate of competence in mammography, in addition to undertaking relevant breast specific CPD
- regularly feeding back results to staff on the quality of their work, including feedback from radiologists regarding technically inadequate images
- developing and implementing standardised group wide policies, protocols and procedures, including those relating to customer care and communication.
- developing standardised information leaflets and pre mammography questionnaires
- ensuring sufficient time in between appointments to enable mammographers undertake the procedure according to protocol
- of agency staff. Thus enabling each staff member to perform a minimum numbers of mammograms per month
- undertake mammography specific patient experience surveys
- replacement of small plate technology with large plate
- a data collection programme, centrally coordinated, to monitor at group, hospital and mammographer level; - monthly mammography technical repeat rates

- quarterly image quality reviews consisting of 30 annoymised images for each mammographer. These were graded, using agreed criteria, by a review panel comprising of the group lead QA mammographer and two rotating mammographers from within the group. Staff were tasked with completing these actions and progress was monitored at regular intervals.

#### RESULTS

The improvements put in place led to a decrease in the numbers of staff performing mammography across the group, resulting in increased numbers of mammograms performed by each member of staff. Quantative measuring of the success of the quality assurance programme was determined by the monitoring of the technical repeat and image quality rates. The peer review visits showed the technical repeat rate across the group as a whole to be 13% in December 2011. By December 2013, this had decreased to less than 3.5%, with the rate for 2013 overall being 3.6%. Using a Perfect, Good, Moderate and Inadequate system of image quality grading, the perfect and good rate was 60% in the final Quarter of 2011. This result had increased to 88.1% by the final quarter in 2013.

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• ensuring all mammography staff have access to a superintendent radiographer highly experienced in mammography as a mentor, as well as

• reducing the number of staff performing mammography, where necessary, rotating staff throughout multiple hospitals and limiting the use









A breast imaging leads quality forum was established, comprising of lead mammographers from each hospital. The remit of the group was to analyse the peer review findings, share good practice and implement a quality assurance programme to address variations in performance and improve overall results.

### GRAPHS

#### **Technical Quality of Mammography Images Audit** % of Perfect and Good Images



#### **Technical Report Rate** December 2011 to June 2014











## CONCLUSION

The implementation of the quality assurance programme which addresses staffing, training, environment, equipment and working relationships, not only between consultant and mammographer, but mammographer and patient, has led to a reduction in the technical repeat rates and improvement in image quality. Most importantly however, this quality assurance programme has led to an improved service to patients with a reduction in exposure to radiation and an increase in efficiency throughout our hospitals.

Key aspects of the programme which have led to the improvements include; the increased numbers of mammograms performed by each mammographer, which is particularly important in hospitals with low volumes; the quarterly image quality reviews, which have provided a learning environment for mammographers to discuss image quality and identify trends; the continuation of the breast imaging leads meeting, enabling ongoing discussion of mammography issues across our hospitals, with the group increasing its remit to provide training sessions for staff.

The increased awareness of this initiative and the engagement of all staff from mammographer to CEO levels, has been an important factor with the success of the programme and it is now important that this initiative continue so further improvements can be made.

