

Standard Operating Procedures

Image Quality Assurance

Written by:	Julie Broomer, Breast Imaging QA Lead
Approved by:	Breast Directorate, Women's and Children's Governance
Approved by Medicines Safety Committee: <i>Where medicines included in guideline</i>	NA
Date of Approval:	23rd October, 2024
Date of Review: This is the most current document and is to be used until a revised version is available	23rd October, 2027

Aim and scope of Standard Operating Procedure

The purpose of this document is to clarify the Image Quality audit and review processes employed to ensure image quality control comply with NHS BSP guidance, national standards and ultimately improve the quality of service provided by Hereford and Worcester Breast Screening Service. This procedure covers all mammographers and aligns with the principals for preceptorship.

Target Staff Categories

Radiographers
Assistant Practitioners
Associate Mammography Practitioners

Key amendments to this Standard Operating Procedure

Date	Amendment	Approved by:
23 rd October, 2024	Document approved	Women's and Children's Governance Meeting

Scope

This standard operating procedure applies to routine breast screening mammography; the same standard of image quality applies to symptomatic imaging although there are no national standards.

Key areas covered:

1. Reviews undertaken by mammographers:
 - Personal repeat imaging review
 - Personal image review
 - Departmental peer review
 - Departmental repeat image audit
2. Oversight of Image Quality reviews
3. Monitoring repeat rates
4. Image quality concerns
5. Supporting mammographers to improve image quality:
 - Newly qualified mammographers
 - Qualified new starters
 - Mammographers returning from a career break (12 months or more)
 - Experienced mammographers
6. Symptomatic Imaging
7. Ongoing concerns

Detail:

1 Reviews undertaken by mammographers:

It is the professional responsibility of mammographers to monitor the quality of their own work and take appropriate action where necessary.

Mammographers are responsible for maintaining records of their audits and must be prepared to share these records at PDR and in response to any image quality concerns raised. The process of critically reviewing clinical images provides an opportunity for professional development through reflective practice.

1.1 Personal repeat imaging review:

- Admin team produce repeat image reports each month and email mammographers individually with a breakdown of their repeat imaging.
- Each mammographer reviews all their repeat images to identify and address persistent issues with a view to reducing future TC TP rate.
- Mammographers use a template to guide the review, recording comments to evidence reflective practice.

- Mammographers are encouraged to seek advice regarding technique from other members of the team where required.
- Advanced practitioners review images with staff where there is a concern that unnecessary repeats are being undertaken.
- An individual repeat rate exceeding the NHSBSP national standards for 3 months would prompt investigation by the Superintendent Radiographer.
- A high repeat rate may be due to a particularly low number of screening mammograms performed in a given month, in which case rolling totals should be used to gauge performance.

1.2 Personal image review:

- Each mammographer is required to perform and document a detailed image quality assessment of a minimum of 10 sets of their own screening images each month, with a view to identifying technical trends and improving image quality.
- The review is recorded on a spreadsheet based on the national image assessment tool.
- Red, amber and green are used to represent the extent to which each of the criteria are met.
- The review is undertaken on reporting monitors to ensure optimal viewing conditions.
- The process of completing this audit provides an opportunity for professional development through reflective practice.

1.3 Departmental peer review:

- Minimum of 3 mammographers to perform and document a detailed peer review of 20 sets of screening images each month, using image assessment criteria outlined in NHS BSP guidance for breast screening mammographers.
- The purpose of the audit is to involve all mammographers in continual improvement of image quality for the service, the discussions arising from this exercise provide an opportunity for mammographers to reflect on the quality of their own work in the broader context of the service.
- The results are recorded in the shared drive to ensure the audits are completed and that all staff are given the opportunity to participate.
- QA lead monitors participation in the peer review audit to ensure all mammographers are engaging with the process.

1.4 Departmental repeat image review:

- Additional image audits (sets of images where more than one image was acquired for each view: TC, TP and multiple film examinations) are performed periodically, by a group of mammographers including an Advanced Practitioner, Trainer, or QA lead.
- Each set of films is reviewed, with discussions focussing on:
 - the quality of the images
 - the reason for the additional image
 - the necessity of the additional image
 - whether this should be recorded as a TP
- This session provides an opportunity to discuss image quality and technique, particularly how the images might have been improved and if appropriate how a repeat might have been avoided.

2 Oversight of Image Quality reviews

Mammographers take responsibility for performing and maintaining records of their personal audits, evidence of the audits is required at PDR and in response to a performance concern.

The personal image review record evidences engagement with image QA and gives an indication as to how critically the mammographer evaluates images, the value of these audits lies in the process of performing the review. Where concerns have been identified by the mammographer or a film reader, audits would be undertaken with the support of an Advanced Practitioner, Trainer, or QA lead.

The QA lead maintains oversight of departmental peer reviews and departmental repeat image reviews to ensure that all staff are participating in collaborative audits. The purpose of these audits is to provide a valuable opportunity for reflective practice and discussions around adaptation of technique in challenging situations, not to identify concerns with individual mammographers.

3 Monitoring repeat rates

- The Superintendent Radiographer reviews repeat image audit information for the service each month, where an individual's repeat rate is consistently failing to meet national standards, the superintendent will bring this to the attention of the mammographer concerned.
- An Advanced Practitioner reviews the repeat images for that period with the mammographer concerned, with the aim of identifying persistent faults or other issues such as unnecessary repeat imaging.
- All or part of the support framework outlined in section 5 below may be employed if the Advanced Practitioner or mammographer feel it would be of benefit.
- Ongoing concerns are raised to the Superintendent.

QA lead and an Advanced Practitioner complete a review of all repeat imaging each month to look for trends and identify potential equipment issues. The outcome is discussed with the Superintendent Radiographer, Trainers, and the Advanced Practitioners. Learning is shared with the whole team at staff meetings.

4 Image quality concerns

- Advanced Practitioners informally address concerns noticed by the reporting team as and when they arise.
- An Advanced Practitioner reviews the specific images causing concern with the mammographer.
- All or part of the support framework outlined in section 5 below may be employed if the Advanced Practitioner or mammographer feel it would be of benefit.
- Advanced Practitioner team maintain a record of these informal sessions to coordinate their response and identify a recurrent issue.
- Ongoing concerns are raised to the Superintendent.

5 Supporting mammographers to improve image quality.

All mammographers are encouraged to seek support from peers and experienced members of the team whenever they feel it would be of benefit.

The support framework below is intended to provide support to mammographers in the following circumstances:

- Newly qualified mammographers.
- Experienced mammographers joining the service from other units.
- Mammographers returning from a career break (12 months or more).
- Locum and temporary mammographers.

- Experienced members of the team with an identified issue as outlined above where the mammographer or supporting member of the senior team feel all or part of the framework below would be of benefit.

Support framework:

- Undertake a departmental image review with an Advanced Practitioner, Trainer, or QA Lead.
- Undertake a personal image review with an Advanced Practitioner, Trainer, or QA Lead.
- Review a full day of screening films which includes some of the mammographer's images with an Advanced Practitioner, Trainer, or QA Lead.
- Review personal repeat imaging with an Advanced Practitioner for a period of 3 months.
- If the mammographer requests clinical support with technique, this is provided by the training team or QA lead.

6 Symptomatic Imaging

6.1 Symptomatic Image Quality:

Image quality is as crucial in the symptomatic service as in the screening service, concerns noted by the reporting team regarding the quality of mammography would be raised and addressed by the Advanced Practitioner team as in section 4 above.

6.2 Symptomatic Repeat Imaging:

The mammographer uses experience and clinical judgement to determine the imaging necessary to complete a thorough examination whilst maintaining the dose as low as reasonably practicable to comply with IR(ME)R.

- Imaging acquired at the first attendance in addition to the initial views is not formally monitored.
- The Advanced Practitioner team keep a record of all symptomatic patients recalled for repeat imaging.
- An Advanced Practitioner reviews the original and repeat imaging with the mammographer responsible.
- The support framework outlined in section 5 would be employed if the Advanced Practitioner or mammographer feel it would be of use.
- Advanced Practitioner team maintain a record of these informal sessions to coordinate their response and identify a recurrent issue.
- Ongoing concerns are raised to the Superintendent.

7 Ongoing concerns

Ongoing concerns are raised to the Superintendent who would conduct a wellbeing meeting and informal discussion regarding the concerns raised. The Superintendent would then decide how best to proceed, and if appropriate when to employ the WAHT Performance Management Policy.

Reference document links:

- [Guidance for breast screening mammographers - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/544222/guidance-for-breast-screening-mammographers.pdf)
- [NHS Breast screening programme screening standards valid for data collected from 1 April 2021 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/544222/nhs-breast-screening-programme-screening-standards-valid-for-data-collected-from-1-april-2021.pdf)

- Collecting, monitoring and reporting repeat examinations
- Breast screening mammographic image assessment tool.ods (live.com)
- Part two: AHP Preceptorship | Health Education England (hee.nhs.uk)