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Guidance

Implementing remote image reading in the NHS Breast Screening Programme

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Remote reading in the context of the NHS Breast Screening Programme (NHS.BSP) is where one service supports another by reading mammograms for that service. A unit temporarily unable to cope with its reading workload can redistribute it to a service with capacity and which is willing to help. The directors of screening at each service are accountable for leading on the organisation and implementation of remote reading.

The **assisted** service is the unit seeking image reading support from another unit.

The **assisting** service is the unit providing image reading support.

Initial steps for assisted services that require image reporting support

Where services do not have enough resources to read the screening mammograms of their eligible population within the required timeframes, the following actions should be taken:

1. The director of breast screening at the potential assisted service identifies the need for help with image reporting.
2. The assisted service agrees funding with organisational management (which will require a business case to outsource image reading).
3. The assisted service informs the commissioners and the Screening Quality Assurance Service (SQAS) of the reading arrangements.
4. The assisted service identifies another service that has capacity and is able to provide remote reading (the assisting service).
5. The assisted service produces a service level agreement (SLA) for the arrangement between the 2 services.

Initial requirements of assisting services

To be considered suitable to help another screening service which lacks capacity, assisting units need to:

- have enough capacity to stay within key performance indicators (KPIs) (<https://www.gov.uk/government/publications/breast-screening-consolidated-programme-standards>) (particularly screening round length and waiting times to results and assessment targets), while reporting the agreed volume of images within the agreed timeframe
- only consider supporting other services if doing so still means that all image readers at the assisting service continue to report at least the minimum number of mammograms per year
- make sure their image readers report the required number of mammograms (this is the responsibility of both the assisted and assisting services)
- meet all other requirements of NHS.BSP image readers, including:
 - participation in image reading external quality assurance scheme (PERFORMS or equivalent)
 - attending update training
 - multidisciplinary team (MDT) attendance
 - participation in arbitration or consensus process
 - participation in assessment clinics
 - undertaking regular personal audit

- ensure readers do not work beyond an acceptable workload – this should be formally agreed by the assisting unit director of breast screening

IT requirements

The assisted service must inform the national breast screening system (NBSS) provider that a remote instance of NBSS needs to be installed at the assisting unit. This means that reading results is by direct entry into the assisted service server from the assisting service. Only one remote NBSS instance can be installed at the assisting site.

Requests for a remote instance of NBSS should be made using the 'remote access request' available on the Hitachi ASD Portal or by emailing the Hitachi Service Desk.

A remote instance of NBSS requires a wired network connectivity to function. Image sharing techniques do not result in automated visibility of folders. This means image sets have to be copied, pushed or pulled across the networks with some degree of manual input after initial setup.

The exact configuration of this arrangement needs agreement between trust IT systems. The images need to be on the trust picture archiving and communication system (PACS) unless a portal to another PACS was opened. Governance issues mean that identities (IDs) used must not intersect with trust IDs between the assisted and assisting services. This issue should not arise with NHS number or screening numbers as the initial 3-digit acronym makes them unique to each unit.

Inform the lead for IT in each assisted and assisting trust or organisation, the PACS manager and the PACS provider of the arrangements. Work with them to make sure that (ideally) peer-to-peer image sharing without further intervention is established (so acquired images are visible automatically at the assisting service). Other image-sharing methods such as the Image Exchange Portal (IEP) may be adequate. In addition:

- PACS managers at each trust should link in with IT, PACS providers and the NBSS provider
- PACS providers at each unit should test real-time image sharing
- the IT lead for each site should ensure that a virtual private network (VPN) is available and that firewalls are adjusted to permit connection with the remote site

Information governance (IG) permission is usually provided by existing imaging and data agreements between trusts. Nonetheless, it is recommended that the Caldicott Guardian for each trust is informed of the arrangements. The assisted service should advise Hitachi in the remote access request that the IG governance is in place.

Once the system has been set up, make sure it is functional by organising remote testing and viewing images in the assisting service using the remote instance of NBSS (which will be live from the assisted service's server).

We recommend a TORMAM test image is read monthly on all image displays in use within the assisting service to check that images are displayed correctly.

We also recommend that the assisted physics service seeks assurance from the assisting physics service that image displays used at the assisting service meet NHS BSP standards.

For greater precision, readers marking images for assessment should ideally use annotations on the digital images, in addition to the remote reader report (ReRR), to indicate areas of interest. Where this is agreed in the process, IT should ensure that annotations transfer correctly between PACS systems.

Quality management system for remote image reading

Standard operating procedures must be produced to ensure that both the assisted and assisting services know how the process of remote reading works for image readers and administrative staff.

Services must undertake a full risk assessment to identify the main risks and their mitigations. There must be an established method for reporting breaches of protocol, and known escalation routes prior to commencement of any remote reading activity.

Image reading staff

Readers need to read the locally-produced remote reading guidance which includes the protocols for image reading. They must sign off to agree that they have read, understood and will fully comply with the protocols. The protocols should be kept up to date by both services participating in the remote reading practice. Any non-compliance should result in an audit and an incident raised as appropriate.

Administrative staff: forms required and process for remote reading

Administration staff at the assisted and assisting services need to understand the remote reading process and the forms used. These are:

- the remote reader report (ReRR) form (<https://www.gov.uk/government/publications/breast-screening-implementing-remote-image-reading>) (this is completed for all screening cases that are reported as abnormal, or that require clinical recall or technical recall, or previous images to enable reading)
- the clinic outcome sheet (COS) (<https://www.gov.uk/government/publications/breast-screening-implementing-remote-image-reading>) (this provides a summary of the image reading outcome for office use, to compare with the information on NBSS)

Transfer of documents must be done electronically using secure nhs.net pathways, **not** by fax or courier.

Process for remote reading

The office manager at the assisted service approves the right results process they are responsible for. The process for reading images remotely must be to the same standard as locally read batches. The right results policy must include:

- updating clinic sheets, ReRR and COS forms
- methods for reconciling images
- communication channels with readers if required
- pathways for assessment

The assisted service provides client sheet information in a mutually agreed format.

The assisting service prints out blank ReRRs. The COS needs to accompany the batch to ensure the correct number of cases are received, read and returned. This may be achieved by scanning all documents and there must be a process to make sure documents are received and acknowledged by the assisted service.

The office manager identifies batches to be read and agrees this with the director of breast screening.

Appropriate screening programme management staff should set targets for remote reading to make sure images are read within agreed timeframes. These should be outlined in the SLA between services.

The assisted service will need to set up all readers from the assisting service on their local NBSS. This will require readers to have user access with logins and passwords as image readers, and will also require entry of General Medical Council (GMC) or Health and Care Professions Council (HCPC) codes to allow them to report images on the system.

There should be a clear mechanism within the assisted service to identify those batches being read remotely.

Images should only be read using NBSS to report on the individual's images by direct entry, to minimise data entry inconsistencies.

The client information sheet with actionable information must be available to readers prior to reporting.

For previous images, if the current images alone, or images with digital priors, allow a confident opinion to be given, this can be done by the assisting service. It is not necessary to arrange for analogue prior images to be available. Where these would assist interpretation, the reader in an assisting service can indicate this and not offer an opinion. It is then expected that these images are interpreted at the assisted, not the assisting unit. Physical transfer of images would be an unnecessarily complex process. This would need an agreed process at both the assisted and assisting services to make sure batch reconciliation is robust in these circumstances.

There must be agreement by the assisted and assisting service over the method of recall to be used, such as arbitrate if abnormal or recall if abnormal. All administrative staff must be fully aware of this.

Readers should use the ReRR to feed back those cases requiring assessment. There is no need to complete an ReRR for those who are returned to routine screening. Where the first reader conveys information to the second reader, using the ReRR, but the patient is not finally recalled, this should be transferred back to the assisted service as part of the clinical record. The record of any arbitrated cases, whatever the outcome, should also be returned to the assisted service. All reading outcomes from the assisting service should be entered onto NBSS by the readers at that service. Where the decision is taken that the woman requires assessment, clear information should be entered into NBSS to assist the clinical team completing the assessment.

The assisting unit should perform first, second and any arbitrating reads. This allows the assisted office to arrange assessment and to send out normal results letters without delay. All administration staff at the assisted service need to understand the right results process for women whose images are read locally or read by the assisting service.

The assisting unit should have an internal process in place for all paperwork relating to the remote batches, to make sure they remain separate to all local paperwork.

The assisting office should send back all completed ReRRs and COS sheets electronically to the assisted office. The possible outcomes are:

- a. Recall to assessment with reason
- b. Return to routine screening
- c. Request old images (and read at assisted unit, not assisting)
- d. Technical recall with reason

Receiving completed batches

The assisted service administration office must reconcile the clinic outcome sheet and the NBSS responses to ensure all reads have been performed and that all outcomes are appropriately acted upon (the right result process). If inconsistencies or errors are noted, the assisted service administration office is responsible for liaison to troubleshoot these. There should be a clear process for queries to be raised, and the assisting service should respond to all queries in a timely manner. The assisted service administration office should monitor batch reading to ensure batches are read on time and that no batch is left unread.

Ending remote reading

The assisted service notifies their local SQAS and screening commissioner about the total number of clients read, and the reason for stopping outsourcing. They should update them with a plan to stay on target (maintaining round length).

SQAS assists by amalgamating film reading statistics on the Breast Screening Information System (BSIS) so that the reading performance of assisting unit readers can be accurately monitored.

Interval cancers

Feedback of interval cancer cases to the assisting unit is recommended. In the event of any disclosure of audit or duty of candour scenarios arising from interval cancers, it is the responsibility of the assisted service to conduct any necessary consultations with the individuals concerned.

Incidents

Any major incidents should be addressed in the governance structures of both trusts, and reported to SQAS and the screening commissioners in line with screening incident management guidance (<https://www.gov.uk/government/publications/managing-safety-incidents-in-nhs-screening-programmes>).