

## Quality Assurance in Teleradiology

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*Teleradiology assumes a digital process where radiological images and reports are transmitted in a secure way between different institutions. Often these transmissions are done across international borders.*

*It is obvious that such a concept needs a careful workflow with a state of the art PACS equipment, secure transmission protocols, and a legal framework. All those aspects need a quality assurance.*

*But the most important issue is the quality of the reports regarding content and language use. A clinical governance policy needs to be agreed between the Teleradiology Centre and the referring institution.*

### CLINICAL LEADERSHIP & CREDENTIALLING

The Teleradiology Centre and the referring institution appoint a Director who hold overall responsibility for the effective operation of the clinical governance arrangements. Each Director is accountable to the respective Boards of the two organisations for the implementation of these arrangements.

The Teleradiology Centre has convened a Medical Advisory Board (MAB) to provide an external review of the clinical governance procedures in operation. Amongst other responsibilities the MAB screens the appropriateness of all Radiologists before they start working for the Teleradiology centre (including taking up references), conducts regular training for the Radiologists and reviews all complaints and the results of clinical audit.

On an annual basis all radiologists working in the Teleradiology centre are seconded to an Academic Hospital, where their practice is reviewed by a member of the MAB.

All Radiologists working for the Teleradiology centre are fully trained and accredited to work as independent practitioners in the EU. Furthermore all radiologists have the appropriate medical indemnity insurance.

### QUALITY MEASUREMENT & CLINICAL AUDIT

The Teleradiology centre report to the referring institution on their performance on a monthly basis, no later than 10 business days after the month end. The contents of this report include the following:

- Turnaround times by category
- Response times to calls to the clinical helpline
- Patient and referrer feedback – complaints, adverse incidents, commendations
- Discrepancy rates (clinical audit)
- Confirmation that Radiologists have current, valid registration and indemnity arrangements & satisfy IR(ME)R requirements.

Turnaround times are reported against explicit contractual standards for the return of reports. Specifically, the Teleradiology Centre must report compliance with the standards for emergency reports, out of hours requests, routine reports and requests for telephone consultations with reporting Radiologists.

In the first 3 months of any new contract the Teleradiology Centre will undertake a clinical audit of not less than 20% of all reports. A peer Radiologist will carry out this audit. Subject to a satisfactory performance the sample size for subsequent audits will fall to between 5 and 10% of all cases.

The clinical audit will report discrepancy rates according to the following definitions:

	<b>DISCREPANCY DEFINITION</b>	<b>EXAMPLE(S)</b>
<b>1</b>	'Sense' error, word omitted No potential clinical consequences	Sentence not making sense. Over-complex or unclear report without summary
<b>2</b>	Minor interpretive / reporting error Unlikely to have any significant clinical consequence	Omission of incidental abnormal finding e.g. dilated parotid duct on brain study Moderate narrowing reported as mild
<b>3</b>	Moderate interpretive / reporting error with potential for significant clinical consequences	Left/ right side error Report 'Normal IAMs and Brain' – IAMs only imaged
<b>4</b>	Serious interpretive / reporting error High probability of clinical consequences	Report of different patient's examination Omission of gross abnormality ( e.g. large tumour)

The referring institution undertakes to provide benchmarking information regarding the key performance indicators described in this policy to the Teleradiology centre, suitably anonymised, in the interests of comparing its corporate performance with others.

Additionally, members of the MAB carry out random quality checking of Radiologist reports to guarantee acceptable levels of accuracy, completeness and use of language by reporting clinicians.

#### **COMPLAINTS, SIGNIFICANT INCIDENTS AND OTHER FEEDBACK**

The Teleradiology centre will comply with the response times and reporting requirements set out in the referring institution Complaints and Significant Incident Policies in addition to the Quality Reporting procedure outlined above.

All discrepancies categorised as being of Grade 3 or 4 will automatically trigger a Significant Incident report and the Teleradiology Centre, as a matter of urgency will undertake remedial action as appropriate. The appointed Director of the Teleradiology Centre will be responsible for overseeing that all necessary remedial actions emerging from such discrepancies are carried out and reported back to the referring institution in a timely manner. In this way the Teleradiology Centre will ensure that lessons learned from such incidents are

incorporated into the regular practice of the organisation.

The Teleradiology Centre and the referring institution will undertake regular satisfaction reviews of patients, referrers and customers of the service in agreement with all stakeholders. The results of these reviews will be reported as part of the monthly Quality Report in the relevant period that they are carried out.

#### **RECORD KEEPING & INFRASTRUCTURE QUALITY ASSURANCE**

The referring institution with the Teleradiology Centre is fully aware of and compliant with the requirements under the Data Protection Act. Policies relating to these aspects of the service and other relevant security and confidentiality procedures needs to be come from the referring institution in an Operational Policy Manual who is compliant with the local regulations..

For day-to-day control of their PACS system, the Teleradiology centre will use PACS Watch, or equivalent continuous monitoring and system information tool, offering automatic fault detection. The system will reduce PACS system downtime and enhances employee efficiency and system reliability and have the capacity to generate management reports that facilitate trend analysis and threshold monitoring to improve efficiency.