Medicolegal Issues in Teleradiology

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Outline:
Introduction
Goals and prevalence
Workflow & potential pitfalls
Key areas
Examples
Conclusions

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Teleradiology involves the electronic transmission/access of medical imaging and associated information from one location to another for purposes of interpretation and/or delivering medical care.

Goals for teleradiology (ACR):
- Provide access for second opinion
- Provide services where there is a dearth of radiologists
- Provide immediate interpretations (emergency radiology)
- Return images to the provider
- Improve interpretation
67% of practices (78% of radiologists in USA) use teleradiology

Use of teleradiology/PACS increased from 58% to 73%

Teleradiology use:
- Less in academic than private practices
- More in medium (5-14 radiologists) than large groups
- Most frequent site was home (81% in 1999, 75% in 2003)

Ebbert et al, AJR 2007
Medicolegal issues

Understand the workflow of teleradiology
Identify potential pitfalls at each level

Workflow:
• Request for a diagnostic test (appropriateness)
• Performing the test
• Monitoring the imaging/images
• Transferring the data
• Transferring appropriate clinical information
• Data receipt
• Confirmation of complete data
• Image interpretation
• Documentation
• Distribution
Medicolegal issues

Key areas:

• Acceptance of a teleradiologist (credentialing)
• IT infrastructure (data transfer & security)
• Image interpretation equipment
• Interpretation and communication
• Quality assurance
• Reimbursement (third party payers)
To practice in the geographic location
- Country (national board certification & registration)
- State (state medical licensure)
- Institution (credentialing)
- Restrictions based on in and out of location presence

Professional liability insurance
- Single/multistate
- Liability coverage plans

ACR: Teleradiologists should be licensed in the sending and receiving states
Much of this is now standardized (DICOM, compression, routing)

Key areas of concern:

• Data transfer rates and concurrency (especially with increasing data size)
• Fidelity of images (data compression)
• IT infrastructure up times
• Ensuring that all acquired data is transmitted and received
• Ensuring supporting documentation is received
• Access to previous studies
• Data security (HIPAA)
Data fidelity

Interpretation equipment:
- Workstation capacity
- Monitor resolution (especially mammography)
- Image manipulation software

Prior studies

Clinical notes

Access and accessibility between technologist and radiologist (especially USG)

Reporting interface

Report distribution, alerts and critical value reporting
Every teleradiology program should have a good QA program:

- Continued education and re-credentialing of radiologists
- Turn around time (especially in ER)
  - Data transfer concurrency from site to server
  - Data transfer rates from server to radiologist workstation
  - Interpretation time for radiologist
- Accessibility to clinical and previous scan information
- Quality assurance of interpretations and regular feedback

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Third party payers may have special requirements

- Board certification
- Geographic location
- Maintenance of certification

Occasionally such payments made by the employing group
Hospital A decides to hire radiologist X for teleradiology
What are the processes they must go through?

• Basic review of radiologist qualifications
• Credentialing at the hospital
• Secure access to hospital imaging systems
• Secure transmission to teleradiology groups’ telerad software
• Sharing of contact information between radiologist and hospital
Understand the workflow of teleradiology
Identify potential pitfalls at each level

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Errors in patient care leading to bad outcomes:

• Insufficient/inaccurate clinical data leading to inadequate interpretation
• Non availability of clinical notes/priors leading to mis-interpretation
• Rapid turn around environment related errors
  • Omission
  • Mis-intrepretation
  • Voice recognition errors
  • System error
  • Network failure
• Failure to communicate critical findings
Example 4: reimbursement

Group/hospital fails to recognize third party payer rules
Preliminary versus final reads
Teleradiology is an important asset in medicine today.

There are many potential areas for failure, which could lead to poor outcomes and subsequent liability to the health institution and provider as well.

Successful teleradiology models need:

- Stringent credentialing of radiologists
- An efficient and secure IT infrastructure
- Image interpretation software/workstations
- Quality assurance programme
- Clear understanding of reimbursement procedures
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Thank you for your attention!