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Medicolegal Issues in Teleradiology

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Medicolegal Issues in Teleradiology

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Outline:

Introduction

Goals and prevalence

Workflow & potential pitfalls

Key areas

Examples

Conclusions

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OVERVIEW

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

PREVALENCE

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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

Teleradiologist Acceptance

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

Data Transfer and security

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)**

Image interpretation & communication

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

Quality assurance

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**

Reimbursement

Third party payers may have special requirements

- **Board certification**
- **Geographic location**
- **Maintenance of certification**

Occasionally such payments made by the employing group

Example 1: Credentialing

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**

Example 2: IT infrastructure selection

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Example 3: professional liability

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

Summary

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 reimbursemtn procedures**

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Thank you for your attention !