General Radiology

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Objectives:

- Describe current initiatives in general radiology
- Discuss Tech QA button on RW
- Review recent QA project and its future use
- Discuss giving a complete history to improve diagnosis
“What’s Up Dr. Dunn?”
General Radiology

- What it’s not – What it is
- Modality Section Chief
- Communication Center
- What, When, Where – Improving Clinical History
- Tech QA on RW- Improving communication
The Hook – Public Speaking Device

- Radiology – A picture is worth a thousand words

- Please keep your report shorter than that.
What it’s not

• Responsibility for Radiology in general

• Responsibility only for General Radiologists

• Military Relations
What it is

- Modality specific
  - Digital Radiography & CR
  - Fluoroscopy
  - General Radiography
General Radiology

Two Areas of Focus

1) Equipment – Phil Andersen
   Operations Director of Imaging Services

2) Professional Modality Section Chief
   Keith White
   Medical Director of Imaging Services
General Radiology – Equipment

- Work with Modality Team
- Co-chair with Administrative Head
- 5 year purchase plan
- System Equipment Standards
- Recent Example - DR
Communications Center

- Actionable Items – Critical Findings
- Intermountain Enterprise Wide
- Mountain Medical Experience
- Estimate 30 critical per day system wide
- Three tier approach
Failure of radiologic communication: An increasing cause of malpractice litigation and harm to patients

Leonard Berlin, MD, FACP

EDITOR’S CHOICE

Actionable Findings and the Role of IT Support: Report of the ACR Actionable Reporting Work Group

Paul A. Larson, MD\textsuperscript{a}, Lincoln L. Berland, MD\textsuperscript{b}, Brent Griffith, MD\textsuperscript{c}, Charles E. Kahn Jr, MD, MS\textsuperscript{d}, Lawrence A. Liebscher, MD\textsuperscript{e}
**Intermountain Imaging Services**

**COMMUNICATION CENTER BUSINESS CASE**

<table>
<thead>
<tr>
<th><strong>Business Case Name:</strong></th>
<th>Imaging Service Communication Center</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Person Accountable:</strong></td>
<td>Curt Littleford</td>
</tr>
<tr>
<td><strong>Requestor Name(s):</strong></td>
<td>Brent Wallace, Kim Henricksen, Rob Allen</td>
</tr>
<tr>
<td><strong>Requestor Department/Division:</strong></td>
<td>Central Office CMO, CNO, VP Rural &amp; Outreach</td>
</tr>
<tr>
<td><strong>Date of Request:</strong></td>
<td>Aug 2014</td>
</tr>
<tr>
<td><strong>Date Needed:</strong></td>
<td>Q3 2014</td>
</tr>
</tbody>
</table>

**Summary of Proposed Initiative**
Communication Center

Actionable Findings

- Category 1 – Critical Findings
  - Communication within minutes

- Category 2 – Acute Findings
  - Communication within hours

- Category 3 – Findings requiring follow-up
  - Communication within days
Category 1 - Critical Findings

Communication within minutes

- Documentation of communication with referring physician
  - Examples
    - Ectopic pregnancy
    - Intracranial hemorrhage
    - Pulmonary embolus
    - Tension pneumothorax
    - Testicular torsion
    - Spine fracture with potential instability
Category 2-Acute Findings

Communication within hours

- Document communication to provider or staff – report
- Require specific medical or surgical treatment
  - Examples
    - Acute pneumonia
    - Acute appendicitis
    - New diagnosis of suspected malignancy
Category 3 – Follow-up required

*Communication within days*

- Mechanisms to insure patient does not “fall through the cracks”
  - Examples
    - Pulmonary nodule
    - Ovarian Cyst
    - Placenta previa in early pregnancy
    - Incidentaloma
What, When, Where

- Improving Clinical History
- Technologists can make a huge difference
- Help Ensure Quality of Care
Improving the Availability of Clinical History Accompanying Radiographic Examinations in a Large Pediatric Radiology Department

OBJECTIVE. The purpose of this quality improvement initiative was to improve the consistency with which radiologists are provided a complete clinical history when interpreting radiography examinations performed in the outpatient and emergency department settings.

MATERIALS AND METHODS. The clinical history was considered complete if it contained three elements: nature of the symptoms, description of injury or cause for clinical concern, duration of symptoms or time of injury, and local site of pain or tenderness, if applicable. This was reduced to three elements: "when, where, when." A goal was established that 95% of the clinical histories should contain all three elements. To achieve this goal, technologists implemented referring clinicians' history. The project was divided into four phases: launch, support, transition to sustainability, and maintenance. During the support phase, results of automated weekly audits automatically populated group-level performance reports. During the transition to the sustainability phase, audit results populated individual-level performance reports. During the maintenance phase, quarterly audit results were incorporated into technologists' employee performance goals.

RESULTS. Before initiation of the project, 58% (76/131) of radiography examinations were accompanied by a complete clinical history. This increased to 92% (928/1000) by the end of the 15-week improvement phase. Performance was sustained at 96% (1,581/1,625) 7 months later.

CONCLUSION. By clearly defining expectations for an appropriate clinical history and establishing system and organizational mechanisms to facilitate verifiable compliance, we were able to successfully and sustainably improve the consistency with which radiography examinations were accompanied by a complete clinical history.
## Improving Clinical History

### TABLE 1: Examples of Clinical History Evaluations From Weekly Audit

<table>
<thead>
<tr>
<th>Referring Clinician History</th>
<th>Additional History From Technologist</th>
<th>What?</th>
<th>When?</th>
<th>Where?</th>
<th>Complete History?</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Pain”</td>
<td>“Right lower quadrant pain and emesis for 4 days”</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>“Fell from monkey bars”</td>
<td>“Fell from monkey bars 2 weeks ago; pain along lateral wrist”</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>“Cough”</td>
<td>“Cough and fever for 5 days”</td>
<td>Yes</td>
<td>Yes</td>
<td>NA</td>
<td>Yes</td>
</tr>
<tr>
<td>“Football injury”</td>
<td>“Twisted ankle; pain at lateral malleolus”</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No; when did the injury occur?</td>
</tr>
<tr>
<td>“Abdominal pain”</td>
<td>“Abdominal pain and nausea for 3 days”</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No; where is the patient’s pain; is it focal or generalized abdominal pain?</td>
</tr>
<tr>
<td>“Cough and fever for 3 days”</td>
<td>None</td>
<td>Yes</td>
<td>Yes</td>
<td>NA</td>
<td>Yes</td>
</tr>
<tr>
<td>“URI symptoms × 5 days with history of radiography. Noted rales in RLL”</td>
<td>None</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>
Tech QA on RW

Improving communication

- Email sent to technologist unless opted out
- Available for Radiology Supervisors (Heidi Warner)
- Reviewed by QA Managers
Tech QA Project

- October baseline - 119
- November – 3 messages sent
- November total - 180
Tech QA Project

Take Home Messages

• Radiologists
  • Worried message is lost – No feedback

• Technologists
  • Emails do get received
  • Want positive not just negative feedback

• Supervisors
  • Not all are sure how to access, others use it

• QA Managers
  • Becoming educated
What I would like now

- Your input – Suggestions
- Your questions