A Five-Year Study on Critical Results Compliance to The Joint Commission National Patient Safety Goal 02.03.01

(Report Critical Results of Test and Diagnostic Procedures on a Timely Basis)

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**Aim**
To describe efforts over the past five years to improve Critical Results documentation and communication in a large radiology department and comply with The Joint Commission (TJC) National Patient Safety Goal (NPSG) 02.03.01

**Methods**
Each year of the 5-year study, one Critical Result was selected for measurement by the Radiology Safety and Accreditation Committee with approval by the Clinical Practice Committee. Monthly, the quality improvement analyst queried the pertinent exam database tied to the selected Critical Result (e.g., Acute Pulmonary Embolism (PE) – CT Chest w/PE protocol, Acute Deep Vein Thrombosis (DVT) – Extremity Weiss Complete) along with specific report keywords (e.g., acute, positive). The analyst would review each of the cases looking for evidence of a Critical Result.

If a Critical Result was identified, the analyst would then verify that the radiologist:

1. Communicated the result to the ordering provider within 60 minutes from the time of the interpretation
2. Documented the name of the licensed care provider to whom the result was communicated
3. Documented the time of communication

The positive exam information data, patient account number, time of interpretation, time of report finalization, time of communication, name of radiologist and resident) was transferred to an Excel spreadsheet.

Data was charted for:
1. Policy compliance to all three elements (Figure 2)
2. Communication vs documentation (Figure 3)

**Critical Results Listing**

- Leaking abdominal aortic aneurysm
- Acute aortic dissection (measured)
- Acute DVT (measured)
- Ectopic pregnancy
- Massive hemoptoemia on CT or ultrasound
- Significant intracranial hemorrhage
- Pneumothorax (no post-op)
- Pneumothorax, if unsuspected
- Tension pneumothorax
- Acute pulmonary embolism (measured)
- Acute spinal cord compression
- Unstable spine fracture
- Acute bacteraemic/hematogenous
- Significant misplacement of tubes or catheters
- New perforated viscus

**Figure 1: Critical Results include but are not limited to:**

**Figure 2: Overall Success to Critical Results Policy**

- Communicated in less than 60 minutes of recognition, documentation of licensed care provider name and time of communication in final report

- Service pager required on CPOE order
- Promote obtaining personal pager to assist in identification for report

**Figure 3: Difference between communicating critical finding and meeting the criteria for documentation**

**Conclusions**
- A multifaceted approach to improving compliance with TJC NPSG on Critical Results requirements yielded positive, steady improving results over the 5-year course of the study. Data revealed high compliance to timeliness of communication with opportunities for improvement related to documentation elements.
- Improved policy compliance by the radiologists assured timely care for their patients and provided effective documentation for audit and medicolegal purposes.
- Improved report mining tools would be helpful in streamlining Critical Results auditing.

**Improvement Efforts**

1. One Critical Results Policy & Procedure for all Mayo imaging locations
2. Dedicated Institute for Healthcare (IHI) Quality Initiative focused on the barriers to effective communication of Critical Results
   - Establish process for call center to track appropriate provider when initially unsuccessful
   - Service pager required on CPOE order
   - Promote obtaining personal pager to assist in identification for report
3. Direct feedback to those radiologists who were noncompliant
4. Multiple Communication Methods
   - Emails
   - Newsletter articles
   - Presentations at division meetings and resident lectures
   - Presentations to front-line modality-specific safety champions
5. Procedural change to fast-track patients positive for acute DVT to the Thrombophilia Clinic or immediate transfer to the Emergency Department for those patients seen late in the day/after hours.