Preventing Radiology Procedural Patient Safety Events by Improving Universal Protocol Through Implementation of a Standardized Time Out

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Define
Background: Universal Protocol is a quality standard enacted by The Joint Commission in 2004 in an effort to eliminate wrong-site, wrong-procedure, and wrong-patient surgery.

Problem: The Mayo Clinic Department of Radiology procedural practice in Rochester, MN experienced multiple preventable patient safety incidents in recent years attributable to a break-down in Universal Protocol.

Goal: To identify root causes of Universal Protocol related patient safety events and implement a solution to eliminate future events from occurring.

Analyze
- Baseline observational audits revealed variable compliance with elements of Universal Protocol, and relatively poor compliance with the key elements identified in the root cause analysis (Fig 1).
- A fishbone diagram (Fig 2) was utilized to understand the factors preventing teams from performing elements of Universal Protocol.
- The experiences from a small hospital in the Mayo Clinic Health System that performed a similar project were evaluated.

Measure
- A root cause analysis of patient safety events revealed key elements of Universal Protocol that should have prevented our patient safety events, including verification of the original order in the electronic medical record (EMR), and verification of specimen orders and specimen labels.
- 87 baseline observational audits were conducted in 6 different procedural areas within the radiology department to analyze how procedural teams were performing Universal Protocol and to measure compliance with elements of Universal Protocol.

Improve
- A standardized time out was drafted (Fig 3) and a Plan-Do-Study-Act (PDSA) performed to assess for improved compliance with elements of Universal Protocol.
- Each team member involved in the PDSA was surveyed about their experience using the standardized time out.
- The standardized time out resulted in increased compliance with key elements of Universal Protocol (Fig 1).
- 85% of survey participants responded that the standardized time out improved their ability to perform elements of Universal Protocol.
- 90% of survey participants were willing to adopt the standardized time out into daily practice.

Control
- The standardized time out is currently undergoing department wide implementation.
- A control plan includes regular audits to assess for non-compliance with the standardized time out.
- A patient safety event occurrence will trigger a root cause analysis and audit of the time out process.

Conclusion
- A standardized time out resulted in improved compliance with performing key elements of Universal Protocol in our complex radiology procedural practice.
- Implementation of the time out into our practice should reduce patient safety events.