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.

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.

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.

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.

Figure 1. Compliance with Universal Protocol Elements

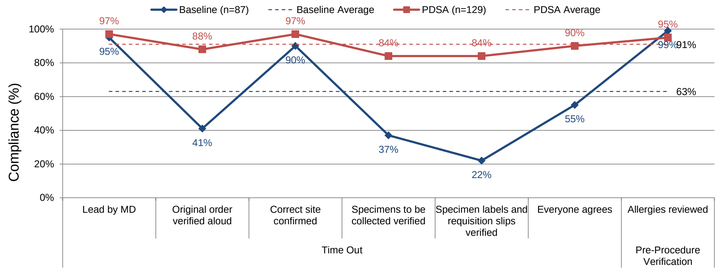

Figure 2. Barriers to Performing Elements of Universal Protocol

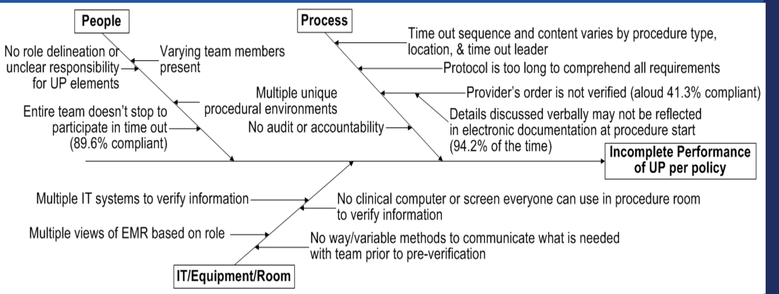

Figure 3. Standardized Time Out

Step #	Role	Step	Details
1	Proceduralist	Announce beginning of time out	"Let's stop and complete the time out." All team members are present and STOP activities to participate in time out.
2	Proceduralist	Verify patient identity	Name, DOB, Clinic # Two patient identifiers confirmed verbally by patient, or if unable, by the procedural team using the patient wrist band.
3	Proceduralist	Verify procedure & site	If able, the patient should be involved in the time out and verify what procedure is going to be performed. If the patient is unable, this can be confirmed by the proceduralist.
4	Proceduralist	Verify original order via EMR	The proceduralist should carefully and completely read or ask someone to read aloud the original order from the EMR and share any modifications made to the original order per ordering provider conversation.
5	Nurse/Assistant	Verify informed consent	Verify informed consent is complete: - Signed by patient, witness signature, dated and timed - Specifies intended procedure
6	Proceduralist & Assistant	Verify tests/specimens, if applicable	Proceduralist and assistant jointly review the tests/specimens ordered, including research. Assistant verifies the requisition form reflects this accurately.
7	Proceduralist & Assistant	Verify labels, if applicable	Assistant reads aloud the label while showing the proceduralist. Review label for correct patient name and specimen source.
8	Nurse	Review relevant allergies	State aloud. If none, state "no relevant allergies."
9	Proceduralist	Does everybody agree?	All team members to respond "yes" or "no."

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.