Targeting the Root Causes of Dissatisfaction with Root Cause Analysis:
A Project to Improve the Process around Patient Safety Events in Radiology

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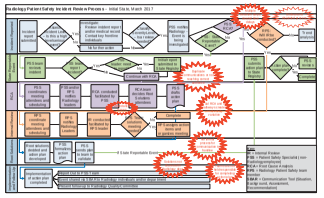
Define

Background: When a serious patient safety event occurs within the Department of Radiology at Mayo Clinic Rochester, a patient safety team facilitates a Root Cause Analysis (RCA) with frontline and work area leaders to learn from the event and improve processes to increase patient safety. An initial process map (Figure 1) illustrated the former workflow and highlighted opportunities for improvement.

Problem: RCA participants and facilitators expressed concerns and overall dissatisfaction with the process.

Figure 1: Initial Process Map



Measure

Baseline satisfaction data were obtained via retrospective survey of 55 participants from 7 events during Quarters 2-4 of 2016. The survey posed the question: "Overall, how would you rate your level of satisfaction with the RCA process?" A 5-point Likert scale was utilized to measure overall satisfaction (1 = very dissatisfied to 5 = very satisfied). Free-text comments were solicited in the survey regarding aspects of the review process and RCA meeting.

Data were subdivided and reviewed by role: participant and facilitator. (Figure 2)

Analyze

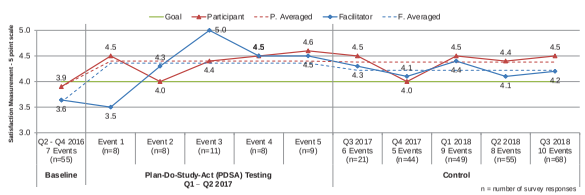
A fishbone diagram was used to stratify free-text comments specific to low satisfaction scores (Figure 3).

The team brainstormed opportunities to reduce waste in the initial RCA process and marked these as bursts (Figure 1).

SMART Goal

Improve the overall satisfaction score of RCA participants from 3.9 to ≥4.0 and RCA facilitators from 3.6 to ≥4.0 by the completion of 5 event reviews.

Figure 2: Satisfaction Levels



Improve

An improved process map was developed (Figure 4) to outline a more concise, efficient process.

Several Plan-Do-Study-Act (PDSA) cycles were completed (Table 1) to target root causes of dissatisfaction, reduce waste, and define standard work.

Results

Goal met: Average satisfaction scores for participants and facilitators were 4.4, above the goal, by the 5th event review.

Figure 3: Root Cause Analysis

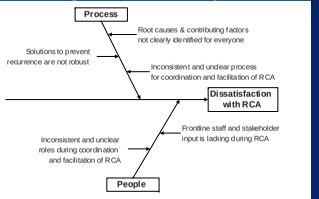
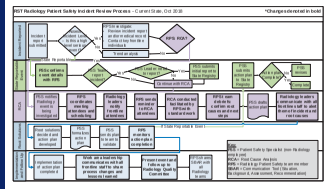


Table 1: Implemented PDSA Cycles

PDSA Cycle	Tested Solution	Tested During Events
1	Decision-making process to initiate an RCA simplified	1, 2, 3, 4, 5
2	RCA meeting coordinated and scheduled by Radiology, not institutional personnel	2, 3, 4, 5
3	Communication about event and RCA meeting standardized	2, 3, 4, 5
4	RCA meeting led by Radiologist with standardized agenda	3, 4, 5
5	Root causes visually documented and explicitly reviewed during RCA meeting	3, 4, 5
6	RCA meetings shortened from 60 to 45 minutes due to standard agenda	4, 5
7	Standardized Action Item Planner created for follow up from RCA	5

Figure 4: Improved Process Map



Control

RCA Satisfaction Scores: The team continues to monitor average satisfaction scores and comments from surveys after each RCA. A reaction plan to initiate root cause analysis and improvement of the process has been outlined should quarterly average scores fall below the goal.

Standard Work: The team reviews and updates the standard work created during this project quarterly.

Lessons Learned

The former RCA process was unique to each patient safety team member, and outcomes like turn-around time, event notifications, and facilitation methods at the RCA meetings varied greatly.

This project created standard work that is consistent, transparent, and efficient, which satisfies our customers, the clinical teams involved in events.

At the RCA, all stakeholders should be involved to define problems and identify root causes. Engagement of stakeholders should continue when creating and testing interventions to determine solutions.