Improving First Case On-Time Starts in Interventional Radiology: The Role of Multidisciplinary Quality Improvement in Optimizing

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BACKGROUND

Strong Memorial Hospital is the flagship hospital for University of Rochester.

- Academic teaching hospital
- Level 1 trauma center
- Largest comprehensive transplant center in Upstate NY.
- 890 beds, >39,000 admissions annually.

Problem: The first case start time (FCST) is a key determinant of daily operational efficiency. Delays FCST create cascading and compounding impacts on productivity.

Starting point: March 2025, only 42% of first cases started within 15min of scheduled time

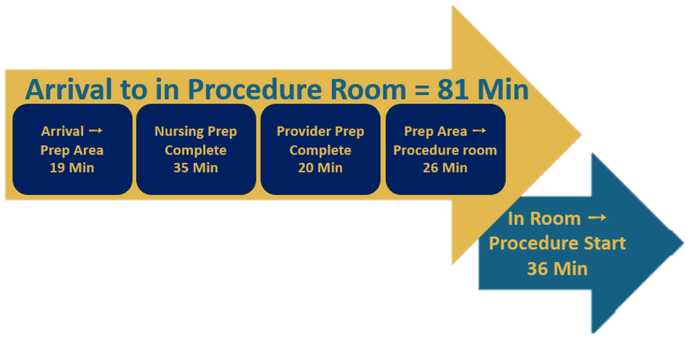
OBJECTIVE

Improve FCST from 42% to 75% in 6 months through multidisciplinary process improvement

METHODS

Evidence based A3 performance improvement methodology to guide multidisciplinary thinking, from problem definition to root cause analysis, countermeasures, and sustained improvement, using iterative PDSA (Plan-Do-Study-Act) cycles.

CURRENT STATE ANALYSIS



PROJECT TIMELINE

Phase 1 — BASELINE *Mar – Apr 2025*
Manual data collection across 8 procedure rooms. Multiple time points recorded from patient arrival through procedure completion timestamps.

Phase 2 — AWARENESS *May – Jun 2025*
Project launch and staff engagement. Increased team awareness of FCST performance metrics.

Phase 3 — INTERVENTIONS *Jul – Sep 2025*
Root causes identified via A3 fishbone. Key drivers established. PDSA interventions tested and implemented.

KEY DRIVERS

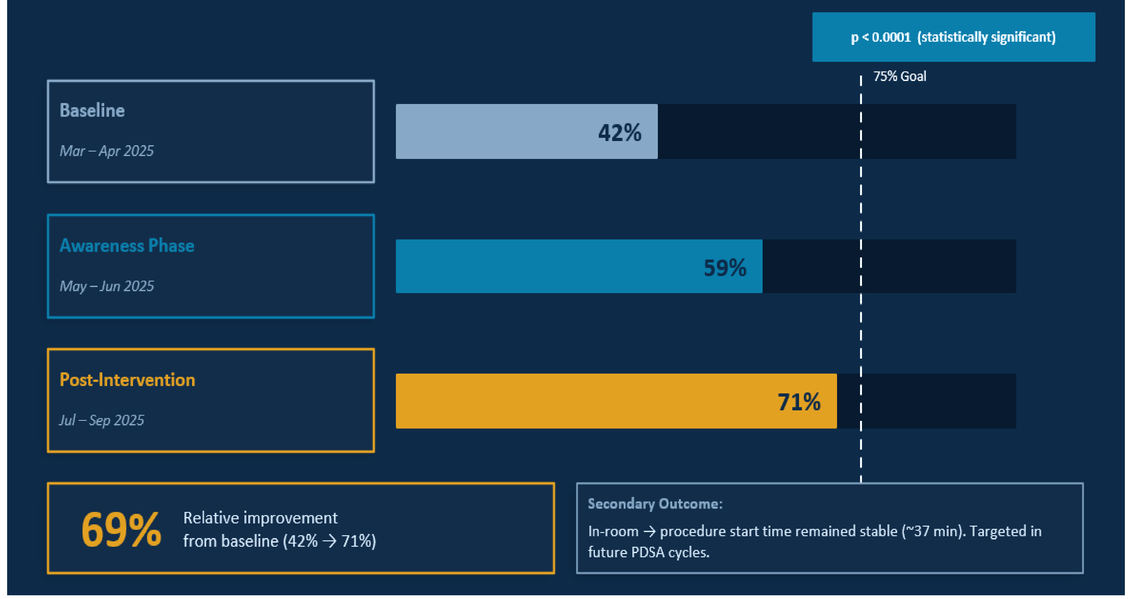
01 **Communication Gaps**
- EMR status board utilization inconsistent
- Geographically separated prep & procedural area

02 **Outpatient Prep Variability**
- Inconsistent prep order placement
- Location within facility far & difficult to find

03 **Workflow & Process Gaps**
- Long A.M. sing-out delays consent process
- Unclear provider room assignments

04 **Data Transparency**
- EMR dashboard inaccurate
- Ontime performance not reliably shared

RESULTS



Interventions

Restructured A.M. Huddle
- Morning hand-off was delayed 15min
- Outpatient consents obtained before huddle so patients could be moved into procedural rooms as soon as nursing completed their work-up.
- Provider room assignments communicated immediately to all staff & assigned within EMR.

Revised Prep Instructions
- Patient arrival times were moved up 15min to account for departmental distance from parking garage
- Nursing schedule adjustments made to reflect arrival time changes

Pre-Procedure Checklist
- EMR optimization was not achievable in our timeframe
- Reverted to a standardized paper checklist
- Specific attention was given to confirming initial “hard stop” information (NPO Status, Anticoagulation holds, adequate labs & driver information) & completion of H & P and MD Assess.

Data Transparency:
- Weekly Kanban board to display on-time start data transparently
- Regularly scheduled team meetings to drive accountability and identify ongoing barriers.

CONCLUSION

A structured, multidisciplinary performance improvement initiative using A3 methodology significantly improved first case on-time starts in our IR division