

The Collaborative Approach to Improving Inpatient Flow to the Operating Room

Nina Scharpp BSN, RN, CNOR & Jennifer Reebel ADN, RN, CNOR
Seattle Children's Hospital Perioperative Microsystems Team

Introduction

Inpatient flow to the Operating Room (OR) has long been a focus for improvement.

- Inconsistencies in communication, handoffs, timing, ownership and process initiation contribute to surgical case delays
- Inefficiencies disrupt patient flow, negatively impact team dynamics and the patient experience within Perioperative Services (PS)
- Lack of inpatient readiness also contributes to OR delays and decreased throughput

The Seattle Children's Perioperative Microsystem team is a multidisciplinary, frontline quality improvement team that strives to improve patient outcomes and operational efficiency. This team sought to identify, understand, and improve the drivers of OR efficiency.

Purpose/Aim

Purpose: Improve efficiency in the perioperative process for inpatients having non-emergent surgery.

Smart Aim: Decrease OR delays by **10%** by end of Q4 FY24 for inpatient, non-emergent, non-ICU surgical cases.

Defined as the time between when the OR team signal "Call for patient" to the "Preop tasks complete" marked by perianesthesia nurses in the EHR.

Methods

- Process mapping and current state analysis utilizing voices from inpatient nurses, perioperative staff, providers, and a family advisor
- Key Driver Diagram (KDD) and PDSA-cycle methodology was adopted
- Electronic Health Record (EHR) utilized as a tool for data points and team communication

Outcomes

Outcome Metric: *Call For Patient (OR)* → *Preop Tasks Complete (Preop)* achieved **11.3% improvement** (53 minutes → 47 minutes)

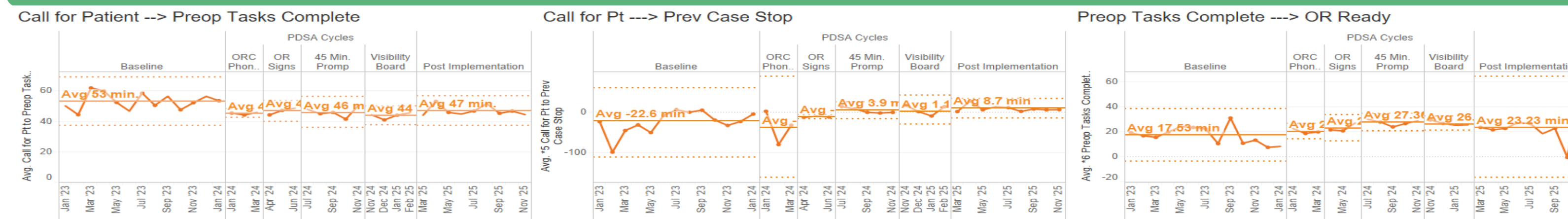
Process Measures: *Call For Patient* → *Patient Sent For* achieved **10.4% improvement** (24 minutes → 21.5 minutes)

Patient Sent For → *In Preop or In Induction Room* achieved **6% improvement** (19.4 minutes → 18.2 minutes)

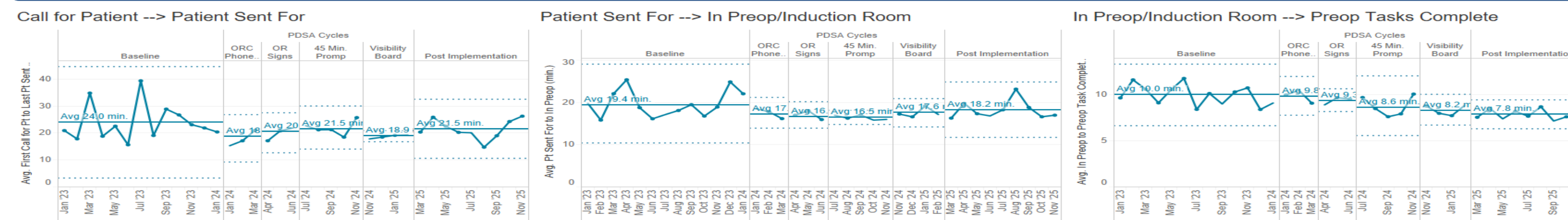
In Preop or Induction Room → *Preop Tasks Complete* achieved **22% improvement** (10 minutes → 7.8 minutes)

Balancing Measure: *Preop Task Complete* → *Anesthesia Start or In OR* (44 minutes → 47 minutes) *more time for preop readiness*

Outcome Measures



Process Measures



Interventions

January 2024

Communication to Inpatient RN:

Operating Room Coordinator (ORC) and night shift Parianesthesia RN call/EHR secure chat with standard script to notify time of surgery and pre-op tasks to complete

April 2024

OR RN to Preop RN Communication:

Standardized and posted the designated contact area and phone number for OR RNs to reach Preop RN when ready to send for an inpatient

April-November 2024

Staff Education:

Disseminated emails and presentations for all of periop and OR staff
Provided in-services for Acute Care RNs:
"Preparing your Patient for their Surgery/Procedure"

October 2024

Preop to OR Communication:

Statusboard signal (SB): "Call for next Inpatient"
Color change on EHR SB 60 min before current surgery stop prompts preop RN to call OR RN to confirm readiness "to call" for next inpatient

Conclusions

- **Outcome measure exceeded goal of decrease in OR delays**
- Improving timeliness of inpatient transfers to surgery can be achieved
- Standardized processes improve consistency and efficiency
- Enhanced communication and standardized workflows are key
- Staff education, input and adherence to standards is vital for long-term sustainability
- Leveraging multidisciplinary teams familiar with the workflow is key to identifying areas for improvement
- Collaboration with inpatient teams is crucial for success
- Balancing measures demonstrated better efficiency with minimal impact on preop wait times

Next Steps

- Expand and apply learnings to procedural areas (GI, IR, Cath Lab)
- Monitor equity data to assess impact on language, race, and ethnic groups
- Hand off quality assurance phase to Perioperative managers and nursing shared governance
- Focus on balancing measures (*Preop tasks complete* → *Patient in OR*) for further improvement work
- Further analysis of post-implementation metric inconsistencies is needed. Contributing factors include: new Preop processes (eConsents, induction room use for 6 ORs), afternoon staffing shortages from Preop RN schedule changes, and unreliable inpatient messaging following ORC turnover.

Implications for Nursing

- Nurses' expertise and in-depth understanding of preoperative readiness is essential in facilitating a smooth transition to the operating room.
- Collaboration between inpatient and perioperative nurses ensures patient readiness is optimized, leading to a streamlined perioperative experience and overall improved surgical outcomes for patients.
- Integrating the insights and specialized knowledge of nurses in improvement initiatives is vital to the success efforts aimed at enhancing OR efficiency.

Acknowledgements

- **Seattle Children's Hospital Perioperative Microsystems Team:**
Evelyn Hwang, ARNP-CS, Pam Christiansen, ARNP-CS, Amber Franz, MD, MEng, Liz Martin, MD, Elena Raney, RN, Lauren Burnett, RN, Pearl Bautista, RN, Susanne Yandow, MD, Rosemary Walkup, Parent Representative, Mandy Breed, ARNP, Paul Merguerian, MD, Colin Crook, ARNP-CS, QI Advisor
- Colin Bowles, MHA, RN, CEMP, Director of Mission Control