The Impact of a Multidisciplinary Quality Transformation Team on Patient Safety and Quality Outcomes

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Background

The Texas Children's Cancer and Hematology Centers' (TXCH) Quality Transformation Team facilitates the delivery of safe, high-quality, and cost-effective care in a large academic pediatric hospital. Using the API Model for Improvement (Figure 1.) and organizational Error Prevention (patient safety) Training methodologies, the multi-disciplinary team collaborates to enhance the overall health and well-being of pediatric Hematology and Oncology (HemOnc), and Bone Marrow Transplant (BMT) patients and families. The group meets monthly to discuss quality improvement and patient safety initiatives, and has implemented processes that have positively impacted patient and family outcomes and operational efficiency.

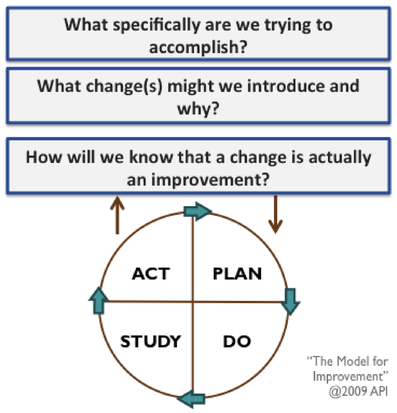

Figure 1. Model for Improvement

Team Goal

The goal of the TXCH Quality Transformation Team is to support the organizational mission of supporting excellence in patient care, education and research at the local, national, and international levels through the use of Improvement Science, Evidence-Based Practice (EBP) guidelines, and the Institute of Medicine (IOM) quality domains.

Methods and Results

The team identified five projects. Due to space limitations, only two are presented here.

Post-Anesthesia Care Unit (PACU) Delayed First Case Project

- GOAL - decrease delays in first case start time by 25% by September 30, 2014.
  - Start time - time patient entered room to begin procedure
  - Delay - greater than 10 minutes from scheduled start time (10:00 a.m. Monday-Friday, except Thursday 12:00 p.m.)
- Baseline data - 77.9% delayed first case
- Ishikawa (fishbone) diagram (Figure 2) used to analyze and attribute delays.

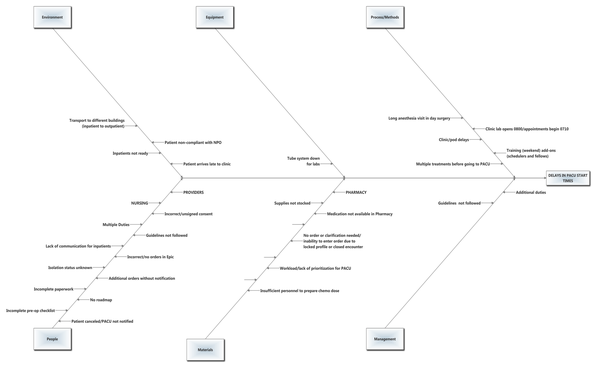

Figure 2. Ishikawa (Fishbone) Diagram

- Two interventions – inpatients scheduled for first procedure (PDSA 1) and lab hours rescheduled (PDSA 2) (Figure 3)
- Daily data collection and bi-weekly analysis
- Multi-factorial processes that impacted on-time starts further examined.

Three-month results showed a 7% decrease in first case delays.

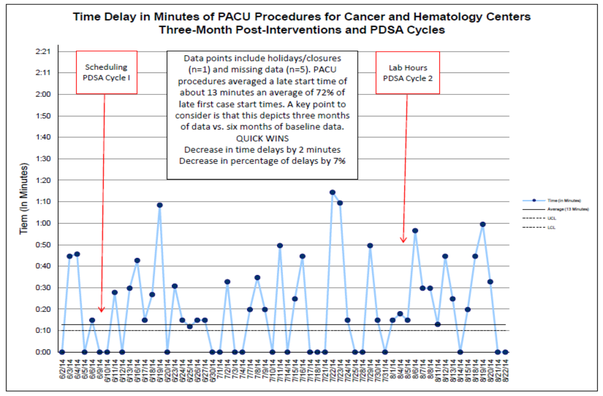

Figure 3. PDSA Interventions and Outcomes

Mislabeled/Unlabeled Laboratory Specimens

- GOAL - decrease number of mis/unlabeled specimens in the HemOnc clinic by 50% by May 31, 2015.
  - New/float staff in clinic unaware of process
  - Mis/unlabeled specimens require more time
  - Staffing changes in lab affected processing
- Baseline data – Q1FY15 (n=3), early Q2FY15 (n=5)
- Meetings with lab/clinic leadership to identify root cause and corrective plan of action
- Implemented Look Once, Look Again (LOLA) process
  - Double nurse signature for all specimens
  - Staff re-education and positive reinforcement
  - Revised accountability structure
- Weekly data collection and analysis and progress announcement to staff during daily huddles (Figure 5)

Goal surpassed one month ahead of schedule and unit maintained zero prevalence of mis/unlabeled specimens for three additional months.

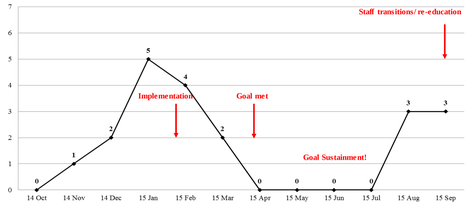

Figure 4. Mislabeled Specimens (Post-Intervention)

Discussion

All team members are well versed in quality improvement methodologies, to include Lean/Six Sigma and organizational Advanced Quality Improvement (AQI) training. Staff also completed Error Prevention Training, a program that emphasizes effective communication of patient safety concerns that require action, support of a questioning attitude, and effective use of three-way communication.

The multidisciplinary PACU team continues to meet monthly to assess progress of interventions. While the team did not accomplish the expected gain, they have continued to assess operational workflow, and patient and staff satisfaction to improve start times. The work from this project has considered a dedicated PACU nurse to aid in enhancing quality and patient outcomes.

Staff transitions in the HemOnc clinic demonstrated an increased prevalence of mis/unlabeled specimens. Staff was re-educated on the LOLA process, which is now standardized across the service line. It is also incorporated into new employee orientation and competency validations.

Implications for Future Practice

The Quality Transformation Team is committed to quality improvement and patient safety in the TXCH. Additional projects, such as CLABSI line education, chemotherapy safety, and medication reconciliation have also positively impacted the service line. We are excited about our work and its impact to our patients, families and staff.

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