From a bird’s eye view: Prioritizing quality improvement initiatives for patient safety

**INTRODUCTION**

With an abundance of data and targets within health care, competing pressures at acute sites have made it difficult to determine where to focus and prioritize the work required to meet Fraser Health’s Patient Safety Priority (PSPs) targets and other patient level targets. Using Lean Six Sigma’s Define-Measure-Analyze-Improve-Control (DMAIC) framework, this quality improvement project supported by Fraser Health’s Process Improvement Team aimed to prioritize improvement work and focus on a few select areas to increase the likelihood that work at acute sites in the Fraser Region area are rigorous, impactful, and sustainable.

**FH PROCESS IMPROVEMENT**

FH’s Process Improvement team (East zone) is composed of a Consultant and Coordinator that have specialized training in utilizing Lean Six Sigma methodology. They support sites with using the DMAIC framework to plan and implement process improvement projects in Abbotsford, Mission, Chilliwack, and Hope.

**LEAN SIX SIGMA**

DMAIC Project Framework

- **DEFINE**
  - Project Charter
  - Customer Needs & Requirements
  - Map the Process
- **MEASURE**
  - Identify Indicators
  - Plan Data Collection
  - Baseline Measurement
- **ANALYZE**
  - Potential Root Causes
  - Narrow Root Causes
  - Critical Root Causes
- **IMPROVE**
  - Generate Solutions
  - Select Solutions
  - Implement Solutions
- **CONTROL**
  - Monitor & Sustain/Plan
  - Response Plan
  - Continual Improvement Plan

**DEFINE**

- We created a project charter outlining the business case, problem statement, team members, goals, and milestone timeline.
- Customers voiced their needs and requirements. Customers shared how they wanted to be able to prioritize where to focus resources and efforts to increase the likelihood that site quality improvement initiatives would be rigorous and impactful.
- We developed a high level map of the current process that sites used for applying structure to quality improvement initiatives, which revealed a number of defects and areas for opportunity.

**MEASURE**

- We identified available data sources related to Patient Safety Learning System (PSLS) events, infection control, and PSPs (Hospital-acquired pneumonia, hospital-acquired urinary tract infections, delirium, sepsis, MRSA, and 10-hour rule).
- Some reports included were:
  - Average & Expected Length of Stay
  - PSLS Severe Harm & Near Miss
  - Occupancy Reports
  - Acute Dashboard
  - Patient Safety Unit Reports
  - Infection Control Performance Metrics Report
  - Case Mixed Groups
  - CDI Weekly Reports
  - CDI & MRSA Vulnerable & Monitoring Reports
  - Staffing Reports
  - Acute Units Performance Dashboard
  - Hospital Transfers

**ANALYZE**

- Instead of reviewing data in silos, we displayed all data sources on walls to view data and targets per site, director responsibility, and unit.
- From a bird’s eye view, this process allowed us to identify unit and site wide trends as well as targets not met by unit and site.
- Tools were developed to analyze the data by site and by unit. Analysis was completed site-by-site over a few days.

**IMPROVE**

- In consultation with site leadership, top priorities for improvement were determined for units and sites while taking into consideration targets and clinical and operational lenses.
- Each site identified one site priority and one opportunity unit. Through focusing in on these priorities, sites identified specific quality improvement projects to:
  - Reduce Hospital-Acquired Urinary Tract Infections
  - Improve patient and family hygiene to reduce the spread of infections
  - Improve patient flow following decision to admit

**CONTROL**

- Sites will review relevant metrics monthly.
- Site staff will continue to be supported with aligning LSS methodology to patient safety priority work.
- In-depth analysis performed in this project will be replicated every 6 months to monitor site progress and inform future directions.

**CONCLUSION**

Through a Bird’s Eye View, focusing the work in this manner facilitated rigorous and impactful improvement projects for improving patient level outcomes.

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