Service Operations Center Improves Hospital Flow and Reduces ED Boarding!

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AIM STATEMENT - Optimize hospital flow to all patients accessing inpatient and observation services using data transparency in order to enhance situational awareness and guide hospital flow process improvement by November 2017.

Problem: A 30% rise in ED and hospital inpatient volumes between 2013 and 2016 resulted in frequent ED saturation and boarding. Patient mortality and quality outcomes are negatively impacted by ED boarding.1,2

CURRENT STATE ASSESSMENT

Driver Diagram and Measures of Success

IHI Hospital Flow strategies were used to view our complex system of hospital flow. Detailed driver diagrams helped identify opportunities within each primary driver: shape or reduce demand, match capacity and demand, and redesign the system. Flow barriers were grouped and prioritized.

Measures of Success

- A 10% reduction in ED patient length of visit and ED boarding hours
- A 25% reduction of bed placement communication contacts — phone calls, pages, & texts
- Development of data driven, standardized hospital flow processes

SOLUTIONS AND TESTS OF CHANGE (PDSA)

Changes – What changes will we make that will result in improvement?

Specific change ideas were chosen to address key drivers. Interdisciplinary teams developed multiple PDSSAs. System redesign resulted in creation of a flow hub, the Service Operations Center (SOC), where co-located stakeholders could maximize situational awareness, optimize communication, and test standardized processes.

OUTCOMES - Results of Implemented Changes

- ED visit time: ↓15% - all patients, admits ↓13%. Boarding hours ↓20.
- SOC: 50% reduction in number of Bed placement calls.
- Hospital-wide: SOC opened. Multiple hospital flow processes adopted.
- Referral capacity: Monthly admits from referrals refer ↑170% (from 35 to 95/mo.)

OUR IMPROVEMENT JOURNEY

Year | Improvements Adopted
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2013 | ED Volumes
2014 | ED Volumes
2015 | ED Volumes
2016 | ED Volumes

KEY LEARNINGS → NEXT STEPS

- Interdisciplinary collaboration optimizes process design, maximizes engagement, seeds readiness for change, and fosters ownership.
- Current state and data analysis should drive improvement opportunities.
- Coordinated project management ensures successful tracking and implementation.
- Communication: Process capture → Staffing → Equipment & Supplies → Data analytics → Construction/Space modification → IT/hardware/software.
- Align system throughput optimization efforts, e.g., discharge and nurse-nurse handoff timeliness, NEDOCS response plan, data transparency, and predictive analytics.

References:

1. Jeanne Rhynsburger, MBA, RN, Patty Palmer, MSN, RN, CCRN, and Michelle Hansen, MSN, RN, CCRN. Service Operations Center Improves Hospital Flow and Reduces ED Boarding! SWISH, January 2018.
2. Jeanne Rhynsburger, MBA, RN, Patty Palmer, MSN, RN, CCRN. Service Operations Center Improves Hospital Flow and Reduces ED Boarding! SWISH, January 2018.

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