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Edmonds, Washington

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.

CURRENT STATE ASSESSMENT

Driver Diagram and Measures of Success

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

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?

Daily readiness Tools & Enhanced Communication
- Daily bed huddles process modifications*
- Proactive “bed ahead” planning*
- Launch of department readiness checklist tools*
- Overflow area designation & activation process*

Specific change ideas were chosen to address key drivers. Interdisciplinary teams developed multiple PDSAs. 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 rose ↑170% (from 35 to 95/mo.)

Key Drivers of Impaired Hospital Flow

Poor communication and situational awareness of hospital flow status
Lack of real-time hospital data flow and coordination
Lack of standardized flow processes with defined escalation pathways
Low physician and case management engagement in hospital flow efforts

Bed Capacity Assessment & Decision Support Tool to improve capacity*
ED NEDOCS with associated response plan*
Case Management & Hospitalist DC huddles*

Service and Staff Optimization
- Clinical staff redeployment triggers*
- Environmental staff deployment, task prioritization, and “swarming”**
- ED Saturation response process**

OUTCOMES - Results of Implemented Changes

- Specifically targeted at reducing patient boarding and flow process improvement:

  - Service Operations Center (SOC)

  - Daily readiness tools

  - Enhanced communication

  - ED NEDOCS with associated response plan

  - Bed capacity assessment and decision support tool

  - Surge preparedness checklists and decision support tool

  - Enhanced real-time data visibility

- Measured success:

  - A 25% reduction of bed placement communication contacts – phone calls, pages, & texts

  - A 10% reduction in ED patient length of visit and ED boarding hours

- Measures of success:

  - Development of data driven, standardized hospital flow processes

- 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/pace modification
    - IS Hardware/software

  - Aligned system through optimization efforts, e.g., discharge and nurse-nurse handoff timeliness, NEDOCS response plan, data transparency, and predictive analytics.

- Key learnings:

  - 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/pace modification, IS Hardware/software.

- References:

  1. 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.

  2. A 25% reduction of bed placement communication contacts – phone calls, pages, & texts

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- References:


