Silo Busting: Enhancing Teamwork by Embedding a Hospitalist in the Emergency Department

Mayo Clinic Health System and Division of Hospital Medicine

ABSTRACT

Background
According to the United States National Center for Health Statistics, since 1997 there has been a steady increase in per capita utilization of Emergency Departments (EDs). It is hypothesized that many of these patients could be discharged from the ED and appropriately managed in the lower acuity outpatient setting, offloading the need for admission.

Objective
To highlight a new and exciting Mayo Clinic innovation where a Hospital Internal Medicine (HIM) team is deployed "upstream" in the patient care pathway and embedded in the ED to assist with managing ED throughput by expediting outpatient admission processes or opening access pathways to the outpatient setting.

Planning
In 2019, 85% of patients admitted to HIM came through the ED and had an average length of stay (ALOS) of 3-5 days. It was hypothesized that some of these admissions could be avoided by implementing an HIM team into the ED and had an average length of stay (ALOS) of 3-5 days. It was hypothesized that some of these admissions could be avoided by implementing an HIM team into the ED.

Implementation
During the COVID-19 pandemic, the hospital's physical capacity was tested with record high patient census. An interdisciplinary team was formed and given a 3-fold charge: 1. Reduce unnecessary hospital admissions to preserve bed capacity for patients who need hospitalization; 2. Fast-track admissions for patients needing hospital care; 3. Minimize disruptions, if any, to current ED workflows.

Key Results
• 348 of 820 "admit likely" patients were evaluated and discharged with outpatient follow up
• No increase in bounce back rates
• No incremental FTE used
• Positive ED Provider Experience

RESULTS

- 348 Sapphire patient interventions (~9% of total ED)
- 342 patients (~4 patients per day) safely discharged due to greater outpatient admission access available to patients who had been evaluated by an internist.
- No increase in bounce back rates
- An estimated 5,000 bed days of capacity will be created annually
- Positive ED Provider Experience

GOALS
- Collaboration model between ED and HIM (RST)
- Alternative pathways for complex yet low acuity ED patients (patients who had been evaluated by an internist)
- OP scheduling resources

METHODS
- HIM resources moved upstream to ED (pre-Sapphire patient interventions)
- Expanding hours to 24/7 may require incremental resources and collaboration

SAPPHIRE PROCESS PILOT
- HIM resources moved upstream to ED pre-admission
- Safe and suitable alternative care pathways identified
- Pilot ran Monday through Friday, from 7 a.m. – 4 p.m.

OBJECTIVES

1. Reduce unnecessary hospital admissions to preserve bed capacity for patients who need hospitalization
2. Fast-track admissions for patients needing hospital care
3. Minimize disruptions, if any, to current ED workflows

PROCESS

- SiteA
- SiteB
- SiteC
- SiteD
- SiteE
- SiteF

FIGURE 1: SAPPHIRE OUTCOMES

- Top 5 Deferred Appointment Areas
  - Primary Care (158)
  - Gastroenterology (47)
  - Community Paramedics (13)
  - General Internal Medicine (12)
  - Community Internal Medicine (11)

FIGURE 2: ED PROVIDER EXPERIENCE SURVEY

- Methods
- Patient satisfaction & provider experience
- SDI
- Total Driver Analysis

RESULTS

- Positive ED Provider Experience
- No incremental FTE used: Approximately three to four admissions were redirected per day. Given the population's historic 3.8 ALOS, this was roughly the equivalent to an inpatient care team's normal patient load of 11 to 15 patients.
- Greater interdisciplinary understanding of workflows and patient care pathways

REFERENCES


CONCLUSIONS

Next phase includes implementing machine learning to identify patient candidates for intervention.

Scaling model to Mayo Clinic Health System sites in the Midwest practice.

Looking to expand hours of service.

Partnering with the Harvard School of Business using Time Driven Activity Based Costing (TDABC) to quantify value.