



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

Authors: Trevor Coons, F.A.C.H.E., M.H.A., Chris Roberts, M.S.H.C.A., M.H.A., Jessica Stellmaker, Jennifer Bartelt, M.H.A., Heather Heaton, M.D. and Riddhi S. Parikh, M.B.B.S.

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 the patients could be discharged from the ED and appropriately/safely managed in a lower acuity outpatient setting, offsetting the need for hospitalization¹.

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

Planning: In 2019, 69 percent of patients admitted to HIM came through the ED and had an average length of stay (ALOS) of 3.8 days. It was hypothesized that some of these admissions could be avoided by implementing an HIM team into the ED environment. ED and Hospital leadership had noted that teamwork across specialties had been found to reduce unnecessary admissions.^{2,3}

Implementation: During the COVID-19 pandemic, the hospital’s physical capacity was tested with record high patient census. An interdisciplinary team with representation from the ED, HIM and Performance Improvement 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

One HIM inpatient care team, normally assigned to admissions, was redeployed to the ED to work in parallel with existing ED care team workflows and processes. In current practice, ED physicians will “flag” a patient within the electronic medical record, as an “admit likely”. This action prompts specific workflows designed to initiate ED to inpatient admission processes. In parallel, the “admit likely” flag served as a visual trigger for the HIM team. In response, the HIM team would evaluate/ assess the care needs of this subset of ED patients. HIM would intervene/provide additional expertise during the hours of 7 a.m. to 4 p.m. each weekday to either expedite the admission process on behalf of the ED provider or begin coordinating appropriate outpatient follow up based on physical assessment findings and chart review.

Key Results & Next Steps:

- During the pilot, 820 ‘admit likely’ patients were evaluated, **342 of which were discharged instead of admitted.**
- **No increase in bounce back rates** were identified as a result of this pilot.
- **No incremental FTE used:** Approximately 3-4 admissions were re-directed per day. Given the population’s historic 3.8 day ALOS, this was roughly the equivalent to an inpatient care team’s normal patient load of 12-15 patients.
- **27 percent of patients** who were likely to be admitted were able to **be safely discharged** due to greater outpatient appointment access available to patients who had been evaluated by an internist.
- **An estimated 5,000 bed days of capacity** will be created annually.
- **Positive ED Provider Experience** data was measured via survey:
 - HIM Availability: 3.88/5
 - Ease of Communication: 4.32/ 5
 - Perceived Value of Pilot: 3.93/ 5
- **Greater interdisciplinary understanding** of workflows and patient care pathways as evidenced by ED physician survey responses asking for more extended hours of coverage.
- Next phase includes **implementing machine learning** to identify patient candidates for intervention, and **scaling model to Mayo Clinic Health System sites in mid-west.**

¹ National Center for Health Statistics. Health, United States, 2019: Table 37. Hyattsville, MD. 2021. Available from: <https://www.cdc.gov/nchs/hus/contents2019.htm>.

² Yu V, Wyatt S, Woodall M, Mahmud S, Klaire V, Bailey K, Mohammed MA. Hospital admissions after vertical integration of general practices with an acute hospital: a retrospective synthetic matched controlled database study. Br J Gen Pract. 2020 Oct 1;70(699):e705-e713. doi: 10.3399/bjgp20X712613. PMID: 32895241; PMCID: PMC7480180.

³ Nanavati M, Saenz S, Swayne K, Carek P. The Golden Letter: Innovation Collaboration to Reduce Avoidable Hospital Admissions. J Am Board Fam Med. 2020 Nov-Dec;33(6):1011-1015. doi: 10.3122/jabfm.2020.06.200077. PMID: 33219081.