DISCHARGE TODAY: THE EFFECTIVENESS OF A MULTIDISCIPLINARY ELECTRONIC DISCHARGE READINESS TOOL

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BACKGROUND

- Commonly discharge planning relies on one-way communication and static EHR data entry.

- We developed a novel EHR tool to facilitate communication in real-time between hospitalists and other clinicians and care team members about discharge readiness and barriers to discharge.

PURPOSE

To evaluate the effectiveness of a novel EHR discharge communication tool.
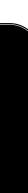
HYPOTHESIS

- Providers and frontline staff will use the Discharge Today tool.

- Use of this tool will remove barriers to discharge, and improve patient flow and provider efficiency.

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STUDY DESIGN

- Prospective, single center, pre-post design:
  ✓ Pre-implementation period: 10/1/18 – 5/4/19
  ✓ Pilot implementation period: 5/5/19 – 7/31/19

- Primary outcomes:
  ✓ time of day the discharge order was entered into the EHR by the discharging physician
  ✓ time of day the patient leaves the hospital
  ✓ hospital length of stay

- Linear mixed modeling, adjusted for type of patient, Charlson Comorbidity Index, teaching service, staffed with an APP, discharge to post-acute care, starting morning census per team, interaction between intervention time period and team starting morning census, interaction between intervention time period and staffed with an APP, team, physician.

RESULTS

- Large uptake and utilization of the Discharge Today tool (Table 1).

- When teams are staffed with an APP, this tool resulted in earlier discharges (19.1 minute decrease; 95% CI: -37.2, -0.9; p=0.0393) and lower lengths of stay (21% decrease; 95% CI: -30%, -11%; p=0.0002).

- For every one-patient increase in the morning census, there was a reduction in the time of day the discharge order was entered (2.9 minute decrease; 95% CI: -5.9, 0.2; p=0.0686).

TABLE

- Pre-implementation: 4,558 discharges
- Pilot implementation: 4,707 discharges

Table 1. Discharge Today Tool Utilization

Discharging Hospital Medicine Physician	N = 56
Utilized tool ever	46 (82.1%)
Utilized tool never	10 (17.9%)
Utilized always	16 (28.6%)
Patients Discharged from a Hospital Medicine Service	N = 4,707
Patients Ever Assigned a Discharge Status	3,994 (84.9%)
Ever Definite	2,087 (52.3%)
Ever Possible	2,209 (55.3%)
Ever In 24-48 hours	1,607 (40.2%)
Ever >48 hours	2,771 (69.4%)
Patients with Barriers Identified	2,133 (53.4%)
Discharge Today tool Users	N = 352
Physician	56 (15.9%)
Advanced Practice Provider (APP)	42 (11.9%)
Resident	67 (19.0%)
Registered Nurse	71 (20.2%)
Case Manager	18 (5.1%)
Other clinical staff	98 (27.8%)

CONCLUSIONS

- The Discharge Today tool allows for real-time documentation and sharing of discharge status.

- Our results suggest that the tool may be useful for improving discharge time and length of stay, particularly if a team is staffed with advanced practice provider (APP) or in higher census situations.