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Title: "The implementation of a process for continuous 7-day readmission review."

**Introduction:** Research on the root causes of inpatient hospital readmissions has focused on the 30 day benchmark. This arguably arbitrary time period is linked to the CMS financial penalty to hospitals with high 30-day readmissions. Critics speculate that a 30-day readmission is an outcome not reflective of the quality of the hospital care, and might be due to patients' natural history of disease process or a new condition altogether. Little research looked into whether causes of 7-day readmission (7DR) can be attributed to the index hospitalization.

**Hypothesis:** In order to eventually reduce readmissions to hospitalist services at an academic tertiary care hospital, our project sought to implement a process to continually evaluate root-causes of all 7-day readmissions hospitalists. Our hypothesis was that 7-day readmissions would be due to:

1. Errors in the discharge process during index hospitalization.
2. Misdiagnoses during the index hospitalization.
3. Patients returning after previously leaving AMA on index hospitalization.
4. "Superutilizers" aka "High Cost/High Need" patients.
5. Chronically ill patients, some at the end-of-life.

**Methods:** We developed a 7-Day Readmission (7DR) Tool allowing the Provider (Attending or APP) of the subsequent hospitalization to quickly determine the most likely reason for readmission. An Epic report identified all Hospitalist patients readmitted within a 7-day period. The 7DR Tool was sent to providers via email format with tool imbedded.. After demographic information was inputted, Providers were instructed to complete the tool and to check the box next to the most likely reason for readmission. Providers were also asked if they felt the readmission was avoidable, and free text questions asked why they felt the patient was readmitted and asked for suggestions to prevent future readmissions. Pilot data was collected over a 2 –month period in 2020, and further refinements to the tool were made. Responses were again gathered over a 4 month period in 2021, from January- April.

#### **Results:**

From October 2020 through April 2021, a total of 375 7DR were identified. Of these patients, 192 (51.2%) emails were sent to the subsequent Hospitalist containing the 7DR tool. The average tool completion rate was 48.1%. As described in Table 2, the discharge disposition from the Index hospitalization was 49.7% Home, 26.2% AMA, 13.3% from a facility (i.e. SAR, SNIF, nursing home, etc.), and 10.8% home with homecare. Of the cases reviewed, only 18 (4.97%) were deemed avoidable by the subsequent Attending physician. Of the major reasons for readmission, 57% were related to the index diagnosis, while 21% were related to a new diagnosis. Of the reported causes for readmission, Substance abuse (20.8%) and Lack of Support (18%) were cited most commonly.

#### **Conclusions:**

The fact that 57% of readmissions were related to the index diagnosis is supported by other studies. Almost half of the readmitted patients came from home. This perhaps represents an opportunity to support post-discharge care interventions aimed at helping patients understand their hospitalizations, new medications, and the transition to outpatient providers. Substance abuse and homelessness were common and this may be particular to our urban underserved environment. With

less than 5% of readmissions deemed avoidable, one can argue that 7DR review is also not reflective of the index hospitalization care. We understand that our process is subjective and might underestimate the avoidable readmissions when asking a provider if their colleague could have done anything better. In summary, having Hospitalist review 7-day readmissions provides a valuable tool to gain insight on local factors contributing to readmissions, and provide guidance for targeting quality improvement interventions.