

STRATEGIC CALL CYCLE CHANGES TO REDUCE PATIENT CENSUS VARIATION

Lead Author: Rani Bhatia

Contributing Authors: Cameron L McBride, MD, Katherine Richards, Christiana M. Hayward, Malavika Kapuria, Samuel Akinbayonle, Bhavish R. Manwani

Category: Patient Safety

Background

Hospitalist surveys imply that higher patient burden can compromise patient safety.

Objectives

In an effort to provide safer patient care, our quality improvement team sought to implement interventions to reduce the variations in patient census across academic inpatient medicine teams.

Methods

Ten academic inpatient medicine teams managing patients at a Veterans Affairs hospital in Houston, Texas admitted patients under a dynamic call cycle of our design. Aiming to reduce variation in patient census, we manipulated variables in an 8-day call cycle. Interventions included changing the total number of day calls in each 8-day period, changing start and stop times of call and changing the number of teams simultaneously taking call in the afternoon (typically the time with the highest volume of admissions per hour). These interventions were implemented in series each month over 5 month-long periods in which team census data was collected. As balancing measures, we collected data on the number of night time overflow admissions and how early in the day the overnight admitting resident had to be called in. As a process measure, we observed how many teams had an extreme census each day, defined by having ≤ 5 patients or ≥ 15 patients.

Results

Over the 5-month study period, mean team censuses varied between 9.1 patients to 11.2 patients. The second month of the study period had the lowest standard deviation of average team census (SD 0.92); the third month's iteration had the highest (SD 2.4). The call cycle in these two months only differed in having 1 afternoon call team stay 1 hour later. No planned intervention had a meaningful impact on the variance in average team census over any of the studied periods. Irrespective of the details of the call cycle, the average time the planned overnight admitting resident received their first admission across each month varied by only 32 minutes at a maximum. The average number of overflow admissions per month varied from 34 to 46 and had no apparent relationship with the variation in team censuses.

Discussion

External factors appear to impact team census more than details of the call cycle; none of our interventions had a meaningful impact. Our changes to call cycle strategy had minimal impact on overnight overflow admissions and the time that each afternoon admitting team capped. Further study is required to assess the impact of holidays, availability of ancillary services and other external factors on variation of inpatient medicine team censuses.