Long length of stay

Reducing long length of stay (LLOS, or inpatient stays lasting over 30 days) is an important way for hospitals to improve cost efficiency, bed availability and health outcomes. Discharge delays can cost hundreds to thousands of dollars per patient, and LLOS represents a burden on bed availability for other potential patients. However, most research studies investigating discharge barriers are not LLOS-specific. Of those that do, nearly all are limited by further patient subpopulation focus or small sample size.

Zhao et al. conducted a chart review of 172 LLOS patients in the Department of Medicine at an academic tertiary care hospital and quantified the most frequent causes of delay as well as factors causing the greatest amount of delay time. We also interviewed healthcare staff for their perceptions on barriers to discharge.

Discharge site coordination was the most frequent cause of delay, affecting 56% of patients and accounting for 80% of total non-medical postponement days. Goals of care issues and establishment of follow-up care were the next most frequent contributors to delay.

Together with perspectives from interviewed staff, these results highlight multiple different areas of opportunity for reducing LLOS and maximising the care capacity of inpatient hospitals [1)].

Hospital leaders are seeking ways to improve resource utilization and minimize long postoperative hospital stays. Common explanations for extended length of stay (LOS) are baseline patient illness, postoperative complications, and physician practice differences. The degree to which extended LOS represents illness severity or postoperative complications is unknown. We investigated influence of postoperative complications and patient comorbidities on extended LOS after lumbar spine surgery in elderly patients.

A retrospective cohort study from 2008 to 2014 analyzed data from the American College of Surgeons National Surgical Quality Improvement Program for elderly patients undergoing lumbar spine surgery. Patient demographics, comorbidities, LOS, and complications were recorded. Multivariable logistic regression analysis was used to determine odds ratio for risk-adjusted LOS. Primary outcome was the degree extended LOS represented patient illness or postoperative complications.

RESULTS: Of 9482 patients, 1909 (20.13%) had extended LOS. A few patients with extended LOS had a history of relevant comorbidities, including diabetes (21.76%), chronic obstructive pulmonary disease (8.17%), congestive heart failure (0.94%), myocardial infarction (0%), acute renal failure (0.47%), and stroke (2.23%). Of patients with normal LOS, 93% had no complications, 5.19% had 1 complication, and 1.69% had >1 complication. Among patients with extended LOS, 73.65% had no complications, 18.96% had 1 complication, and 7.39% had >1 complication ($P < 0.000$).

The study suggests that much of the variation in LOS for elderly patients undergoing lumbar spine surgery is not attributable to baseline patient illness or postoperative complications and most likely represents differences in practice style or surgeon preference [2)].

Trauma-related hospitalizations drive a high percentage of health care expenditure and inpatient

resource consumption, which is directly related to length of stay (LOS). Robust and reliable interactions among health care employees can reduce LOS. However, there is little known about whether certain patterns of interactions exist and how they relate to LOS and its variability. The objective of this study is to learn interaction patterns and quantify the relationship to LOS within a mature trauma system and long-standing electronic medical record (EMR).

METHODS: We adapted a spectral co-clustering methodology to infer the interaction patterns of health care employees based on the EMR of 5588 hospitalized adult trauma survivors. The relationship between interaction patterns and LOS was assessed via a negative binomial regression model. We further assessed the influence of potential confounders by age, number of health care encounters to date, number of access action types care providers committed to patient EMRs, month of admission, phenome-wide association study codes, procedure codes, and insurance status.

RESULTS: Three types of interaction patterns were discovered. The first pattern exhibited the most collaboration between employees and was associated with the shortest LOS. Compared to this pattern, LOS for the second and third patterns was 0.61 days ($P = 0.014$) and 0.43 days ($P = 0.037$) longer, respectively. Although the 3 interaction patterns dealt with different numbers of patients in each admission month, our results suggest that care was provided for similar patients.

DISCUSSION: The results of this study indicate there is an association between LOS and the extent to which health care employees interact in the care of an injured patient. The findings further suggest that there is merit in ascertaining the content of these interactions and the factors that induce these differences in interaction patterns within a trauma system [3].

Pterional keyhole clipping is less invasive than clipping via standard craniotomy, minimizes hospital stay, and achieves durable treatment for relatively small unruptured MCA aneurysms [4].

Patients who receive intraoperative steroids have shorter hospital stays and lower infection rates after spine surgery [5].

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