Short-term Morbidity and Readmissions are Increased with Skilled Nursing Facility Discharge Following TJA

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Introduction: Discharge to a skilled nursing facility (SNF) in Medicare eligible patients after total joint arthroplasty is costly. It is unclear whether this practice confers a benefit to patients or if it places patients at increased risk for complication and readmission. Currently, Medicare policy requires a minimum three-day hospital stay for patients discharging to SNF, creating a potential source of bias during univariate comparison of SNF and home discharge. Thus, we sought to determine short-term complication and readmission rates for SNF versus home discharge in a cohort of patients 65 and older who were discharged after post operative day 3.

Methods: Patients who underwent total hip or knee arthroplasty between 2012 and 2013 were identified in the National Surgical Quality Improvement Project (NSQIP) database. Patients younger than 65, and those over 65 who were discharged prior to postoperative day 3, and thus not SNF eligible by Medicare rule, were excluded from the analysis in order to create a Medicare and SNF eligible cohort. Patients were classified according to discharge disposition, categorically defined as home or SNF. Patient demographics and comorbidities were compared in the two cohorts, and subsequent univariate and multivariate analysis allowed determination of short-term complications associated with discharge disposition.

Results: Overall 34,610 Medicare and SNF eligible TJA patients were identified. Of these, 54.8% of patients discharged home. Notably, patients who discharged to SNF compared with home were older and had higher rates of obesity, diabetes, coronary artery disease, chronic obstructive pulmonary disease, and were more frequently ASA class 3 or 4 (p<0.001 for all comparisons). Univariate analysis revealed that patients discharging to SNF had a higher rate of any complication (7.9% vs. 4.7%, p<0.001) and readmission (5.3% vs. 3.3%, p<0.001). Multivariate regression analysis identified discharge to SNF (adjusted odds ratio [OR] 1.9, 95% Confidence Interval [CI] 1.7-2.0), ASA class 3 or 4 (OR 1.5, 95% CI 1.4-1.6), age >80 (OR 1.2, 95% CI 1.1-1.3), COPD (OR 1.4, 95% CI 1.2-1.6), and dependent functional status (OR 1.5, 95% CI 1.2-1.9) as independent risk factors for a 30-day complication. These same variables were also significant predictors of 30-day readmission.

Conclusions: In a cohort of Medicare and SNF eligible patients, discharge to a SNF was the strongest predictor of 30-day complication following TJA. Additionally, SNF discharge was an independent predictor of readmission following TJA. Given these findings, concerted efforts from institutions and surgeons to promote discharge to home are warranted. Furthermore, future studies should investigate whether changes in postoperative protocols, including more frequent short-term follow-up and surveillance, can minimize morbidity in patients who discharge to SNF following TJA.

Significance: In a cohort of Medicare and SNF eligible patients, discharge to a SNF was the strongest predictor of 30-day complication following TJA. Additionally, SNF discharge was an independent predictor of readmission following TJA.