Too Many Hip Fracture Patients Are Discharged to Rehabilitation Hospitals

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INTRODUCTION:
Previous research has questioned the benefits of discharging hip fracture patients to rehabilitation hospitals. The COVID-19 pandemic shifted clinical practice to discharge more hip fracture patients home rather than to rehabilitation facilities. We used this natural experiment to determine how the reduced use of rehabilitation hospitals affected hip fracture patient outcomes.
METHODS:
We performed a cohort study using National Surgical Quality Improvement Program (NSQIP) data from 2016 to 2020. We included patients aged 60 and older with a surgically treated hip fracture. The primary exposure was the interaction of discharge to a rehabilitation center with the admission year (2016-19 vs. 2020). The primary outcome was the use of a mobility aid 30 days after injury. Secondary outcomes included 30-day readmission, unplanned reoperation, delirium, and mortality. We estimated the effects of time-dependent changes in discharge practices using a difference-in-differences analysis to mitigate confounding.
RESULTS:
We included 43,254 patients admitted from 2016 to 2019 and 12,871 patients admitted in 2020 (median age, 83 years; 69.2% female). The proportion of patients discharged to rehabilitation centers declined from 78% in 2016-2019 to 68% in 2020 (difference; -10%; 95% CI, -10% to -9%; $p<0.001$). The change in rehabilitation discharge was not associated with a difference in postoperative mobility aid use (difference, -1%; 95% CI, -3% to 0.5%, $p=0.18$). The change in rehabilitation utilization was also not associated with differential rates of 30-day readmission (difference, -0.9%; 95% CI, -2% to 0.5%; $p = 0.19$), reoperation (difference; -0.07%; 95% CI, -0.07% to 0.5%, $p = 0.83$), delirium (difference; 1.3%, 95% CI, -0.6% to 3.3%, $p = 0.19$), or mortality (difference; 0.6%, 95% CI, -0.2% to 1.4%; $p = 0.13$). The shift to home discharge during 2020 was more likely for patients taking pre-injury bone medication (OR, 1.12, $p<0.01$) and without dementia (OR, 1.41, $p<0.001$).
DISCUSSION AND CONCLUSION: The results suggest that at least 10% of hip fracture patients discharged to rehabilitation centers might be discharged home without negatively affecting their clinical outcomes. Patients taking pre-injury bone medications and those without dementia could potentially benefit most from this shift.