The Effects of Hallway Bed Placement on Elderly Hip Fracture Patients

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Purpose: Tertiary care centers have strained hospital capacities as the population ages and small hospitals close. As such, use of hallway beds (HB) in the emergency department (ED) has become more common. We hypothesize that elderly patients with hip fracture placed in an HB will have higher rates of delirium, higher 90-day readmissions, and longer hospital length of stay.

Methods: Patients age 50 years and older who were admitted to a single Level I trauma center and underwent surgery for isolated OTA31A and 31B fractures from 2020 to 2024 were retrospectively reviewed from a prospectively collected database. Patients with additional traumatic injuries were excluded. Patients were stratified into HB and non-hallway bed (NHB) patients. Additional pre- and postoperative data up to 1 year after surgery were also collected.

Results: A total of 401 patients met inclusion criteria; 231 (57.6%) were NHB patients and 170 (42.4%) were HB patients. Across groups, the mean age was 80.3 years, and the most common ASA score was 3 (75%). Patients placed in an HB for any amount of time had statistically significantly increased discharge to a skilled nursing facility versus patients in an NHB (57.6% vs 45.8%, $p = 0.09$), overall time in the ED (31.61 hours vs 16.8 hours, $p<0.00001$), and time to surgery (36.9 hours vs 28.2 hours, $p = 0.001$). HB patients who spent 8+ hours in a hallway bed trended toward more rehospitalizations within 90 days versus NHB patients (35% vs 33.7%, $p = 0.8$) as well as in-hospital delirium (8.0% vs 6.5%, $p = 0.57$); however, these were not significant. There was no difference in ASA score distribution, 1:1 monitoring, antipsychotics, or 1-year mortality between groups.

Conclusion: Our data show that HB patients have a longer ED stay, discharge to a skilled nursing facility at a higher rate, and wait longer for surgery. There were nonsignificant trends toward increased rates of delirium and 90-day rehospitalization. Further analysis is needed to characterize how placement in an HB affects elderly patients with hip fracture, as placement in an NHB is a potentially simple optimization for a vulnerable orthopaedic population.