



Comparing Primary Total Hip Arthroplasty Post-discharge Care Duration, Costs, and Outcomes

Karthikeyan Ponnusamy, MD, Zan Naseer, BS, Anne Kuwabara, BS, Mostafa El Dafrawy, MD, Louis Okafor, MD, Clayton Alexander, MD, Robert Sterling, MD, Richard Skolasky, DSc, Harpal S. Khanuja, MD

Introduction: Given Medicare's push to bundle post-discharge care with total hip arthroplasty (THA) payments, we sought to measure the duration and costs of post-discharge extended care facility (ECF) and home healthcare (HH) utilization and its impact on readmissions. We hypothesized ECF discharges would have higher costs and be independently associated with readmissions.

Methods: We conducted a retrospective cohort study of the 100% 2008 Medicare Provider Analysis and Review database, and identified primary THA patients by ICD9 codes and excluded fractures/ER admissions to select for elective cases. Patients discharged to an ECF (48,642 patients) were compared with HH (47,670 patients). Descriptive statistics of demographics, comorbidities, duration and costs of post-discharge care, and 60 day readmission and mortality rates were calculated. Multivariate logistic regression models of the association of discharge disposition with readmission and mortality were determined.

Results: Compared to HH, ECF patients were older (75.7 vs 70.9 years, $p < 0.0001$) and more likely female (70.52% vs 55.13%, $p < 0.0001$). ECF patients had longer (3.9 vs 3.5 days, $p < 0.0001$) and costlier hospital stays (\$47,775 vs \$46,645, $p < 0.0001$). Mean ECF length of stay was 18.4 days (standard error 0.1) and cost \$11,423 (standard error \$48). Of the ECF patients, 22.43% needed HH after ECF discharge for another 28.4 days and cost of \$2,364. Whereas HH patients utilized services for 25.1 days (standard error 0.31) and cost \$2,251 (standard error \$29). At 60 days from discharge, ECF patients had greater readmission (11.99% vs 6.96%, $p < 0.0001$) and mortality rates (0.67% vs 0.18%, $p < 0.0001$). ECF discharge is an independent risk factor for 60 day readmissions (OR 1.7, 95%CI 1.7-1.8) and mortality (OR 2.8, 95%CI 2.2-3.6).

Conclusion: Discharge to ECF leads to greater costs and is independently associated with greater 60 day readmissions and mortality. Given post-discharge care accounts for 20% of costs, care pathways need to be re-examined.