

Skilled Nursing Facility After Hip Fracture Diminishes Care "Quality"

Ariana T Meltzer-Bruhn, Garrett Esper, Christopher Gabriel Herbosa, Sanjit R Konda¹, Kenneth A Egol²

¹NYU Langone Medical Center, ²NYU Langone Orthopedic Hospital

INTRODUCTION:

Quality is defined as outcome/ cost. The purpose of this study is to analyze differences in length of post-hospitalization treatment received, outcomes, and costs between skilled nursing facility (SNF) and home with health services (HHS) for patients treated with arthroplasty.

METHODS:

Between October 2018-September 2020, 192 patients eligible for the Comprehensive Care for Joint Replacement (CJR) bundle program who were treated for a displaced femoral neck fracture with total hip arthroplasty (THA) or hemiarthroplasty (HA) and were discharged to SNF or HHS were analyzed for demographics, comorbidities, post-operative outcomes, costs of care, and discharge rehabilitation details. Demographics, need for the Intensive Care Unit (ICU), inpatient length of stay, minor and major inpatient complications, length of post-hospitalization care received, costs, and readmissions were compared using chi square or T-tests as appropriate.

RESULTS:

There were 60 (31%) patients discharged to HHS (37% THA, 63% HA) and 132 (69%) patients discharged to SNF (14% THA, 86% HA). Patients discharged to SNF were older ($p < 0.01$), had higher Charlson Comorbidity Index (CCI) scores ($p = 0.011$), and had longer post-hospitalization care ($p < 0.01$). Patients treated with HA had longer stays in rehabilitation at both SNF ($p = 0.101$) and HHS ($p = 0.077$). There were no differences in rates of inpatient minor complications ($p = 0.520$), inpatient major complications ($p = 0.119$), ICU admissions ($p = 0.193$) or readmission rates within 30 ($p = 0.690$) and 90 days ($p = 0.176$). Cost of care at a SNF was higher than HHS ($p < 0.01$), especially in patients treated with HA ($p < 0.01$).

DISCUSSION AND CONCLUSION: Among CJR bundle patients treated for a displaced femoral neck fracture with arthroplasty, discharge with HHS is a more cost-effective option that does not increase risk of readmission. Providers should keep this in mind when working with patients and their families on discharge planning.

Table 1: Outcomes & Cost Analysis

	SNF	HHS	P-Value
Hospital Quality Measures			
All Patients, n (%)	132	60	
Length of Stay (d), mean ± std	5.52 ± 2.64	4.28 ± 1.60	<0.01
Minor Complication Rate	19 (14%)	6 (10%)	0.520
Major Complication Rate	14 (11%)	2 (3%)	0.119
Need for ICU	20 (15%)	5 (8%)	0.193
Readmission Rate			
30-Day	11 (8%)	4 (7%)	0.690
90-Day	26 (20%)	6 (10%)	0.095
Discharge Quality Measures			
Length of Stay (d), mean ± std	36.02 ± 25.51	17.48 ± 12.94	<0.01
SSI within 30 Days	5 (4%)	0 (0%)	0.127
DVT within 30 Days	10 (8%)	3 (5%)	0.510
Overall Cost (USD)	26,088.15 ± 17,459.63	3,979.12 ± 1,705.70	<0.01
Cost for HA Patients (USD)	26,934.78 ± 18,920.32	3,367.79 ± 2,128.68	<0.01
Cost for THA Patients (USD)	20,726.17 ± 16,179.23	3,396.33 ± 1,578.94	<0.01

SNF=Skilled Nursing Facility; HHS=Home Health Services; ICU=Intensive Care Unit; SSI=Surgical Site Infection; DVT=Deep Vein Thrombosis; HA=Hemiarthroplasty; THA=Total Hip Arthroplasty