

# **Home Health Care is associated with an Increased Risk of ED Visit, Readmission, and Cost of Care without Reducing Risk of Complication following Shoulder Arthroplasty: A Propensity-Score Analysis**

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## **INTRODUCTION:**

Home health services provide patients with additional professional care and supervision following discharge from the hospital to theoretically reduce the risk of complication and reduce healthcare utilization. The aim of this investigation was to determine if patients assigned home health services following total shoulder arthroplasty (anatomic (TSA) and reverse (RSA)) exhibited lower rates of medical and surgical complications, lower healthcare utilization, and lower cost of care compared to patients not receiving these services.

## **METHODS:**

A national insurance database was retrospectively reviewed to identify all patients undergoing primary anatomic and reverse total shoulder arthroplasty from 2010 to 2019. Patients who received home health services were matched using a propensity score algorithm to a set of similar patients who were discharged home without services. We compared medical complication rates, emergency department (ED) visits, readmissions, and 90-day cost of care between the groups. Multivariate regression analysis was performed to determine the independent effect of home health services on all outcomes.

## **RESULTS:**

A total of 1,119 patients received home health services and were matched to 11,190 patients who were discharged home without services. Patients who received home health services had higher rates of ED visits within 30 days (OR 1.293;  $p = 0.0328$ ) and 90 days (OR 1.215;  $P = 0.0378$ ) as well as increased readmissions within 90 days (OR 1.663;  $P < 0.001$ ). Complication rates showed no difference between groups. Episode-of-care costs for home health patients were higher than those discharged without these services (\$12,521.04 vs. \$9,303.48;  $P < .001$ ).

## **DISCUSSION AND CONCLUSION:**

Patients assigned home health care services exhibited higher cost of care without a reduction in the rate of complication, early return to the ED, or readmission. These findings suggest that patients should be carefully evaluated for the potential benefit of home health care services and that these services may need to be restructured to provide the most value for at-risk patients.