

Analysis of Costs Associated with Increased Length of Stay following Total Joint Arthroplasty

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INTRODUCTION:

The length of stay (LOS) after Total Joint Arthroplasty (TJA) has trended downward over recent years, with similar readmission and complication rates observed among hospital stays of 0-2 days. Understanding the cost breakdown associated with LOS further incentivizes same-day surgeries and earlier discharge when medically appropriate.

METHODS:

A retrospective review was conducted on patients undergoing TJA at a single institution (n=614) with LOS ranging from 0-3 days. Patients with a LOS of 4 days or longer were excluded due to sample size limitations. Primary outcomes included total costs, private practice costs, and facility costs. Secondary outcomes included ASA scores and readmission rates. Statistical analysis was performed using T-tests, ANOVA, and Chi-Squared tests.

RESULTS:

The study cohorts consisted of LOS 0 days (n=77), 1 day (n=452), 2 days (n=63), and 3 days (n=23). For LOS 0 days, costs averaged \$22,847, with private practice costs accounting for \$4,657 (21%) and facility costs totaling \$17,110 (74%). For LOS 1 day, costs averaged \$24,905, with private practice costs accounting for \$4,083 (17%) and facility costs totaling \$19,764 (78%). For LOS 2 days, costs averaged \$27,183, with private practice costs accounting for \$3,609 (14%) and facility costs totaling \$22,281 (81%). For LOS 3 days, costs averaged \$29,478, with private practice costs accounting for \$3,433 (12%) and facility costs totaling \$24,106 (82%). The average ASA scores for LOS 0-3 days were 2.0, 2.3, 2.3, and 2.8, respectively (p<0.001). Readmission rates for cohorts in the LOS 0-3 days were 0.0%, 2.7%, 3.2%, and 8.7%, respectively.

DISCUSSION AND CONCLUSION: Longer hospital stays were associated with increased costs, with each additional day of a 3-day LOS costing an average of \$2,210. Additionally, private practice reimbursement decreased by an average of \$408 per day. The proportion of costs also changed, with a smaller portion being due to private practice costs and a larger portion due to facility costs.