

Non-Home Discharge is Associated with Prosthetic Joint Infection After Total Joint Arthroplasty

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INTRODUCTION: Prosthetic joint infection (PJI) can be a devastating complication in an otherwise successful procedure. Many risk factors have been investigated to reduce the rate of PJIs. There are few studies on the impact of final discharge destination, and the results are relatively inconclusive. This study was designed to evaluate if a patients' final discharge location was associated with a change in their post-operative infection rate. The hypothesis of this study was that patients who received a non-home discharge had a higher rate of post-operative infection.

METHODS: Retrospective data was collected from December 2019 to March 2022 on patients from a single tertiary care center after undergoing hip or knee total joint arthroplasty. Patients who had a history of a previous infection or those who received arthroplasty as treatment for a fracture were excluded. Patients were grouped by location of discharge after their arthroplasty. One group received discharge to home, while the non-home discharge group may have been discharged to rehab, skilled nursing facility, an assisted living home, or any other healthcare facility. Univariate and multivariate statistical analyses were performed to determine if non-home discharge or any other variables impacted post-operative infection rate.

RESULTS: In all, 226 patients were included, 192 were discharged home and 34 received non-home discharges. There was an increased rate of post-operative infections with non-home discharge (14.7%) versus home discharged patients (2.60%; $p < 0.008$). The odds ratio for infection in non-home discharge was 9.58 [95% CI 1.84 – 49.79]. The average age was 65.3 ± 11.3 for non-home discharge and 60.2 ± 8.4 for the home discharge patients ($p = 0.002$). Medicaid insurance was associated with a higher rate of infection ($p = 0.022$) but was not associated with non-home discharge ($p = 0.513$).

DISCUSSION AND CONCLUSION: This study found that non-home discharge is associated with an increased risk for a PJI. Discharge destination is a modifiable risk factor which should be identified in at-risk patients prior to primary or revision arthroplasty.

Infection Rate, N (%)	Home Discharge (192)	Non- Home Discharge (34)
Infected (28)	5 (2.6%)	5 (14.7%)
No Infection (228)	187 (97.4%)	29 (85.3%)

Table 1: Rate of prosthetic joint infection following total joint arthroplasty based on location of discharge. Patients who were discharged to a non-home location are at an increased risk of prosthetic joint infection. ($p < 0.001$).