

Increased Hospital Cost associated with Increased Patient Length of Stay in Total Joint Arthroplasty

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INTRODUCTION: Total hip (THA) and knee arthroplasty (TKA) is often reimbursed at a lower rate for outpatient arthroplasty, defined as less than 2 midnights, than for patients who stay at least 2 nights. We sought to evaluate the hospital personnel and medication costs based on the patient’s length of stay.

METHODS: We retrospectively reviewed 9,036 primary THAs and 8,754 primary TKAs performed at a single institution between 1/1/2018 and 12/31/2022. Patients were categorized if they were discharged the same day, after 1 midnight, or after 2 nights. Patients were only discharged once medically indicated. Records were reviewed for hospital personnel and medication cost.

RESULTS: For THA, personnel costs were higher for patients who stayed longer in the hospital for every phase of surgery, including preoperative personnel (\$280.65 versus \$298.60 versus \$293.02, $p < 0.001$), operative room personnel (\$1,468.39 versus \$1,725.94 versus \$1,763.80, $p < 0.001$), post-anesthesia care unit (PACU) personnel (\$134.21 versus \$172.97 versus \$183.93, $p < 0.001$), and inpatient personnel (\$186.84 versus \$755.60 versus \$1,355.57, $p < 0.001$). Medication costs were also higher for patients who stayed longer (\$105.50 versus \$150.55 versus \$170.98, $p < 0.001$). Similarly, for TKA, personnel costs were higher for patients who stayed longer at each surgery phase, including preoperative personnel (\$303.54 versus \$333.25 versus \$333.25, $p < 0.001$), operative room personnel (\$1,448.30 versus \$1,605.13 versus \$1,636.93, $p < 0.001$), PACU personnel (\$129.67 versus \$150.42 versus \$168.55, $p < 0.001$), and inpatient personnel (\$171.39 versus \$817.58 versus \$1,498.58, $p < 0.001$). Medication costs were also higher for patients with longer stays (\$94.58 versus \$121.27 versus \$143.28, $p < 0.001$).

DISCUSSION AND CONCLUSION: Hospital personnel and medication costs steadily increased as the number of nights that the patient stayed at the hospital increased. We believe that hospital reimbursement for a 1-night stay should be higher than that for same day surgery, since longer length of stay is associated with higher personnel and medication costs.

Cost at Each Phase of Surgery

