**Δ 90-Day Postoperative Narcotic Use Following Hospitalization for Orthopaedic Trauma**

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**Background/Purpose:** Narcotic abuse is a growing problem within our society, and can act as a barrier in providing adequate postoperative pain management. In order to effectively care for patients, orthopaedic surgeons must be aware of which patients are at a higher risk for developing drug-seeking tendencies. The purpose of this study was twofold. First we sought to analyze narcotic use in the 90-day postoperative period for orthopaedic trauma injuries and compare those to other patients undergoing elective orthopaedic procedures. Secondly, we examined if patient-reported pain scores during hospitalization are correlated with increased narcotic use during the 90-day postoperative period.

**Methods:** An electronic medical records (EMR) query was performed between 2012 and 2015 at one institution using DRG (diagnosis-related group) codes for spine, adult reconstruction, and trauma procedures. Demographics, length of stay (LOS), all pain scores recorded during LOS, and all narcotic pain medication prescribed in the 90 days following discharge were collected. Only patients who were prescribed postoperative narcotics within our institution's EMR were available for analysis. Narcotic pain medication was converted to morphine equivalents for comparison purposes. Multivariate analysis was performed using a one-way ANOVA (analysis of variance) for continuous variables and Pearson's $X^2$ analysis for categorical variables.

**Results:** 5030 patients across three orthopaedic cohorts had complete information available for analysis of 90-day narcotic use. 1578 were spine surgery patients (average age 61.1), 2923 were joint replacement patients (average age 64.9), and 529 were trauma patients (average age 61.0). Spinal patients had the longest LOS, highest mean pain reported during LOS, and were prescribed the most morphine in the 90-day postoperative period. However, trauma patients did not differ significantly from spinal patients in terms of LOS ($P = 0.161$) and the total morphine prescribed in the 90-day postoperative period ($P = 0.543$). There was no significant correlation between the mean patient-reported pain score during LOS and amount of narcotics prescribed in the 90-day postoperative period ($r = 0.150$) across all three orthopaedic specialties or within solely orthopaedic trauma patients ($r = 0.115$). Orthopaedic trauma patients were grouped into the following cohorts: hip and femur (191 patients); tibia, fibula, ankle, humerus, and knee (205 patients); polytrauma (9 patients); and other, including shoulder, elbow, hand, wrist, and foot (124 patients). There were no significant differences in the amount of morphine prescribed in the 90-day postoperative period between the orthopaedic trauma cohorts ($P = 0.425$).

**Conclusion:** Overall, pain levels during admission do not directly influence narcotic use in the 90-day postoperative period. However, while trauma patients do not report as much pain in the immediate postoperative period as spinal patients, they receive larger amounts of morphine equivalents in the 90-day postoperative period. Orthopaedic trauma sur-

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geons should be aware that their patients will require increased levels of narcotics following discharge compared to other orthopaedic specialties, and are thus at a higher risk of developing narcotic dependency.