

Patients Utilizing Opioids Before Total Joint Arthroplasty Have Greater Social Determinants of Health Deficits than Opioid-Naïve Patients

Alexandra L Hohmann¹, Elizabeth Abe¹, Juan David Lizcano¹, Samantha Schae Meacock, James J Purtill², Yale Fillingham

¹Rothman Orthopaedic Institute, ²Rothman Institute

INTRODUCTION: Many patients undergoing total joint arthroplasty (TJA) take opioids chronically before surgery, and these patients may have worse outcomes after surgery. The purpose of this study was to determine if patients who fill opioid prescriptions before TJA are more likely to have a social determinants of health deficit (SDHD).

METHODS: This study included a retrospective, single-institution cohort of patients undergoing TJA for osteoarthritis between 2018 and 2022. Opioid prescriptions for these patients were queried by a national prescription drug monitoring program. Patients were classified as preoperative opioid users if they had at least one filled opioid prescription between 1-30 days and between 31-90 days preoperatively, and patients without a filled prescription in the year before surgery were classified as naïve. Naïve and opioid-using patients were matched 3:1 on demographics, history of spine diagnoses or surgery, and type of arthroplasty. Social determinants of health identified included living alone, transportation access, race and ethnicity, insurance type, social vulnerability index (SVI), and area deprivation index (ADI).

RESULTS: After matching, 918 opioid-using patients were compared with 2,754 naïve patients. Opioid-using patients were more likely to be Black (16.8% versus 10.1%, $P<0.001$), more likely to be unemployed or on disability ($P<0.001$), more likely to be on Medicare or Medicaid ($P<0.001$), more likely to live alone ($P<0.001$), and more likely to lack access to transportation ($P<0.001$). Opioid-using patients also had significantly higher vulnerability scores in the national ADI ($P<0.001$) and across SVI categories ($P<0.001$ for all indices) than naïve patients.

DISCUSSION AND CONCLUSION: Patients with preoperative opioid use before TJA are more likely to have a SDHD compared to opioid-naïve patients, which may indicate differences in pathways of care in patients with SDHD undergoing TJA. These findings further highlight the influence SDHD can have on patient outcomes following TJA.