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Disparities Associated with Total Joint Arthroplasty Transfusion and Complication Rates

Introduction: Complications such as infection, readmission and mortality occur with transfusion after total joint arthroplasty (TJA). Certain populations, including females, Black patients, patients with public insurance and older adults have higher risks of transfusion. Recently, there has been a decline in transfusion rates and a greater emphasis on equity in medicine. Therefore, our study sought to understand whether disparities in transfusion rates still exist and what variables influence transfusion rates over time.

Methods: We used the Ochsner Healthcare Network database to identify TJA patients from 2013 to 2021. Fisher exact and Wilcoxon rank sum tests were used to compare categorical and continuous variables, respectively. Multivariable logistic regression was performed to predict transfusion rates within 5 days of surgery and adjust for potential confounders.

Results: We identified 7,595 patients, of which, 233 (3.0%) received a transfusion. 67.9% were White and 61.9% were female. Transfusion rates were shown to decline over time. However, Black patients had a higher rate of transfusion than White patients overall (4.9% vs. 2.2%), and this trend persisted over time. After adjusting for confounding variables, the biggest factor associated with a higher risk of transfusion was being Black (aOR = 1.75, 95% CI = 1.33-2.31). Black patients were also transfused more often than White patients with equal hemoglobin values.

Conclusion: Transfusion rates for TJA patients are declining, however Black patients continued to receive transfusions at higher rates than white patients.