

## Poster #34

### Research Study

Title: “Racial & Ethnic Disparities in 30-Day Postoperative Hip Fracture Outcomes”

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**Introduction and Objective.** Hip fracture operations are among the most prevalent surgeries in the United States. While studies have suggested racial/ethnic disparities are present following orthopedic operations, these studies' findings are inconsistent and have limitations. The objective of our study was to determine if there is an association between minority race/ethnicity and rate of complications arising within 30 days of hip fracture surgery.

**Methods.** We performed a retrospective cohort study using the 2016-2018 ACS-NSQIP database. Our study analyzed adults aged 65-89 who received hip fracture operations between 2016-2018. We compared minority patients (African American-NH, Asian-NH, Hispanic) to White-NH patients. Our primary outcome was the frequency of complications within 30 days of surgery. We adjusted for confounders by calculating adjusted odds ratios and conducted a stratified multivariate regression analysis to assess if treatment selection (THA, hemiarthroplasty, ORIF) modified the effect of race/ethnicity on complications.

**Results.** Our sample included 33,085 adults (69.0% females, 69% Whites, median age 80.9 years). Bleeding requiring transfusion was the most common complication (22.8%), followed by infections (5.4%) and pulmonary (4.5%). Unadjusted odds ratios indicated that African American and Hispanic patients suffered significantly higher rates of complications than White-NH patients: African American OR=1.22 (95% CI: 1.09-1.37), Hispanic OR=1.21 (1.10-1.33), Asian OR=1.05 (0.92-1.21). When adjusting for baseline characteristics, all three minority groups experienced significantly higher complication odds as compared to Whites: African American aOR=1.20 (1.07-1.35), Asian aOR=1.20 (1.03-1.39), Hispanic aOR=1.24 (1.12-1.37). Surgical treatment selection was found to modify the association between race/ethnicity and composite rates of complication.

**Conclusions-Implications.** Our study found that minorities suffer increased rates of complications within 30 days of hip fracture surgery. When stratifying by surgical treatment selection, minorities were still found to suffer significantly higher rates of complication. Future research should identify underlying causes and further explore the association between race/ethnicity and hip fracture complications - while accounting for potential confounders, including socioeconomic status. Having established that an association exists, it is important to identify underlying cause(s) so we can address these disparities and optimize patient care.