

# **Racial and Ethnic Disparities in Perioperative Metrics After Pelvic Fracture: A Nationwide Study**

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## **INTRODUCTION:**

Racial and ethnic disparities in orthopedic trauma have been previously reported, demonstrating delayed time to surgery and poorer perioperative outcomes for minority patients. However, little of this data focuses on pelvic fractures. The aim of this study was to investigate racial and ethnic disparities in perioperative metrics for patients undergoing pelvic fracture surgery in the United States from 2016 to 2019.

## **METHODS:**

The National Inpatient Sample was queried for White, Black, and Hispanic patients aged 18-64 who underwent non-elective pelvic fracture surgery between 2016 and 2019. Perioperative metrics included time to surgery, length of stay (LOS), in-hospital costs, discharge destination, and in-hospital mortality. Associations between race/ethnicity and perioperative metrics were assessed using multivariable generalized linear and logistic regression models, expressed in either % change or odds ratio (OR) with 95% confidence intervals (CI).

## **RESULTS:**

Overall, 3,003 pelvic fracture surgeries were included. Black (n=485) compared to White patients (n=2,060) incurred higher costs (+20.1% [CI 12.7%,28.1%], p<0.001), had decreased time to surgical repair (-15.6% [CI -24.1%, -6.2%], p=0.002), increased LOS (15.2% [CI 7.7%,23.2%], p<0.001) and higher odds of in-hospital mortality (OR 3.08 [CI 1.16,8.15], p=0.028). Hispanic (n=458) compared to White patients also incurred higher costs (+7.4% [CI 0.6%,14.8%], p=0.034) but no significant associations in terms of other outcomes. There were no racial or ethnic differences in terms of odds of institutional discharge.

## **DISCUSSION AND CONCLUSION:**

Racial and ethnic disparities exist in LOS, cost, and mortality for pelvic fracture surgery between White and minority patients from 2016 to 2019 in the United States, particularly impacting Black patients. However, Black patients were found to undergo surgery faster, a difference that should be contextualized in future research. These findings highlight the need for continued initiatives and healthcare reform policies targeting perioperative disparities in orthopaedic trauma care.