

# Racial Disparities in Postoperative Morbidity and Mortality among a High-Risk Pediatric Surgical Cohort

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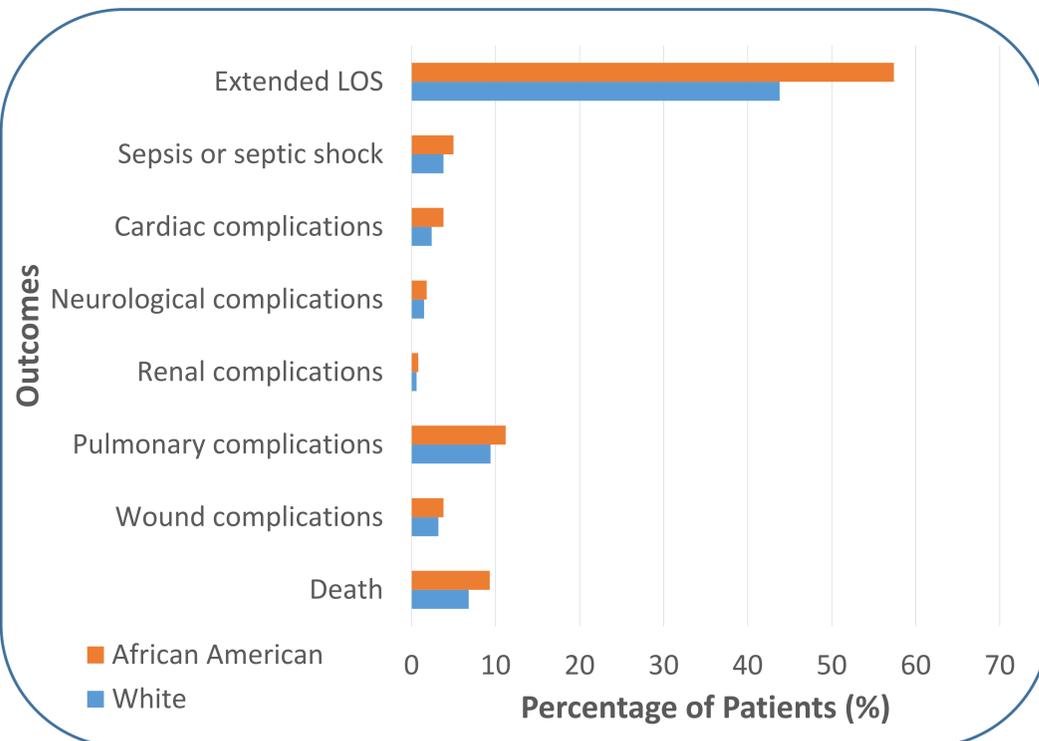
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## Background

- Sicker patients have higher postoperative complication and mortality rates.
- Post-surgical complication rates have continued to decline in the U.S.
- Not all racial groups have benefited equally.

## Hypothesis

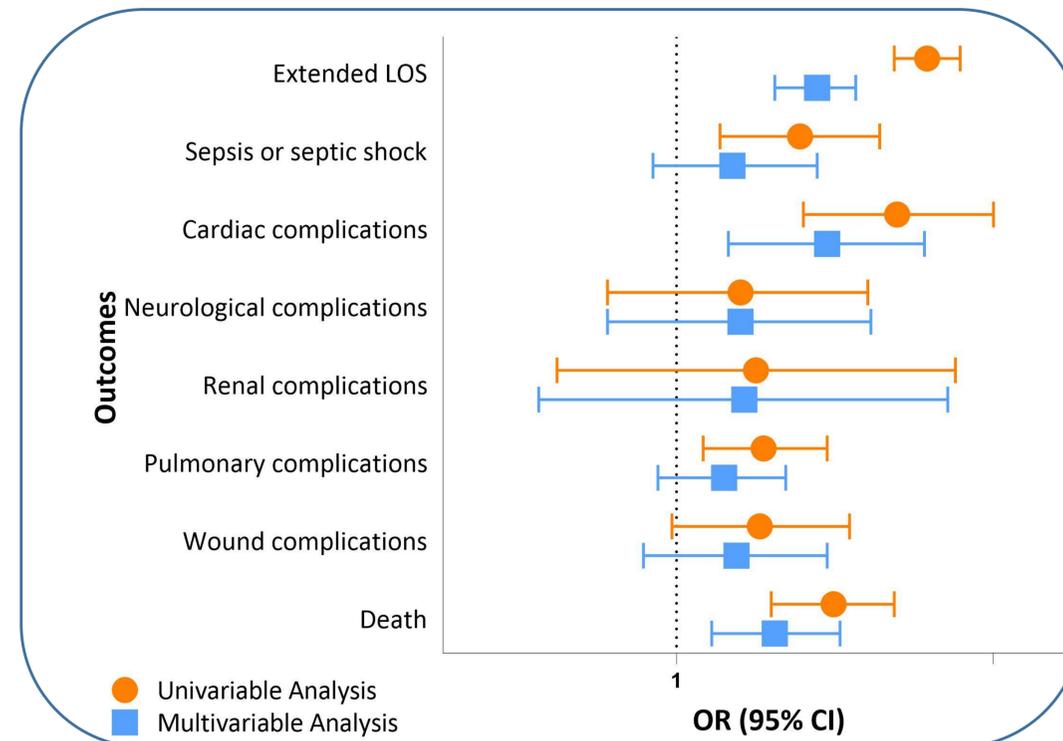
Among a cohort of “sick” African American (AA) and White children, there will be no systematic difference in the rates of postoperative morbidity and mortality.



**Figure 1.** Comparison of postoperative complications in AA patients versus White patients.

## Methods

- Used data from the National Surgical Quality Improvement Program-Pediatric (NSQIP-P)
- Identified all children who underwent inpatient surgery between 2012 and 2018 with ASA physical status  $\geq 3$ .
- Compared risk-adjusted odds ratios of postoperative mortality and complications between AA and White children.
- Bonferroni correction was applied to correct for multiple comparisons.



**Figure 2.** Unadjusted and adjusted analyses for the association between race and postoperative morbidity and mortality.

## Results

- Total of 15,758 children (White 76.6%, AA 23.4%) underwent inpatient surgical procedures fit criteria.
- Postoperative mortality occurred in 7.4% (n = 1087) patients.

**In ASA  $\geq 3$  pediatric patients, AA children had significantly higher rates of 30-day postoperative morbidity and mortality than White children.**

## Discussion

- Racial and ethnic disparities in postoperative morbidity and mortality remain significant and persistent.
- Racial differences in postoperative outcomes among the sickest pediatric surgical patients may not be entirely explained by preoperative health status.
- More studies are needed to help elucidate the mechanisms underlying such differences in post-surgical outcomes.

## References

1. Nafiu OO, et al. Race, postoperative complications, and death in apparently healthy children. *Pediatrics*. 2020; 146(2): 1-8.
2. Esnaola NF, et al. Race and surgical outcomes: It is not all black and white. *Annals of Surgery*. 2008; 248(4): 647-655.