

Disparities in Access to Robotic Groin Surgery: A National Inpatient Sample Analysis

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Introduction

- Robotic surgery utilization has increased in general surgery, including inguinal hernia repairs
- Adoption is limited by cost, infrastructure requirements, and surgeon learning curve
- Robotics is often concentrated in large, academic, high-resource centers
- This concentration may contribute to disparities in access to robotic surgery

Objective

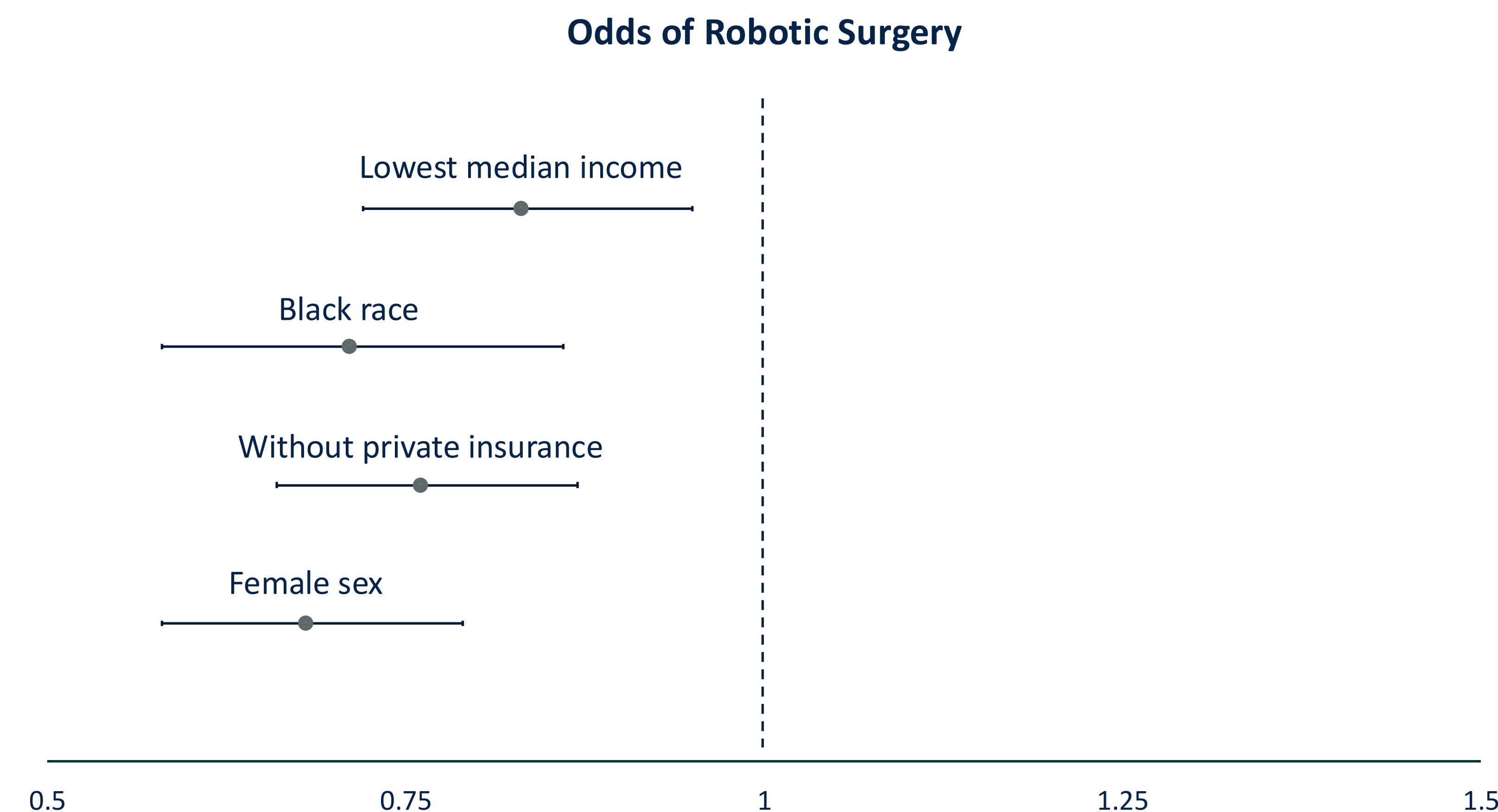
Evaluate socioeconomic and racial disparities in access to robotic groin hernia repair

Methods

- Healthcare Cost and Utilization Project National Inpatient Sample, 2019 and 2021
- Adults ≥ 18 years undergoing inguinal or femoral hernia repair
- Utilization of robotic-assisted repair vs non-robotic repair (laparoscopic or open)
- LASSO variable selection followed by weighted multivariable logistic regression adjusting for patient, socioeconomic, and hospital characteristics

Results

- Out of 10,913 patients, 14.2% underwent robotic surgery
- Utilization of the robot for inguinal hernia repair increased from 2019 to 2021:
 - 12.7% $\rightarrow$ 15.9%
- Robotic surgery was more frequent in elective surgery
 - 32.5% vs. 9%



Results continued

- Robotic surgery was less likely to be used in:
 - Patients with the lowest median household income
 - Patients without private insurance
 - Female patients
 - Black patients

Conclusions

- The percent of groin hernia surgeries performed robotically increased from 2019 to 2021
- Significant racial and socioeconomic disparities exist in access
- Lower income, non-private insurance, female sex, and black race were associated with decreased robotic utilization
- Ensuring equitable access to advanced surgical technologies will be increasingly important as robotic platforms expand

References

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