

Racial Disparities in Unplanned Admissions Post-Ambulatory Surgery

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1



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2

Introduction



- Surgical care: inpatient → ambulatory (no hospital stay)¹
 - Preference due to lower cost & efficiency²
- Increasing use for sicker patients & more complicated procedures
- Unplanned admission after ambulatory surgery negates advantages³
- Study objective: Explore relationship of race & unplanned admission post-ambulatory surgery

3

Methods



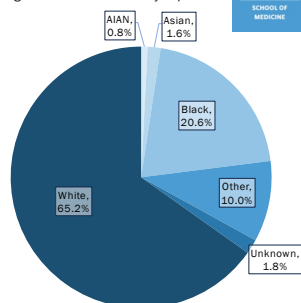
- Retrospective analysis of ambulatory surgeries served by UNC Anesthesiology from July 2014 - June 2023
- UNC IRB #16-0950
- Data Source: NC TraCS Institute
- Age, race, length of stay (LOS), ASA status
- Unplanned admission = LOS ≥ 1 day
- Same-day discharge = LOS 0 days
- Stratified by ASA status & Age group by decade (0-10, 11-20)
- χ^2 test & post hoc analysis were used to identify significant differences ($p < 0.05$, RStudio)
- Multiple tests were corrected with Bonferroni correction

4

Results

- 335,815 cases
- 4.11% unanticipated admission rate
- Other = Other & >1 race reported
- Unknown = prefer not to answer & blank
- AIAN = American Indian/Alaskan Native

Figure 1. Overall Ambulatory Population



5

Results



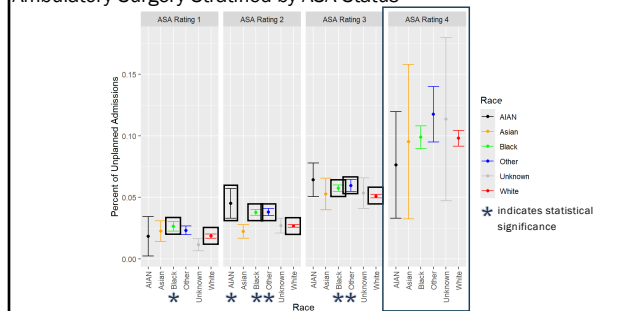
- Overall association between race & unplanned admission was statistically significant ($p < 0.001$)

Table 1. Race & Unplanned Admission

Race	Unplanned Admission Rate	Unplanned Admissions/Total	Adjusted p-value from post-hoc
AIAN	5.3%	149/2,821	<0.001
Asian	3.0%	159/5,251	0.009
Black	5.0%	3,429/69,192	<0.001
Other	4.2%	1,733/41,619	0.003
Unknown	2.9%	173/5,933	0.001
White	3.9%	8,456/219,071	reference

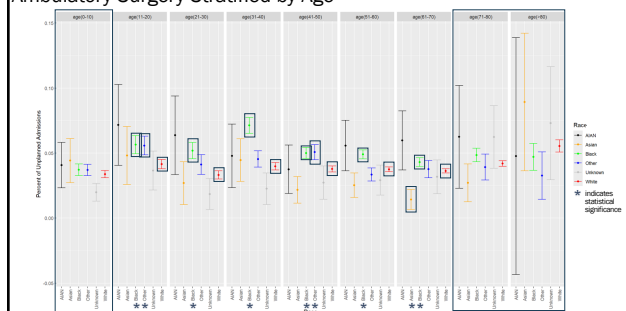
6

Figure 2. Association of Race with Unplanned Admission Post-Ambulatory Surgery Stratified by ASA Status



7

Figure 3. Association of Race with Unplanned Admission Post-Ambulatory Surgery Stratified by Age



8

Discussion

- Reasons for unplanned admission after ambulatory surgery are multifactorial^{2,4}
 - Social: lack of escort or home support
 - Organizational: surgery ending after 3pm, unscheduled procedure
 - Surgical: surgery length & type, unanticipated surgical complexity, post-operative pain, fever, bleeding
 - Anesthetic: dizziness, post-operative nausea & vomiting, inadequate level of consciousness, urinary retention
 - Medical: age, comorbidities, moderate to major illness severity
- These challenges may disproportionately affect different population groups
- Lack of PTO may push patients to pursue outpatient procedures^{5,6}
- Differences in access to culturally competent care, variations in reimbursement, & physician bias may also play a role

9

Conclusion

- Ambulatory surgery is growing due to its cost-benefit & efficiency
- Minorities, especially Black patients face disadvantages
 - Even after stratifying for ASA status & age
- Future studies
 - Include more study centers & variables
 - Focus on identifying specific causes to target preventative interventions

10

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11

Thank you!

Questions?

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12