Disparities Despite Discourse: Racial Disparities in Pediatric MBS

Zachary Ballinger MD[1], Hayley Reddington MD[1], Jonathan Green MD MSCI[2], Muriel Cleary MD[2], Kaitlyn Wong MD[2], Nicole Cherng MD[1], Jeremy Aidlen MD[1]

1. *Department of Surgery, UMass Chan Medical School, Worcester MA*
2. *Division of Pediatric Surgery, UMass Chan Medical School, Worcester MA*

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Background

Obesity in adolescence leads to more severe comorbidities in adulthood and decreases overall lifespan. Adolescent obesity disproportionately affects males and minorities. Despite the safety and efficacy of Metabolic and Bariatric Surgery (MBS) and the nearly 5 million children eligible for MBS in the US, utilization remains low with significant socioeconomic disparities. Historically, the patient most likely to receive MBS has been white and female with private insurance.

The American Academy of Pediatrics (AAP), American Society of Metabolic and Bariatric Surgery (ASMBS) and other societies have expanded guidelines and outreach to address the complex web of factors that contribute to this socioeconomic disparity.

Our study aimed to evaluate the impact of these guidelines through an examination of the demographics and outcomes of those undergoing MBS.

Methods

A Retrospective review of patients < 18 years old in the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) database from 2017-2022. Summary chi squared and ANOVA testing was used to compare variables across years, and multivariate logistic regressions were used to evaluate outcomes.

Key References:

- Shapiro WL, Kunani P, Sidell MA, Li X, Anderson SR, Slezak JM, et al. Prevalence of Adolescents Meeting Criteria for Metabolic and Bariatric Surgery. Pediatrics. 2024 Mar 1;153(3):e2023063916.
- Hampl SE, Hassink SG, Skinner AC, Armstrong SC, Barlow SE, Bolling CF, et al. Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents With Obesity. Pediatrics. 2023 Jan 9;151(2):e2022060640
- Pratt JSA, Browne A, Browne NT, Bruzoni M, Cohen MJ, Desai A, et al. ASMBS pediatric metabolic and bariatric surgery guidelines, 2018. Surg Obes Relat Dis. 2018 Jul 1;14(7):882–901

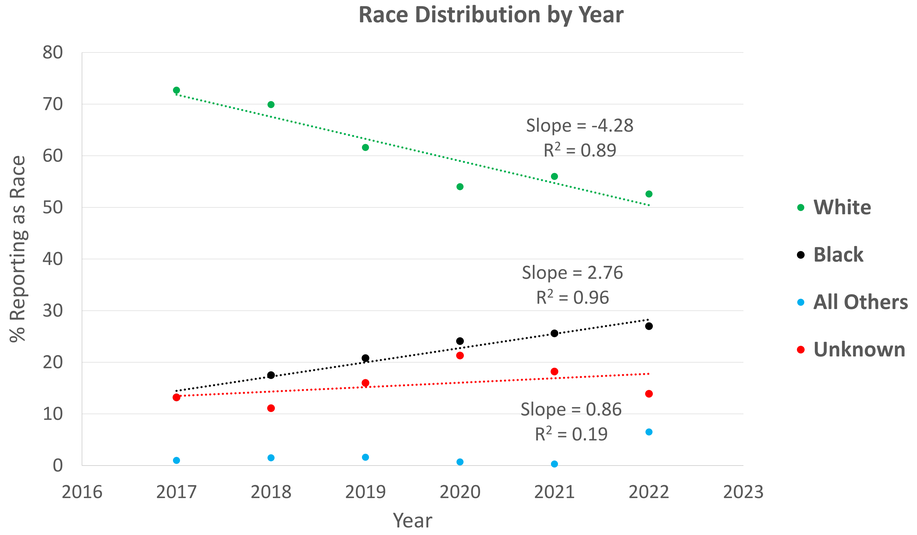
Results:

Pre-Operative Comorbidities:

- Black patients had significantly higher rates of diabetes (23% vs 16%) & hypertension (10% vs 7%) than the overall cohort.
- Hispanic patients had higher rates of hypertension (9% vs 7%) compared to Non-Hispanic patients
- Non-Hispanic patients had higher rates of GERD (10% vs 7%) than Hispanic patients

Surgical Details:

- White patients had higher rates of gastric bypass procedures (10% vs 5%) compared to the overall cohort.
- Black patients had the highest rate of robotic surgery (19% vs 14% in White patients) while Asian, Pacific Islander, Alaska and Hawaii native patients underwent exclusively laparoscopic procedures.
- Hispanic patients had lower rates of robotic surgery (12% vs 17%)



Results (continued):

Race	N	BMI	95% CI	P-Value
White	1301	46.57	46.13 - 47.02	<0.001
Black or African American	461	**50.08**	49.29 - 50.86	
Asian / Pacific Islander	44	46.09	43.66 - 48.52	
Unknown	331	46.52	45.71 - 47.33	
Ethnicity				
Hispanic/Latino	760	46.62	46.04 - 47.21	0.004
Not Hispanic/Latino	1385	47.69	47.25 - 48.12	

Outcomes:

- There were no mortalities and a low overall complication rate (2.9%).
- Dehydration accounted for 66% of all complications.
- Rates of readmission and reoperation rates were low (0.4% & 1%, respectively).
- There was no difference in any outcome by age or race, and complication rates did not vary significantly annually.

Multivariable Regressions:

The odds of any post-operative complication increased when a patient had pre-existing comorbidities (OR 1.7), and odds of an ED visit increased if female or black (OR 1.9, 2.0, respectively)

Conclusions:

Despite outreach efforts and policy changes, significant disparities in access to MBS persist. The majority of MBS is still performed for white, female patients despite Black and Hispanic patients having a higher rate of comorbidities. This suggests decreased or delayed MBS access in these key groups. The ratio of cases performed on white patients is, however, moving closer to match the population with obesity. Complications are equivalent across all racial and ethnic groups.