



The Path Not Taken: The Influence of Referral Type and Sociodemographic Factors on Receipt of Bariatric Surgery



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BACKGROUND

- The path to bariatric surgery is often long and complex, requiring significant individual motivation, starting with **the referral process**.
- Obesity often **more heavily impacts medically underserved communities** who struggle with access to the healthcare system and are often **less likely to be referred for bariatric surgical care**.
- How entry into the bariatric surgery process, **either through self-referral or physician referral**, as well as how socioeconomic status impacts **completion of surgery** is not well understood.

OBJECTIVES

- describe how **patient sociodemographic characteristics** influence **referral type** and 2) understand how **referral type** impacts **receipt of surgery**.

METHODS

A **retrospective study** was performed using institutional medical data from a large hospital system between the years **2017-2022**. All **adult patients** with a primary care physician in the system **who met criteria for bariatric surgery** based on the 1991 National Institutes of Health (NIH) statement were included.

Referral Designation:

- Physician Referral:** Any patient with a **documentation of a referral** for bariatric surgery
- Self Referral:** Any patient with bariatric surgery appointment **without referral OR** a referral from a **bariatric surgeon**

Primary Outcome: Completion of bariatric surgery

Analysis 1: Multivariable logistic regression model to determine characteristics associated with physician and self referral, *respectively*.

Analysis 2: Multivariable Logistic Regression model assessing characteristics which increased the likelihood of completion of bariatric surgery.

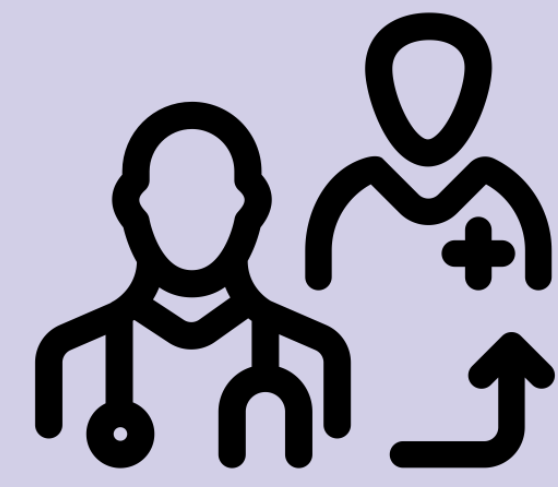
Patients underwent **1:1 Propensity Score Matching** based on age, race, comorbidities, BMI.

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CONCLUSION

Underserved groups, **including Hispanic, Medicaid and patients from the most socially vulnerable zip codes**, are far more likely to have to **self-refer**, and less likely overall to **receive surgery**. However, those who **do self-refer** are more likely to **proceed to surgery**, demonstrating the barrier to surgery is likely **one of access rather than motivation**.



Physician referral more likely for affluent patients



Socioeconomically disadvantaged groups more likely to self refer



Self referred more likely to complete surgery

Ensuring **appropriate referral networks and resources** are in place to support patients from **the most medically underserved backgrounds** is key to treating obesity and obesity related disease.

RESULTS

Figure 1. Study cohort.

133, 882 patients eligible for bariatric surgery with PCP contact from 2017-2022

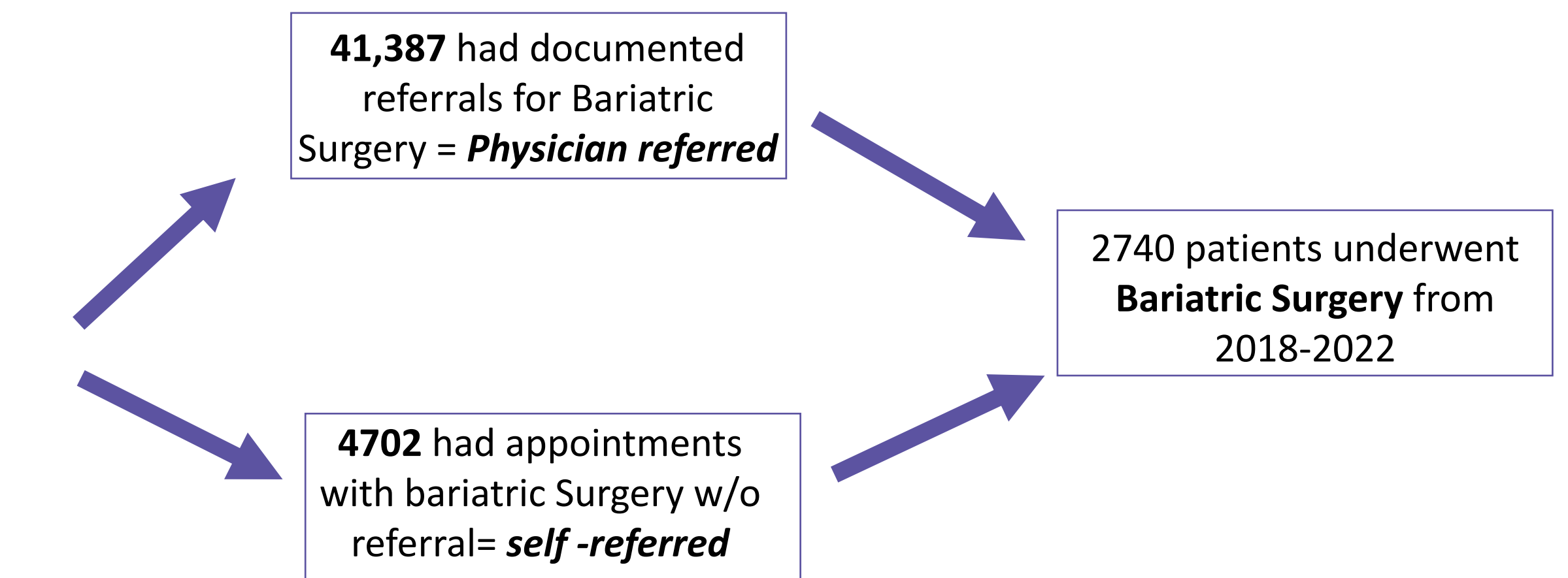


Table 1. Multivariable logistic regression models assessing characteristics associated with completion of bariatric surgery.

Characteristic		Odds Ratio (95 % CI)
Referral Type	Physician Referred	1
	Self Referred	1.22 [1.10, 1.35]**
Gender	Female	1
	Male	0.70 [0.61, 0.80]**
Age	18-39	1
	40-49	1.06 [0.93, 1.21]
	50-59	0.84 [0.72, 0.95]*
	60-69	0.47 [0.38, 0.57]**
	70 or older	0.32 [0.21, 0.48]**
Race/Ethnicity	NH White	1
	NH Black	1.21 [1.04, 1.41]*
	Hispanic	1.29 [1.13, 1.47]*
	Asian	0.78 [0.41, 1.51]
	AI/AN/NH/PI	1.69 [1.16, 3.12]*
	Other/Unk	1.07 [0.83, 1.40]
SVI Quartile	Q1	1
	Q2	1.29 [1.11, 1.50]*
	Q3	1.47 [1.27, 1.72]**
	Q4	1.80 [1.53, 2.11]**
Insurance Type	Private	1
	Medicare	0.45 [0.36, 0.56]**
	Medicaid	0.52 [0.45, 0.59]**

CI= Confidence Interval, NHW= Non-Hispanic White, NHB=Non-Hispanic Black, AN/AI/PI/NH=Alaskan Native, American Indian, Pacific Islander, Native Hawaiian
*p<0.05, **p<0.01

Figure 1. Characteristics of Physician and Self Referred Patients

