

The Visit Effect: How Patient Engagement Drives Bariatric Surgery Access

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Introduction

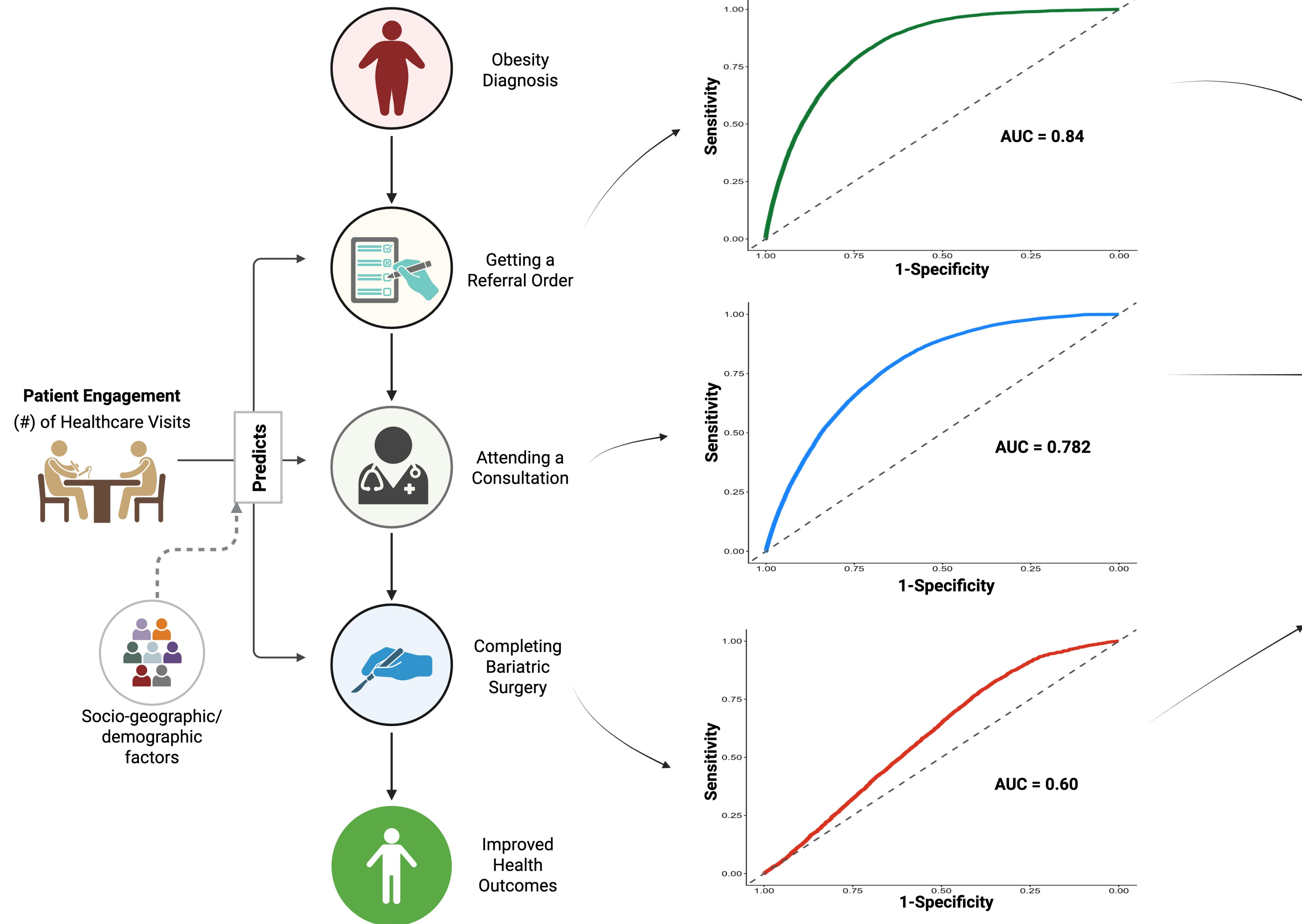
Bariatric surgery is an effective, long-term treatment for obesity, but people interested and in need of the intervention may not end up receiving it. This study investigates how “Patient Engagement (PE)”, a term for a person’s encounters with the healthcare system, is associated with increased awareness of obesity, and therefore, utilization of bariatric surgery.

Hypothesis:

↑PE (# of previous visits) = ↑BS Initiation & completion

Methods

- **Outcome variables:** Key stages of bariatric surgery treatment Getting a Referral Order, Attending a Consultation, and Undergoing Bariatric Surgery.
- **Test groups:** Patients *who have* and *have not* progressed through any of those stages.
- **Analysis:** Categorical and continuous variables were summarized using descriptive statistics. Differences in event occurrence among the groups were analyzed using standardized mean differences. Sociodemographic and geographic data and clinical characteristics (age, BMI, sex, race, ethnicity, and Area Deprivation Index state ranks) were collected and compared between test groups; changes in the predictive value of PE based on sociodemographic and geographic factors were evaluated.



Results

Referral Order Receipt

PE strongly predicted order receipt (cross-validated AUC = 0.842, 95% CI: 0.839-0.846). The optimal cutoff of ≥ 21 previous visits yielded 83.0% sensitivity (95% CI: 82.1%-83.8%) and 70.4% specificity (95% CI: 70.3%-70.5%).

Consultation Attendance

PE moderately predicted consultation attendance (AUC = 0.782, 95% CI: 0.779-0.785). The optimal cutoff of ≥ 15 previous visits yielded 77.7% sensitivity (95% CI: 77.2%-78.3%) and 65.1% specificity (95% CI: 65.0%-65.3%).

Surgery Completion

PE was a poor predictor of surgery completion (AUC = 0.600, 95% CI: 0.591-0.609). Despite an optimal cutoff of ≥ 20 previous visits yielding high sensitivity (84.1%, 95% CI: 83.3%-85.0%), specificity was very poor (34.6%, 95% CI: 33.9%-35.3%).

Sociodemographic Differences

Standardized mean differences indicate any differences in demographics between groups are small and not likely to be meaningful. Demographics also did not improve predictive accuracy beyond PE.

Conclusion

- Patient Engagement is a strong predictor of **bariatric surgery referral and consultation completion** but not a meaningful predictor of **bariatric surgery completion**.
- Patient Engagement reveals **potential targets for interventions that remove obstacles to bariatric surgery completion, specifically at the initial order and consultation stages** rather than at the surgical decision point.