

From OR to ER: Predicting Emergency Department Visits After Implant-Based Breast Reconstruction

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Introduction

- Implant-based breast reconstruction (IBBR) is the most popular reconstructive approach for women following mastectomy¹
- Complications after mastectomy and breast reconstruction, leading to unplanned ED visits². However, overuse of the ED can result in strain on healthcare resources³
- Risk of ED use following IBBR has not yet been fully characterized

Objective: Determine the rate, characteristics, and risk-factors for **returns to the ED** within **30 days** after **IBBR**

Methods

Design: We retrospectively reviewed all patients who underwent immediate or delayed implant-based breast reconstruction at a single institution from 2017-2023. Direct-to-implant and two-staged expander-implant reconstructions were included.

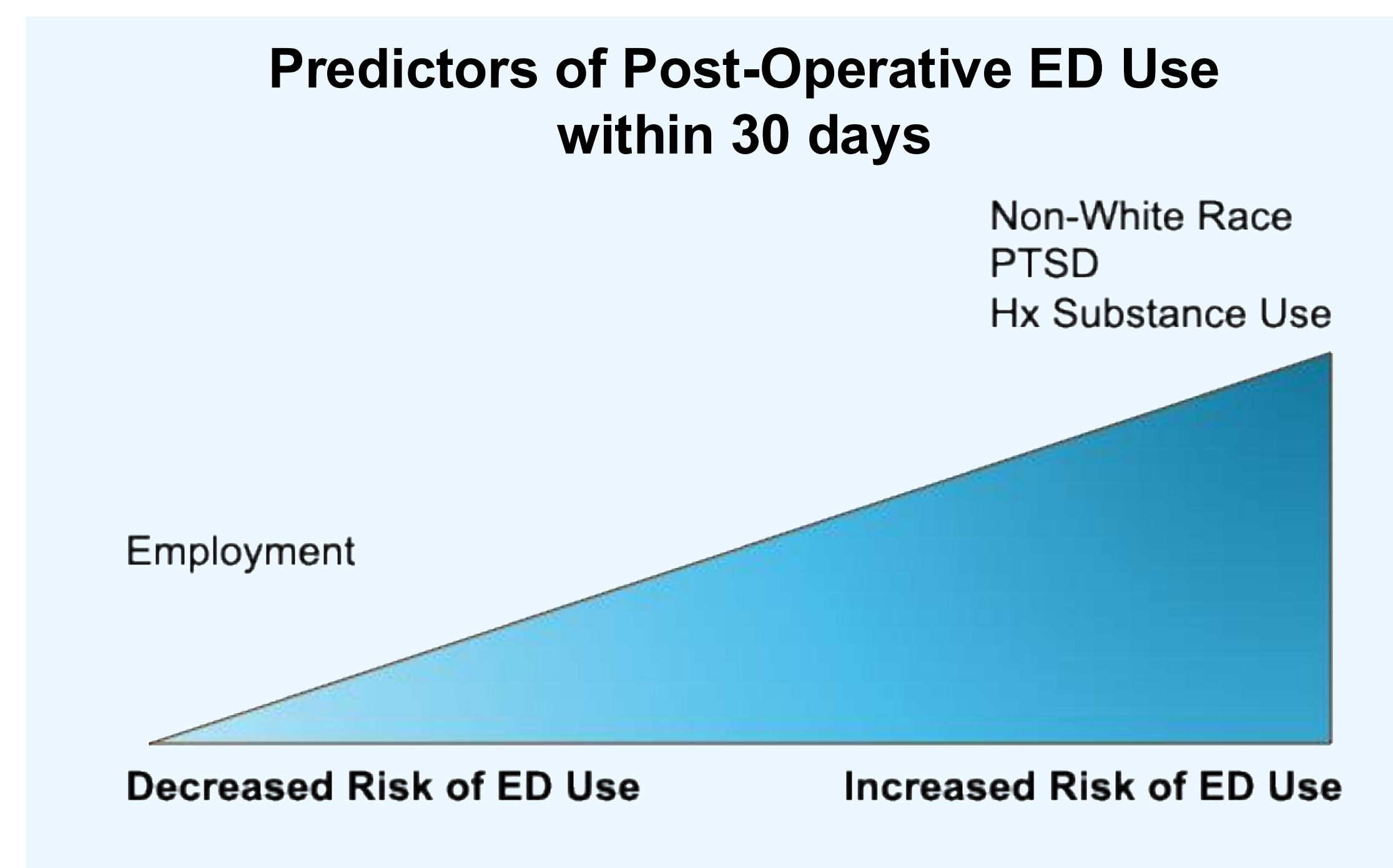
Primary outcomes: Post-operative ED use within 30 days of IBBR.

Data: Patient demographics, co-morbidities, operative factors, and characteristics surrounding ED visits were collected.

Analysis: Logistic regressions assessed sociodemographic, co-morbidity, and operative characteristics as predictors of ED use.

Results

730 patients underwent IBBR and **42 (5.75%)** presented to the ED within 30 days post-operatively



Increased risk of ED use:

- Non-White Race (OR 3.07, p=0.001)
- PTSD (OR 4.14, p=0.014)
- History of substance use (OR 2.26, p=0.027)

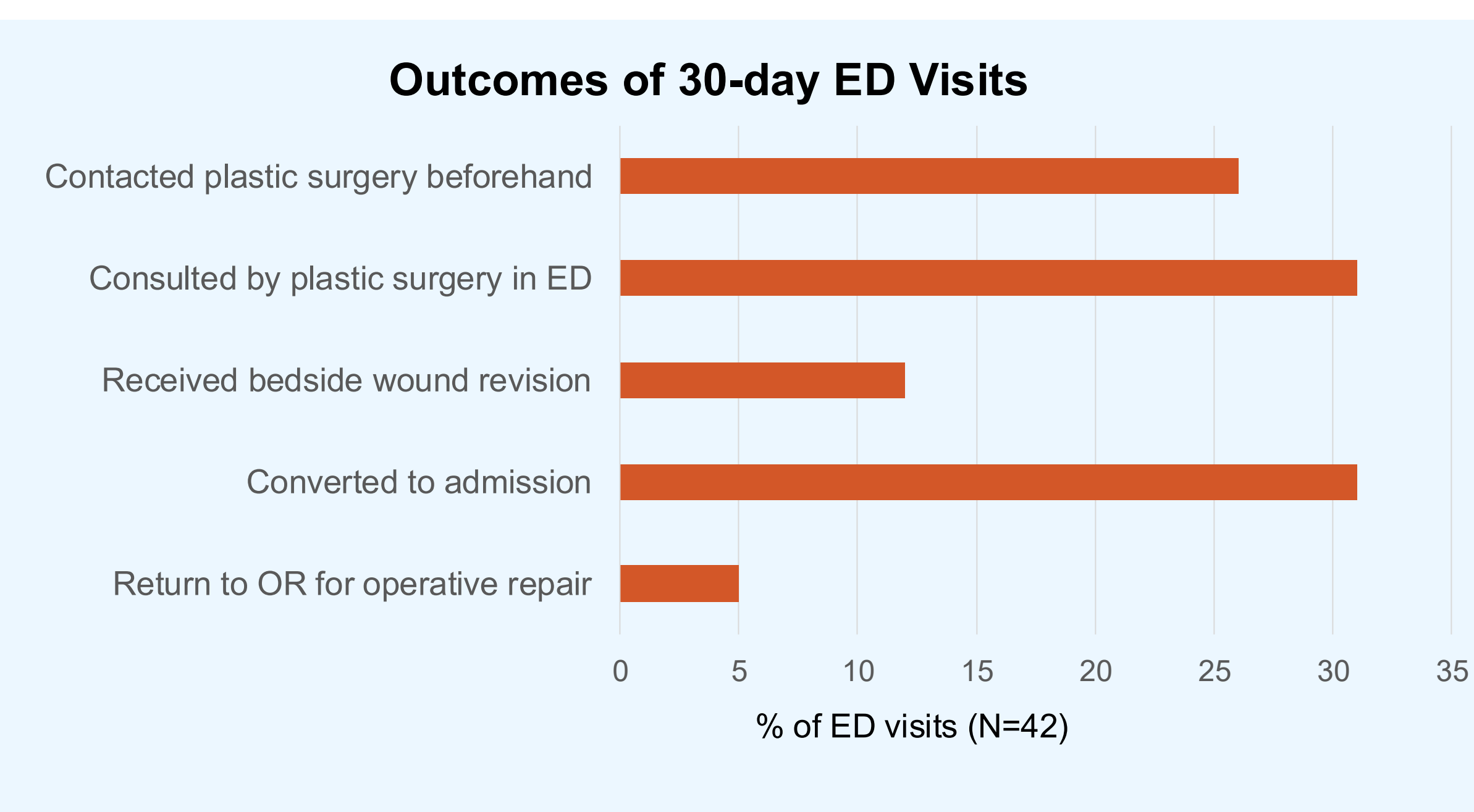
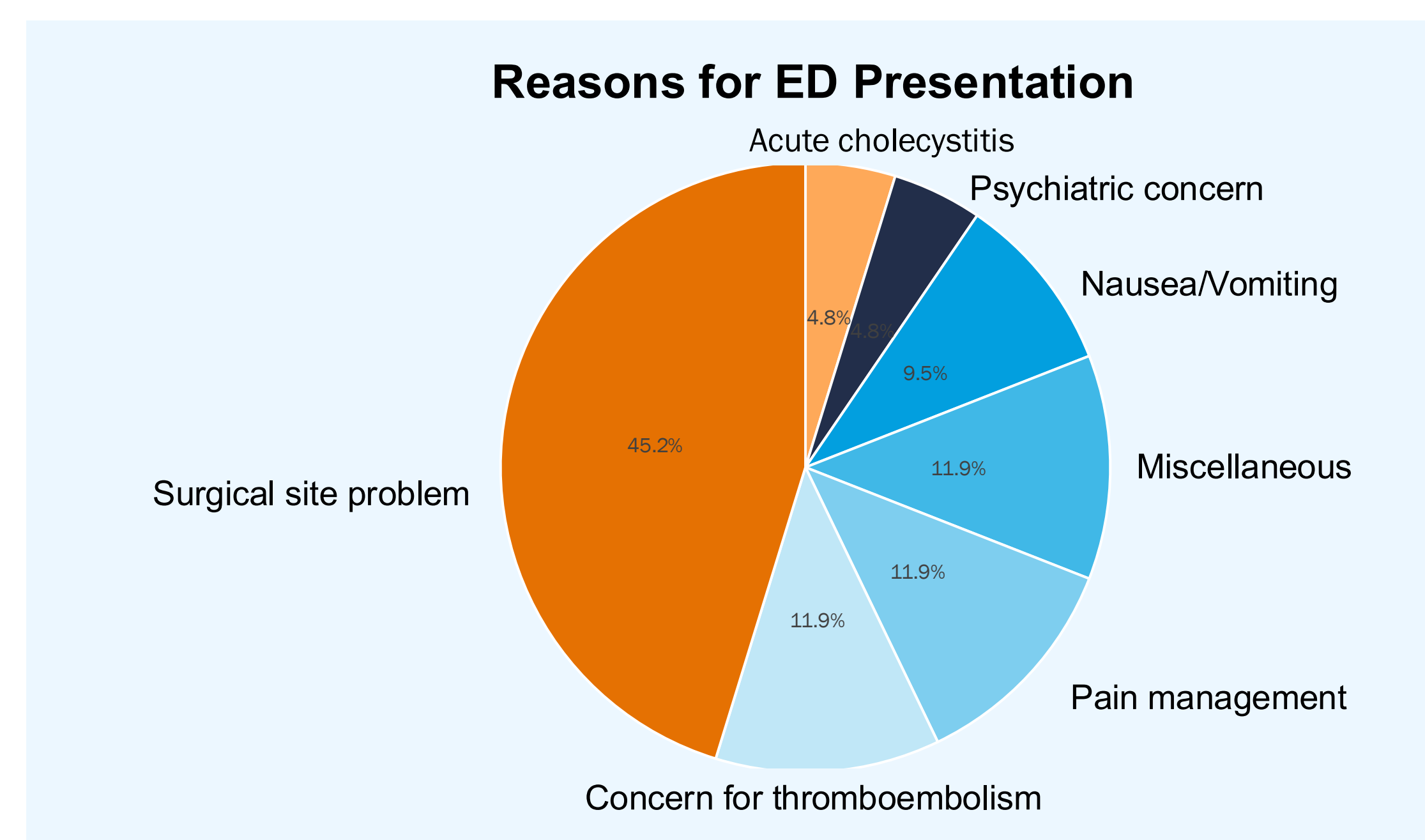
Decreased risk of ED use:

- Full / part-time employment (OR 0.51, p=0.043)

No significant association:

- Age
- Insurance status
- Medical co-morbidities including HTN, DM, OSA, and other
- Oncologic and operative factors

	Patients with an ED visit (n=42)	All other patients (n=688)	p-value
<i>Timing of reconstruction after mastectomy</i>			0.005
Immediate	18 (42.9%)	447 (65.0%)	
Delayed	24 (57.1%)	241 (35.0%)	
<i>Device of reconstruction</i>			0.490
Tissue expander	11 (26.2%)	234 (34.0%)	
Implant	31 (73.8%)	454 (66.0%)	
<i>Plane of reconstruction</i>			0.847
Pre-pectoral	34 (81.0%)	537 (78.1%)	
Sub-pectoral	8 (19.0%)	151 (21.9%)	



Conclusion

- Vulnerable patient populations are at higher risk of ED-use following IBBR, including patients of non-white race and psychiatric comorbidity like PTSD or substance use
- Employment was conversely a protective factor against post-operative ED-use
- Surgical site problems were the most common concern, but there were low rates of contact with surgical teams beforehand
- Few ED visits ultimately converted to an admission, reflecting that many were likely preventable or could have been addressed in ambulatory settings

Clinical Relevance

- Many ED visits following IBBR may be preventable, with concerns that may be safely addressed in outpatient clinics
- Strategies in post-operative counseling, patient risk-profiling, and communication with surgical teams can help reduce avoidable visits and relieve ED burden

References

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