

Evaluating Differences in Enhanced Recovery after Surgery (ERAS) Implementation and Its Effects on Opioid Use by Race in Georgia and South Carolina

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INTRODUCTION

- Postoperative opioid overuse remains a major contributor to the U.S. opioid crisis.
- Enhanced Recovery After Surgery (ERAS) protocols emphasize multimodal, opioid-sparing analgesia to improve outcomes.
- Gaps remain: Implementation is inconsistent, and racial differences in effectiveness are underexplored.
- Objective: Evaluate whether preoperative acetaminophen and gabapentin reduce opioid use and assess potential differences across racial groups.

METHODS

- Design: Retrospective chart review (July 2019–June 2020).
- Population: 160 patients undergoing major gynecologic oncology surgery.
- Data collected: Demographics, surgical approach, ERAS adherence (acetaminophen, gabapentin, NSAIDs, transversus abdominis plane [TAP] block), inpatient and post-discharge opioid use (standardized to oral morphine equivalents [OME]).
- Analysis: Multivariable general linear models for opioid use (inpatient, discharge, 30-day) and subgroup analysis by race.

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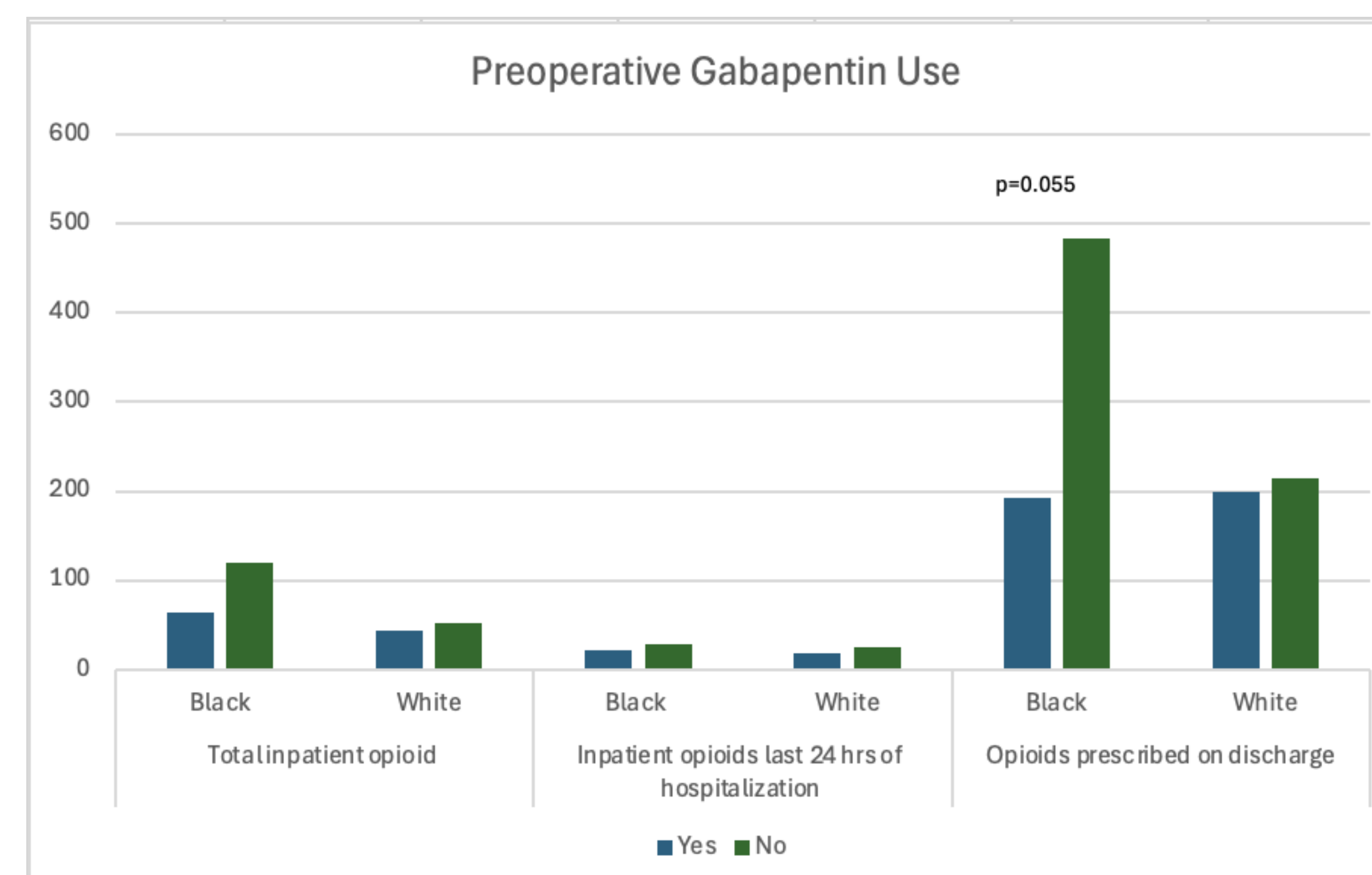
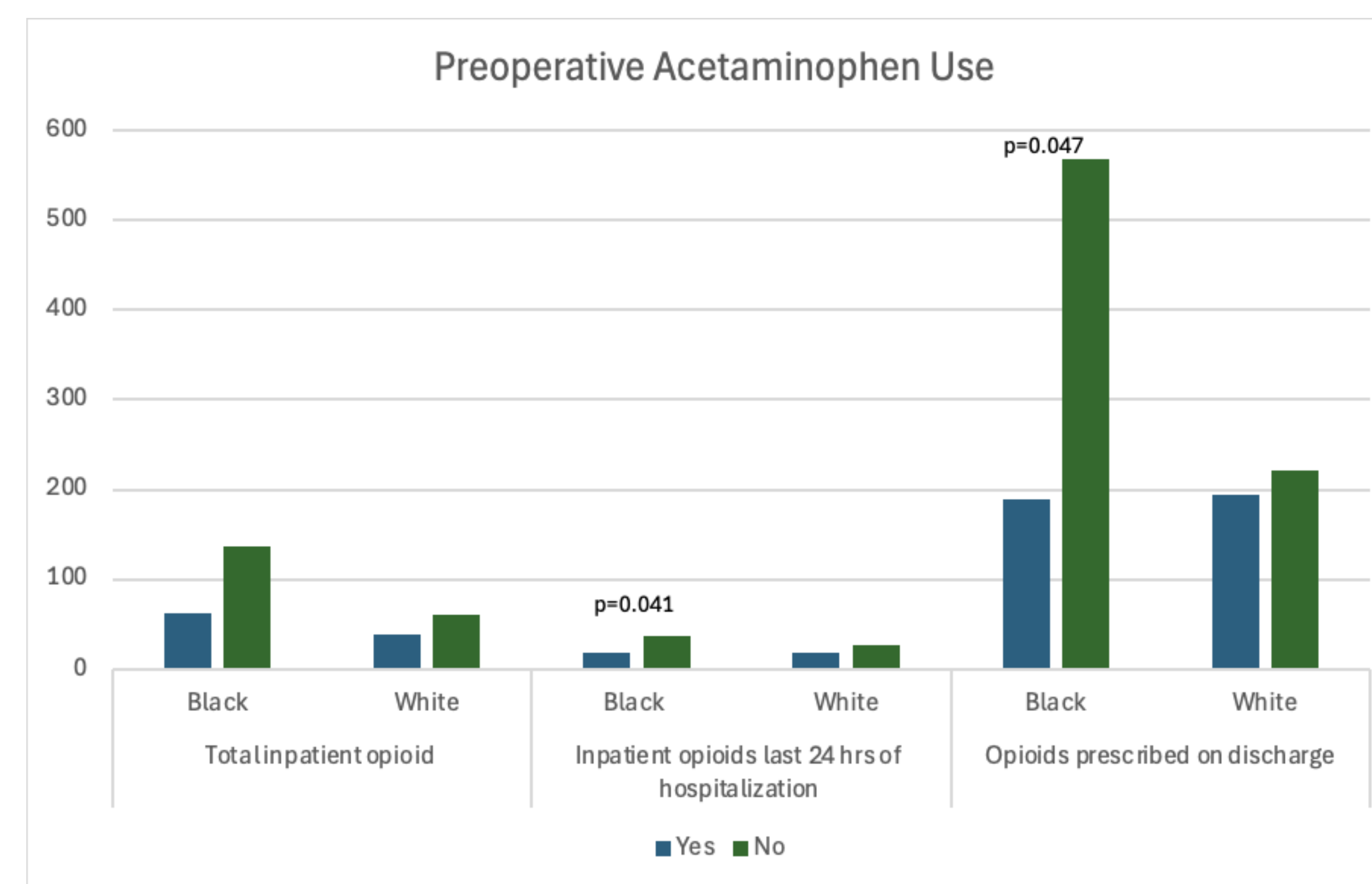
RESULTS

1. Opioid use by compliance with ERAS components

	Preoperative Gabapentin use		
	Yes (n=84)	No (n=76)	p
Total inpatient opioids	49.5	82	0.085
Inpatient opioids per 24 hrs	19.1	20.4	0.7
Inpatient opioids last 24 hrs of hospitalization	19.1	27.2	0.11
Opioids prescribed on discharge	198 (n=77)*	335 (n=72)*	0.055
Opioids prescribed within 30 days of discharge	287 (n=77)*	550 (n=72)*	0.0099

	Preoperative Acetaminophen Use		
	Yes (n=93)	No (n=67)	p
Total inpatient opioids	47.6	89.1	0.046
Inpatient opioids per 24 hrs	18.7	21.2	0.49
Inpatient opioids last 24 hrs of hospitalization	17.6	30.3	0.021
Opioids prescribed on discharge	193 (n=87)*	365 (n=62)*	0.038
Opioids prescribed within 30 days of discharge	268 (n=87)*	619 (n=62)*	0.0027

3. Comparison of opioid use between white and black patients accounting for ERAS component compliance



2. ERAS Components and Length of Stay (LOS)

	Yes	No	p
Preoperative gabapentin	3.29 (n=84)	5.16 (n=76)	0.002
Preoperative NSAID	1.67 (n=6)	4.27 (n=154)	0.001
Preoperative acetaminophen	3.46 (n=93)	5.16 (n=67)	0.007

CONCLUSIONS

- Preoperative acetaminophen consistently reduces perioperative opioid needs and shortens LOS.
- Gabapentin is associated with reduced long-term opioid use after discharge and enhanced recovery, as demonstrated by shorter hospital stays.
- Our findings suggest that Black patients experienced greater reductions in postoperative opioid use from ERAS components compared to their white counterparts.

CLINICAL IMPLICATIONS

- Practical: Low-cost interventions (acetaminophen, gabapentin) can meaningfully reduce opioid burden.
- Equity: Standardizing ERAS protocols may reduce racial disparities in postoperative care.
- Future studies: Larger, prospective studies needed to confirm differential effectiveness by race.

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