



INTRODUCTION

- Legal Status:** As of January 2025, 39 U.S. states have legalized medical cannabis and 24 have legalized recreational cannabis¹
- Analgesic Properties:**
 - THC:** Modulates nociceptive processing via **CB1 and CB2 receptors**²
 - CBD:** Acts on **serotonin 1A, TRPV1, and adenosine A2A receptors**³
- Study Aim**
 - Evaluate the impact of **perioperative cannabis use** on **postoperative pain and opioid consumption** in patients undergoing **mastectomy with immediate bilateral alloplastic reconstruction**.

METHODS

- Study Design:** Retrospective cohort study at a single tertiary care institution
- Inclusion:** Female patients undergoing **bilateral, immediate TE-based reconstruction** (Jan 2021–Jan 2025)
- Exclusion:** Opioid use disorder or concurrent procedures
- Data Collected:**
 - Demographics, cannabis use, operative details
 - Postoperative pain scores
 - Opioid use (converted to MME)
- Analysis:**
 - t-tests** (continuous), **Chi-squared tests** (categorical)
 - Backward stepwise multivariable regression** for opioid use predictors

CONCLUSION

- Despite reported analgesic effects, **cannabis use was associated with increased postoperative pain and opioid use**
- Independent risk factor** for higher opioid requirements (+16.59 MME inpatient, +39.44 MME refill)
 - Other risk factors: **active smoking, younger age, larger breast cup size, and therapeutic mastectomy**
- Findings highlight the need for **tailored perioperative pain management strategies in cannabis users**

REFERENCES

1. State Medical Cannabis Laws. U.S. Centers for Disease and Control. Accessed March 3, 2025.
2. Vuckovic S, Srebro D, Vujovic KS, Vucetic C, Prostran M. Cannabinoids and Pain: New Insights From Old Molecules. *Front Pharmacol*. 2018;9:1259. doi:10.3389/fphar.2018.01259
3. Louis-Gray K, Tupal S, Premkumar LS. TRPV1: A Common Denominator Mediating Antinociceptive and Antiemetic Effects of Cannabinoids. *Int J Mol Sci*. Sep 2

RESULTS

Table 1. Patient and Operative Details

	Cannabis Users (n = 40)	Non-Users (n = 197)	<i>p-value</i>
Demographics			
Age (year)	48.3	47.9	0.86
Weight (kg)	64.6	65.7	0.60
BMI (kg/m²)	24.1	25.0	0.20
ASA Class	2.1	2.1	0.49
Comorbidities			
Diabetes	2.5%	2.5%	1.00
Hypertension	20.0%	10.2%	0.10
Hyperlipidemia	10.0%	17.3%	0.35
Alcohol Use	62.5%	43.2%	0.04*
Active Smoker	20.0%	5.1%	<0.01*
Former Smoker	15.0%	13.2%	0.80
Intraoperative Details			
Breast Cup Size	2.9 (~ C)	3.0 (~ C)	0.81
Prophylactic Mastectomy	10.0%	8.6%	0.76
Nipple Sparing Mastectomy	80.0%	80.2%	1.00
Axillary Biopsy	95.0%	95.4%	1.00
Axillary Dissection	5.0%	8.6%	0.75
Pre-pectoral TE placement	57.5%	59.9%	0.86
Intraoperative Opioids (MME)	45.5	48.2	0.44
Case Length (hour)	2.8	3.0	0.05*

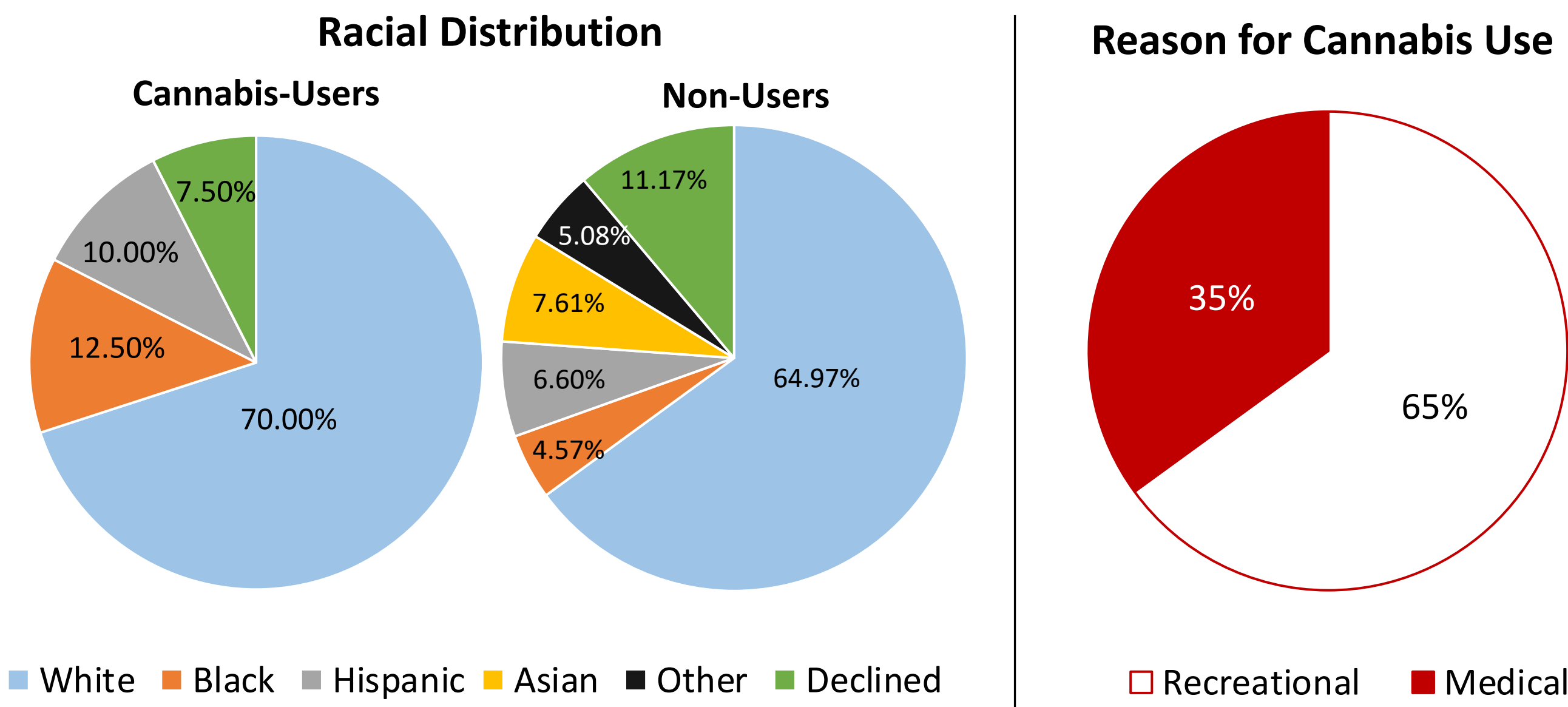


Table 2. Postoperative Outcomes

	Cannabis Users	Non-Users	<i>p-value</i>
Length of Hospitalization (day)	1.33	1.28	0.49
Take-Back	2.50%	0%	0.17
Readmission within 30 Days	0%	5.08%	0.28
Readmission Requiring Reoperation	0%	3.55%	0.60

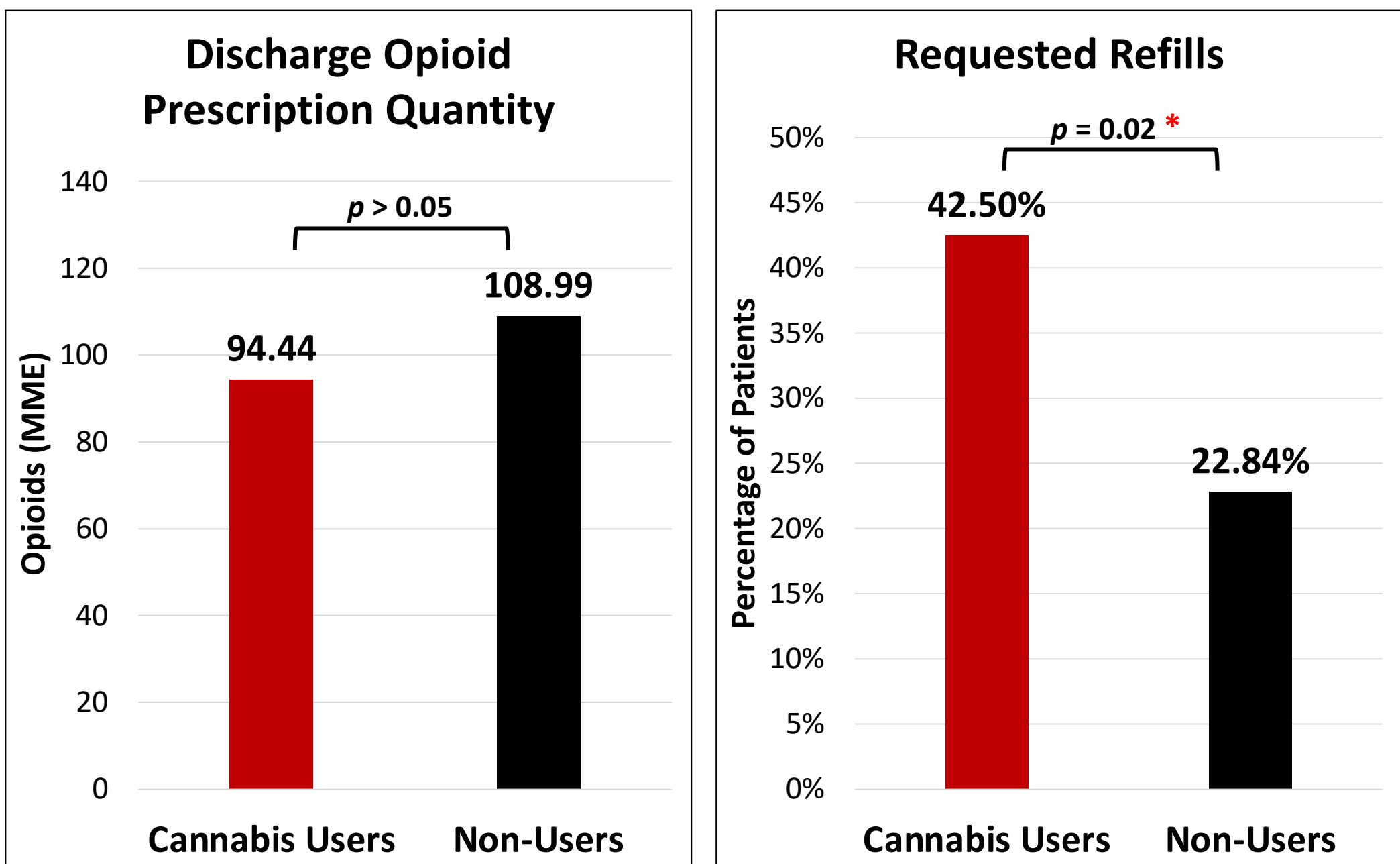
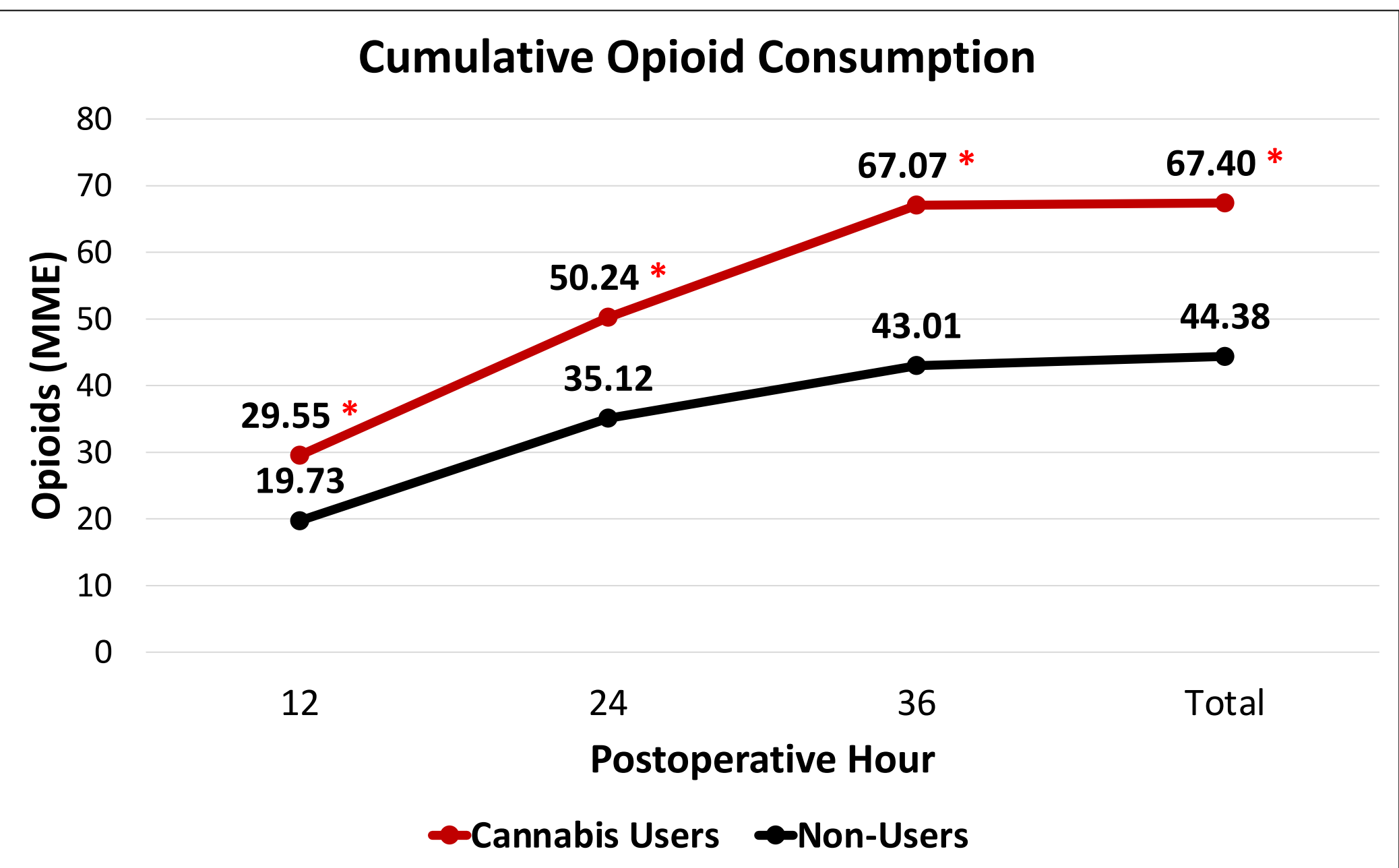
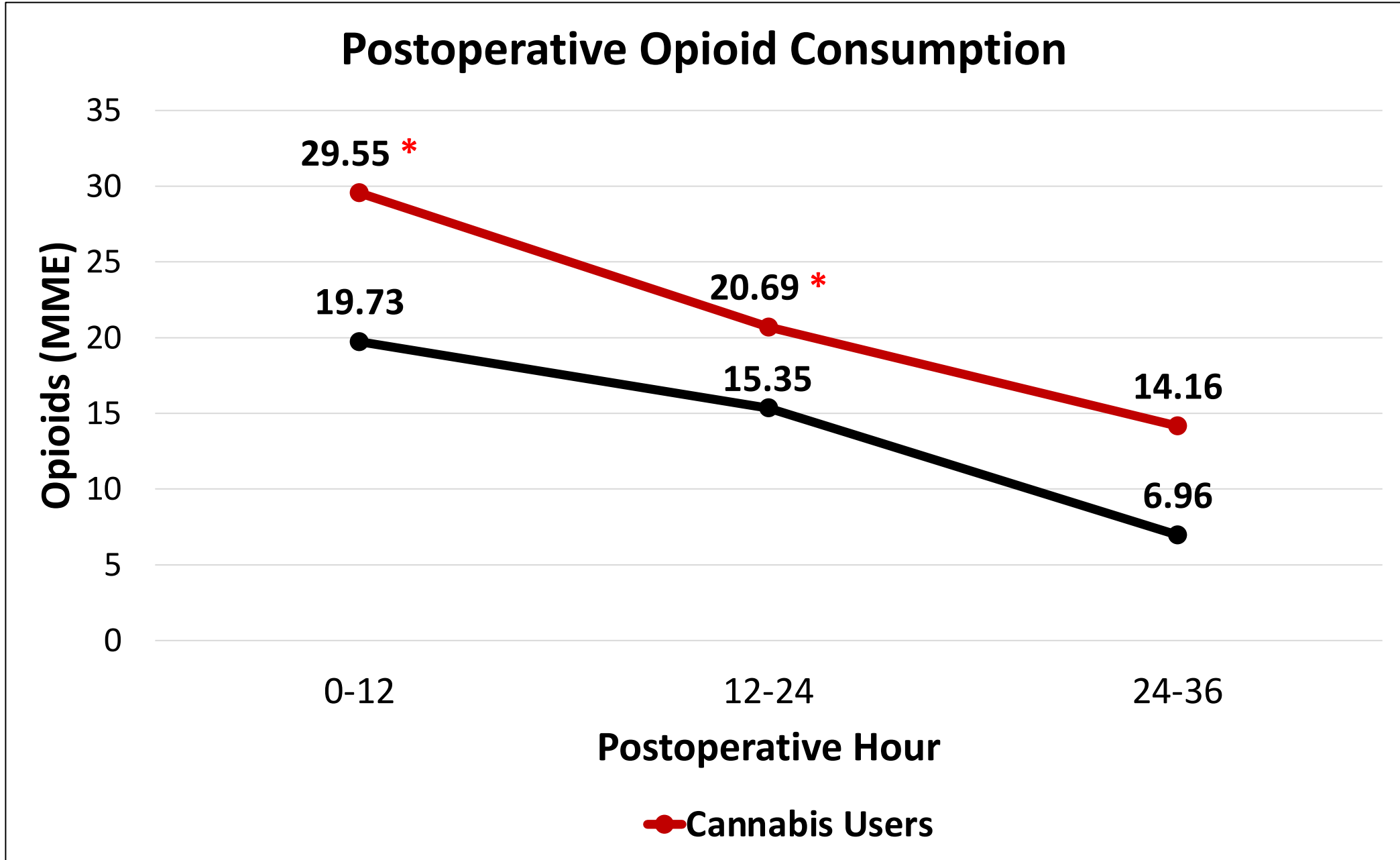
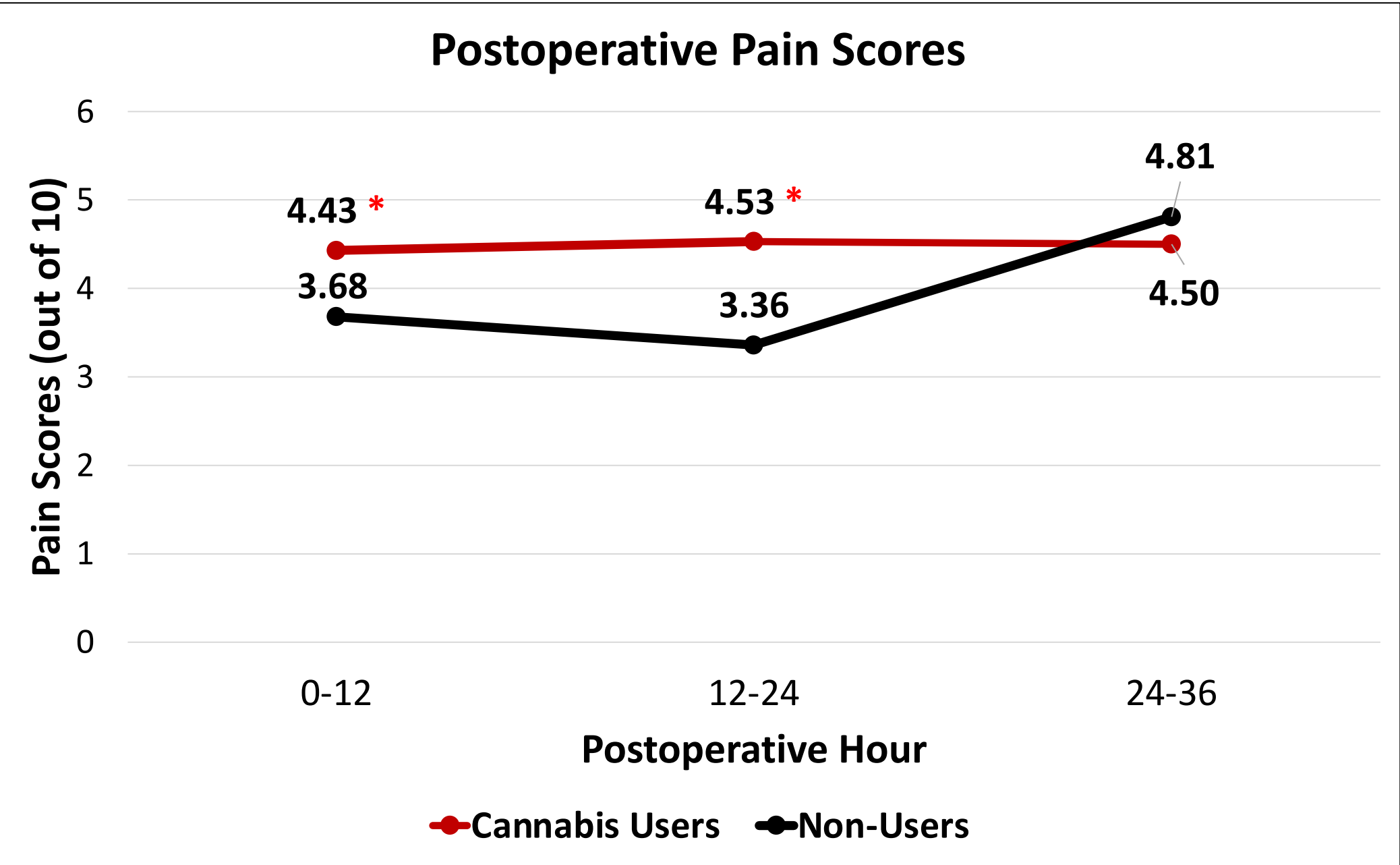


Table 3. Backward Stepwise Selection in Multivariable Linear Regression

Outcome	Variable	Coefficient	95% Confidence Interval	<i>p-value</i>
Inpatient Opioid Use (R² = 0.72)	Active Smoking	18.93	[1.66, 36.20]	0.032*
	Cannabis Use	16.59	[4.34, 28.83]	0.008*
	Age (year)	-0.56	[-0.82, -0.29]	<0.001*
	Length of Hospitalization (hour)	2.53	[2.08, 2.98]	<0.001*
Opioid Refill Quantity (R² = 0.28)	Therapeutic Mastectomy	32.62	[6.83, 58.41]	0.013*
	Cannabis Use	39.44	[19.42, 59.46]	<0.001*
	Age (year)	-0.71	[-1.25, -0.17]	0.010*
	Breast Cup Size	8.25	[3.15, 13.35]	0.002*