

Real-world Evidence on the Association Between the Use of Cannabis and Healthcare Resource Utilization Among Patients With Chronic Post-Traumatic Stress Disorder

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CHRONOS

RWD119

Background

Although studies have shown cannabis use may be associated with a reduction in post-traumatic stress disorder (PTSD) symptoms, more robust and rigorous analyses are required [1]. Utilizing novel real-world data (RWD) sources is one path forward to a better understanding the impact of cannabis use among patients with PTSD.

Objectives

- To describe differences in rates of healthcare resource utilization (HCRU) among chronic PTSD patients who purchase and do not purchase cannabis products.
- Explore moderation by tetrahydrocannabinol (THC) containing products on rates of HCRU among PTSD patients who purchase cannabis products.

Methods

This analysis identified patients with chronic PTSD (ICD-10-CM:F42.12) in CHRONOS, a claims-based RWD source linked to point-of-sale cannabis dispensary data from states with either medical or recreational access. Patients with at least one cannabis purchase within a year of their first PTSD diagnosis (index event) were defined as cannabis users (CUs). CUs were matched 1:N to non-CUs by state of residence. Patients <18, with acute or undefined PTSD, and without 12 months of continuous enrollment before index were excluded. HCRU was defined in the year after index by counting ER, office, outpatient, and inpatient visits (Figure 1). Poisson regression was used to calculate event rate ratios and 95% confidence intervals for each visit type, comparing CUs to non-CUs, with CU's stratified by the number of cannabis purchases in the patient's history [quartile 1 (Q1), Q2, Q3, Q4]. Models allowed for variable follow-up using person-time and adjusted for patient demographics.

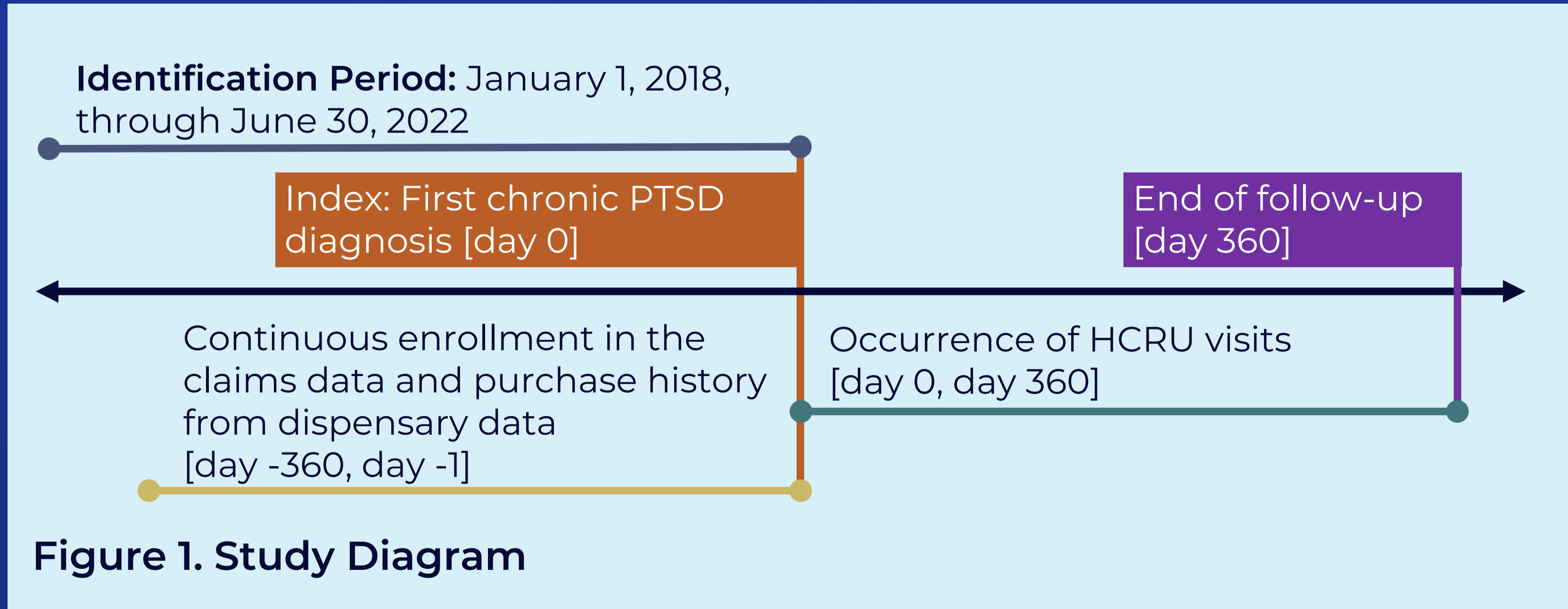


Figure 1. Study Diagram

Results

This analysis identified 61,427 non-CUs and 1,071 CUs with chronic PTSD. Most patients were female with a mean age of 38.7 (SD: 12.9). The mean number of purchases made by CUs, stratified by quartile, were 1.0 (SD: 0.0), 4.4 (SD: 2.0), 18.3 (SD: 7.4), and 133.0 (SD: 87.7), respectively. CUs in Q1 were less likely to purchase products containing THC than patients in Q2, Q3, and Q4 (Table 1).

Compared to patients without a THC-containing product in their history, patients in Q1 with a THC-containing product had higher rates of inpatient and outpatient visits (Figure 2). Compared to non-CUs, CUs in Q3 and Q4 had lower rates of office visits, and CUs in Q1 had lower rates of ER visits (Figure 3).

Table 1. Patient Demographics and Cannabis Use Characteristics

	Non-Cannabis Users		Cannabis Users							
			Q1	Q2	Q3	Q4				
Total (N)	60,356	245	286	270	270					
Age (Mean, SD)	38.7	12.9	38.0	12.8	39.5	12.7	39.1	12.3	38.0	11.5
Female (N, %)	44,096	73.1	175	71.4	176	61.5	180	66.7	154	57.0
Presence of THC (N, %)			46	18.8	224	78.3	211	78.2	199	73.7
No. of Transactions (Mean, SD)			1.0	0.0	4.4	2.0	18.3	7.4	133.0	87.7

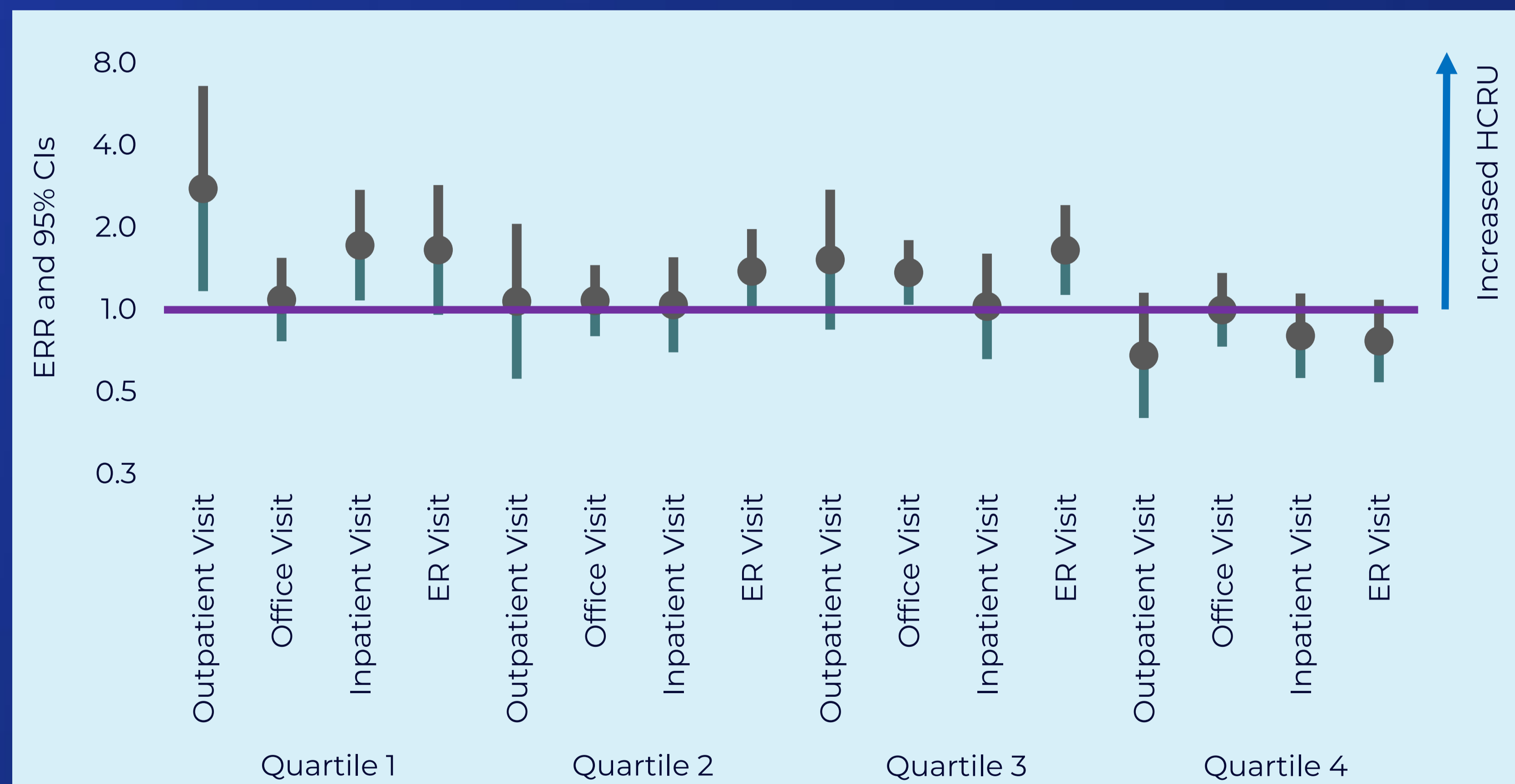


Figure 2. Differences in HCRU Between CUs with and without a History of THC products, by Quartile of Cannabis Purchases

Note: CIs, confidence intervals; ER, emergency room; ERR, event rate ratios

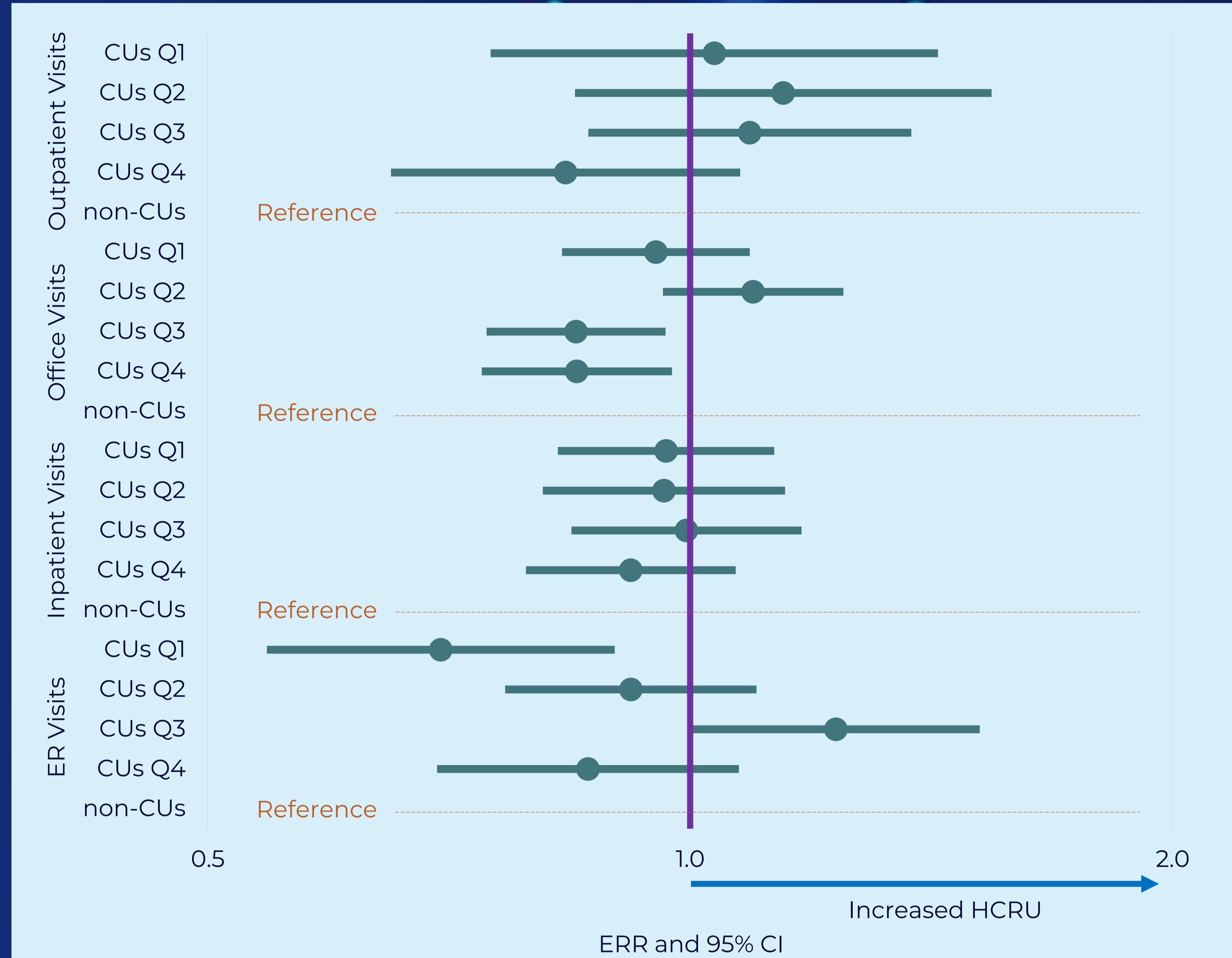


Figure 3. Differences in HCRU between CUs and Non-CUS

Note: CIs, confidence intervals; CUs, cannabis users; ER, emergency room, ERR, event rate ratios

Conclusions

These findings suggest a trend in greater HCRU among less infrequent CUs (Q1) who purchase products with THC, and fewer office and ER visits among CUs overall compared to non-CUS. Further analysis should explore the impact of misclassification arising from the use of dispensary purchases as a definition of cannabis use.

1. Rehman, Y., Saini, A., Huang, S., Sood, E., Gill, R., & Yanikomeroğlu, S. (2021). Cannabis in the management of PTSD: A systematic review. AIMS Neuroscience, 8(3), 414–434.

