

Self-Reported Use of Non-FDA-Approved Cannabinoid Products Among Hospitalized Patients in a Large US Hospital Network



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Presented at the 2025 ISPE Annual Meeting

Disclosures

The contents are those of the authors and do not necessarily represent the official views of, nor an endorsement by, FDA/HHS, the US Government, HCA Healthcare or any of its affiliated entities. E.R., K.H., E.R.H., M.E.K., J.N., A.R., C.C.F., and M.S. are employees of HPHCI, an organization which conducts work for government and private organizations, including pharmaceutical companies. This project was supported by Task Order 75F40123F19009 under Master Agreement 75F40119D10037 from the US Food and Drug Administration.

Background

The growing cannabinoid product (CP) market and its increasing public accessibility have generated unique regulatory challenges.

Objective

To explore self-reported use of non-FDA-approved CP (whether hemp or marijuana) in a large US hospital network.

Methods

Study Design: Cross-sectional descriptive study

Data Source: HCA Healthcare, which contributes inpatient electronic health record (EHR) data for use in the FDA’s Sentinel System.

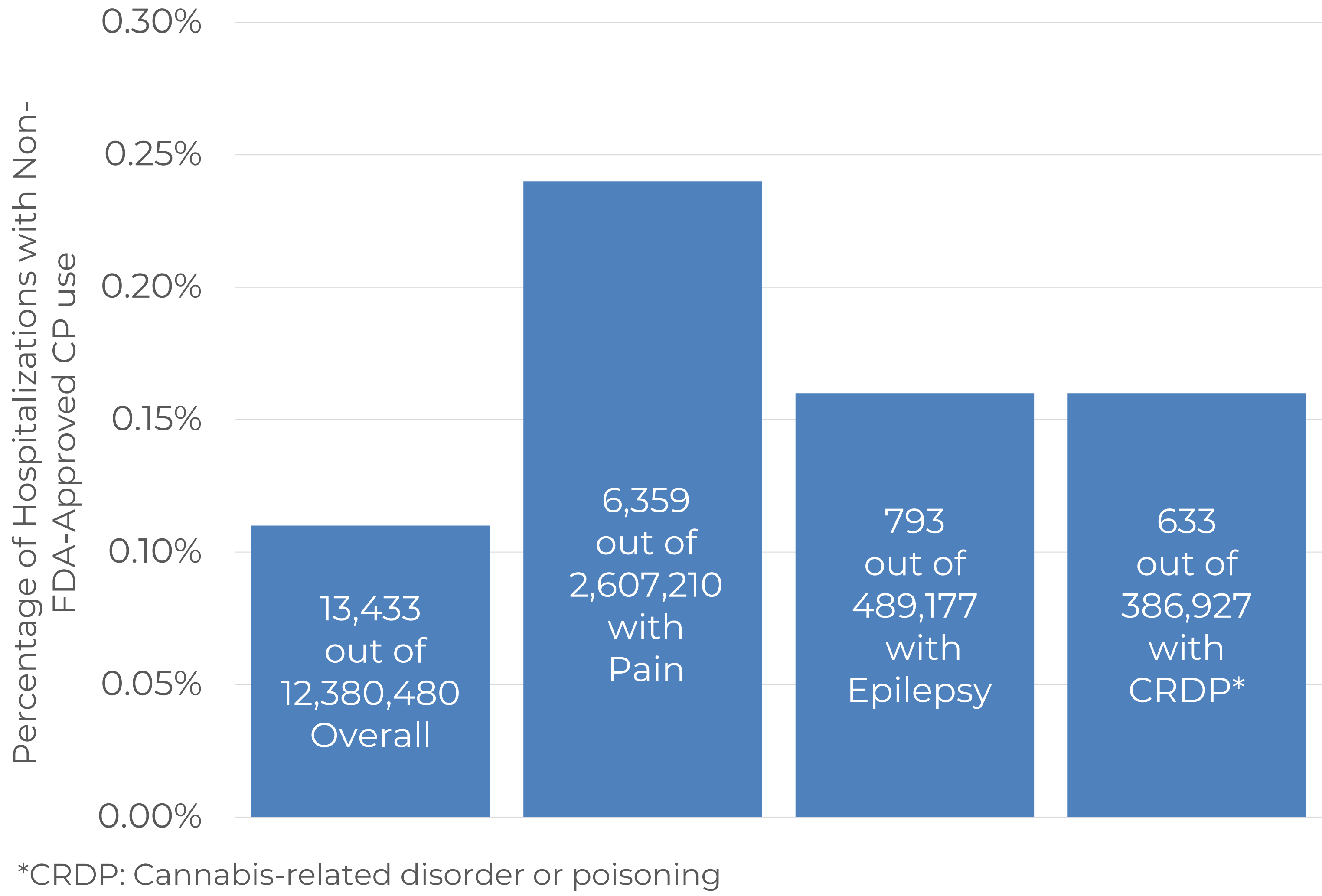
Study Period: January 1, 2018, through December 31, 2023

Study Population: Hospitalizations at 165 facilities across 18 states were identified. Among these, ICD-10-CM diagnosis codes (any diagnosis position) were used to define hospitalizations with epilepsy, pain, or cannabis-related disorders or poisonings (CRDP).

Analyses: Non-FDA-approved CP use was captured using 3- to 5-character search terms within ‘Home Medications’ data, which includes medications patients self-reported taking at home prior to the encounter, and those with which the patient was discharged. The 105 truncated terms included acronyms, abbreviations, colloquialisms, variations, and common misspellings for non-FDA-approved CP. Self-report of non-FDA-approved CP use was assessed in overall hospitalizations and hospitalizations with epilepsy, pain, and CRDP. Comorbidities, documented in the EHR with ICD-10-CM diagnosis codes, and medications administered, per the inpatient pharmacy table, were described.

Results

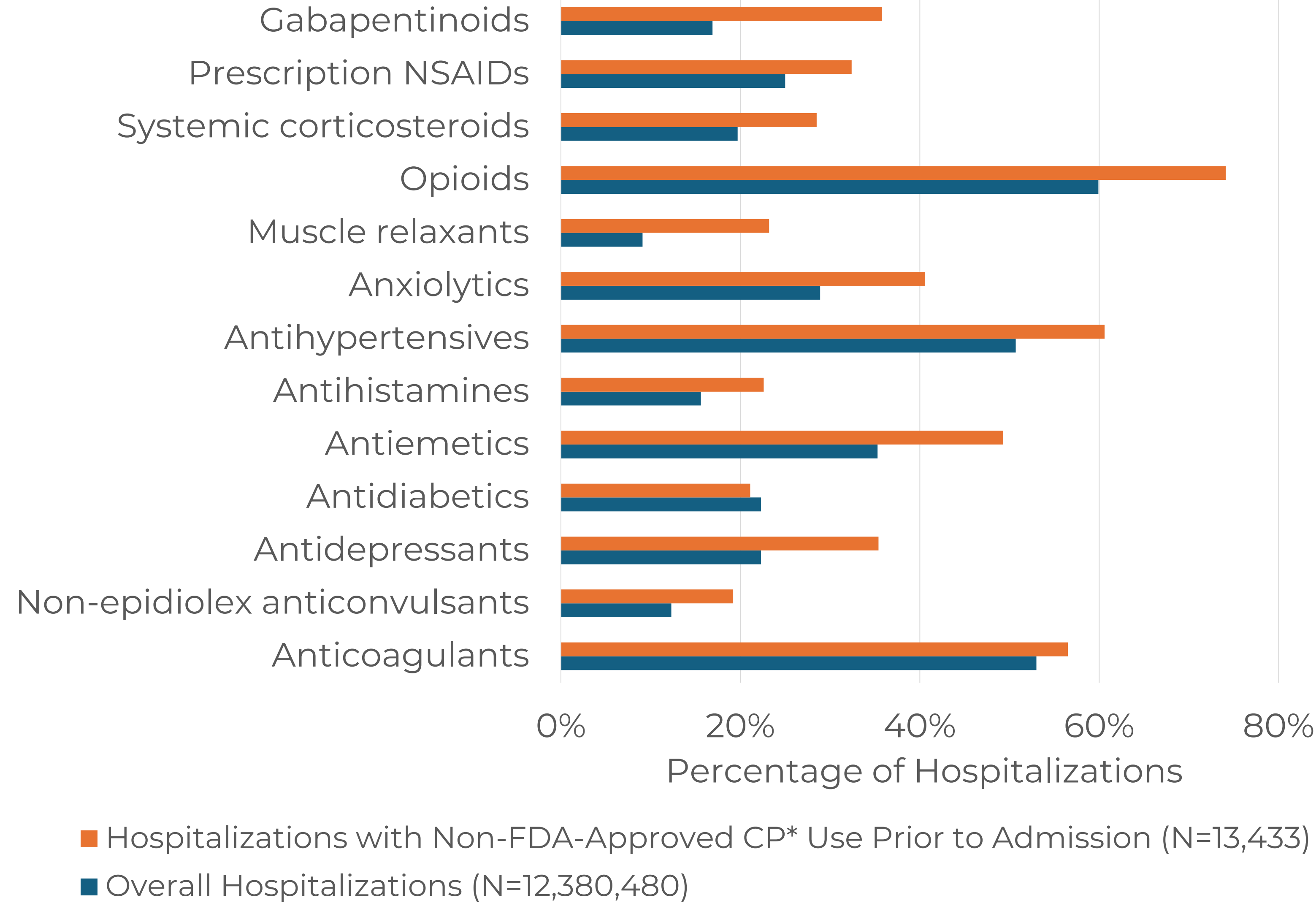
Figure 1. Percentage of Hospitalizations with Evidence of Self-Reported Non-FDA-Approved Cannabinoid Product (CP) Use Prior To Admission, January 1, 2018 - December 31, 2023



Patients reported CP use prior to admission in 0.11% (n=13,433) of the overall hospitalization cohort, 0.16% of the epilepsy (n=793) and CRDP (n=633) cohorts, and 0.24% of the pain sub-cohort (n=6,359) (**Figure 1**)

Select drug classes were more commonly administered in *hospitalizations with CP use prior to admission* than in *overall hospitalizations*, including opioids (74% CP vs. 60% overall hospitalizations) and antihypertensives (61% CP vs. 51% overall hospitalizations) (**Figure 2**)

Figure 2. Proportion of Hospitalizations with Administration of Medication from Select Drug Classes, January 1, 2018 - December 31, 2023



Note: Administration of medication was ascertained from the inpatient pharmacy table.

Table 1. Proportion of Commonly Observed Non-FDA-Approved Cannabinoid Product (CP) Search Terms Among Hospitalizations with Non-FDA-Approved CP Use Prior to Admission, January 1, 2018 - December 31, 2023

	Overall Hospitalizations	Epilepsy Hospitalizations	Pain Hospitalizations	CRDP+ Hospitalizations
Total*	13,433	793	6,359	633
CANNA	4.5%	11.5%	4.0%	8.7%
CBD	13.9%	14.1%	13.5%	9.5%
CBD C	3.5%	0.6%	4.5%	2.1%
CBD G	5.8%	3.3%	5.4%	3.9%
CBD O	37.0%	37.3%	39.6%	19.9%
HEMP	7.4%	5.4%	7.9%	2.2%
MARIJ	7.4%	7.1%	6.8%	34.1%
POT C	3.1%	3.4%	2.0%	0.5%
THC	2.6%	3.5%	2.7%	7.0%

†CRDP: Cannabis-related disorder or poisoning

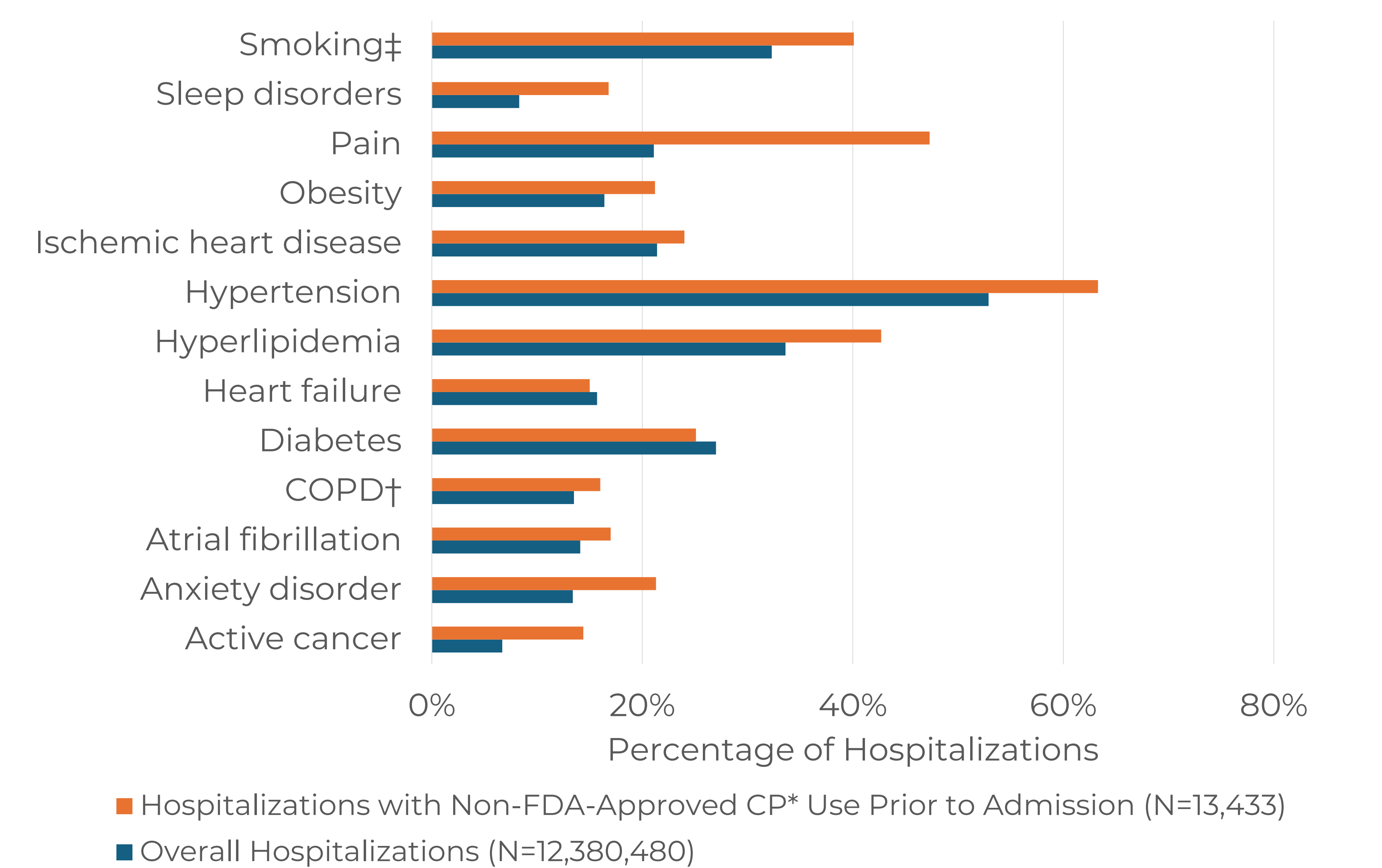
*Total counts of Non-FDA-Approved CP use prior to admission are reported among overall hospitalizations and hospitalizations with epilepsy, pain, and cannabis-related disorders or poisoning.

Values represent percentages of the total counts for each search term. Note that values do not add to 100% as only commonly observed search terms are listed. The heatmap in this table represents a spectrum from darkest blue (for the lowest percentages) to darkest red (for the highest percentages) for percentage of CP use.

Demographics among patients with *overall hospitalizations* and *hospitalizations with CP use prior to admission* were similar (>56% females and median length of stay of 4 days) except that patients with evidence of CP use (median age 67 years) were older than the overall hospitalization population (median age 57 years) (data not shown)

Compared to *overall hospitalizations*, *hospitalizations with evidence of CP use prior to admission* had higher proportion of comorbidities (**Figure 3**)

Figure 3. Proportion of Hospitalizations with Selected Clinical Characteristics, January 1, 2018 - December 31, 2023



Discussion

- It was feasible to identify non-FDA-approved CP use documented as self-reported medications taken prior to admission during hospitalizations at HCA Healthcare.
- We observed extremely low reporting of non-FDA-approved CP use compared to the prevalence noted in published US surveys. However, hospitals are not required to document non-FDA-approved CP use under federal regulations.
- With increased availability of non-FDA-approved CP, these results suggest the need for further methods development work, including work to assess the accuracy of CP identification in EHR data, and for improved monitoring and documentation of CP use.