



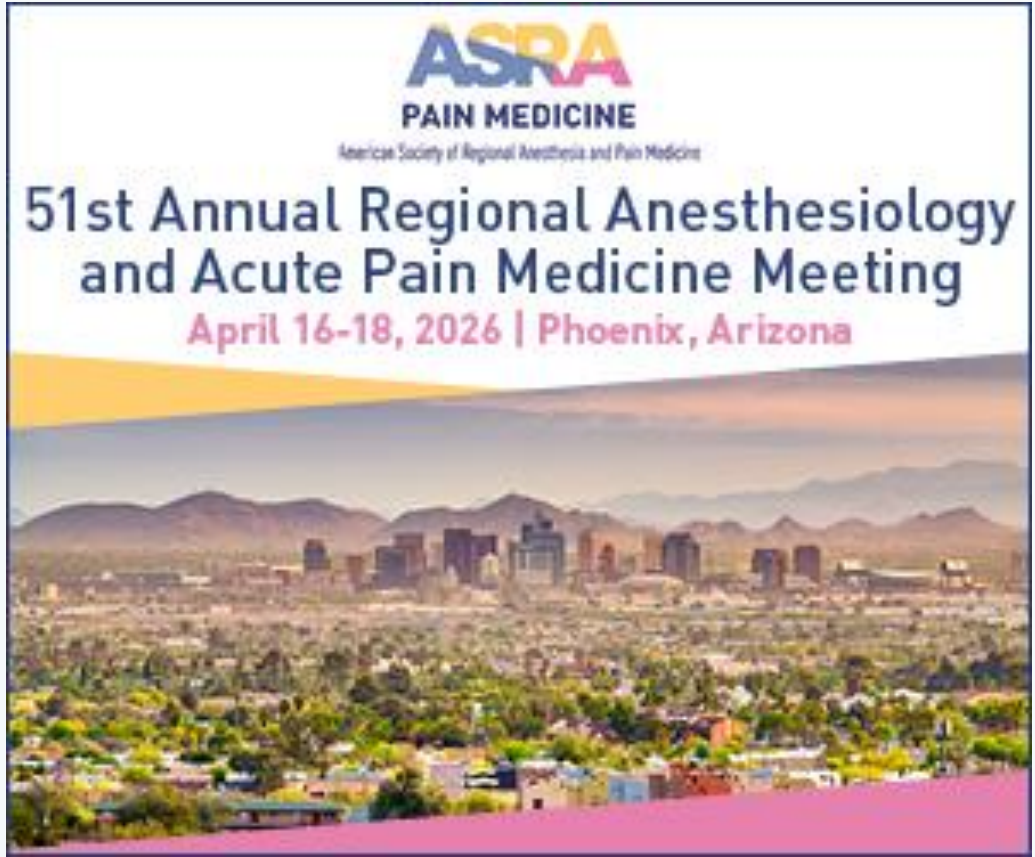
Preoperative cannabis and cannabinoid use patterns in hip and knee arthroplasty patients with complex pain (Abstract# 2315866)

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INTRODUCTION

- ASRA Pain Medicine consensus guidelines regarding perioperative cannabis use recommend universally screening to determine type, amount, frequency of use, administration route, and time of last use¹.
- However, limited granular data currently exist regarding preoperative cannabis/cannabinoid use among complex/chronic patients undergoing orthopedic surgery.
- This study characterizes preoperative cannabis/cannabinoid use among patients seen by our institutional Complex/Chronic Pain Service (CPS).

METHODS

- This single-institution retrospective study was Institutional Review Board approved (IRB#2021-1899 and IRB#2023-1561).
- Primary and revision total hip/knee arthroplasties (THA, TKA) performed in 2023-2024 were identified from our electronic medical record-based registry and filtered to identify patients seen by the CPS and using cannabis/cannabinoids (**Figure 1**).
- Per institutional standard of care, all patients are screened preoperatively for any substance use via self-disclosure and documented within the social history intake form.
- In addition, Prescription Drug Monitoring Program (PDMP) review, including any documented cannabis/cannabinoids obtained from a New York state-licensed medical cannabis dispensary, is performed by the CPS and documented in Epic.
- Cannabis/cannabinoid use was considered medical if specified as “medical” or for symptom management, recreational if characterized as “recreational” or not for symptom management.
- Clinical notes were manually reviewed and data capture included patient, surgery, anesthesia, and cannabis/cannabinoid use characteristics summarized using descriptive statistics.

Preoperative cannabis use among patients with complex pain was more often medical than recreational, though obtaining products from dispensaries was uncommon

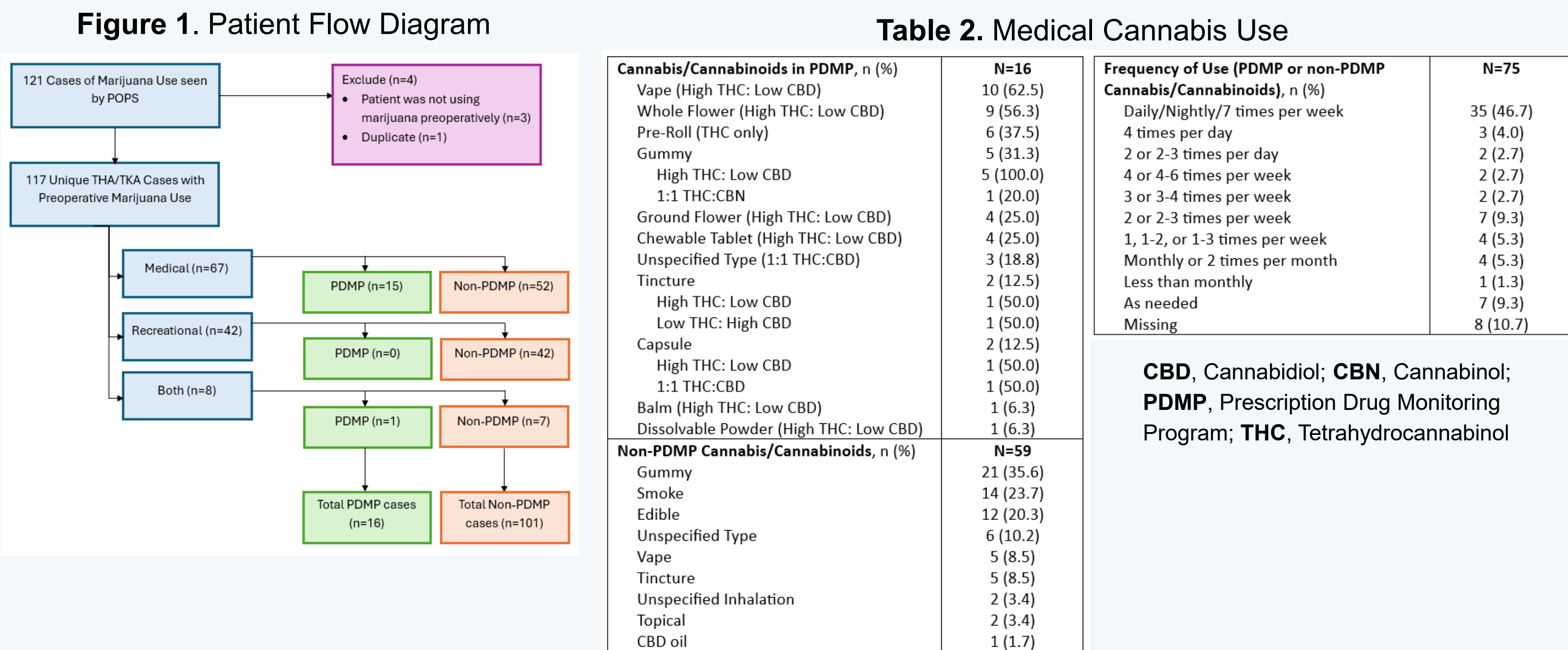


Table 1. Patient and Case Characteristics

Age at Surgery (years), median [IQR]	62 [55, 68]	ASA Status, n (%)	2	60 (51.3)
Sex, n (%)			3	57 (48.7)
Female	65 (55.6)	Anesthesia Type, n (%)		
Male	52 (44.4)	General	27 (23.1)	
Race, n (%)		Neuraxial	90 (76.9)	
Asian	1 (0.9)	Surgery Type, n (%)		
Black or African American	18 (15.4)	Reimplantation Total Hip/Knee	2 (1.7)	
White or Caucasian	97 (82.9)	Removal Total Knee Implant/Replacement	2 (1.7)	
Patient Declined	1 (0.9)	Revision Hip Replacement	13 (11.1)	
Ethnicity, n (%)		Revision Knee Replacement	8 (6.8)	
Hispanic or Latino	3 (2.6)	Total Hip Replacement	45 (38.5)	
Not Hispanic or Latino	111 (94.9)	Total Knee Replacement	47 (40.2)	
Patient Refused	3 (2.6)	Other Substance Use, n (%)		
Charlson Comorbidity, n (%)		Active smoking tobacco use	15 (12.8)	
Chronic Pulmonary Disease	21 (17.9)	Active smokeless tobacco use	1 (0.9)	
Diabetes without Chronic Complications	17 (14.5)	Alcohol use	66 (56.4)	
Rheumatic Disease	11 (9.4)	Active Opioid Prescription Prior to Admission, n (%)	101 (86.3)	
Diabetes with Chronic Complications	8 (6.8)			
Peripheral Vascular Disease	7 (6.0)			
Renal Disease	7 (6.0)			
Myocardial Infarction	6 (5.1)			
Congestive Heart Failure	3 (2.6)			
Malignancy	3 (2.6)			
HIV or AIDS	3 (2.6)			
Cerebrovascular Disease	1 (0.9)			
Peptic Ulcer Disease	1 (0.9)			
Dementia	0 (0.0)			
Mild Liver Disease	0 (0.0)			
Hemiplegia or Paraplegia	0 (0.0)			
Moderate or Severe Liver Disease	0 (0.0)			
Metastatic Solid Tumor	0 (0.0)			

References



RESULTS

- Patient and case characteristics of the 117 cases analyzed are summarized in **Table 1**. Patients were ASA Status 2 or 3 with the following most common Charlson comorbidities: chronic pulmonary disease (n=21) and diabetes without chronic complications (n=17).
- Most cases were primary THAs (n=45) or primary TKAs (n=47) and most were performed under neuraxial anesthesia (n=90).
- An active opioid prescription prior to admission was found in the vast majority (n=101) of cases.
- Reason for preoperative cannabis use was only medical in 67 (57.3%) cases (**Table 2**), only recreational in 42 (35.9%) cases (**Table 3**), or both medical and recreational in 8 (6.8%) cases, which were included in the counts in both **Table 2** and **Table 3**.
- Of the 75 total cases of medical use, 16 had cannabis/cannabinoids in the PDMP with high THC: low CBD vape (n=10) or whole flower (n=9) and THC-only pre-roll (n=6) being the most common.
- In both the medical and recreational use groups, the most common non-PDMP cannabis/cannabinoid forms used were gummy, edible and smoke.
- Frequency of use was more commonly described as daily, nightly, or 7 days per week in the medical use group (46.7%) compared with the recreational use group (24.0%).

DISCUSSION

- Although preoperative cannabis/cannabinoid use among patients with complex/chronic pain was more often medical rather than recreational, patients were not commonly getting certifications to go to medical dispensaries.
- Medical cannabis/cannabinoids documented within the PDMP allow providers to more accurately assess preparation type and formulation (CBD/THC content) compared with non-PDMP cannabis/cannabinoids.
- Patients may be using more than one preparation, and prior studies also indicate higher prevalence of daily cannabis use among medical users compared with recreational users^{2,3}.