Pragmatic use of cannabis products for chronic pain

Context: Definitions, history, legality

Kevin F. Boehnke, PhD

Research Assistant Professor
Anesthesiology Department,
Chronic Pain and Fatigue Research Center
University of Michigan

Disclosures

Sponsor Name	Honoraria/ Expenses	Consulting/ Advisory Board	Funded Research	Royalties/ Patent	Stock Options	Ownership/ Equity Position	Employee	Other (please specify)
Vireo Health								Data Safety and monitoring committee (unpaid)
Tryp Therapeutics			х					Protocol development funding
National Institutes of Health			X					R01AT010381 (NCCIH), K01DA049219 (NIDA), and R34AR078435 (NIAMS)
State of Michigan			X					State of Michigan Veteran's Marijuana Research Program

Hemp? Cannabis? Marijuana?



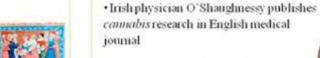


- All are Cannabis sativa
- Hemp: <0.3% THC → no longer a controlled substance
- Marijuana: >0.3% THC, used in cannabis prohibition campaigns → Schedule I
- Cannabis: Most accurate term scientifically

· C. sativa fiber first appears in Taiwan



· Chinese surgeon Hua T'o uses C. sativa as anesthetic



· Emperor Shen Neng of China first prescribes medicinal C. sativa

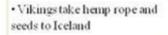


· French queen Amegunde is buried with hemp cloth

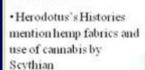


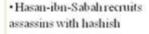
Pharmacopoeia

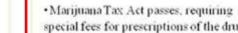
· C. sativa rope appears in southern Russia



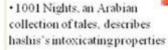
· French physician Moreau publishes Hashish and Mental Illness



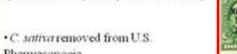




· C. sativa rope appears in Greece.



special fees for prescriptions of the drugs



8000-200 B.C.

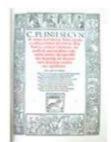
200 B.C. - 200 A.D.

200-1500 A.D.

1500-1800 A.D.

1800-1950 A.D.

1950 A.D. - To date



· Pliny the Elder's The Natural History mentions hemp rope and marijuana analgesic effects

· Plutarch mentions Thracians using cannabis as an intoxicant

·Discorides, a physician in Nero's army, lists medical marijuana in his pharmacopoeia

Greek physician Galen prescribes marijuana as a medicine

· Portuguese physician Garcia da Ortareports C. sativa effects

. China's Li Shih-Chen writes of antibiotic and antiemetic effects of C. sativa

· Linnaeus classifies Cannabis sativa

· Lamarck classifies the plant Cannabis indica

· Napoleon's soldiers learn of cannabis and hashish in Egypt



· Czech researchers confirm antibiotic and analgesic effects of cannabis

 Gaoni and Mechoulam isolated and synthesized the main phytocannabinoid, D9-THC

·FDA approves dronabinol, a synthetic D9-THC for cancer patients

 FDA approves dronabinol for AIDSwasting syndrome

· Many Western countries adopt laws in support of medical C. sativa uses

Bonini, Sara Anna, et al. "Cannabis sativa: A comprehensive ethnopharmacological review of a medicinal plant with a long history." Journal of ethnopharmacology 227 (2018): 300-315.



Big Decline in Opioid Use by Marijuana Users

March 23, 2016

By Pat Anson, Editor

■ RollingStone Medical Pot Is Our Best Hope to Fight the Opioid Epidemi

Medical Pot Is Our Best Hope to Fight the Opioid Epidemic

"There are direct reasons why [cannabis] could actually help people get off of opioids," says one leading



It's time we start talking seriously about medical marijuana as a way to end the opioid epidemic. John



EXPLAINERS

POLITICS & POLIC

WORLD

CULTURE SCIE

SCIENCE & HEALTH

IDENTITIES

TIES ENERGY & ENVIRONMEN

MORE +

One way to fight the opioid epidemic? Medical marijuana.

An innovative, but evidence-based, idea.

By German Lopez | @germanrlopez | german.lopez@vox.com | Updated Jan 18, 2017, 1:10pm EST





PUBLIC HEALTH

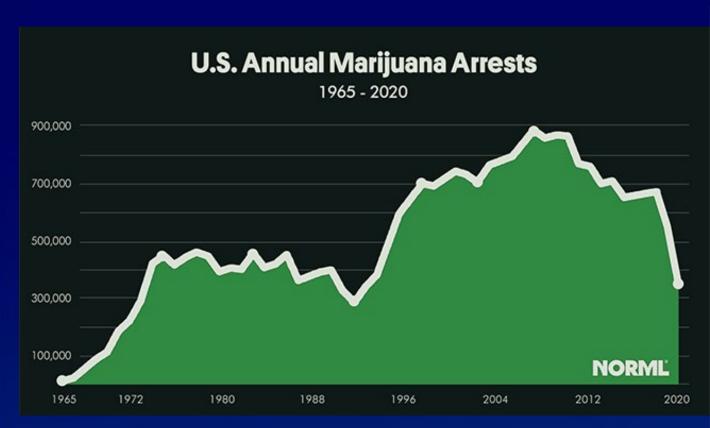
Could Medical Cannabis Break the Painkiller Epidemic?

A body of research suggests yes, but scientists are having to fight red tape to study whether medical marijuana could substitute for opioid drugs

Cannabis in US

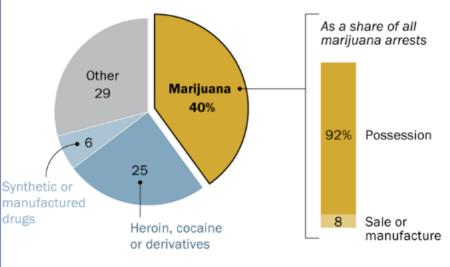


Societal pain from criminalization



Four-in-ten U.S. drug arrests in 2018 were for possession, sale or manufacture of marijuana

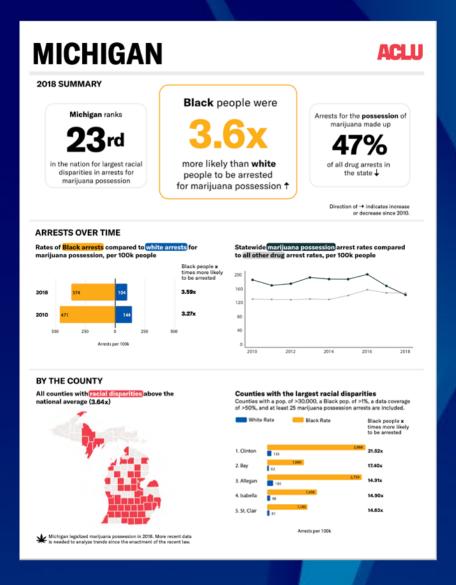
% of arrests for each drug category, including possession, sale and manufacture



Source: FBI's Uniform Crime Reporting Program.

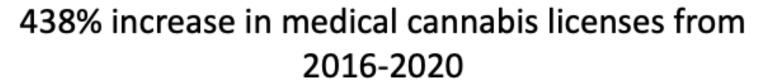
PEW RESEARCH CENTER

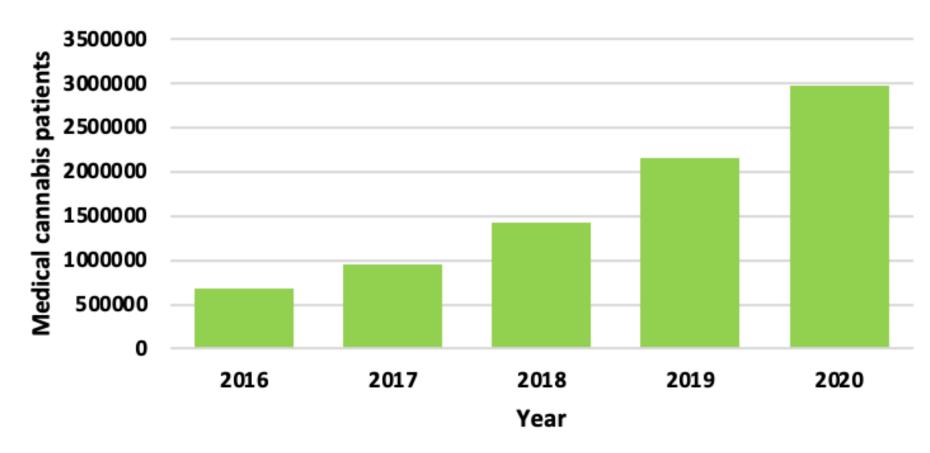
Rates of Black and White Marijuana Possession Arrests per 100k People Black arrest rate White arrest rate O 2010 2012 2014 2016 2018 Source: FBI/Uniform Crime Reporting Program Data Note: Florida and Washington, D.C. did not provide data.





"We must also consider a broad range of other potential psychosocial outcomes of incarceration, including depression, anxiety, and trauma-related psychiatric symptoms; years of life lost while incarcerated; loss of income; loss of family and social ties; and in some states, continued policy-level ramifications after release, such as voting disenfranchisement."





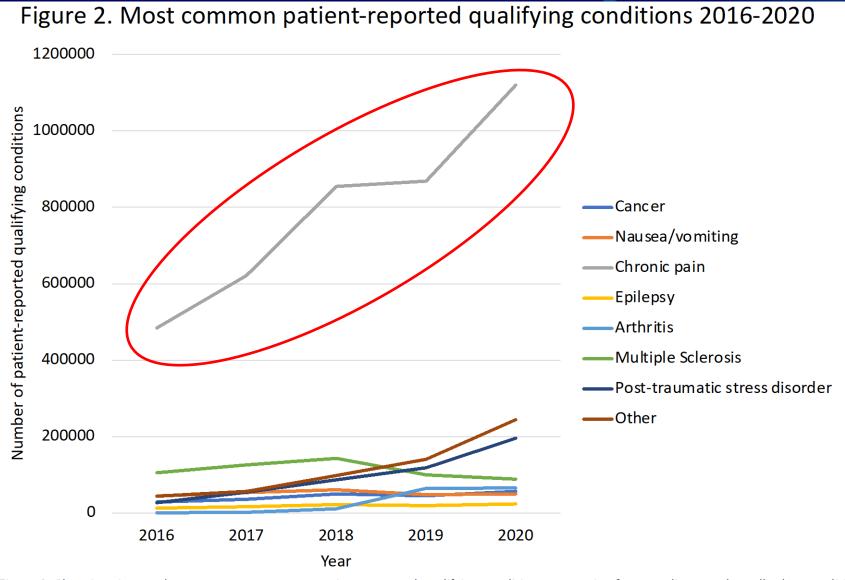


Figure 2. Chronic pain was the most common reason patient-reported qualifying condition, accounting for more licenses than all other conditions combined. Patients could report ≥1 qualifying condition or symptom. Significant contributors to the "Other" category include: vague categories such as "chronic or debilitating disease or condition", "Psychiatric conditions", "multiple conditions", or "other" in state reports. The years for which each state contributed data are as follows:

Cannabis in Michigan



Michigan Medical Marihuana Program

Application/Renewal Instructions and Checklist www.michigan.gov/mmp (517) 284-6400

Michigan Medical Marihuana Program

Application for Registry Identification Card

Instructions

This application is for a person who is 18 years of age or older and a resident of Michigan.

Type or print legibly when completing the application

- Michigan Medical Marihuana Act of 2008:
 - In September 2023: 129,099 patients in Michigan¹
 - 59.4% for chronic pain
 - 45.8% for severe and chronic pain
 - 20.6% for arthritis



- Michigan Regulation and Taxation of Marihuana Act of 2018:
 - 12 plants at home
 - 2.5 ounces on person, 10 ounces at home
 - 15 grams of concentrate



1: 2023 Cannabis Regulatory Agency Monthly Report: September 1, 2023-September 30, 2023¹²

Summary

- Cannabis has a rich history of historical medical and other use
- Prohibition has caused immense societal harm and blocked research
- Medical use is rising
- We need to understand how to effectively support patients using cannabis for pain and develop better cannabis-based treatments