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United States Drug Overdoses  
(2021)

**100,000+**

*The vast majority were attributable to opioids.*

Cannabis and Its Impact on  
Chronic Pain and Opioid Use

**64** to **75**  
percent percent

*reduction in opioid use when  
medical cannabis was also  
consumed.*

## EXPLAINER

# Can Cannabis Help Solve the Opioid Crisis?

September 2022

## Summary

In 2021, drug overdose deaths in the United States—the vast majority of which were attributable to opioids—topped **100,000**, an all-time high. The **overprescribing of OxyContin** and the more recent contamination of the illicit drug supply with **fentanyl and related substances** has escalated opioid-related deaths across the country. This complex and evolving crisis has left the nation looking for solutions, from **increased border control** to **expanded harm reduction programs** such as **naloxone distribution** and the **opening of the nation's first above-ground overdose prevention centers**.

In recent years, cannabis has emerged as a **promising** tool that may mitigate some risks associated with opioid use. Consequently, states have expanded access to medical cannabis for treating **chronic pain** and **opioid use disorder (OUD)**. Some legalization advocates **claim** even recreational access to cannabis may reduce opioid-related harms. Critics, however, express **concerns** that the recommendation to substitute cannabis for opioids has gotten **ahead** of the **science**.

To provide context to constituents and lawmakers considering whether cannabis policies can be used to reduce opioid-related harms, we examined the research on the relationship between cannabis legalization and opioid prescription, opioid use and health outcomes, including overdose and OUD.

## Does Legalizing Cannabis Reduce Opioid Use and Related Harms?

As of **May 2022**, 38 U.S. states and the District of Columbia have laws permitting medical cannabis and 19 states plus the district allow adult recreational use. Following cannabis' legislative sweep of the nation, researchers have begun examining the impact of legalization on opioid-related harms at the population level.

Thus far, the evidence is inconclusive. Some research suggests that legalizing cannabis, especially by providing **access** via regulated dispensaries, is **associated** with **lower rates of general and high-risk opioid prescribing**, less opioid **dependence** and fewer **opioid-related deaths**. However, other studies find that apparent benefits are statistically **insignificant**, **short-lived** or simply **inconsistent**.

Much of this muddiness likely stems from the **complex environments** in which population-level policy research takes place, including states' distinctly different cannabis policies; changes in opioid prescribing recommendations; and the time-sensitive and geographically diverse waves of illicit drug market fentanyl infiltration. As such, policymakers who are interested in legalizing recreational or medical cannabis as an opioid harm reduction measure should consider the clinical science evaluating cannabis' direct effects on specific opioid-related outcomes—notably cannabis as an alternative or adjunct medication for treating chronic pain or OUD.

## Cannabis is an effective treatment for chronic pain

In 2017, a **report** suggested that cannabis could help reduce chronic pain. Earlier this year, a **systematic review** of placebo-controlled trials and cohort studies confirmed this, finding that medical cannabis—consumed in a variety of formulations and forms—does appear to reduce chronic pain, albeit by small margins for some patients.

Other studies have taken this question a step further and considered whether and why cannabis is used as a stand-in by chronic pain patients. This growing body of research



## Policy Recommendations

*Maximize benefits by ensuring equitable access via regulated dispensaries.*

*Ensure states include chronic pain in medical cannabis programs.*

*Continue research on the impact of cannabis use.*

## Contact Us

For more information on the subject, contact:

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shows that many patients experience cannabis' analgesic effects as **comparable** to those of opioids. Furthermore, cannabis patients often report relatively **fewer side effects** compared to opioids. This leads some chronic pain **patients** to **reduce** their opioid use while consuming cannabis or completely switch to medical cannabis. Indeed, one **systematic review** found a 64 to 75 percent reduction in opioid use when medical cannabis was also consumed. Overall, the subjective benefits and measurable shifts are a net positive because, **although** cannabis is **not risk-free**, the lack of overdose danger makes it the **safer** choice for most people.

## It is not clear whether cannabis can treat opioid use disorder

An estimated **3 million people** in the United States have had or are currently living with an OUD. Medications for opioid use disorder (MOUD)—most commonly, opioid agonists such as buprenorphine and methadone—are considered the **gold-standard** treatment. But a dearth of low-barrier **access** remains a major hindrance for many individuals seeking help. In recent years, this has led to an increased focus on the potential role of cannabis in treating OUD.

Cannabis does show promise as an adjunct to or replacement for traditional MOUD in **pharmacological** and **animal** studies, reducing withdrawal symptoms and diminishing the "**rewarding properties of opioids**," thus potentially preventing relapse. However, research conducted with humans and in clinical scenarios remains inconclusive as to the real-world implications of this potential. Although a handful of qualitative studies indicate some people find cannabis useful in reducing their **opioid consumption**, a small but growing body of research suggests that cannabis use has **little** to no **effect** on MOUD outcomes, such as opioid use, treatment adherence or treatment retention.

## What does this mean for policy?

- Evidence is not yet strong enough to suggest that legalizing cannabis will in-and-of itself reduce opioid-related harms at the population level. However, evidence for cannabis legalization as an opioid harm reduction tool is stronger when people can access cannabis through state-regulated dispensaries. **As such, states that have already decriminalized medical or recreational cannabis or plan to do so can maximize benefits by creating a system that ensures equitable access to regulated products via dispensaries.**
- There is strong evidence to indicate that access to medical cannabis can greatly benefit people experiencing chronic pain, including by providing them a substance with which to replace or decrease their opioid consumption. **States would be wise to ensure chronic pain is included in existing medical cannabis programs or consider launching such programs. Future research may elucidate which types of cannabis products and modes of use are most effective in helping chronic pain patients replace or reduce their opioid consumption.**
- When it comes to the use of cannabis in treating OUD, the science is less clear, and lawmakers would be wise to continue following the emerging evidence, including information coming from states that have recently approved this application. **Future research should continue to explore the potential of medical cannabis as an adjunct medication in the treatment of OUD—this may include identifying associated risks (i.e., to individuals with certain co-occurring mental health issues) as well as which specific cannabinoid ratios may be most effective and which populations would benefit the most.**