Cannabis Policy Impacts Public Health and Health Equity

Over the past several decades, more than half of all U.S. states have legalized cannabis for adult and/or medical use, creating inconsistent policies on issues ranging from control of the cultivation, production, and distribution of cannabis to the strength and types of products sold, as well as how and where these products are sold and marketed. Because cannabis is not federally legal, the federal government has provided limited guidance to states that have legalized cannabis.

In response, the Centers for Disease Control and Prevention (CDC) and the National Institutes of Health (NIH) commissioned the National Academies of Sciences, Engineering, and Medicine (the National Academies) to convene an ad hoc committee to consider the public health consequences of cannabis legalization. The resulting report, *Cannabis Policy Impacts Public Health and Health Equity*, finds that federal policies have complicated efforts to develop cannabis policies that protect public health and calls for federal public health leadership on cannabis policy. This report builds upon a 2017 National Academies report, *The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research,* that reviewed the health effects of cannabis consumption.

The committee found that a rapidly changing cannabis policy landscape presents a complex public health challenge. Regulations vary from state to state, and most were developed without a robust public health strategy; instead, legalization prompted the creation of

The term "cannabis" has been adopted as the standard terminology within scientific and scholarly communities to describe products derived from the Cannabis sativa plant, including cannabinoids, marijuana, and hemp used for medical, industrial, and social purposes.

commercial markets, driving an industry focused on profit over public health.

THE CHANGING LANDSCAPE OF CANNABIS POLICY

As of April 24, 2023, 38 states, three territories, and the District of Columbia allowed cannabis for medical use, and as of November 8, 2023, 24 states had passed legislation legalizing adult nonmedical cannabis supply and use for those over 21 years of age. In addition, 9 states had approved measures allowing for the sale of products with low delta-9-tetrahydrocannabinol (THC) and high cannabidiol (CBD) in limited medical situations.

Botanical cannabis[1] is categorized under the Controlled Substances Act (CSA) as a Schedule I, or highly controlled, substance—meaning it has a high abuse potential and no accepted medical use. This classification has made it difficult to create federal public health policies for cannabis or conduct research to understand the consequences of cannabis policies on public health. Even the Office of National Drug Control Policy (ONDCP) is prohibited from studying the impacts of cannabis legalization. However, on May 21, 2024, the Drug Enforcement Administration proposed a rule that would shift the scheduling of cannabis to Schedule III, defined as having moderate abuse potential and a currently accepted medical use. While rescheduling would reduce barriers to cannabis research, it would not legalize it federally, and state medical and adult use programs would remain illegal under federal law. Further complicating matters, the 2018 Agriculture Improvement Act (PL-115-334), often called the "2018 Farm Bill," redefined hemp and removed it from the CSA. This exemption, as well as other policy changes at the state level, has led to extensive markets for cannabis products throughout the country, even in states that have not legalized cannabis.

CORRESPONDING CHANGES IN CANNABIS PRODUCTS AND USAGE

Cannabis use is increasing in many populations. Public perception of risk has declined while availability has surged. Notably, more people have reported daily or near-daily cannabis use than daily or near-daily alcohol

[1] Cannabinoid drugs fall within different areas of the Controlled Substances Act. Cesamet™ (nabilone), synthetically derived delta-9-THC in powder form, is Schedule II, and Marinol® (dronabinol), synthetically derived delta-9-THC in liquid form, is Schedule III. Epidiolex, highly purified naturally derived cannabidiol, is Schedule V.

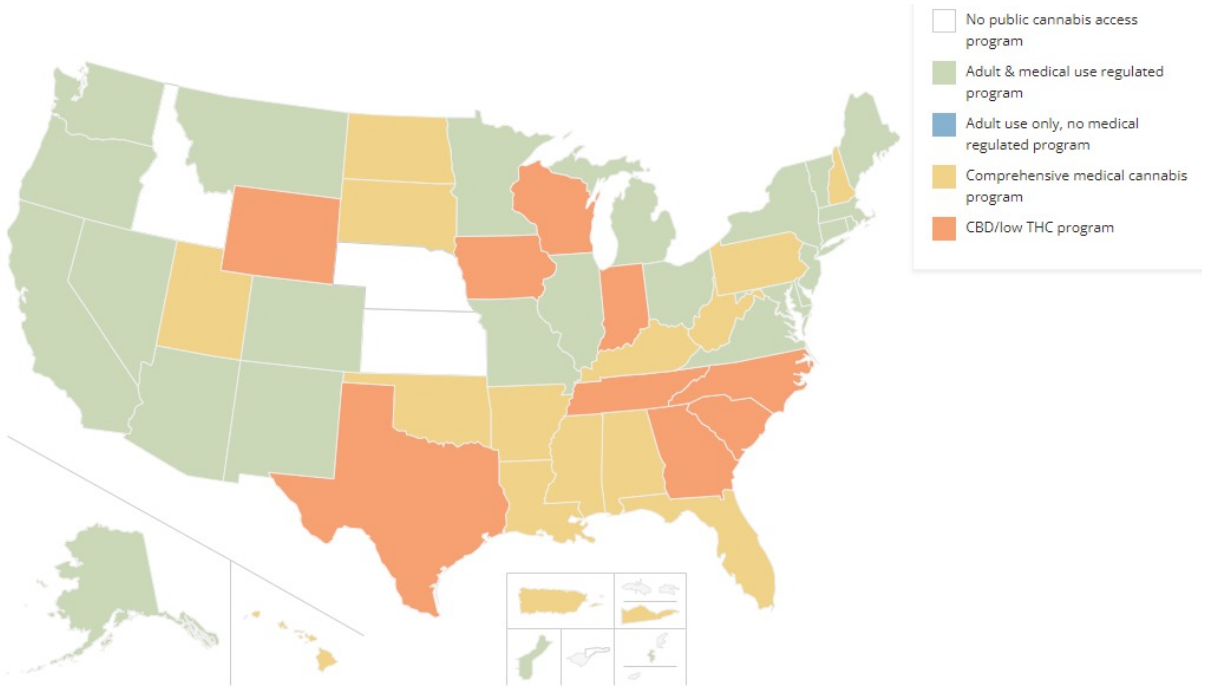

FIGURE S-1 Map of state-level cannabis legalization.
NOTES: CBD = cannabidiol; THC = delta-9-tetrahydrocannabinol. The map does not include state policies instituted in response to the 2018 Agriculture Improvement Act (PL-115-334).
SOURCE: National Conference of State Legislatures.

use in 2022. While dried flower remains the most used product, concentrates, edibles, and vape oils are gaining in popularity, with many people using multiple products and administration methods. Moreover, the THC concentration of products consumed today has markedly increased.

Cannabis is more challenging to regulate than tobacco and alcohol because the cannabis plant contains over a hundred cannabinoids, with plant hybrids having unique and inconsistent chemical profiles and health impacts. Extracts from the cannabis plant can be incorporated into many different products that can be used through many modes of administration, all with different intoxicating profiles, resulting in additional confusion.

RECOMMENDATIONS FOR FEDERAL LEADERSHIP ON PUBLIC HEALTH

The commercial markets created by state legalization require complex policies surrounding the cultivation, processing and manufacturing, distribution, marketing, and sales of cannabis to promote public health and health equity. Yet the federal government has done little to help, and in fact, the committee finds that some federal policies have complicated the efforts of state governments to develop cannabis policies that protect public health. These policies include the 2018 Farm Bill, which, in removing hemp and other cannabinoids from the CSA, created a lucrative industry for intoxicating cannabis products legally designated as hemp. The committee recommends that Congress refine the definition of hemp to state clearly that no form of THC or semisynthetic cannabinoid derived from hemp is exempt from the CSA (see **Recommendation 2-1** in the report).

The report recommends that CDC, in conjunction with other federal agencies, conduct research on and develop best practices for protecting public health for states that have legalized cannabis, drawing from tobacco and alcohol policies. The committee names several areas these best practices should encompass (e.g., marketing and price restrictions, taxation, measures to limit youth access). The best practices should be reconsidered and updated periodically as new research emerges (see **Recommendation 2-2** in the report).

To support states that already have legalized or intend to legalize cannabis, the committee recommends that the National Governors Association, the National Council of State Legislatures, and other public health stakeholders develop model legislation concerning best practices. The committee names several areas this legislation could include and recommends that CDC's best practices be incorporated into the model legislation once they have been developed (see **Recommendation 2-3** in the report).

The committee further recommends a range of other steps that could help bring public health to the forefront of cannabis policy. The U.S. Pharmacopeia has established product quality and analytical standards for cannabis inflorescence (flower) and is developing standards for cannabis extracts incorporated into pills and edibles. As these standards are completed, the committee recommends that state cannabis regulators adopt and enforce them to ensure the safety and quality of all legal cannabis products (see **Recommendation 4-2** in the report).

The committee also recommends that CDC, in conjunction with its federal, state, tribal, and territorial partners, create a public health surveillance system to monitor cannabis cultivation and product sales, use patterns, and health impacts (see **Recommendation 4-1** in the report) and create a public health campaign to educate about the potential risks of cannabis, how to identify risky behavior, and strategies to lower their risk (see **Recommendation 4-4** in the report).

MINIMIZING HARMS AND PROMOTING HEALTH EQUITY

The committee found that the commercial cannabis industry may contribute to health inequities. Cannabis legalization could reduce social inequities and, as a result, health disparities, by mitigating the adverse effects of criminalization of cannabis use, possession, and sales, which have historically been disproportionately borne by minoritized populations. Racial disparities in cannabis arrests may have increased during this period of legalization, and factors such as marketing to minoritized groups, and overconcentration of retailers in certain communities have led to differing cannabis use. However, limited data confounded certainty.

To mitigate this problem, the committee recommends that jurisdictions responsible for enforcing cannabis laws regularly gather and report detailed data on the use of criminal enforcement tools, such as arrests, sentences, incarceration, and diversion programs (see **Recommendation 5-1** in the report). Additionally, the committee recommends that state cannabis regulators systematically evaluate and revise their social equity policies to ensure they meet their stated goals and minimize unintended consequences (see **Recommendation 5-2** in the report). Finally, the committee recommends that states with legalized or decriminalized cannabis implement criminal justice reforms and automatically expunge or seal records for low-level cannabis-related offenses (see **Recommendation 5-3** in the report). To collect further information, the committee recommends that NIH and CDC, together with state, local, and tribal health authorities and private entities support research into how state and local cannabis regulations influence public health outcomes and health equity (see **Recommendation 6-1** in the report) and recommends that ONDCP be allowed to study the impacts of cannabis legalization (see **Recommendation 4-5** in the report).

LOOKING FORWARD

The rapidly changing landscape of cannabis legalization presents a complex challenge for public health. This report's recommendations provide concrete ways for federal policymakers to weigh in on behalf of the public's health.

To learn more, visit nationalacademies.org/cannabis-policy.

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