

# Monitoring the Effects of Cannabis Legalization: A Review of State Approaches and Measures





Megan O'Grady, PhD Jennifer Sussman, MFA Shayna Cunningham, PhD Alison Wiser, MSW Sydney Tabor, MPH

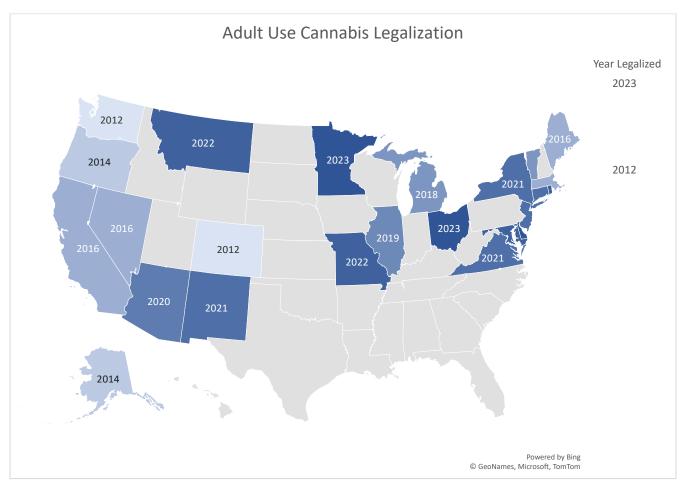
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## **INTRODUCTION**

The legalization of Adult Use cannabis in the United States is an evolving landscape. Currently, adult use (recreational) cannabis is legal in 24 states and the District of Columbia. Some states have legalized cannabis for medical use only and in others cannabis in all forms remains illegal. With legalization comes legislation and policy changes to support public health efforts. States vary in the way they monitor and report public health outcomes related to cannabis use.

This report examines current cannabis data monitoring efforts across the United States and looks at recommendations for further monitoring, utilizing an approach that combined literature review with a state-by-state web search to determine monitoring activities, data sources, and approaches. A scoping review of literature was also conducted to dive deeper into monitoring efforts and approaches.



\*Lighter color = Earlier legalization

\*Grey = Adult Use Cannabis is not Legal

# CANNABIS DATA MONITORING EFFORTS ACROSS THE US

The tables below represent key outcomes monitored by states that have legalized adult use cannabis. Prevalence of use, attitudes toward cannabis and perception of risk, as well as health outcomes and motor vehicle accidents related to cannabis are outcomes monitored by majority of states. Market data, made available and collected by most states with legalized adult use cannabis, is not as commonly used to inform public health.

Key Outcomes Monitored	States	Notes
Prevalence of use	AK, AZ, CA, CO, CT, DC, IL, MA, MD, ME, MI, MN, MO, MT, NV, NJ, NM, NY, OH, OR, RI, VT, VA, WA	Includes states that are monitoring prevalence of use in any or all the following categories: Adult, Young Adult, Youth & Use during Pregnancy
Motor vehicle accidents	AK, CA, CO, CT, DC, IL, MA, ME, MT, NV, NJ, OR, RI, VA, VT, WA	May also include data on incidents of impaired driving that did not result in an accident
Attitudes toward cannabis/ Perception of Risk	AK, AZ, CA, CO, CT, DC, IL, MA, ME, MI, MT, OH, OR, RI, VA,	Includes states that are monitoring attitudes/perception of risk in any or all the following categories: Adult, Young Adult, Youth & Use during Pregnancy
Heath Outcomes	AK, CA, CO, CT, IL, MA, ME, MN, MO, MT, NM, NY, NV, OR, VT, VA, WA	May include mental health outcomes, hospitalization and use of health care services related to cannabis use, ambulance reports, ER data, and poison control data.
Treatment data	CT, DC, IL, MA, ME, MI, MT, NJ, NY, VT, WA	
Crime Rates	AK, AZ, CA, DC, DE, IL, MA, ME, MT, OH, OR, VA, WA	May include Civil penalties, arrests, prosecutions, incarcerations and sanctions imposed for violations of possession and distribution of cannabis products, and juvenile justice data.
Methods of consumption	CO, CT, IL, MA, MN, OR, VT	
Incidents of discipline in schools	MA	
Market data	AK, AZ, CA, CO, CT, DC, DE, IL, MA, ME, MD, MI, MO, NJ, NM, NV, NY, OR, WA	Market Data may include; Types and strength of marijuana products sold, number of licensed retailers, tax data, number of sales, price monitoring, plant activity and volume (growing data).
Availability of High Potency Cannabis	АК, СО	This data may also be represented in Market data for some states.

Table 1: Outcomes Monitored in States with Legalized Adult Use Cannabis

\*Information was gathered through a web scan for data portals and reports in each state and is limited to information that was readily available.

	Prevalence of Use	Motor Vehicle Accidents	Attitudes and perception of risk	Health Outcomes	Treatment Data	Crime Rates	Market Data	Methods of Consumption	Incidents of discipline in schools	Availability of High Potency Cannabis
		Moto	Attitu						Incide	
Alaska	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$			$\checkmark$
Arizona	$\checkmark$		$\checkmark$			$\checkmark$	$\checkmark$			
California	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$			
Colorado	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	$\checkmark$		$\checkmark$
Connecticut	$\sim$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$		
Delaware						$\checkmark$	>			
District of Columbia (D.C.)	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$			
Illinois	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		
Maine	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			
Maryland	$\checkmark$						$\checkmark$			
Massachusetts	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Michigan	$\checkmark$		$\checkmark$		$\checkmark$		$\checkmark$			
Minnesota	$\checkmark$			$\checkmark$				$\checkmark$		
Missouri	$\checkmark$			$\checkmark$						
Montana	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$				
Nevada	$\checkmark$	$\checkmark$		$\checkmark$			$\checkmark$			
New Jersey	$\checkmark$	$\checkmark$			$\checkmark$		$\checkmark$			
New Mexico	$\checkmark$			$\checkmark$			$\checkmark$			
New York	$\checkmark$			$\checkmark$	$\checkmark$		$\checkmark$			
Ohio	$\checkmark$		$\checkmark$			$\checkmark$				
Oregon	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\sim$	$\checkmark$	$\checkmark$		
Rhode Island	$\checkmark$	$\checkmark$	$\checkmark$							
Vermont	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$			$\checkmark$		
Virginia	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\sim$				
Washington	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			
washington				$\checkmark$						

\*Information was gathered through a web scan for data portals and reports in each state and is limited to information that was readily available.

# NOTEWORTHY PRACTICES ACROSS THE US

In this section, states that have exemplary monitoring practices or data practices that focus on special topics are highlighted.

#### Examples of well-done data dashboards and webpages

The Maine State Epidemiological Outcomes Workgroup created this Dashboard that serves as a great example of a way to showcase cannabis monitoring efforts and data. The data is filterable by County, Public Health District or State and shows both most recent data results as well as chance since the previous period. It also allows the viewer to see details indicating the source of information.

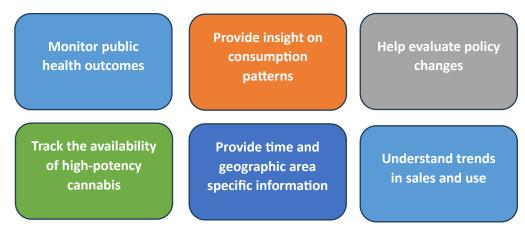
## CDPH

California's Department of Public Health has a comprehensive webpage that links to different data dashboards, fact sheets and infographics, data briefs and reports, as well as research and evaluation products related to monitoring cannabis in the state.

#### Using cannabis market data to inform public health

Market data can include the number of licensed cannabis retailers, tax data, total retail sales, average sales per retailer, type and potency of product sold, price monitoring, advertising practices and related data, and plant activity and volume (growing data).

Market data can be used to:



Examples of states with readily accessible market data dashboards and reports are below, click on the state to view:



#### Monitoring perinatal cannabis use

California developed the <u>Maternal and Infant Health Assessment (MIHA)</u>, an annual survey of a stratified random sample of English and Spanish speaking women living in California who had a live birth. California is utilizing this survey to assess prevalence and identify disparities in perinatal cannabis use. Questions on Cannabis asked in the MIHA include:

- During your most recent pregnancy did you use marijuana or weed in any way (like smoking, eating or vaping)?
- Since your most recent birth have you used marijuana or week in any way (like smoking, eating or vaping)?
- During the past 30 days, on how many days did you use marijuana in any way?

The MIHA also collects data on income, marital status, level of education, mental health, alcohol and tobacco use, domestic violence, physical health, birthing experience, health insurance status, and food and financial insecurities.

Nationally, many states participate in the Pregnancy Risk Assessment Monitoring Survey (PRAMS), which collects data on maternal attitudes and experiences before, during, and shortly after pregnancy and has the option to include a section that asks about Cannabis use during the perinatal period. Alaska created a survey called Childhood Understanding Behaviors Survey (CUBS) which serves as a follow up to PRAMS. Alaska sends the CUBS survey, three years later, to all mothers who completed PRAMS and are still living in Alaska. CUBS includes questions on parental cannabis use. By re-interviewing mothers who completed a PRAMS survey, CUBS can evaluate factors present at birth and/or early life that might increase risk for later adverse childhood outcomes, including parental cannabis use. Although majority of states have a PRAMS survey program, few other states conduct an on-going follow-up survey in early childhood.

#### Monitoring cannabis-related incidents of discipline in schools

In Massachusetts, adult use cannabis legislation has uniquely called for a collection of data on the number of incidents of discipline in schools, including suspensions or expulsions, resulting from cannabis use or possession of cannabis or cannabis products. The MA Department of Elementary and Secondary Education (DESE) collects discipline data from school districts, charter schools and virtual schools. This data has been made publicly available at this <u>website</u> and has been used to inform prevalence rates of cannabis use among youth in Massachusetts, and to determine if incidents of discipline for cannabis related offenses increases due to the legalization of adult use cannabis. The data can be extracted by district/school, race/ethnicity, gender, special education, economic advantage, limited English proficiency, and high needs status.

#### **Monitoring High-potency Cannabis**

Increasing potency in cannabis products has been a concern for many years and is an increasing issue for public health. <u>Colorado has recommended the real-time monitoring and surveillance of sales and consumption patterns of high-concentration cannabis</u>. Colorado's Marijuana Enforcement Division (MED) has detailed <u>real-time information</u> on cannabis production and sales in the state. Using this information alongside data on consumption and use patterns, hospital discharge data, and poison control data, can provide timely surveillance of the sale and use of high-concentration cannabis products and the implications for impact on public health.

# CANNABIS MONITORING: DATA SOURCES

#### Nationally Collected Data

Where is it Collected	Description	Other Information
Collected for all US states	Nationally representative data on the use of tobacco, alcohol, and drugs; substance use disorders; mental health issues; and receipt of substance use and mental health treatment	35 measures of substance use and mental health by age group, individuals 12 and older.
	<ul> <li>Questions on Cannabis:</li> <li>Prevalence and Frequency of Use</li> <li>Age of first Use</li> <li>Method of Use</li> </ul>	
States that included the Marijuana use module in 2023: Connecticut, Delaware, Illinois, Indiana, Maine, Maryland, Mississippi, Montana, Nebraska, Nevada, New Mexico, Ohio, Oklahoma, Oregon, Vermont, Virginia, Wyoming	<ul> <li>Health-related telephone survey that collect state data about health-related risk behaviors, chronic health conditions, and use of preventive services.</li> <li>Marijuana Module includes <ul> <li>Prevalence and Frequency of Use</li> <li>Method of use</li> </ul> </li> <li>CT's Added questions: <ul> <li>Perception of Risk</li> <li>Driving under influence of Cannabis</li> <li>How/ where do you get Cannabis</li> <li>Reason for use (medical, non-medical, both)</li> </ul> </li> </ul>	Is made up of a core component, optional modules, and state-added questions. Other States may also include additional questions on Cannabis.
	Collected Collected for all US states States States that included the Marijuana use module in 2023: Connecticut, Delaware, Illinois, Indiana, Maine, Maryland, Mississippi, Montana, Nebraska, Nevada, New Mexico, Ohio, Oklahoma, Oregon, Vermont, Virginia,	CollectedCollected for all US statesStatesNationally representative data on the use of tobacco, alcohol, and drugs; substance use disorders; mental health issues; and receipt of substance use and mental health treatmentQuestions on Cannabis: • Prevalence and Frequency of Use • Age of first Use • Method of UseStates that included the Marijuana use module in 2023: Connecticut, Delaware, Illinois, Indiana, Maine, Maryland, Nebraska, Nevada, New Mexico, Ohio, Oklahoma, Oregon, Vermont, Virginia, WyomingMarijuana Module wyomingMarijuana Module • Prevalence and Frequency of Use • Method of useCr's Added questions: • Preception of Risk • Driving under influence of Cannabis • How/ where do you get Cannabis

[			,
		<ul> <li>Do you often think you</li> </ul>	
		should quit or cut down	
		use?	
Youth Risk Behavior	YRBS High school:	Measures health-related behaviors	Includes the Youth Risk and
Surveillance System	Collected in most US	and experiences that can lead to	Behavior Survey (YRBS) for High
(YRBSS)	States: States that did	death and disability among youth	School & the YRBS For Middle
	NOT participate in	and adults.	School
	2021 Alaska,		
	Minnesota, Oregon,	Questions on Cannabis include:	Other states may include
	Washington,	<ul> <li>Prevalence and Frequency</li> </ul>	additional questions on
	Wyoming	of use	Cannabis.
	YRBS Middle School:	<ul> <li>Age of first use</li> </ul>	
	States participating:		
	New Mexico, North	CT's added Questions:	
	Dakota, Ohio,	<ul> <li>Car safety and Cannabis</li> </ul>	
	Kentucky, West	Use (Driving or Riding in	
	Virginia, Virginia,	car with driver under the	
	North Carolina,	influence)	
	Florida, District of	Method of Use	
	Columbia, Delaware,	• Perception of risk of harm	
	Maryland, Rhode	from Cannabis Use	
	Island, Vermont,		
	Maine, Hawaii		
Pregnancy Risk	Collected for most	Reproductive Health	A supplemental questions
<u>Assessment</u>	States: States NOT	Questionnaire, to collect data on	portion about marijuana can be
Monitoring System	participating:	maternal attitudes and experiences	added to states PRAMS
(PRAMS)	California, Idaho,	before, during, and shortly after	questionnaire. As of 2021 CT did
	North Carolina, Ohio	pregnancy.	not include this supplemental
			portion.
		Supplemental Cannabis use	
		section includes questions about:	
		<ul> <li>Use before, during, and</li> </ul>	
		after pregnancy	
		<ul> <li>Frequency of use</li> </ul>	
		<ul> <li>Method of use</li> </ul>	
		<ul> <li>Reason for use</li> </ul>	
		<ul> <li>Interactions with health</li> </ul>	
		care workers about	
		Cannabis	
International	Annual Survey:	Includes data on	Designed to examine public
Cannabis Policy Study	Canada and the	Prevalence and Frequency	health impacts of Cannabis
(ICPS)	United States (since	of Use	Policy. Conducted by the
	2018), Australia and	Method of use	University of Waterloo .
	New Zealand (since	Exposure to health	The latest report for the UC and
	2021) and Germany and the United	warnings and public	The latest report for the US can be found here:
		educational campaigns	https://cannabisproject.ca/wp-
	Kingdom (since 2023)	Exposure to cannabis	content/uploads/2024/01/2021-
		marketing and branding	
		Mental health status	ICPS-US-National-Report-Sept- 27-1.pdf.
		Perception of health risk,	<u>27-1.pul</u> .
		Purchase information	
		(legal vs illegal)	

The data described above are utilized to monitor key outcomes related to cannabis. The table below includes key outcomes of cannabis legalization, and data sources utilized to track them.

Key Outcomes Monitored	Data Sources
Prevalence of use	NSDUH, BRFSS, YRBS, ICPS, State Specific School and Public Health Surveys
Cannabis use by pregnant individuals	PRAMS, California's Maternal and Infant Health Assessment (MIHA)
Motor vehicle accidents	Crash Data, Department of Transportation (DOT), Department of Public Safety (DPS), Bureau of Highway Safety (BHS), Traffic Safety Commission
Attitudes toward cannabis/ Perception of Risk	NSDUH, BRFSS, YRBS, Healthy Kids Colorado Survey
Heath Outcomes	Emergency Room Data, Hospital Discharge Data, Medical billing data (Medicaid), Poison Control Data, Overdose Surveillance Data, Fatality Reporting Systems
Mental Health	BRFSS, YRBSS
Treatment data	NATIONAL - Treatment Episode Data Set (TEDS) MAINE - Web Infrastructure for treatment services (WITS) MASSACHUSETTS -Substance Abuse Management Information System (SAMIS)
Crime Rates/Data	Juvenile Justice, Drug Enforcement Agency, Law Enforcement Data, WSIPP Criminal History Database (WA)
Methods of consumption	NSDUH, YRBS, BRFSS, ICPS, State Specific School and Public Health Surveys
Incidents of discipline in schools	Unique to MA: Department of Elementary and Secondary Education (DESE)
Availability of High Potency Cannabis	Testing of DEA seizures, Analysis of Market data

#### **Cannabis Data Monitoring: New England States**

*New England States: Connecticut, Maine, Massachusetts, New Hampshire (not yet legalized), Rhode Island, & Vermont.* 

	Prevalence of Use	Motor Vehicle Accidents	Attitudes and perception of risk	Health Outcomes	Treatment Data	Crime Rates	Market Data	Methods of Consumption	Incidents of discipline in schools	Availability of High Potency Cannabis
Connecticut	$\checkmark$	$\checkmark$	$\checkmark$	$\mathbf{i}$	$\checkmark$		$\mathbf{i}$	$\searrow$		
Maine	$\sim$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\searrow$	$\checkmark$			
Massachusetts	$\checkmark$	$\sim$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Rhode Island	$\checkmark$	$\sim$	$\checkmark$							
Vermont	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$			$\checkmark$		

Notable Practices in New England States with Legalized Adult-Use Cannabis

- Monitoring perception of risk & prevalence of use in youth, young adult and adult populations
- A focus on the need to monitor cannabis use by pregnant individuals
- Monitoring the shifting methods of use (e.g., smoking, vaping, edibles, dabbing)
- A notable focus on mental health outcomes and cannabis use, specifically depression, anxiety and suicidal ideation. Some reports also focus on first episode psychosis.
- Rhode Island: Student and Young Adult Survey that collects information on how cannabis is obtained by youth (e.g., family members as main point of access)

#### **Cannabis Data Monitoring: Connecticut**

The Connecticut Department of Public Health (DPH) provides annual cannabis data and statistics on adverse health events, demographic risk factors, and trends related to cannabis consumption in CT. Other state agencies participate in monitoring cannabis outcomes relevant to their populations or areas of focus. The second annual Cannabis Health Statistics Report can be found <u>here.</u>

Data Source	Indicators	Туре	LINK TO DATA	Notes
Behavioral Risk Factor Surveillance System Survey (BRFSS)	<ul> <li>Prevalence of Adult Cannabis Use</li> <li>Driving Under the Influence</li> <li>Perceived Risk</li> <li>Source of cannabis</li> <li>Method of Use</li> <li>Reason for use (i.e medical / non- medical, both)</li> </ul>	Survey	BRFSS	2017 and then 2021 and onward have included questions on Cannabis
Cannabis Analytic Tracking System (CATS)	<ul> <li>Date of Sale</li> <li>Retailer Information</li> <li>Product specifications and product amount.</li> </ul>			IN DEVELOPMENT: Tracking cannabis from seed to sale. Will allow DPH to estimate trends in consumption over time.
National Survey on Drug Use and Health (NSDUH)	<ul> <li>Prevalence of Substance Use Disorder</li> <li>Prevalence of Use</li> <li>Age of first use</li> <li>Frequency of use</li> <li>Method of use</li> </ul>	Survey	<u>NSDUH</u>	
Treatment Episode Data Set (TEDS)	Primary Substance     relevant to Admission	Healthcare Administrative	TEDS	Only facilities that receive public funds.
CT Inpatient Hospitalization and Emergency Department Visit Dataset	Cannabis related     treatment / illness	Healthcare Administrative	CT Hospitalizati on and ER Dataset	
Youth Risk Behavior Surveillance System (YRBSS) / CT School Health Survey (CSHS)	<ul> <li>Prevalence of youth cannabis use</li> </ul>	Survey	<u>CT School</u> <u>Health</u> <u>Survey</u>	Has included cannabis related questions since 2005
Pregnancy Risk Assessment Monitoring System (PRAMS)	<ul> <li>Prevalence of Cannabis use during pregnancy</li> </ul>	Survey		CT recently added the marijuana supplement, the 2025 report will reflect the additional questions on Cannabis.
Connecticut Crash Data Repository (CTCDR)	Cannabis related fatal motor vehicle crashes			IN DEVELOPMENT
National Highway Traffic Safety Administration (NHTSA) Fatality Analysis Reporting System (FARS)	Fatal motor vehicle crash data including drug test results.	Traffic/Mortality		
National Violent Death Reporting System (NVDRS) & State Unintentional Drug Overdose Reporting System (SUDORS)	<ul> <li>Toxicology information on deaths resulting from specific causes.</li> </ul>	Mortality		Can identify presence of THC, but not establish causation.
CT poison Control Center / ToxiCALL	Cannabis related     poisoning events			IN DEVELOPMENT

#### **Cannabis Data Monitoring: Illegal/Mixed Legalization States**

In the United States, the landscape of cannabis legalization varies widely across different states. As of now, there are 25 states (Alabama, Arkansas, Florida, Georgia, Hawaii, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Mississippi, Nebraska, New Hampshire, North Carolina, North Dakota, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, West Virginia, Wisconsin, Wyoming) where cannabis remains illegal or is restricted to medicinal use only. Within these states, there exists a notable deficiency in prevention resources and/or comprehensive data concerning cannabis use prevalence and impact. The key factors to these gaps include:

- 1. Limited Research Funding: States with strict cannabis laws typically allocate fewer resources towards studying its prevalence and effects. This lack of funding restricts the ability to conduct thorough research and gather robust data. There are some universities or health districts within these states allocating studies to cannabis, but they are limited in terms of reach and topic.
- 2. Data Collection Infrastructure: States may lack the infrastructure needed to collect, analyze, and disseminate data on cannabis use and its associated health impacts. This includes deficiencies in surveillance systems and reporting mechanisms.
- 3. **Regulatory Barriers**: Legal restrictions on cannabis make it challenging to collect data on its use, cultivation, and distribution. This regulatory environment inhibits researchers from accessing the necessary information to assess prevalence accurately.
- 4. **Public Health Reporting**: In states where cannabis is illegal or tightly regulated, there may be underreporting of its use when data is collected through self-report methods such as surveys. This is due to stigma or fear of legal repercussions and hinders the development of accurate prevalence estimates.
- 5. Healthcare Provider Education: Healthcare professionals in these states may not receive adequate training on cannabis-related health issues. This gap in education can result in underdiagnosis or mismanagement of cannabis-related health problems. This issue may also arise within the Police Departments of these states, and they may not be fully equipped to handle cases involving cannabis.
- 6. Advocacy Programs: Advocacy groups are actively campaigning for legalization. By mobilizing grassroots support and lobbying legislators, these groups aim to change laws and regulations surrounding cannabis use, but their campaigns are not based in data.

Overall, the absence of prevention resources and comprehensive data in states with illegal or limited medicinal cannabis reflects broader challenges in policy, funding, and infrastructure that impact public health and regulatory oversight. These gaps are crucial insight to why developing evidence-based strategies to manage cannabis use to mitigate potential health risks are essential for every state regardless of legalization status.

#### **SCOPING REVIEW**

To continue to build a knowledge base around cannabis monitoring efforts in the United States in the context of adult use legalization, the CPES team conducted an intensive scoping review to identify the scope and size of the literature on cannabis outcome monitoring and provide valuable insights to enhance evidence-based decision-making, data monitoring, prevention planning, and policy development. The full report and results of this effort are currently under review for publication at a peer-reviewed journal and the full article in its draft form is available upon request from CPES.

CPES partnered with a research librarian at UConn Health to search published literature and non-published reports, including PubMed/MEDLINE, Embase, Scopus, PsycInfo, Web of Science, Dissertations & Theses Global, the Trip Database, the RAND website, and the Council of State and Territorial Epidemiologists website. These were searched from date of inception to 8/16/2023 to retrieve all relevant records. Reviewers screened abstracts and titles to identify the initial set of articles to be considered; full articles were then screened for final inclusion. Included articles were coded using a standardized form. This resulted in a total of 3,355 records being extracted for screening after the removal of duplicates and 124 additional records identified by searching our identified websites (e.g., RAND website). After screening, 84 papers/reports were included in the review.

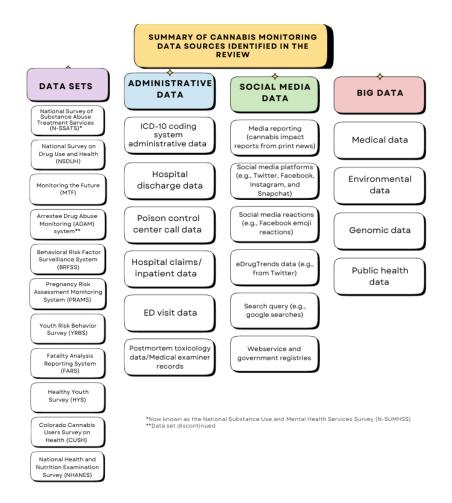
#### SUMMARY OF CANNABIS MONITORING OUTCOMES IDENTIFIED IN THE REVIEW a) $(\otimes)$ ... .... **CANNABIS USE AND** SOCIAL EQUITY PUBLIC SAFETY AND LEGAL IMPLICATIONS MARKET PRACTICE PSYCHOLOGICAL INFLUENCES ON IONITOR THE EFFEC OF LEGALIZATION BEHAVIOR · Cannabis-related · Product safety · Cannabis-Substance Use Disorders and consequences (e.g., cannabis use disorder, co-use, comorbid disorders, birth defects) Environmental monitoring (e.g., cannabis content in wastewater, water, power usage) Cannabis hospital visits (e.g., related impaired driving · Product content, Cannabis ED/ urgent care disparities (e.g., in diagnosis, outcomes (e.g., crashes/injuries /fatalities) usage (e.g. prevalence, potency and differentiation visits, treatment admissions/hospital treatment seeking, arrest, conviction rates, outlets frequency, claims, poison · Cannabis retailer Proper cannabis disposal quantity). information (e.g., number, location, density of outlets) center cases. Mental and behavioral health related consequences (mental health disorders, suicidality impulsive and violen behaviors) Cannabishospital discharges) related placement) Modality of Second-hand exposure at home use (e.g., smoked, Laboratory testing injuries (e.g. in · Retail market data Social (e.g., sales, amounts, type, cultivation, production) ski resort) and screening idality, action/social movement activity Economic in edible) (e.g., UDS cannabinoid (e.g.,cost o state and local agency administrative and · Cannabisimmunoassay screen Factors related arrests (THC IA), postmortem THC/COOH-THC data) Long term and convictions (e.g., Youth criminal justice consequences of alcohol and cannabis revenues, law enforcement/ associated Cannabis marketing practices (e.g., youth-targeted advertisement Community infrastructure with initiation regulators legalization implementation, mental health and addiction treatment related to increased cannabis use. (e.g., age) · Cannabis-related outcomes) Acute health effects morbidity/mortality . Unintended and from contaminated cannabis products intended consequences of cannabis advertisement, Perceived (e.g., injuries, Cannabis-related school price in legal and illegal market) risks and violence or death Cannabis-related social norms, Cannabis-related health impacts (e.g., acute coronary disease, cyclical vomiting syndromes) among young people cannabis use, needing but not receiving treatm workplace and employers, impa on employee productivity) post-use) outcomes (e.g., school dropout laws/policies (e.g., daily knowledge. · Effect on the market for alcohol and other drugs attitude, · Cannabis use rates. cannabis use, CUD, beliefs suspensions. exacerbated act expulsions, and absenteeism) medical conditions psychiatric disorders) Regulation (e.g. Long-term psychosocial outcomes (e.g. educational Cannabis (e.g., myocardial possession, taxes and finance) infarctions, strokes, Potential benefits of cannabis and its components Pediatric cyclic vomiting) attainment, life satisfaction, etc.) Cannabis effect accidental poisonings from Cannabis product contamination (e.g., with mold, bacteria, or pesticides) Polysubstance on minority communities e.g., quality of use Cannabis · Trends in Occupational health and safety edible products contamination or overdose Incidents communications of substance use life indicators

#### Analysis resulted in seven key areas for cannabis outcome monitoring (see Figure below)

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In addition, **data sources and datasets** that could be targeted in cannabis monitoring efforts were identified (See Figure to the right).

The results of this review also highlight several methodological recommendations for monitoring the impacts of adult-use cannabis legislation. For example, expanding analytical approaches used, and using outcomes and designs that capture the nuanced and heterogenous ways laws are implemented across states and localities, ensuring careful selection of control or comparison groups, and conducting large prospective studies.



Finally, this scoping review identified several key lessons learned in monitoring the public health outcomes of adult-use cannabis legalization:

- The current data infrastructure for monitoring the public health outcomes in the United States is inadequate. More funding is needed to support the development and maintenance of this infrastructure. A report indicated that while most cannabis legislation requires some type of public health surveillance, only a few states had legislative requirements to fund surveillance efforts (CSTE, 2018).
- Data collection and monitoring systems should ideally be established early in the legalization process.
- States would benefit from increased cross-state collaboration and dialogue to build and enhance data infrastructure across states.
- It is important for states to consider more localized data sources, as national surveys often do not provide state, local, or regional estimates. While national surveys are representative at a national level, they may not accurately reflect the specific states, regions, or other localities.

Monitoring cannabis outcomes amid a rapidly changing legal landscape is complex due to the limitations of the current data systems, datasets, and methods. Continued efforts are required to identify best practices in monitoring outcomes utilizing these findings to influence prevention, treatment, and policy efforts.

# CONCLUSION

#### How Connecticut compares to other states

Connecticut's cannabis monitoring efforts are comprehensive relative to other states in the US. It is obvious that CT monitoring efforts have taken cues from states that were early adopters of adult use cannabis legalization. Connecticut has also leveraged opportunities to add supplemental cannabis questions to their state specific versions of national behavioral health surveys, such as the Youth Risk Behavior Survey (YRBS) and Behavioral Health Risk Factor Surveillance Survey (BRFSS) whenever possible. The state also benefits from a robust and wellmobilized prevention, treatment and recovery infrastructure that stands poised to address outcomes of cannabis monitoring as they are identified.

#### **Recommendations for further monitoring**

- Further monitoring of cannabis use during the perinatal period, using the PRAMS 2025 survey which will include the additional cannabis questions;
- Explore ways to access the effect exposure to cannabis advertising has on youth, attitudes and perception of harm;
- Track and monitor high potency product and use, to inform regulations and policy;
- Develop local data collection tools and increase community capacity to implement tools to collect data locally, in order to obtain more standardized and complete community level data on cannabis use, behaviors, risk and protective factors statewide;
- Explore development of a cannabis monitoring data dashboard for public use.

#### Limitations of this report

Monitoring efforts are evolving, especially in states where cannabis use legalization is recent, as data collection methods and data systems are developed to respond to cannabis legalization, sales, and use. As this is a point-in-time web scan of readily available information on state websites and through publicly published data reports, there may be monitoring efforts by states that are not represented here. A review of states who were early adopters of cannabis legalization has shown that the initial step of identification of indicators and sources relevant to legalization effects is generally followed up by data gathering and monitoring efforts, and finally development of reports, dashboards and portals to publicly share these data. Consequently, the efforts of states early in their adult use cannabis legalization journey may not yet be visible vias the methods utilized in this report. In the appendix, you will find two tables organized by state containing all the information reviewed through the web scan, with links to websites, reports and publications. One table represents states where adult use cannabis is legal, and one representing states where adult use cannabis remains illegal.

## **APPENDIX**

Table 1: States where Adult Use Cannabis is Legal

State & Year of Legalization Alaska - 2014	Webpages • <u>Alaska</u> <u>Cannabis</u> Information <u>Portal</u> • <u>Alaska</u> <u>Department of</u> <u>Health</u> • <u>Alcohol and</u> <u>Marijuana</u> <u>Control Office</u> • <u>Alaska</u> <u>Marijuana</u> <u>Data and</u> <u>Statistics</u>	Surveys/Sources for Data YRBS BRFSS NSDUH PRAMS Alaska Childhood Understandin g Behaviors Survey (CUBS) (a follow up to PRAMS) TEDS Poison Control Center Juvenile Justice (DJJ) Alaska Health Facilities Data reporting Alcohol & Marijuana Control Office (AMCO) Alaska Department of Revenue (DOR)	<ul> <li>Key Outcomes Monitored</li> <li>Prevalence of Use (Adult, Youth, Pregnant Women)</li> <li>Motor</li> <li>vehicle accidents</li> <li>Health Outcomes</li> <li>Availability of high-potency cannabis</li> <li>Crime Rates</li> <li>Attitudes toward Cannabis</li> <li>Market data</li> </ul>	Links to Reports / Publications Cannabis Retail Market Indicators in Five Legal States in the United States: A Public Health Perspective -: ScienceDirect Marijuana Use and Public Health in Alaska
Arizona - 2020	<ul> <li><u>Arizona</u> <u>Cannabis</u> <u>Information</u> <u>Portal</u></li> <li><u>Arizona</u> <u>Department of</u> <u>Health</u> <u>Services</u></li> </ul>	Arizona Youth <u>Survey</u> <u>YRBS</u>	<ul> <li>Prevalence of Use (Adult, Youth)</li> <li>Crime Rate</li> <li>Attitudes toward Cannabis</li> <li>Market Data</li> </ul>	<u>The Arizona Cannabis Education</u> (AzCANN) program <u>Marijuana Legalization in Arizona: A</u> <u>Baseline Report</u> <u>Market Data</u>

California - 2016	<ul> <li>Department of Cannabis Control</li> <li>Data dashboards</li> <li>Let's Talk Cannabis</li> <li>California Cannabis</li> <li>California Cannabis</li> <li>Equity Accountability Report</li> <li>The California Cannabis Surveillance system (CCSS)</li> <li>The maternal and Infant Health Assessment (MIHA)</li> </ul>	<ul> <li>California School Climate, Health and Learning Survey</li> <li>Poison Control Data</li> <li>Overdose Surveillance Data</li> <li>California Healthy Kids survey (CHKS)</li> <li>The California Youth Tobacco Survey (CYTS)</li> <li>The California Health Interview Survey (CHIS)</li> <li>The California Health Interview Survey (CHIS)</li> <li>Emergency Department Data</li> <li>California's</li> </ul>	<ul> <li>Motor vehicle accidents</li> <li>Health Outcomes</li> <li>Prevalence of use (Adult, Youth, Pregnant Women)</li> <li>Attitudes toward Cannabis</li> <li>Crime Rates</li> <li>Market Data</li> </ul>	Tobacco and Cannabis Use During and After Pregnancy in CaliforniaExamining indirect effects of advertising exposure on young adults' cannabis and nicotine vaping2022 Cannabis Data Snapshot V52016 Baseline Data Brief - Cannabis Use & Consequences CA
Colorado - 2012	<ul> <li>(MIHA)</li> <li>Colorado Cannabis</li> <li>Marijuana Education and youth prevention resources</li> <li>Department of Public Health</li> <li>Market Data</li> </ul>	<ul> <li>Emergency Department Data</li> <li>California's Maternal and Infant Health Assessment (MIHA)</li> <li>BRFSS</li> <li>Healthy Kids Colorado Survey (HKCS)</li> <li>PRAMS</li> <li>Colorado Hospital Association (CHA)</li> <li>Poison Control Center</li> </ul>	<ul> <li>Motor vehicle accidents</li> <li>Health Outcomes (using hospital and ER data, Poison Control data)</li> <li>Prevalence of use (Youth, Adult, Pregnant women)</li> <li>Mortality Data</li> <li>Market Data</li> </ul>	Monitoring Health Concerns Related to         Marijuana         The impact of recreational cannabis         legalization on youth         2020-Regulated-Marijuana-Market-         Update         Colorado MED Dashboard   Tableau         Public         Underage Sales Dashboard
Connecticut - 2021	• <u>Cannabis</u> <u>Health</u>	BRFSS     YBRFSS	<ul> <li>Prevalence of use (Adult, Youth,</li> </ul>	2024 Cannabis Health Statistics Report (CHSR)

Delaware -	<ul> <li>Statistics (ct.gov)</li> <li>SEOW</li> <li>CT Data Collaborative</li> <li>CT Open Data Portal</li> </ul>	<ul> <li>CT School Health Survey</li> <li>NSDUH</li> <li>Cannabis Public Health Surveillance</li> <li>Cannabis Health Statistics Report</li> <li>PRAMS</li> <li>Cannabis Analytic Tracking System (CATS)</li> <li>CT Inpatient and ER Department Visit Dataset (CIEDVD)</li> <li>CT Poison Control Center (CPCC)</li> <li>TEDS</li> <li>CT Crash Data Repository (CTCDR)</li> <li>Fatality Analysis Reporting System (FARS)</li> <li>National Violent Death Reporting System (NVDRS)</li> <li>State Unintentional Drug Overdose Reporting System (SUDORS)</li> <li>Newly</li> </ul>	<ul> <li>Pregnant Women)</li> <li>Attitudes toward cannabis use</li> <li>Mental Health Outcomes</li> <li>Health Outcomes (Hospital, ER data, Poison Control)</li> <li>Demographic Risk Factors</li> <li>Treatment Episode Data</li> <li>Motor Vehicle Accident data/reports</li> <li>Method of Use</li> <li>Market Data</li> </ul>	2023 CHSR Inpatient and ER visits         2023 CHSR Treatment Episode Data         Statistics and Documents (ct.gov)         Cannabis Analytic Tracking System         [CATS] (A Seed to sale tracking system, real- time inventory used to track individual cannabis plants from planted to sale as a final product. Useful in determining how much cannabis is available. This system is available for DCP, DRS and can be made available for other entities upon request.)
2023	Cannabis Information Portal	legalized	<ul> <li>Market Data (currently data for medical Marijuana exists)</li> </ul>	2023 Annual Report

	• <u>Office of the</u> Marijuana			
District of Columbia (DC) - 2015	Commissioner <u>DC Cannabis</u> <u>Information</u> <u>Portal</u>	<ul> <li><u>BRFSS</u></li> <li><u>YRBSS</u></li> <li><u>Office of the</u> <u>Chief Medical</u> <u>Examiner</u> (OCME )data</li> </ul>	<ul> <li>Prevalence of Use</li> <li>Motor Vehicle Accidents</li> <li>Attitudes and perceptions</li> <li>Crime Rates</li> <li>Treatment Data</li> </ul>	Marijuana Report Final 2016
Illinois - 2019	<ul> <li><u>Cannabis-Policy-Resource-Center</u></li> <li><u>Illinois SEOW</u></li> <li><u>IL Cannabis</u>InformationPortal</li> </ul>	<ul> <li>Illinois Youth Survey</li> <li>Monitoring the Future</li> <li>YRBSS</li> <li>BRFSS</li> <li>PRAMS</li> <li>TEDS</li> </ul>	<ul> <li>Market Data</li> <li>Motor Vehicle Accidents</li> <li>Crime Rate</li> <li>Method of Use</li> <li>Prevalence of use (Adult, Youth, Pregnant women)</li> <li>Mental Health outcomes (Psychosis/suici de rates)</li> <li>Health Outcomes (ER and Hospital data)</li> <li>Treatment Data</li> <li>Attitudes toward Cannabis</li> </ul>	Substance Use, Racial, Gender, and Income Disparities         The Impact of Legalization of Marijuana in Illinois - 2021         2023 Cannabis Report
Maine - 2016	<ul> <li>Maine SEOW- <u>Cannabis</u></li> <li>Maine <u>Interactive</u> <u>Health Data</u></li> <li>Data   Office of Cannabis Policy</li> <li>Maine <u>Cannabis</u> <u>Information</u> <u>Portal</u></li> <li>Maine Drug <u>Data Hub</u></li> </ul>	<ul> <li>BRFSS</li> <li>Department of Public Safety (DPS)</li> <li>Bureau of Highway Safety (BHS)</li> <li>Department of Transportatio n (DOT)</li> <li>Drug Enforcement Agency (MDEA)</li> </ul>	<ul> <li>Market Data</li> <li>Prevalence of Use (youth and Adult)</li> <li>Motor Vehicle Accidents</li> <li>Health Outcomes (Hospital, ER, Poison control data)</li> <li>Attitudes and perceived risk of use</li> <li>Treatment data</li> <li>Crime Rates</li> </ul>	

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	• <u>Cannabis</u> <u>Prevention in</u> <u>Maine</u>	<ul> <li>Maine Integrated Youth Health Survey (MIYHS)</li> <li>NSDUH</li> <li>Parent Survey</li> <li>PRAMS</li> <li>Syndromic Surveillance System</li> <li>Web Infrastructure for treatment services (WITS)</li> <li>SEOW Young</li> </ul>	• Market Data	
Maryland - 2022	<ul> <li><u>Cannabis</u> <u>Public Health</u> <u>Advisory</u> <u>Council</u></li> <li><u>Medical and</u> <u>Adult-Use</u> <u>Cannabis Data</u> <u>Dashboard</u></li> </ul>	Adult Survey Early stages of developing data dashboard with plans to use the following data sets: BRFSS YRBS PRAMS Poison Control Centers Maryland Public Behavioral Health System (PBHS) Vital Statistics Administratio n (VSA) Maryland Violent Death Reporting System (MVDRS) Health Services Cost Review Commission( HSCRC)	<ul> <li>Advisory council is leading prevention efforts.</li> <li>Prevalence of use data (Adult, Youth)</li> <li>Market Data</li> </ul>	2024 <u>Cannabis Briefing Presentation</u>
Massachus etts - 2016	<u>Massachusetts</u> <u>Cannabis</u> <u>Information</u>	<ul> <li>BRFSS</li> <li>Community Health Equity</li> </ul>	<ul> <li>Prevalence of use (Youth and Adult)</li> </ul>	2024 The State of Cannabis is MA Open Data - Cannabis Control
	Portal	-1		<u>Commission MA</u>

<ul> <li>Health Topic Data</li> <li>Cannabis Control Commission</li> </ul>	Initiative Survey       • Motor vehicle accidents       State of the Data 2019         • The Massachusett S Youth       • Methods of Consumption (MYHS)       State of the Data 2019         • Methods of Consumption (MYHS)       • Attitudes       •         • NSDUH       • Incidents of discipline in Control Data       • Crime Rates         • The Department of Elementary and Secondary Education (DESE)       • Market Data         • Massachusett s Trauma Registry       • Massachusett s Trauma Registry       • Massachusett s Trauma Registry         • National Health and Nutrition Examination Syrtem (SAMIS)       • State Emergency Department Data (SEDD)       • YRBSS         • State Emergency Department Data (SEDD)       • YRBSS         • Massachusett s Mariuana Baseline Health Study       • Massachusett s Mariuana Baseline Health Study         • Massachusett s All Payer Claims Data       • Massachusett s All Payer Claims Data         • Massachusett s Ausett s public       • Massachusett s public
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Michigan - 2018	<ul> <li><u>SEOW</u></li> <li><u>Cannabis</u> <u>Regulatory</u> <u>Agency</u></li> <li><u>Michigan</u> <u>Cannabis</u> <u>Information</u> <u>Portal</u></li> <li><u>Reports and</u></li> </ul>	<ul> <li>Health Data Warehouse</li> <li>Fatality Analysis Reporting System (FARS)</li> <li>Substance Abuse Services System</li> <li>NSDUH</li> <li>TEDS</li> <li>YRBS</li> <li>Monitoring the future survey</li> <li>BRFSS</li> </ul>	<ul> <li>Adult and youth prevalence</li> <li>Attitudes toward Cannabis</li> <li>Treatment Data</li> <li>Market Data</li> </ul>	Monitoring the Future   NIDA Cannabis Regulatory Agency Statistical Report
Minnesota - 2023	<ul> <li><u>Cannabis</u> <u>Dept. of</u> <u>Health</u></li> <li><u>Minnesota</u> <u>Office of</u> <u>Cannabis</u> <u>Management</u></li> </ul>	<ul> <li>NSDUH</li> <li>International Cannabis Policy Study</li> <li>BRFSS</li> <li>Minnesota Adult Tobacco Survey</li> <li>Minnesota Student Survey</li> <li>Minnesota Youth Tobacco Survey</li> <li>Pinnesota Youth Tobacco Survey</li> <li>Poison Control System</li> </ul>	<ul> <li>Prevalence of Use (adults, youth)</li> <li>Health Outcomes Data</li> <li>Method of Use</li> </ul>	University of Minnesota Cannabis Research Center Cannabis Use in Minnesota: Baseline Assessment (PDF) Minnesota 2022 ICPS US State Report
Missouri - 2022	<ul> <li><u>Behavioral</u> <u>Health</u> <u>Epidemiology</u> <u>Workgroup</u></li> <li><u>Cannabis</u> <u>Regulation</u></li> </ul>	<ul> <li><u>Missouri</u> <u>Student</u> <u>Survey</u></li> <li>NSDUH</li> </ul>	<ul> <li>Prevalence of use (Adult and Youth)</li> <li>Health outcomes</li> </ul>	2021 EPI profiile
Montana - 2022	<ul> <li>Public Health and Human Services</li> <li>Montana Cannabis</li> </ul>	<ul> <li><u>BRFSS</u></li> <li>NSDUH</li> <li>YRBSS</li> <li>PRAMS</li> <li>Hospital discharge</li> </ul>	<ul> <li>Prevalence of use (Adult &amp; Youth)</li> <li>Attitudes toward use</li> <li>Health outcomes</li> </ul>	Summary of Marijuana Use in Montana Montana Marijuana Sales Report 2024 MontanaStateCannabis.org

Nevada - 2016	<ul> <li>Information Portal</li> <li>Nevada Cannabis Compliance Board</li> <li>SEOW</li> </ul>	data and ER data • Law enforcement Data • PRAMS	<ul> <li>Motor Vehicle Accidents</li> <li>Crime Rates</li> <li>Treatment Data</li> <li>Market Data</li> <li>Motor Vehicle Accidents</li> <li>Health Outcomes</li> <li>Prevalence of use (Adult &amp; Youth)</li> <li>Market Data</li> </ul>	Presentation by the SEOW and the Multidisciplinary Prevention Advisory Committee
New Jersey - 2021	<ul> <li><u>SEOW</u></li> <li><u>Cannabis</u> <u>Smart.</u> <u>Cannabis Safe.</u></li> <li><u>New Jersey</u> <u>Cannabis</u> <u>Information</u> <u>Portal</u></li> </ul>	<ul> <li>New Jersey Household Survey on Drug Use and Health</li> <li>Middle School Surveys Risk and Protective Factor Survey</li> </ul>	<ul> <li>Prevalence of use (Adult &amp; Youth)</li> <li>Motor Vehicle Accidents</li> <li>Treatment data</li> <li>Market Data</li> </ul>	New Jersey Cannabis Statistics 2024- 2023 Department of Human Services NJSPL - Cannabis Survey - 2023
New Mexico - 2021	<ul> <li><u>New Mexico</u> <u>Prevention</u></li> <li><u>New Mexico</u> <u>Cannabis</u> <u>Information</u> <u>Portal</u></li> </ul>	<ul> <li>2023 New <u>Mexico</u> <u>Community</u> <u>Survey</u></li> <li><u>BRFSS</u></li> <li><u>YRRS</u></li> <li><u>Emergency</u> <u>Department</u> <u>and Hospital</u> <u>Discharge</u> <u>Data</u></li> <li><u>NSDUH</u></li> </ul>	<ul> <li>Prevalence of use (Adult &amp; Youth)</li> <li>Health outcomes</li> <li>Market Data</li> </ul>	Substance Use EPI Profile 2024
New York - 2021	<ul> <li><u>New York</u> <u>Cannabis</u> <u>Information</u> <u>Portal</u></li> <li><u>Prevention</u> <u>Agenda</u> <u>Partners</u></li> <li><u>Office of</u> <u>Addiction</u> <u>Services and</u> <u>Supports</u></li> </ul>	<ul> <li><u>BRFSS</u></li> <li>YRBS</li> <li>NSDUH</li> <li>Statewide Planning and Research Cooperative System (SPARCS)</li> <li>Emergency Department Data</li> </ul>	<ul> <li>Adult and youth prevalence of use</li> <li>Treatment data</li> <li>Health Outcomes</li> <li>Market Data</li> </ul>	Cannabis in NYC New York State Behavioral Risk Factor Surveillance System Brief

	Alcohol and     Drug Use Data			
Ohio - 2023	<ul> <li><u>SEOW</u></li> <li><u>Ohio Cannabis</u> Information Portal</li> </ul>	<ul> <li><u>BRFSS</u></li> <li>Ohio Healthy Youth Environments Survey (OHYES!)</li> <li>NSDUH</li> </ul>	<ul> <li>Prevalence of Use (Adult, Youth)</li> <li>Crime Rates</li> <li>Attitudes toward cannabis use</li> </ul>	<u>Cannabis Policy Ohio</u> <u>Implications for future cannabis policy</u>
Oregon - 2014	<ul> <li><u>Oregon Health</u> <u>Authority –</u> <u>Data and</u> <u>Reports</u></li> <li><u>Oregon Health</u> <u>Authority</u></li> <li><u>Oregon</u> <u>Cannabis</u> <u>Information</u> <u>Portal</u></li> <li><u>Oregon Liquor</u> <u>and Cannabis</u> <u>Commission</u></li> </ul>	<ul> <li>Poison Control Center Data</li> <li>ER and Hospital Data</li> <li>NSDUH</li> <li>BRFSS</li> </ul>	<ul> <li>Motor Vehicle Accidents</li> <li>Prevalence of use (Adult, youth, Pregnant Women)</li> <li>Health Outcomes</li> <li>Methods of consumption</li> <li>Crime Rates</li> <li>Attitudes and perceptions</li> <li>Market Data</li> </ul>	<u>Marijuana Consequences - Oregon 2019</u> <u>Adult Marijuana Use - Oregon 2019</u> <u>Youth Marijuana Use - Oregon 2019</u>
Rhode Island - 2022	<ul> <li><u>SEOW</u></li> <li><u>Department of</u> <u>Health</u></li> <li><u>Rhode Island</u> <u>Prevention</u> <u>Resource</u> <u>Center (RIPRC)</u></li> <li><u>Marijuana –</u> <u>Rhode Island</u> <u>Regional</u> <u>Prevention</u> <u>Coalitions</u></li> </ul>	<ul> <li>Rhode Island Young Adult Survey (RIYAS)</li> <li>RI Student Survey (RISS)</li> <li>YRBSS</li> <li>Fatality Analysis Reporting System (FARS)</li> </ul>	<ul> <li>Prevalence of use (youth and adult)</li> <li>Attitudes toward cannabis use</li> <li>Motor Vehicle Accidents</li> </ul>	<u>Marijuana data brief</u>
Vermont - 2018	<ul> <li><u>Cannabis</u></li> <li><u>Vermont</u></li> <li><u>Department of</u></li> <li><u>Health</u></li> <li><u>Cannabis</u></li> <li><u>Control Board</u></li> <li><u>Cannabis –</u></li> <li><u>Prevention</u></li> <li><u>Substance Use</u></li> <li><u>Dashboard</u></li> </ul>	<ul> <li>ER and hospital Data</li> <li>NSDUH</li> <li>YRBS</li> <li>BRFSS</li> <li>PRAMS</li> <li>Motor Vehicle Crash Facts</li> <li>Poison Control Data</li> <li>Vermont Medicaid Claims</li> </ul>	<ul> <li>Prevalence of use (Youth and Adult)</li> <li>Health Outcomes</li> <li>Treatment Data</li> <li>Method of Use</li> <li>Motor Vehicle Accident Data</li> </ul>	Data and Reports   Vermont         Department of Health         Vermont Cannabis Use Highlights         Marijuana Use in Vermont         Lit Review: Update to the Health Impact         Assessment         Data Brief

Virginia - 2021	<ul> <li><u>SEOW</u></li> <li><u>Cannabis</u> <u>Control</u> <u>Authority</u></li> <li><u>Virginia</u> <u>Cannabis</u> <u>Information</u> <u>Portal</u></li> </ul>	<ul> <li>BRFSS</li> <li>Poison Control Center</li> <li>YRBSS</li> <li>NSDUH</li> <li>Virginia Cannabis Control Authority (CCA)</li> <li>Department of Juvenile Justice</li> <li>Department of Criminal Justice Services</li> <li>Hospital Data</li> </ul>	<ul> <li>Prevalence of use (Youth and Adult)</li> <li>Attitudes toward cannabis</li> <li>Health Outcomes</li> <li>Crime Data</li> <li>Motor Vehicle Crash Data</li> </ul>	Annual Report by the Cannabis Public Health Advisory Council – 2022
Washington - 2012	<ul> <li>Washington State Department of Health</li> <li>Washington Cannabis Information Portal</li> </ul>	<ul> <li><u>BRFSS</u></li> <li><u>PRAMS</u></li> <li><u>Healthy</u> <u>Youth Survey</u></li> <li><u>Medicaid</u> <u>claims data</u></li> <li><u>WSIPP</u> <u>Criminal</u> <u>History</u> <u>Database</u></li> <li><u>Traffic Safety</u> <u>Commission</u></li> </ul>	<ul> <li>Prevalence of use</li> <li>Motor Vehicle Accidents</li> <li>Treatment Data</li> <li>Crime Rates</li> <li>Market Data</li> </ul>	<u>Cannabis Related Public Health and</u> <u>Safety Outcomes</u>

Table 2: States where Adult Use Cannabis is NOT legal

State & Year of Legalization	Sources	Key Outcomes Monitored	Links to Key Reports / Publications / Websites
Alabama - Mixed	<ul> <li><u>Alabama</u> <u>Department of</u> <u>Mental Health</u></li> <li><u>Alabama Marijuana</u> Laws</li> </ul>	<ul> <li>Medical cannabis is legalized, recreational is not</li> </ul>	<ul> <li>No additional links found addressing cannabis use/effects on state</li> </ul>
Arkansas - Mixed	• <u>Arkansas Department</u> of Health	<ul> <li>Medical cannabis is legalized, recreational is not</li> </ul>	<ul> <li>No additional links found addressing cannabis use/effects on state</li> </ul>
Florida - Mixed	• Florida Department of <u>Health</u>	Medical cannabis is	No additional links found addressing cannabis     use/effects on state

	Office Of Medical Marijuana Use	legalized, recreational is not	
Georgia - Mixed	• <u>Georgia Department of</u> <u>Public Health</u>	<ul> <li>Medical cannabis is legalized, recreational is not</li> </ul>	<ul> <li>No additional links found addressing cannabis use/effects on state</li> </ul>
Hawaii - Mixed	<ul> <li><u>Hawaii State</u> <u>Department of Health</u></li> <li><u>Office of Medical</u> <u>Cannabis Control and</u> <u>Regulation</u></li> <li><u>Hawai'i Substance</u> Use Statistics</li> </ul>	<ul> <li>Medical cannabis is legalized, recreational is not</li> </ul>	<ul> <li>No additional links found addressing cannabis use/effects on state</li> </ul>
Idaho – Illegal	• <u>SEOW</u>	<ul> <li>Medical and recreational cannabis are illegal</li> </ul>	<ul> <li>No additional links found addressing cannabis use/effects on state</li> </ul>
Indiana – Mixed	<ul> <li><u>SEOW</u></li> <li><u>Health: Overdose</u> <u>Prevention</u></li> </ul>	<ul> <li>Medical cannabis is legalized, recreational is not</li> </ul>	<ul> <li>No additional links found addressing cannabis use/effects on state</li> </ul>
Iowa – Mixed	• <u>Health and Human</u> <u>Services</u>	<ul> <li>Medical cannabis is legalized, recreational is not</li> <li>Low internet presence in terms of data of use and prevention</li> </ul>	<ul> <li>No additional links found addressing cannabis use/effects on state</li> </ul>
Kansas - Illegal	<ul> <li><u>Kansas Prevention</u> <u>Collaborative</u></li> <li><u>Kansas Marijuana</u> Laws 2024</li> </ul>	<ul> <li>Medical and recreational cannabis are illegal</li> </ul>	<ul> <li><u>https://www.sciencedirect.com/science/article/pii/S03</u> 76871623012954?via%3Dihub</li> </ul>
Kentucky – Mixed	<ul> <li><u>REACH Evaluation</u></li> <li><u>North Central District</u> <u>Health Department</u></li> </ul>	<ul> <li>Medical cannabis is legalized, recreational is not</li> </ul>	<ul> <li>No additional links found addressing cannabis use/effects on state</li> </ul>
Louisiana – Mixed	<ul> <li><u>Strategic Plan</u></li> <li><u>La Dept. of Health</u></li> </ul>	<ul> <li>Medical cannabis is legalized, recreational is not</li> </ul>	<ul> <li>No additional links found addressing cannabis use/effects on state</li> </ul>
Mississippi - Mixed	<ul> <li><u>Mississippi State</u> <u>Department of Health</u></li> <li><u>Mississippi Marijuana</u> <u>Laws 2024</u></li> </ul>	<ul> <li>Medical cannabis is legalized, recreational is not</li> </ul>	<ul> <li>No additional links found addressing cannabis use/effects on state</li> </ul>

		• Low internet presence for use data	
Nebraska - Illegal	<ul> <li><u>Nebraska Marijuana</u> <u>Laws 2024</u></li> <li><u>Nebraska Cannabis</u> <u>Information Portal</u></li> </ul>	• Medical and recreational cannabis are illegal	• <u>Epidemiology and Surveillance (ne.gov)</u>
New Hampshire - Mixed	• <u>New Hampshire</u> <u>Cannabis Information</u> <u>Portal</u>	• Medical cannabis is legalized, recreational is not	• No additional links found addressing cannabis use/effects on state
North Carolina - Illegal	<ul> <li><u>North Carolina</u> <u>Cannabis Information</u> <u>Portal</u></li> <li><u>Marijuana -</u> <u>Community Impact</u></li> </ul>	<ul> <li>Medical and recreational cannabis are illegal</li> <li>Prevalence of Use (Adult &amp; Youth)</li> </ul>	
North Dakota - Mixed	• <u>North Dakota</u> <u>Cannabis Information</u> <u>Portal</u>	Medical cannabis is legalized, recreational is not	<u>State Epidemiological Outcomes Workgroup</u> <u>(und.edu)</u>
Oklahoma - Mixed	<ul> <li><u>Marijuana</u></li> <li><u>SEOW</u></li> </ul>	• Medical cannabis is legalized, recreational is not	<ul> <li><u>Young Adults' Perceptions of and Intentions to Use</u> <u>Nicotine and Cannabis Vaporizers in Response to e-</u> <u>Cigarette or Vaping-Associated Lung Injury Instagram</u> <u>Posts: Experimental Study - PMC (nih.gov)</u></li> </ul>
Pennsylvania – Only Medical is Legal	<ul> <li><u>Cannabis Research  </u> <u>Drexel University</u></li> <li><u>Department of Health</u> <u>Home</u></li> </ul>	<ul> <li>Medical cannabis is legalized, recreational is not.</li> </ul>	•
South Carolina - Illegal	• <u>South Carolina</u> <u>Cannabis Information</u> <u>Portal</u>	• Medical and recreational cannabis are illegal	• <u>2020-SC-County-Level-Profiles-on-Substance-Use-</u> <u>Related-Indicators.pdf</u>
South Dakota - Mixed	<ul> <li><u>South Dakota</u> <u>Cannabis Information</u> <u>Portal</u></li> <li><u>SEOW</u></li> </ul>	• Medical cannabis is legalized, recreational is not	• No additional links found addressing cannabis use/effects on state
Tennessee - Mixed	<ul> <li><u>Prevention</u></li> <li><u>Tennessee Cannabis</u> <u>Information Portal</u></li> </ul>	• Medical cannabis is legalized, recreational is not	<ul> <li>No additional links found addressing cannabis use/effects on state</li> </ul>
Texas - Mixed	<ul> <li><u>Texas Cannabis</u> <u>Information Portal</u></li> <li><u>Reports &amp; Statistics</u></li> </ul>	• Medical cannabis is legalized,	• No additional links found addressing cannabis use/effects on state

		recreational is not	
Utah - Mixed	<ul> <li><u>Utah Cannabis</u> <u>Information Portal</u></li> <li><u>Utah Active Medical</u> <u>Marijuana Patients in</u> <u>2024</u></li> <li><u>SEOW Online Data</u> <u>System</u></li> </ul>	• Medical cannabis is legalized, recreational is not	<u>Medical Cannabis: 2024 Health and Human Services</u> <u>April Report</u>
West Virginia - Mixed	<ul> <li>West Virginia <u>Prevention Solutions</u> </li> <li>West Virginia <u>Cannabis Information</u> <u>Portal</u> </li> <li>West Virginia <u>Marijuana Laws 2024</u> </li> <li><u>SEOW</u> </li> </ul>	<ul> <li>Medical cannabis is legalized, recreational is not</li> <li>Prevalence of Use (Youth &amp; Adult)</li> </ul>	• <u>State-CDC-YSU-Prevention</u>
Wisconsin - Mixed	<ul> <li>Wisconsin Marijuana Laws 2024</li> <li>Alliance for Substance Misuse Prevention</li> </ul>	<ul> <li>Medical cannabis is legalized, recreational is not</li> </ul>	<ul> <li>No additional links found addressing cannabis use/effects on state</li> </ul>
Wyoming - Illegal	<ul> <li><u>Wyoming Department</u> of Health</li> <li><u>SEOW</u></li> </ul>	<ul> <li>Medical and recreational cannabis are illegal</li> <li>Prevalence of Use (Youth and Adult)</li> </ul>	<ul> <li><u>Facts &amp; Statistics   Wyoming Rx Abuse</u></li> <li><u>Marijuana Education – Prevention Management</u></li> </ul>

#### **Additional Sources**

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Hayer, Sarena MD, MA\*; Mandelbaum, Ava D. BS<sup>+</sup>; Watch, Lester MD<sup>‡</sup>; Ryan, Kimberly S. MD§; Hedges, Madeline A.¶; Manuzak, Jennifer A. PhD||; Easley, Charles A. IV PhD\*\*; Schust, Danny J. MD<sup>++</sup>; Lo, Jamie O. MD, MCR<sup>‡‡</sup>. Cannabis and Pregnancy: A Review. Obstetrical & Gynecological Survey 78(7):p 411-428, July 2023. | DOI: 10.1097/OGX.00000000001159 <u>Obstetrical & Gynecological Survey (lww.com)</u>

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