



Cannabis Use in Minnesota

BASELINE ASSESSMENT

July 1, 2024

Cannabis Use in Minnesota: Baseline Assessment

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As requested by Minn. Stat. § 3.197: This report cost approximately \$15,000 to prepare, including staff time, printing, and mailing expenses.

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Executive summary

This report provides an overview of the current state of surveillance data on cannabis use in Minnesota, pursuant to Minn. Stat. § 144.196. It provides baseline information from which the Minnesota Legislature and the Minnesota Department of Health (MDH) can track trends after the 2023 legalization of adult recreational cannabis use in Minnesota in 2023. Our assessment finds that tracking the state of cannabis data and use of cannabis in Minnesota will be with continued and refined uses of existing data sources. MDH will share more detailed analyses of cannabis surveillance data in a forthcoming legislative report, in January 2025.

This report shares data collected between 2016 and 2024, on cannabis use prior to adult use legalization in Minnesota, from the following sources:

Data on use among all age groups:

- National Survey on Drug Use and Health
- Minnesota Poison Control System
- Minnesota Office of Medical Cannabis
- International Cannabis Policy Survey

Data on adult use:

- Behavioral Risk Factor Surveillance System
- Minnesota Adult Tobacco Survey

Data on use among youth:

- Minnesota Student Survey
- Minnesota Youth Tobacco Survey

Key trends to note include:

- The proportion of adults and youth who reported using cannabis recreationally has increased over time.
- The proportion of users who smoke cannabis increased after hemp-derived cannabinoid products were introduced into the market.
- The proportion of users who eat or drink cannabis products increased after hemp-derived cannabinoid products were introduced into the market.
- The proportion of poison control calls related to youth has increased, particularly among those under 5 years old.
- On average, Minnesotans use cannabis at comparable rates to national estimates.
- The number of approved patients in the medical cannabis registry has increased steadily and continuously over time. As of 2023, there were just over 41,000 patients in the medical cannabis registry; approximately 61% of them were returning patients.
- In 2023, less than 2% of medical cannabis registry patients were under 18 years old.

Data limitations include:

- Sources categorize age groups differently.
- The age of 21 is not commonly used as a cutoff point between youth and adult cannabis users.
- Measurement of cannabis use grew more complex when hemp-derived cannabinoids were introduced into the market.
- Overall, surveillance data on cannabis does not collect information about cannabidiol (CBD).
- Electronic health records must be used to track hospital-treated cannabis poisoning.

Introduction and overview

This assessment is intended to satisfy Minn. Stat. §144.196, which requires a baseline report on cannabis surveillance data by July 1, 2024. It contains:

- Information and context on available data sources for cannabis surveillance, and an overview of questions asked by those sources between 2016 and 2023
- Descriptive statistics for indicators in these data sources, which share a representative overview of the data available in each source, as requested by statute

This assessment measures self-reported use of cannabis in adults and youth (defined as persons under 18 years old), as well as information on the use of medical cannabis, using data from:

- National Survey on Drug Use and Health (NSDUH)
- Behavioral Risk Factor Surveillance System (BRFSS)
- Minnesota Adult Tobacco Survey (MATS)
- Minnesota Pregnancy Risk Assessment Monitoring System (PRAMS)
- Minnesota Student Survey (MSS)
- Minnesota Youth Tobacco Survey (MYTS)
- International Cannabis Policy Study (ICPS)

This assessment outlines the types of data available from each source and provides high-level, summary statistics to inform readers of what to expect in future reports. Prior to the legalization of cannabis, the Minnesota Department of Health (MDH) measured the use of cannabis products with a variety of tools.

Limitations: It is also important to note that most of the data shared in this report was collected prior to the legalization of adult recreational cannabis use in Minnesota, therefore this report will not reflect trends since legalization. A detailed list of relevant policies follows this section. Because this report assesses current data sources, the narrative and context included in this report focuses on how feasible it is for current surveillance data sources to provide indicators required by statute, and the gaps in data sources. As a result, MDH did not include additional analyses, such as stratification by race, ethnicity, gender, sexual orientation, and disability status. MDH will include more rigorous analyses in subsequent reports and provide the thoughtful and in-depth engagement required for a sensitive topic that has such a tenuous and inequitable history of enforcement.

Importantly, the timeline in which MDH has assembled this report has made a deep engagement process untenable, which is necessary for thoughtful reporting. In addition, some partners (such as the Minnesota Office of Cannabis Management and UMN Cannabis Research Center) are still being set up and this prevents us from forming a necessary advisory committee to do such analysis. Lastly, some data partners (such as the Minnesota Office of Medical Cannabis) plan to produce their own detailed reports and MDH does not wish to duplicate their reporting.

Future reports: MDH will begin to release biennial assessments of cannabis use in January 2025, as required by statute. The biennial report will analyze cannabis use in more detail, including by race/ethnicity, by gender, income, and region where possible. To the extent the data allows, it may also include policy recommendations.

Lastly, it will also describe gaps in current data, and potential ways to improve data infrastructure to better meet statutory requirements for cannabis surveillance.

National cannabis use

In 2021 and 2022, an estimated 21.43% of adults in the United States had used cannabis in the past year¹ and an estimated 14.91% of adults had used cannabis in the past month² (National Survey on Drug Use and Health, U.S. Substance Abuse and Mental Health Services Administration). As of 2023, 24 states have legalized recreational use of cannabis.

Due to the 2018 Farm Bill, hemp (defined as cannabis that contains less than 0.3% Delta-9 tetrahydrocannabinol, or THC), is allowed nationally. Due to subsequent efforts by states, hemp-derived THC products fall into a legal gray area in all contiguous states to Minnesota. In areas bordering Minnesota, North Dakota and South Dakota have legalized the use of medical cannabis, while Canada legalized recreational use in 2018. Iowa and Wisconsin continue to outlaw cannabis products containing THC not derived from hemp.

Minnesota data sources on cannabis use

Based on the survey fielded, data on cannabis use is collected at different points in time. **Table 1** lists the data shared in this report.

Table 1. Current data sources on cannabis use in Minnesota and frequency of collection

Source	Age groups	2016	2017	2018	2019	2020	2021	2022
Minnesota Poison Control System	All			X	X	X	X	X
National Survey on Drug Use and Health	All	X	X	X	X	X	X	X
Behavioral Risk Factor Surveillance System	Adult	X	X	X	X	X	X	X
Minnesota Adult Tobacco Survey	Adult			X				
Minnesota Office of Medical Cannabis	Adult	X	X	X	X	X	X	X
International Cannabis Policy Study	Adult, youth			X	X	X	X	X
Minnesota Student Survey	Youth	X			X			
Minnesota Youth Tobacco Survey	Youth		X			X		

Timeline of cannabis policies in Minnesota

¹ 95% CI: 20.90%-21.96%

² 95% CI: 14.47%-15.35%

Cannabis Use in Minnesota: Baseline Assessment

This section notes cannabis-related policies passed in or affecting Minnesota.

- **2014:** Medical uses of cannabis legalized in Minnesota under Minn. Stat. § 152.22 to 152.37
- **2018:** U.S. Agriculture Improvement Act of 2018 (commonly known as the 2018 Farm Bill) legalized sale and use of hemp products containing less than 0.3% delta-9 tetrahydrocannabinol (THC); hemp-derived products entered the legal market through this bill
- **2019:** Sale of non-intoxicating cannabinoid products derived from hemp in Minnesota was codified via Minn. Stat. § 151.72, subd. 3
- **2022:** Use of hemp-derived edibles containing 5 milligrams of delta-9 THC per serving legalized in Minnesota via revision of Minn. Stat. § 151.72
- **2023:** Minnesota Adult Use Cannabis Act legalized adult use of recreational cannabis in Minnesota

Most of the data that is represented in this report precedes the legalization of adult use cannabis and the legalization of adult use hemp-derived THC edibles.

Data: Cannabis use in all age groups

National Survey on Drug Use and Health

The National Survey on Drug Use and Health, conducted annually by the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA), provides estimates about substance use in the United States. The survey provides data estimates at the national, state, and sub-state levels. Data from this survey is used in the CDC webpage on cannabis and health effects and drives policy decisions. It has had recent improvements in its methodology and modules.

The methodology for this survey changed after 2020: previous versions were collected in-person only, and after 2020 the survey was administered both online and in person. Because of this change, SAMHSA recommends against comparing 2021 and 2022 data to prior years; therefore, this report has excluded data from years prior to 2021. The findings listed below report on Minnesota data, rather than national data, from the survey.

Key findings (2021-2022)

- Approximately 23% of adults aged 18 and over, and 11% of adolescents between the ages of 12 and 17, reported using cannabis in the past year.
- Approximately 2.6% of respondents aged 18 and over reported their first use of cannabis happened in the past year; 4.2% of adolescents aged 12-17 reported their first use of cannabis happened in the past year.

Table 2. Cannabis use in Minnesota, 2021-2022

Cannabis use	% ages 12-17 (95% CI)	% ages 18+ (95% CI)
Cannabis use in the past year	10.95% (8.16%-14.55%)	23.12% (19.95%-26.63%)
Cannabis use in the past month	6.37% (4.69%-8.59%)	16.38% (13.71%-19.45%)
First use of cannabis in the past year	4.21% (3.15%-5.60%)	2.62% (2.08%-3.29%)

Source: National Survey on Drug Use and Health

Further data

Questions asked by the National Survey on Drug Use and Health include:

- Have you ever, even once, used any CBD or hemp products?
- How long has it been since you last used any form of CBD or hemp product?
- Have you ever, even once, used marijuana or any cannabis product?
- How old were you the first time you used marijuana or any cannabis product?
- Did you first use marijuana or any cannabis product in [CURRENT YEAR - 1] or [CURRENT YEAR]?
- How long has it been since you last used marijuana or any cannabis product?

- On how many days in the past 12 months did you use marijuana or any cannabis product?
- What is your best estimate of the number of days you used marijuana or any cannabis product during the past 30 days?
- During the past 12 months, that is, since [DATEFILL], in which of the following ways did you use marijuana or any cannabis product?
- During the past 30 days, that is, since [DATEFILL], in which of the following ways did you use marijuana or any cannabis product?
- Was any of your marijuana or cannabis product use in the past 12 months recommended by a doctor or other health care professional?
- Was all of your marijuana or cannabis product use in the past 12 months recommended by a doctor or other health care professional?

More information

[National Survey on Drug Use and Health](https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health) (<https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health>)

International Cannabis Policy Study

The International Cannabis Policy Study is an international research collaboration designed to examine the public health impacts of cannabis policy. The International Cannabis Policy Study includes annual population-based surveys in Canada, the United States, Australia, and New Zealand. It includes a module with questions specific to Minnesota, which is represented in this report.

Key findings (2018-2022)

- The proportion of people who used cannabis in the past year and in the past month increased consistently between 2018 and 2022.
- The proportion of cannabis users who used cannabis daily or nearly daily increased between 2018 and 2022.
- Consistently in all years included in this report, adults aged 26 to 35 used cannabis the most frequently among all age groups.

Table 3. Cannabis use in Minnesota, 2018-2022

Cannabis use	2018-2020	2021	2022
Cannabis use in past 12 months	26%	30%	33%
Cannabis use in past month	18%	20%	21%
Cannabis use daily / near daily	6%	11%	11%

Source: International Cannabis Policy Study

Table 4. Cannabis use by age, Minnesota, 2022

Cannabis use by age	Past 12 months	Monthly	Daily or almost daily
16 to 25	31%	19%	11%
26 to 35	46%	28%	15%
36 to 45	36%	24%	12%
46 to 55	29%	19%	9%
56 to 65	24%	15%	8%

Source: International Cannabis Policy Study

Further data

Questions asked by the International Cannabis Policy Study include:

- During the past 30 days, on how many days did you use marijuana?
- Do you use marijuana for medical reasons, “recreational” reasons, or both?
- Have you ever asked a licensed health professional for a recommendation to use medical marijuana?
- Have you ever received a recommendation for medical marijuana?
- Is improving or managing mental health one of the main reasons you use cannabis?
- Is improving or managing physical health one of the main reasons you use cannabis?

More information

[International Cannabis Policy Study \(https://cannabisproject.ca/\)](https://cannabisproject.ca/)

Minnesota Poison Control System

Since 2018, the Minnesota Poison Control System has tracked data on cannabis-related hospitalization and other poisonings.

It is important to note that Minnesota Poison Control System data likely underrepresents the incidence of any poisoning or other exposure, and rates are likely higher in communities, because reporting poisoning is voluntary. As a result, Minnesota Poison Control System data may not represent all (or even potentially most) cannabis-related hospitalizations.

Key findings (2018-2022)

- The number of reports of cannabis-related poisoning increased between 2018 (281 reports) and 2022 (701).
- Adults over age 20 generated the most poison control reports related to cannabis, remaining steady between 44% and 51% of all reports.
- The proportion of calls related to youth aged 5 and under increased between 2018 (7% of calls) and 2022 (22%).
- The proportion of calls related to youth between 6 and 19 years old decreased between 2018 (42% of calls) and 2022 (28% of calls).

Table 5. Cannabis poisoning reports by age group, Minnesota, 2018-2022

Total poisoning reports by age group	2018 (count)	2018 (%)	2019 (count)	2019 (%)	2020 (count)	2020 (%)	2021 (count)	2021 (%)	2022 (count)	2022 (%)
0 to 5 years old	21	7%	47	13%	55	15%	117	21%	157	22%
6 to 19 years old	120	42%	152	42%	135	37%	148	27%	196	28%
20+ years old	143	50%	161	44%	169	47%	276	51%	344	49%
Total (incl. age unknown)	285	100%	362	100%	361	100%	545	100%	701	100%

Source: Minnesota Poison Control System

Further data

Indicators from the Minnesota Poison Control System include:

- Type of cannabis product that led to poisoning (e.g., edibles, vaping, topical)
- Route of consumption that led to poisoning (e.g., ingestion, dermal)
- Exposure reasons
- Symptoms

More information

[Minnesota Regional Poison Center \(https://mnpoinson.org/\)](https://mnpoinson.org/)

Data: Adult cannabis use

Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is a large-scale telephone survey of adults aged 18 and older. Jointly, MDH and the Centers for Disease Control and Prevention (CDC) work together to collect data monthly, throughout the year.

Key findings (2016-2022)

- The proportion of cannabis *non-users* dropped between 2016 (93.5%) and 2022 (87.5%).
- The proportion of daily or nearly daily users increased between 2016 (1.8%) and 2022 (4.7%).
- The proportion of cannabis users who reported smoking as their primary mode of use decreased between 2017 (89.1%) and 2022 (71.0%).
- The proportion of cannabis users who reported eating or drinking it as their primary mode of use increased between 2017 (2.4%) and 2022 (14.9%).

Table 6. Adult cannabis use, Minnesota, 2016-2022

During the past 30 days, how many days did you use marijuana or hashish?

Adult use in past 30 days	2016 (count)	2016 (%)	2017 (count)	2017 (%)	2018 (count)	2018 (%)	2019 (count)	2019 (%)	2020 (count)	2020 (%)	2021 (count)	2021 (%)	2022 (count)	2022 (%)
0 days	3,955,327	93.5%	3,981,575	93.3%	3,918,798	91.1%	3,888,075	89.7%	3,942,421	89.7%	3,985,490	90.4%	3,868,585	87.5%
1-5 days	122,822	2.9%	117,626	2.8%	155,881	3.6%	164,223	3.8%	189,043	4.3%	166,640	3.8%	209,536	4.7%
6-10 days	35,894	0.8%	25,844	0.6%	38,984	0.9%	49,063	1.1%	47,326	1.1%	46,636	1.1%	56,364	1.3%
11-15 days	16,913	0.4%	16,947	0.4%	33,929	0.8%	27,287	0.6%	25,715	0.6%	27,274	0.6%	28,402	0.6%
16-20 days	14,383	0.3%	16,802	0.4%	21,633	0.5%	29,548	0.7%	34,771	0.8%	23,642	0.5%	38,618	0.9%
21-25 days	9,698	0.2%	13,474	0.3%	7,997	0.2%	11,320	0.3%	12,969	0.3%	9,711	0.2%	14,383	0.3%
26-30 days	75,578	1.8%	94,444	2.2%	126,590	2.9%	166,958	3.9%	143,523	3.3%	149,106	3.4%	207,133	4.7%

Source: Behavioral Risk Factor Surveillance System

Table 7. Modes of adult cannabis use, Minnesota, 2017-2022

2017: During the past 30 days, what was the primary mode you used marijuana?

2018-2022: During the past 30 days, which of the following ways did you use marijuana the most often?

Mode of use among adult cannabis users	2017 (count)	2017 (%)	2018 (count)	2018 (%)	2019 (count)	2019 (%)	2020 (count)	2020 (%)	2021 (count)	2021 (%)	2022 (count)	2022 (%)
Smoke it	254,171	89.1%	327,305	85.0%	319,470	71.2%	363,628	80.2%	311,833	73.7%	393,906	71.0%
Eat it / drink it	6,798	2.4%	13,844	3.6%	23,375	5.2%	35,703	7.9%	41,524	9.8%	82,422	14.9%
Vaporize it	6,774	2.4%	36,602	9.5%	92,926	20.7%	41,247	9.1%	54,296	12.8%	62,409	11.3%
Dab it / use it in some other way	6,798	2.4%	7,263	1.9%	12,629	2.8%	12,770	2.8%	15,355	3.6%	15,701	2.8%

Source: Behavioral Risk Factor Surveillance System

Table 8. Reasons for adult cannabis use, Minnesota, 2018-2022

When you used marijuana (or hashish) during the past 30 days, was it...

Reason for use among adult cannabis users	2018 (count)	2018 (%)	2019 (count)	2019 (%)	2020 (count)	2020 (%)	2021 (count)	2021 (%)	2022 (count)	2022 (%)
...only for medical reasons to treat or decrease symptoms of a health condition	78,707	20.4%	94,746	21.1%	94,525	20.8%	98,021	23.2%	115,964	20.9%
...only for non-medical purposes to get pleasure or satisfaction	170,433	44.3%	184,349	41.1%	215,197	47.5%	176,278	41.7%	233,850	42.2%
...for both medical and non-medical reasons	135,874	35.3%	169,305	37.8%	143,627	31.7%	148,708	35.2%	204,623	36.9%

Source: Behavioral Risk Factor Surveillance System

Further data

Data from the Behavioral Risk Factor Surveillance System includes:

- During the past 30 days, on how many days did you use marijuana or cannabis?
- During the past 30 days, which one of the following ways did you use marijuana the most often? Did you usually... [smoke, eat, drink, vaporize, dab, other]
- When you used marijuana or cannabis during the past 30 days, was it usually: medical, nonmedical, both

More information

[Behavioral Risk Factor Surveillance System \(BRFSS\)](https://www.health.state.mn.us/data/mchs/surveys/brfss/) (<https://www.health.state.mn.us/data/mchs/surveys/brfss/>)

Minnesota Adult Tobacco Survey

While Minnesota conducted the Minnesota Adult Tobacco Survey for the final time in 2018, we can use data from this survey to supplement the baseline understanding of adult cannabis, alongside the Behavioral Risk Factor Surveillance System and the National Survey on Drug Use and Health. Data are weighted to be representative of the population of the state.

Key findings (2018)

- In 2018, 7.6% of respondents reported having used cannabis in the past 30 days.
- In 2018, 89.7% of cannabis users reported smoking cannabis, while 22.1% reported vaping it and 22.3% reported eating it.
- In 2018, 30.4% of cannabis users reported smoking cannabis as a blunt (cannabis flower rolled in the empty wrapper of a cigar) or a spliff (a cigarette with a mixture of cannabis flower and commercial tobacco flower) in the past 30 days.

Table 9. Cannabis use among adults in Minnesota, 2018

Adult use in the past 30 days, among those surveyed	Weighted %
Used marijuana in the past 30 days	7.6%

Source: Minnesota Adult Tobacco Survey

Table 9a. Method of cannabis use among adult cannabis users in Minnesota, 2018

Method of use among those who responded “yes” in Table 9	Weighted %
Smoked it	89.7%
Vaped it	22.1%
Ate it	22.3%
Some other way	8.0%

Source: Minnesota Adult Tobacco Survey

Table 9b. Blunt or spliff use among adults who smoked cannabis, Minnesota, 2018

Blunt or spliff use in the past 30 days, among those who responded “smoked it” in Table 9a	Weighted %
Smoked marijuana as a blunt or spliff in the past 30 days	24.5%

Source: Minnesota Adult Tobacco Survey

Table 9c. Frequency of cannabis blunt or spliff use among adults, Minnesota, 2018

Frequency of blunt/spliff use among those who responded “yes” in Table 9b	Weighted %
Every time	15.4
Most of the time	15.9
Sometimes	34.2
Rarely	34.5

Source: Minnesota Adult Tobacco Survey

Further data

Data from the Minnesota Adult Tobacco Survey includes:

- During the past 30 days, have you used marijuana?
- When you used marijuana in the past 30 days, how did you use it?
- During the past 30 days, when you vaped marijuana, did you mix the marijuana with an e-juice containing nicotine?
- During the past 30 days, when you vaped marijuana, did you mix the marijuana with an e-juice containing nicotine...
- Sometimes people take tobacco out of a traditional cigar, cigarillo or filtered cigar and replace it with marijuana, or marijuana mixed with tobacco. This is often called a blunt or spliff. During the past 30 days, when you smoked marijuana, did you smoke it as a blunt or spliff?
- During the past 30 days, when you smoked marijuana, did you smoke it as a blunt or spliff?

It is possible to stratify Minnesota Adult Tobacco Survey data by age and gender, and possibly race/ethnicity.

More information

[Minnesota Adult Tobacco Survey \(MATS\)](https://www.health.state.mn.us/data/mchs/surveys/mats/) (<https://www.health.state.mn.us/data/mchs/surveys/mats/>)

Minnesota Office of Medical Cannabis

Minnesotans could first purchase medical cannabis for therapeutic use in 2015 if they had qualifying conditions. Minn. Stat. § 152.27, subd. 1(a) authorized the Minnesota Office of Medical Cannabis (OMC) to collect data on program operations related to certified patients, registered health care practitioners, and registered caregivers

and parents. This data helps evaluate benefits, risks, and outcomes for patients with a qualifying medical condition who are engaged in the therapeutic use of medical cannabis.

Key findings (2016-2023)

- The number of approved patients in the Minnesota medical cannabis registry increased between 2016 (4,017) and 2023 (41,140).
- The proportion of patients in the medical cannabis registry who were new patients decreased between 2017 (83.8%) and 2023 (38.6%).
- In 2023, less than 2% of patients in the medical cannabis registry were under 18 years old.
- In 2023, adults aged 36-49 made up the largest share of medical cannabis registry patients.

Table 10. Approved patients, Minnesota medical cannabis registry, 2016-2023

Approved patients	2016	2017	2018	2019	2020	2021	2022	2023
Number of approved patients in registry	4,017	8,075	14,481	18,249	28,522	29,402	39,577	41,140
Number of new patients	n/a	5,882	8,836	10,951	10,160	13,587	18,247	15,871
Percent of patients that are new	n/a	83.8%	72.4%	61.0%	40.1%	50.8%	48.0%	38.6%
Number of returning patients	n/a	1,140	3,371	7,010	15,196	13,152	19,781	25,269
Percent of patients that are returning	n/a	16.2%	27.6%	39.0%	59.9%	49.2%	52.0%	61.4%

Source: Minnesota Office of Medical Cannabis

Table 11. Minnesota medical cannabis registry patients by age, 2023

Approved patients by age group	Count	%
4 years old and under	14	0.0%
5 to 17 years old	442	1.1%
18 to 24 years old	1,976	4.8%
25 to 35 years old	8,361	20.3%
36 to 49 years old	13,659	33.2%
50 to 64 years old	10,618	25.8%
65+ years old	6,070	14.8%
Total	41,140	100.0%

Source: Minnesota Office of Medical Cannabis

Further data

Data from the Minnesota Office of Medical Cannabis includes:

- Patients active in the registry
- New patients vs. returning patients
- Qualifying medical conditions
- Active patients by age and gender
- Active patients by race and ethnicity
- Condition symptom ratings
- Benefits
- Negative side effects (type and severity)
- Medical cannabis dispensary visits, including products purchased (THC/CBD ration, route of administration)
- Counties where medical cannabis users live
- Health care practitioners that certify qualifying medical conditions
- Number of health care practitioners
- Health care practitioner assessment of patient: pain scores, reduction of other pain medications, benefits, negative effects

More information

[Minnesota Medical Cannabis Dashboard](https://www.health.state.mn.us/people/cannabis/data/dashboard.html)

(<https://www.health.state.mn.us/people/cannabis/data/dashboard.html>)

Data: Youth cannabis use

Minnesota Student Survey

The Minnesota Departments of Education and Health conduct the Minnesota Student Survey every three years, for every student in Minnesota in fifth, eighth, ninth, and 11th grades. The survey measures cannabis use most thoroughly among students in eighth through 11th grades.

Key findings

- In 2016, 2019, and 2022, less than 10% of eighth-graders and ninth-graders, and less than 15% of 11th-graders, reported having used cannabis in the past 30 days.
- In 2016, 2019, and 2022, less than 5% of respondents reported daily use, either within the period of the past 30 days or in their general use patterns.
- Between 2016 and 2022, the proportion of students who had never used cannabis increased for all grades (eighth, ninth, and 11th).
- In 2022, 4% of eighth-graders, 6% of ninth-graders, and 14% of 11th-graders reported having vaped with THC at least once.

Table 12. Cannabis use among Minnesota students, 2016-2022

Use in the past 30 days	Eighth grade, 2016	Eighth grade, 2019	Eighth grade, 2022	Ninth grade, 2016	Ninth grade, 2019	Ninth grade, 2022	11 th grade, 2016	11 th grade, 2019	11 th grade, 2022
0 days	95%	96%	97%	93%	92%	95%	84%	84%	88%
1 to 2 days	2%	2%	1%	3%	3%	2%	5%	5%	4%
3 to 5 days	1%	1%	0%	1%	1%	1%	3%	3%	2%
6 to 9 days	1%	1%	0%	1%	1%	0%	2%	2%	1%
10 to 19 days	0%	1%	0%	1%	1%	1%	2%	2%	2%
20 to 29 days	0%	0%	0%	1%	1%	0%	2%	2%	1%
All 30 days	1%	0%	0%	1%	1%	1%	2%	2%	2%

Source: Minnesota Student Survey

Table 13. Occasions of cannabis use among Minnesota students, 2016-2022

Occasions using cannabis in the past 12 months	Eighth grade, 2016	Eighth grade, 2019	Eighth grade, 2022	Ninth grade, 2016	Ninth grade, 2019	Ninth grade, 2022	11 th grade, 2016	11 th grade, 2019	11 th grade, 2022
0	95%	94%	96%	90%	90%	93%	77%	79%	83%
1-2	2%	2%	2%	3%	3%	2%	6%	5%	4%
3-5	1%	1%	1%	2%	2%	1%	4%	3%	3%
6-9	1%	1%	0%	1%	1%	1%	2%	2%	2%
10-19	1%	1%	0%	1%	1%	1%	3%	3%	2%
20-39	0%	0%	0%	1%	1%	1%	2%	2%	2%
40 or more	1%	1%	1%	2%	2%	1%	6%	5%	5%

Source: Minnesota Student Survey. Note: More than one occasion can occur on a given day

Table 14. Frequency of cannabis use among Minnesota students, 2016-2022

Use of cannabis	Eighth grade, 2016	Eighth grade, 2019	Eighth grade, 2022	Ninth grade, 2016	Ninth grade, 2019	Ninth grade, 2022	11 th grade, 2016	11 th grade, 2019	11 th grade, 2022
Never	94%	94%	95%	89%	89%	93%	75%	76%	81%
Tried once or twice	3%	3%	2%	4%	4%	3%	7%	8%	6%
Once or twice a year	1%	1%	1%	2%	1%	1%	4%	4%	3%
Once a month	1%	1%	1%	1%	1%	1%	3%	3%	3%
Twice a month	1%	1%	0%	1%	1%	1%	3%	3%	2%
Once a week	1%	1%	1%	1%	1%	1%	4%	3%	2%
Daily	1%	1%	0%	1%	1%	1%	4%	4%	3%

Source: Minnesota Student Survey

Table 15. Frequency of vaping with THC among Minnesota students, 2022

Vaping with THC	Eighth grade	Ninth grade	11 th grade
Never	96%	94%	86%
Tried once or twice	2%	3%	5%
Once or twice a year	0%	1%	2%
Once a month	0%	1%	2%
Twice a month	0%	1%	1%
Once a week	0%	1%	2%
Daily	0%	1%	2%

Source: Minnesota Student Survey, new question in 2022

Further data

Data on cannabis *use* from the Minnesota Student Survey includes:

- During the last 12 months, have you used marijuana or hashish?
- During the last 30 days, on how many days did you use marijuana or hashish?
- During the last 12 months, on how many occasions (if any) have you used marijuana or hashish?
- During the last 12 months, on how many occasions (if any) have you used synthetic marijuana (K2, Gold) that you took only to get high?

Data on *perception* of cannabis use from the Minnesota Student Survey includes:

- How much do you think people risk harming themselves physically or in other ways if they use marijuana once or twice per week?
- How wrong do your parents feel it would be for you to use marijuana?
- How wrong do your friends feel it would be for you to use marijuana?

It is possible to stratify survey results by race/ethnicity, gender, and age.

More information

[Minnesota Student Survey at MDH \(https://www.health.state.mn.us/data/mchs/surveys/mss/\)](https://www.health.state.mn.us/data/mchs/surveys/mss/)

Minnesota Youth Tobacco Survey

MDH conducts the Minnesota Youth Tobacco Survey every three years, with a representative sample of Minnesota middle and high schools.

Due to small sample sizes, results on students categorized as ungraded are suppressed from these estimates.

Key findings (2023)

- In 2023, 89.3% of respondents had never used cannabis.
- Among all youth in 2023, 10.4% reported having used a vape for THC.
- Among youth who reported having vaped in 2023, 23% reported having used a vape for THC.
- Among youth in 2023, the proportion reporting smoking, vaping, and eating cannabis products were approximately equivalent, between 2% and 3%.

Table 16a. THC vaping among youth in Minnesota, 2023

Youth who have used a vape for THC (percent of sample)	All grades
% of youth who've vaped, who have used a vape for THC	23.0%
% of all youth who have used a vape for THC	10.4%

Source: Minnesota Youth Tobacco Survey

Table 16b. THC vaping among youth in Minnesota, by grade, 2023

Youth who have used a vape for THC (percent of sample)	Sixth grade	Seventh grade	Eighth grade	Ninth grade	10 th grade	11 th grade	12 th grade
% of youth who've vaped, who have used a vape for THC	13.3%	18.4%	20.4%	22.5%	19.4%	25.7%	24.8%
% of all youth who have used a vape for THC	1.0%	2.6%	3.6%	8.6%	12.3%	20.1%	23.7%

Source: Minnesota Youth Tobacco Survey

Table 17a. Cannabis use among Minnesota youth, 2023

Any cannabis use in the past 30 days (percent of sample)	All grades
0 times	89.3%
1 to 2 times	4.2%
3 to 9 times	1.8%
10 to 19 times	1.3%
20 to 39 times	0.9%
40 or more times	2.6%

Source: Minnesota Youth Tobacco Survey

Table 17b. Cannabis use among Minnesota youth, by grade, 2023

Any cannabis use in the past 30 days (percent of sample)	Sixth grade	Seventh grade	Eighth grade	Ninth grade	10 th grade	11 th grade	12 th grade
0 times	98.4%	96.0%	95.7%	91.3%	88.3%	81.9%	75.3%
1 to 2 times	0.7%	2.0%	2.3%	4.1%	3.9%	8.1%	8.0%
3 to 9 times	0.4%	0.9%	0.8%	2.0%	2.8%	3.0%	2.6%
10 to 19 times	0.0%	0.5%	0.3%	0.9%	1.2%	1.8%	3.9%
20 to 39 times	0.4%	0.1%	0.6%	0.5%	0.6%	2.3%	1.8%
40 or more times	0.2%	0.5%	0.5%	1.3%	3.2%	2.9%	8.5%

Source: Minnesota Youth Tobacco Survey

Table 18a. Smoking cannabis among Minnesota youth, 2023

Smoked cannabis in the past 30 days (percent of sample)	All grades
0 times	91.1%
1 to 2 times	2.8%
3 to 9 times	1.6%
10 to 19 times	1.1%
20 to 39 times	1.0%
40 or more times	2.5%

Source: Minnesota Youth Tobacco Survey

Table 18b. Smoking cannabis among Minnesota youth, by grade, 2023

Smoked cannabis in the past 30 days (percent of sample)	Sixth grade	Seventh grade	Eighth grade	Ninth grade	10 th grade	11 th grade	12 th grade
0 times	97.7%	97.2%	96.9%	94.6%	89.5%	83.9%	79.0%
1 to 2 times	0.5%	1.1%	1.2%	1.6%	4.0%	5.6%	5.3%
3 to 9 times	0.5%	0.4%	0.8%	1.6%	2.1%	2.7%	2.6%
10 to 19 times	0.1%	0.7%	0.1%	0.6%	1.1%	2.6%	2.7%
20 to 39 times	0.4%	0.2%	0.5%	0.4%	0.7%	2.1%	2.5%
40 or more times	0.8%	0.5%	0.5%	1.2%	2.7%	3.1%	7.8%

Source: Minnesota Youth Tobacco Survey

Table 19a. Smoking a cannabis blunt among Minnesota youth, 2023

Smoked a blunt in the past 30 days (percent of sample)	All grades
0 times	93.9%
1 to 2 times	2.4%
3 to 9 times	0.9%
10 to 19 times	0.8%
20 to 39 times	0.5%
40 or more times	1.6%

Source: Minnesota Youth Tobacco Survey

Table 19b. Smoking a cannabis blunt among Minnesota youth, by grade, 2023

Smoked a blunt in the past 30 days (percent of sample)	Sixth grade	Seventh grade	Eighth grade	Ninth grade	10 th grade	11 th grade	12 th grade
0 times	97.5%	98.8%	97.8%	96.2%	94.0%	88.9%	85.0%
1 to 2 times	0.4%	0.7%	0.8%	1.9%	3.3%	5.4%	4.0%
3 to 9 times	0.0%	0.0%	0.3%	0.7%	0.9%	1.3%	2.6%
10 to 19 times	0.0%	0.3%	0.1%	0.2%	0.4%	2.5%	2.2%
20 to 39 times	0.2%	0.2%	0.3%	0.2%	0.0%	0.7%	1.7%
40 or more times	1.9%	0.0%	0.7%	0.9%	1.4%	1.2%	4.6%

Source: Minnesota Youth Tobacco Survey

Table 20a. Vaping cannabis among Minnesota youth, 2023

Vaped cannabis in the past 30 days (percent of sample)	All grades
0 times	92.6%
1 to 2 times	2.8%
3 to 9 times	1.1%
10 to 19 times	0.9%
20 to 39 times	0.9%
40 or more times	1.7%

Source: Minnesota Youth Tobacco Survey

Table 20b. Vaping cannabis among Minnesota youth, by grade, 2023

Vaped cannabis in the past 30 days (percent of sample)	Sixth grade	Seventh grade	Eighth grade	Ninth grade	10 th grade	11 th grade	12 th grade
0 times	98.7%	96.9%	97.9%	94.2%	89.6%	87.4%	84.9%
1 to 2 times	0.3%	1.6%	0.9%	2.8%	4.7%	5.5%	3.9%
3 to 9 times	0.3%	0.4%	0.3%	0.7%	2.0%	2.6%	1.3%
10 to 19 times	0.2%	0.5%	0.4%	0.8%	1.1%	1.6%	1.8%
20 to 39 times	0.1%	0.2%	0.2%	0.8%	0.5%	1.5%	3.1%
40 or more times	0.4%	0.5%	0.4%	0.7%	2.1%	1.5%	5.1%

Source: Minnesota Youth Tobacco Survey

Table 21a. Eating or drinking cannabis products among Minnesota youth, 2023

Ate or drank cannabis products in the past 30 days (percent of sample)	All grades
0 times	95.6%
1 to 2 times	2.2%
3 to 9 times	0.7%
10 to 19 times	0.2%
20 to 39 times	0.3%
40 or more times	1.0%

Source: Minnesota Youth Tobacco Survey

Table 21b. Eating or drinking cannabis products among Minnesota youth, by grade, 2023

Ate or drank cannabis products in the past 30 days (percent of sample)	Sixth grade	Seventh grade	Eighth grade	Ninth grade	10 th grade	11 th grade	12 th grade
0 times	99.2%	98.4%	98.1%	97.1%	94.3%	94.2%	88.9%
1 to 2 times	0.0%	1.1%	0.7%	1.6%	3.1%	3.1%	5.3%
3 to 9 times	0.0%	0.1%	0.2%	1.0%	1.3%	1.0%	1.3%
10 to 19 times	0.0%	0.0%	0.1%	0.0%	0.1%	0.4%	0.9%
20 to 39 times	0.0%	0.2%	0.0%	0.2%	0.1%	0.4%	1.2%
40 or more times	0.8%	0.2%	0.9%	0.2%	1.1%	0.9%	2.4%

Source: Minnesota Youth Tobacco Survey

Further data

Data from the Minnesota Youth Tobacco Survey includes:

- Ever used a vape for something besides tobacco?
- During the past 30 days, how many times did you use marijuana?
- During the past 30 days, how many times did you vape marijuana/THC?
- What are the reasons that you have used e-cigarettes? (To vape marijuana, THC, or hash oil or THC wax)

It is possible to stratify results by gender and grade level, and possibly by race/ethnicity.

More information

[Minnesota Youth Tobacco Survey](https://www.health.state.mn.us/data/mchs/surveys/tobacco/) (<https://www.health.state.mn.us/data/mchs/surveys/tobacco/>)

Other potential tools to monitor cannabis use

Pregnancy Risk Assessment Monitoring System

The Minnesota Pregnancy Risk Assessment Monitoring System (Minnesota PRAMS) is a population-based survey designed to collect information on maternal behaviors and experiences before, during, and shortly after a woman's pregnancy.

Currently, Minnesota PRAMS does not collect data on cannabis use. A marijuana supplement does exist, which could be incorporated in the current survey. If sample sizes exceed relevant thresholds, MDH could stratify data by characteristics like race/ethnicity, urban/rural, and Federal Poverty Guidelines.

Data from the Minnesota Pregnancy Risk Assessment Monitoring System could include:

- At any time during the 3 months before you got pregnant OR during your most recent pregnancy, did you use marijuana or hash in any form?
- During the 3 months before you got pregnant, how often did you use marijuana products in an average week?
- During your most recent pregnancy, how often did you use marijuana products in an average week?
- During your most recent pregnancy, how did you use marijuana?
- Why did you use marijuana products during pregnancy?
- During any of your prenatal care visits, did a doctor, nurse, or other health care worker do any of the following things?
- During any of your prenatal care visits, did a doctor, nurse, or other health care worker refer you to treatment because of drug use (prescribed or non-prescribed drugs)?
- Since your new baby was born, have you used marijuana or hash in any form?
- How long do you think it is necessary for a woman to wait after using marijuana to breastfeed her baby?

More information

[Minnesota Pregnancy Risk Assessment Monitoring System \(Minnesota PRAMS\)](https://www.health.state.mn.us/people/womeninfants/prams/)
(<https://www.health.state.mn.us/people/womeninfants/prams/>)

Gaps in current data

This report has identified several gaps in the current data infrastructure toward meeting statutory requirements for cannabis surveillance in Minnesota:

Measurement of age: Many surveys do not use the age of 21 as a standard cutoff for adult cannabis use. Because the advent of 21 as an age of adulthood for the purchase and consumption of cannabis products is a relatively new policy, surveys that measure cannabis have not necessarily standardized to this age. For example, some surveys segment adult use starting at age 18, and then at age 25. This limits the ability to compare results between data sources for specific age groups. To move forward, it would be helpful to modify these tools to use age groups relevant to legislative requirements and accurate to policies.

Measurement of frequency of use: Many surveys use the number of days in the prior 30 days to describe frequency of use. This report observed a variety of methods for categorizing the numbers of days and the cutoff for “high” or “frequent” use. As a result, the MDH Center for Health Statistics will conduct a scan of (1) how other states and other researchers typically cut off and categorize frequency of use, and (2) which cutoffs are the most meaningful for understanding the impacts of cannabis use and policy on the health of adults in Minnesota, based on best available scientific knowledge and literature. This process will require balancing the constraints of meaningful increments, substantial detail, and finding sufficient sample sizes to provide disaggregated estimates (such as stratifications by race and ethnicity, gender identity, or region of the state). MDH anticipates that, after conducting this scan, reports will be more useful to clinicians, policymakers, researchers, and Minnesotans.

Hemp-derived products: Due to statutory recommendations in Minnesota, hemp and cannabis legally occupy two different markets. Because Minnesota legalized hemp-derived cannabinoids and their related products more recently, much of cannabis surveillance data and research does not distinguish between hemp and cannabis (apart from CBD). To the extent that it is important for policy and regulation, distinguishing between these markets may be necessary. It may be important to understand the impact of the cannabis market on consumption as well as the size of the hemp market as the cannabis market becomes regulated and grows after licensure is implemented. Finding opportunities to collect new data by developing new instruments or modifying existing instruments to distinguish between hemp and cannabis will be necessary to achieve this.

Poisoning and hospital-treated cannabis adverse events: Current data on poisoning and hospital-treated cannabis is collected by the Minnesota Poison Control System. While some of these calls are recorded by clinicians and hospitals, the Minnesota Poison Control System is voluntary and not intended to track treatment outcomes. As a result, this data system has a catchment that does not reflect the entirety of hospital treated cannabis adverse events and poisonings. While data from the Minnesota Poison Control System is valuable, it will be important to establish a routine and rigorous systematic approach to studying and analyzing this data. The MDH Center for Health Statistics plans to explore conversations with data sources like the Minnesota All-Payers Claims Database and the Minnesota Electronic Health Records Consortium, to assess whether it’s feasible to regularly analyze electronic health records for frequency, distribution, and trends in cannabis-related adverse events.

Demographic data and disaggregation: In addition to the constraints related to measuring age mentioned earlier, the MDH Center for Health Statistics identified limitations in its ability to stratify and disaggregate data by other demographics. For several surveillance sources, such as BRFSS, MYTS, and PRAMS, data on race and ethnicity is available, but some groups may not be represented in sufficient sample sizes to report on their use publicly (due to suppression rules). To protect the privacy of individual people and to reduce and prevent stigmatization of groups, it is important to identify and restrict analyses to data sources where there is a robust enough estimate to generalize to a population. However, it is feasible to stratify by age and gender for almost all sources.

Other gaps/opportunities: It will take time to add new questions to surveys like as the Behavioral Risk Factor Surveillance System (BRFSS) so the surveys can better meet legislative priorities, and further time to collect new data provided by those questions. Because of this, any new added questions to surveys likely won't be reflected in legislative reports until 2027.

Conclusion

This baseline assessment identifies several data sources that can track trends in cannabis use among adults and youth in Minnesota. This report also shares a plausible range of data estimates of adult and youth cannabis use in Minnesota.

Because this report shares data from several different sources with different methodologies, sample populations, and questions, it is important to focus on comparing data between years of the same survey to look for trends, rather than compare data across different sources.

Overall, Minnesotans use cannabis at comparable rates to others in the United States. In Minnesota, the most common age group of recreational cannabis users were adults aged 26-35, and the most common age group among medical cannabis users were adults aged 36-45. More adults report using cannabis in 2022 than in 2016, and fewer adults report smoking cannabis in the same time frame alongside a simultaneous growth in oral consumption.

Future reports and analysis may help determine the causes of cannabis use trends in Minnesota (for example, that edible hemp-derived cannabinoids are more readily available, an overall changing market, or the impact of legalizing adult recreational cannabis use). Future reports may also dive deeper into trends within specific groups (for example, by race, ethnicity, and other demographics).

As surveillance of cannabis use in Minnesota moves forward, it is important to identify data sources that can discern between hemp-derived cannabinoids and cannabis-derived cannabinoids, or which include both. In the future, it may be feasible to measure cannabis use in ways that meet statutory requirements by improving, investing in, or modifying data infrastructure; doing so may also inform policies that advance health and health equity in Minnesota.