

2025 Maryland Cannabis Use Biannual Study

Summary Report

Maryland Cannabis Administration

June 2025



Welcome - We're Glad You're Reading This Report!

This summary report provides a snapshot of key measures and insights from the legislatively mandated 2025 Maryland Cannabis Use Biannual Study ("MCUBS").* The MCUBS reviews and compiles existing data sources from more than a dozen state agencies and partners to assess youth and adult rates of cannabis use, perceptions about cannabis use, and critical public health and safety measures including cannabis-impaired driving and cannabis-related poisonings and hospitalizations. This summary report was developed as a "go-to" resource for stakeholders, legislators, and public health partners seeking information about cannabis use in the state, including where changes in behaviors may be occurring, calling for action to protect public health and monitor the progress of those actions. Within this report, you'll find observations related to youth use, which has been on the decline for a decade; adult product preferences, which include a shift toward more edible cannabis products; associations between cannabis use and mental health; and the recent decline in cannabis-related calls to poison control, after years of annual increases, with the important caveat that cannabis-related calls for youth exposures especially children 5 and under continue to increase.

Our goal is to ensure that data-driven public health protections are in place in Maryland and that these actions are responsive to the changing cannabis landscape.

Legislation requiring the Maryland Cannabis Baseline Study in 2023 and subsequent biannual studies can be found [here](#) (HB 837/2022). For the full report, see the [2025 Maryland Cannabis Use Biannual Study](#) (under the "Reports" tab at cannabis.maryland.gov). To contact the Maryland Cannabis Administration, email publichealth.mca@maryland.gov.

**NOTE: This is the first MCUBS summary report; the 2023 MCUBS report, which provided a baseline for cannabis use in the state, does not have a short-form version. Methodology used for this report can be found on the last page.*



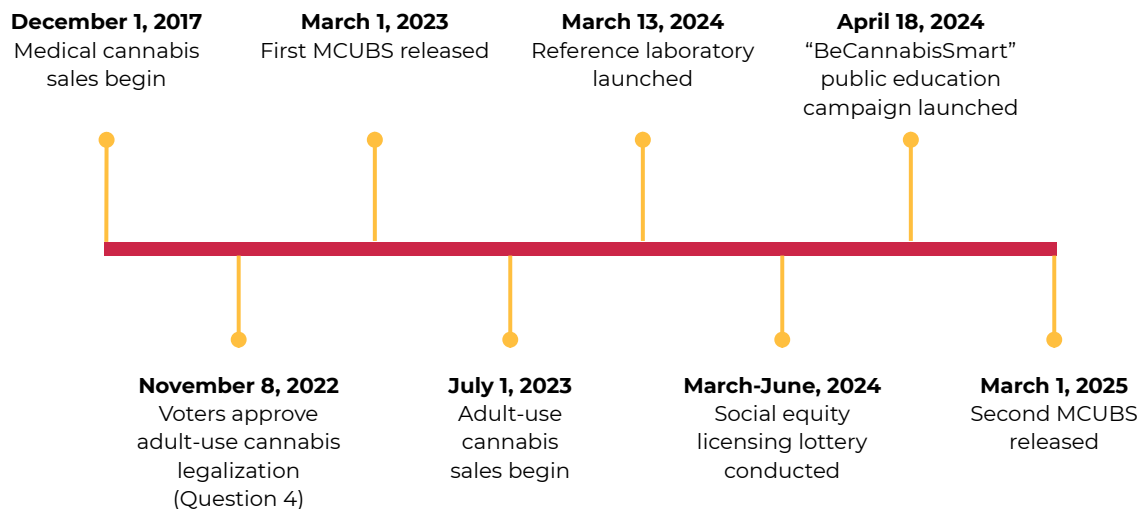
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Maryland Cannabis Legalization Timeline

Maryland established a medical cannabis program that began facilitating sales to certified medical cannabis patients in December 2017. During the 2022 General Election, Maryland voters approved a ballot referendum legalizing sales of cannabis for adults 21+ starting July 1, 2023 (known as “Question 4”). The following year, on May 3, 2023, Governor Wes Moore signed the Cannabis Reform Act into law, creating a statutory framework for adult-use cannabis sales in the state.

Also on May 3, 2023, the Maryland Cannabis Administration (MCA, or the Administration) was established to succeed the Maryland Medical Cannabis Commission (MMCC) as the regulatory agency overseeing the cultivation, manufacture, testing, and distribution of both medical and adult-use cannabis.



Maryland’s transition from medical-only cannabis to adult-use sales was expedited with an allowance for existing medical dispensaries to pay a conversion fee, thereby ensuring a licensed marketplace for adults at least 21 years of age upon legalization. Adult-use sales began on July 1, 2023, with 98 existing dispensaries operational on the first day of market launch. Adult-use sales totaled \$709 million in the first year.

Following the initial adult-use market launch under former medical-only dispensaries, the Administration became the first in the nation to conduct exclusive social equity licensing lotteries in March and June 2024, issuing 205 total licenses across grower, processor, and dispensary categories. During that time, MCA launched a reference laboratory dedicated to cannabis oversight and managed entirely by the Administration. That spring, in collaboration with the Maryland Department of Health, the Administration introduced a comprehensive new public health and safety campaign, “BeCannabisSmart,” which promotes responsible adult cannabis use and educates the public on important topics such as the dangers of cannabis-impaired driving, smoke-free public spaces, and protecting youth from accidental consumption through safe storage of cannabis products.

Changes Following Adult-Use Legalization

The 2025 Maryland Cannabis Use Biannual Study is the first follow-up study to the 2023 Maryland Cannabis Use Baseline Study (both referred to as MCUBS), which served as the pre-legalization baseline report of cannabis use in the state. It is important to note that as collection of different data sets occur on different timelines and take time to clean and validate prior to publishing, the data provided in the 2025 MCUBS cannot yet show a full assessment of the public health impacts of adult-use legalization. Below are preliminary observations.



In a survey of medical cannabis patients, self-reported rates of **driving under the influence** or within 3 hours of using cannabis (hereafter, "DUIC") doubled in 2023 after adult-use legalization. Rates of DUIC dropped slightly in 2024 but remained higher than rates reported pre-legalization.



Source: MMCPs 2022-2024



Source: MPC and NCPC
cannabinoid exposure reports

Cannabis-related calls to **poison centers** dropped in 2024, following years of annual increases. However, cannabis-related calls continued to increase for youth, especially for children aged 5 and under.



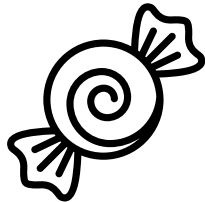
Cannabis-related **ED visits and hospitalizations** have trended down over the years, including post-legalization. However, cannabis-related ED visits and hospitalizations were highest in those aged 13-20, and the rate for those 0-12 has trended upward.

Source: HSCRC Case mix 2018-2024*

Changes Following Adult-Use Legalization

Edibles are a growing product category, a trend seen in other states after adult-use legalization. Vaping as a method of consumption also increased.

Source: BRFSS 2022, 2023.



Among past-month adult consumers:	<u>2022</u>		<u>2023</u>
Smoking reported as a consumption method.	80%	➔	80%
Edibles reported as a consumption method.	37%	➔	46%
Vaping reported as a consumption method.	26%	➔	35%

Smoke odor is a common complaint. One in 5 Maryland adults surveyed after adult-use legalization said they were unsure where it is legal to smoke or vape, with particular uncertainty over rules about outdoor public smoking (at recreation areas, parks, etc.)

Source: GKV Benchmark Communications Survey 2023, 2024



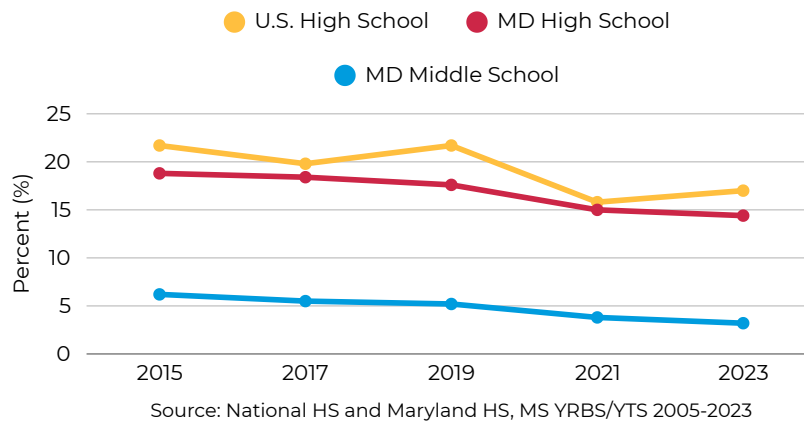
In recent years, **intoxicating hemp products** (delta-8, delta-10, etc.) have been sold in growing numbers in gas stations, convenience stores, smoke/vape shops, and online in Maryland and across the U.S., largely outside of state regulation. Unless noted, the data sources in this report do not differentiate between cannabis and intoxicating hemp or hemp-derived products, meaning it is unknown to what extent intoxicating hemp products may be contributing to negative public health outcomes.

Youth Use, Methods, Reasons & Sources

Rates of past-30 day use (also called “current use”) among Maryland high school and middle school students has **trended down** and has been lower than national levels since 2013.

Note: The 2022-2023 survey data was collected prior to adult-use legalization.

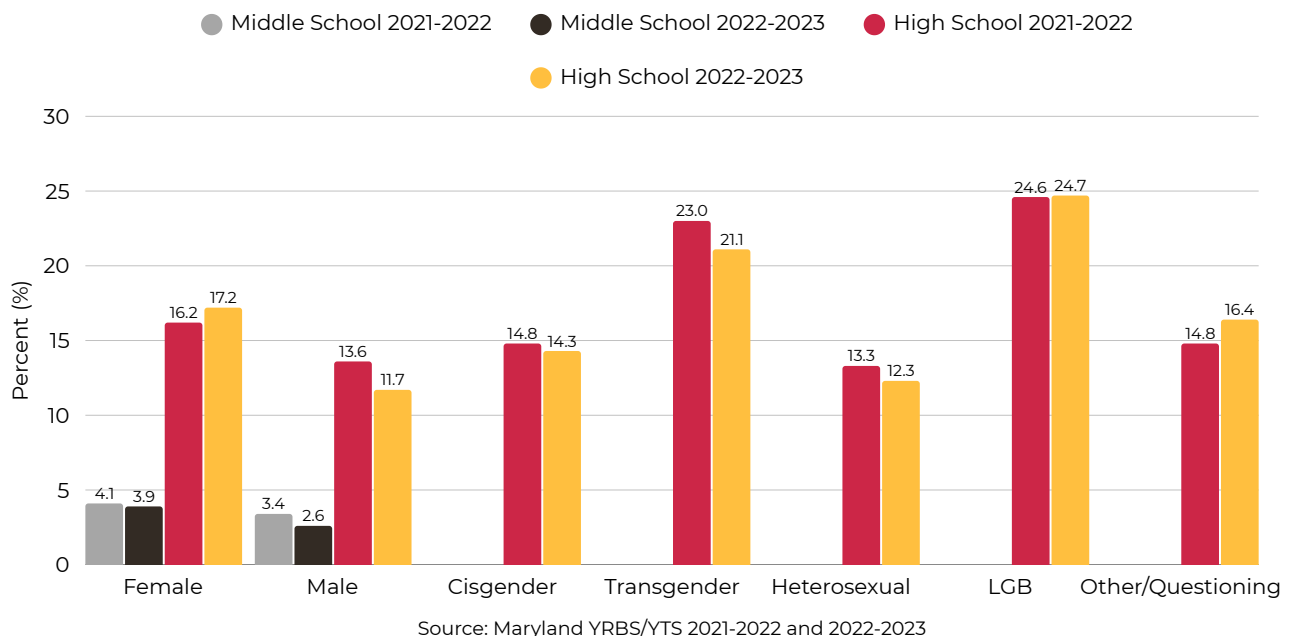
Current Cannabis Use (Past 30 Days) in Maryland and U.S. High School Students



About **14% of high school** and **3% of middle school** students reported past 30-day use during the 2022-2023 school year.

Despite overall declining trends, past month use was higher in **females, LGBT, and multiracial students** (not pictured).

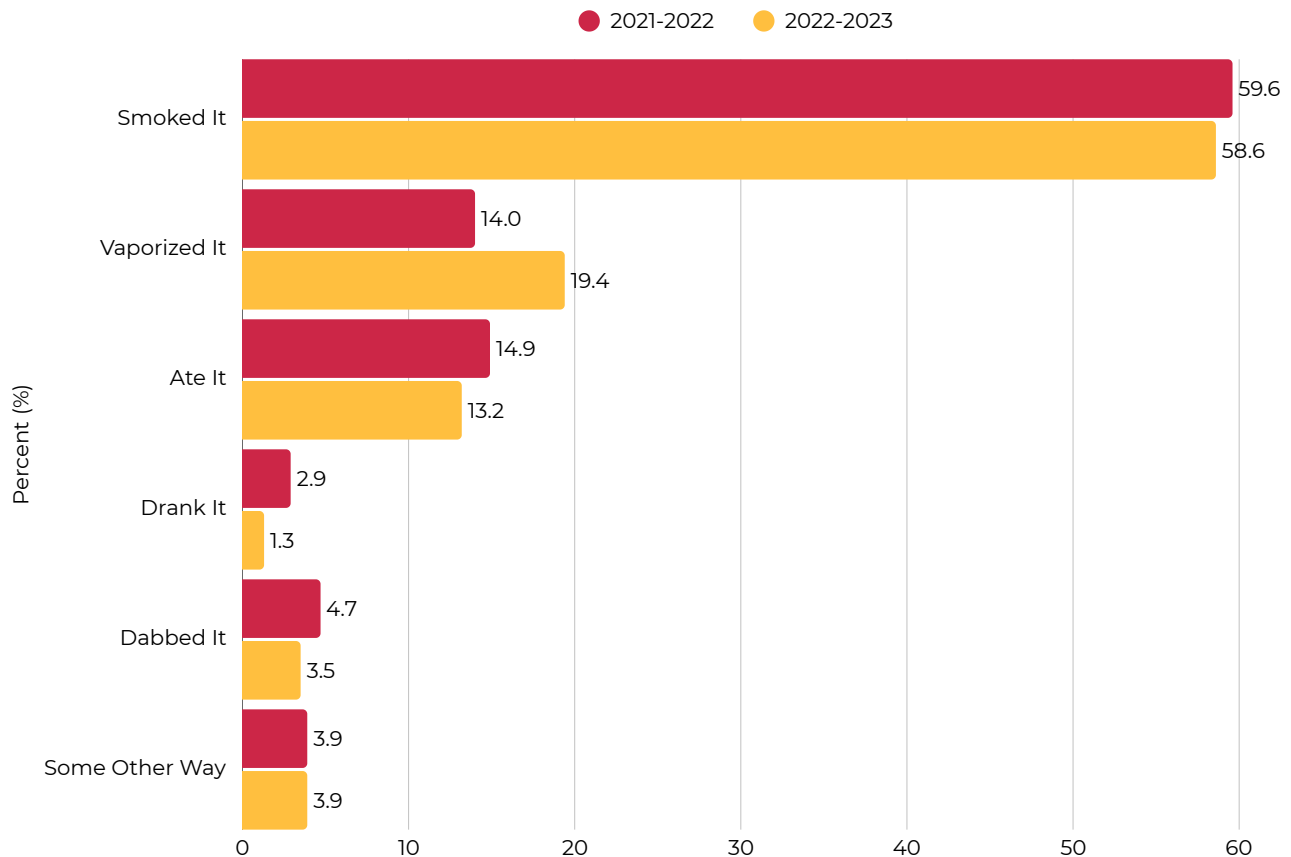
Current Cannabis Use (Past 30 Day) Among Maryland Middle and High School Students by Gender and Sexual Identity (2021-2022 and 2022-2023)



Youth Use, Methods, Reasons & Sources

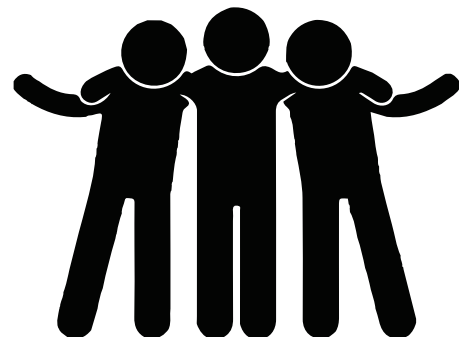
Smoking remains the most popular consumption method among high school students, while **vaping** saw the largest increase in prevalence from the 2021-2022 to 2022-2023 school years.

Primary Method of Cannabis Consumption Among High School Students Who Currently Use Cannabis (Past 30 Days) (2021-2022 and 2022-2023)



Source: Maryland YRBS/YTS 2021-2022 and 2022-2023

Most teens reported **friends** or **other teens** as the main source of obtaining cannabis. More than a third of teens reported obtaining cannabis directly from **unregulated sources** ("another store" or "online") or they were not sure where cannabis was sourced. Unregulated cannabis may pose even greater risks to youth as products are not state-tested prior to sale. Contents may be higher (or lower) in THC than labeled and/or contain harmful contaminants.



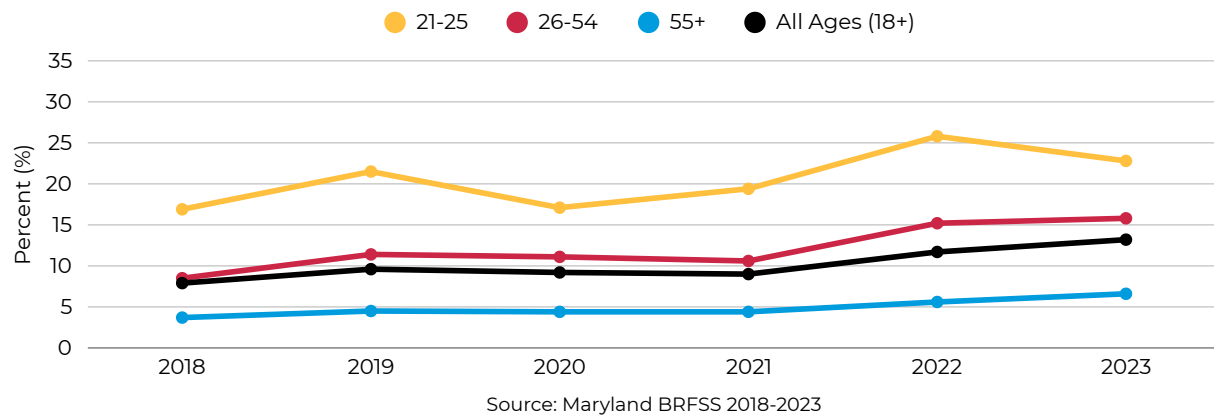
Source: YPBS-23

Adult Use & Methods

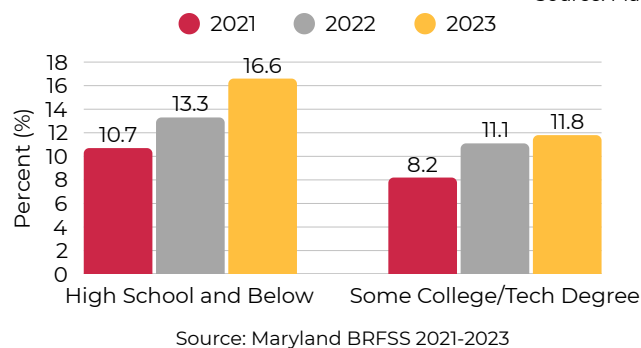
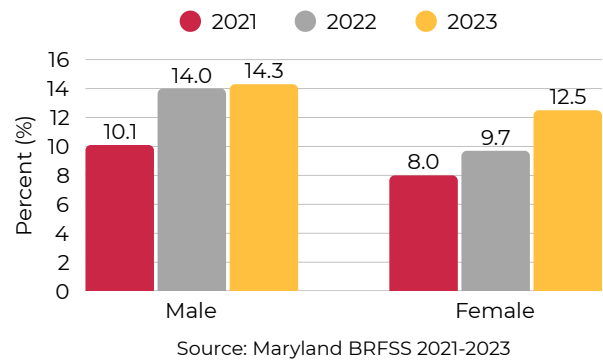
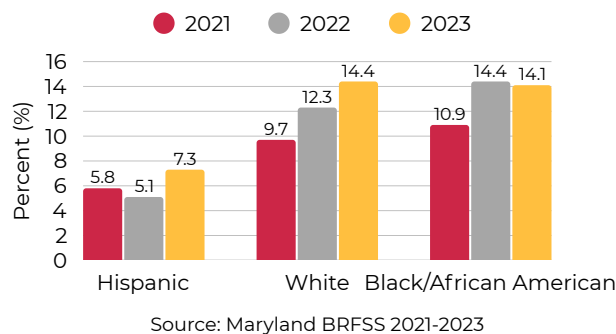
Rates of past 30-day cannabis use among Maryland adults **increased from 9% to 13%** from 2021 to 2023. Increases were observed in most demographics, with noted increases in adults who are **female, White**, and have a **high school education or below**.

Note: Data from 2023 reflects a mixture of responses collected before and after adult-use legalization.

Current Cannabis Use (Past 30 Days) in Maryland Adults (2018-2023)



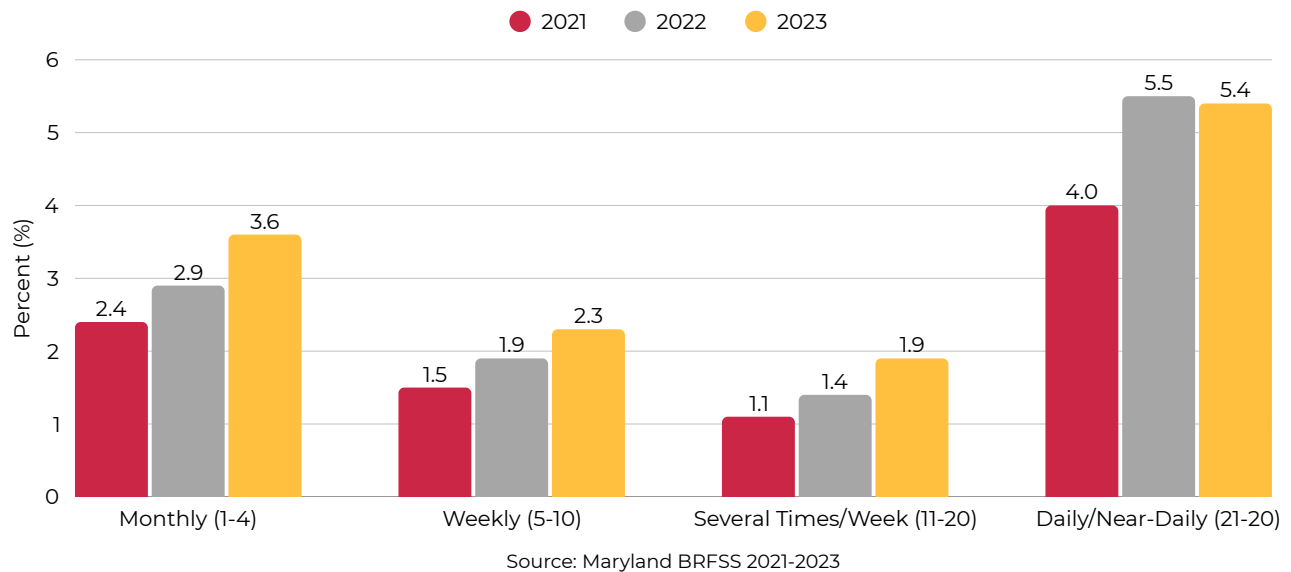
Current Cannabis Use (Past 30 Days) Among Maryland Adults by Gender, Education, and Race/Ethnicity (2021-2023)



Adult Use & Methods

Maryland adults also reported **more frequent use**, with increases in cannabis use on a monthly and weekly basis, as well as several times per week. In 2022 and 2023, approximately 5% of Maryland adults reported daily or near-daily cannabis use.

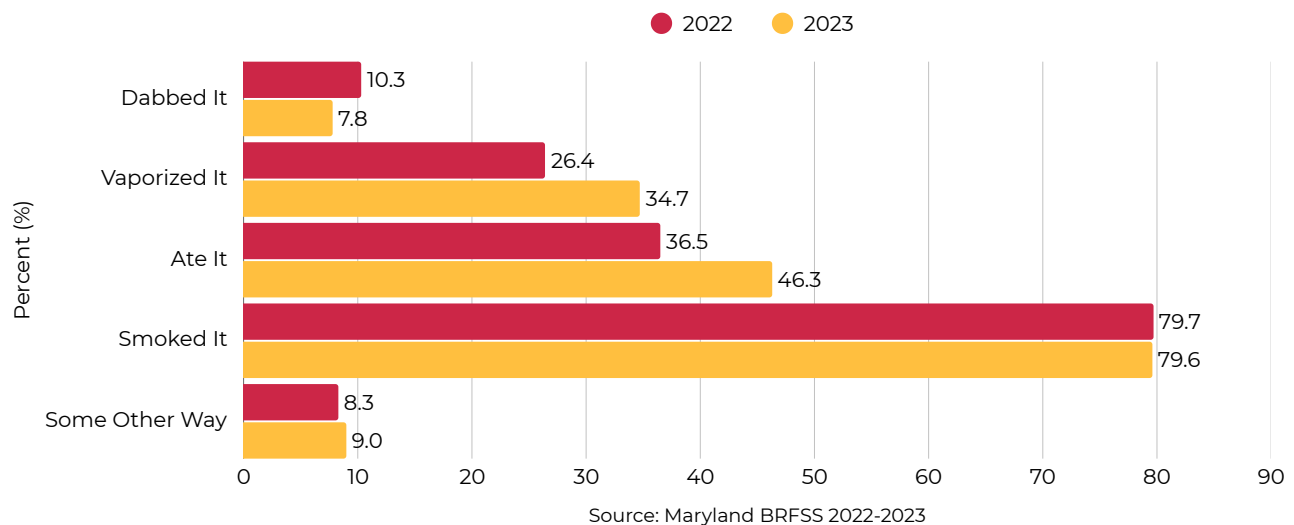
Frequency of Current Cannabis Use (Past 30 Days) Among Maryland Adults (2021-2023)



Smoking remained the most common method of cannabis consumption; however, from 2022 to 2023, **vaping** and **edible** product use rose, and the number of adults who reported using more than one consumption method also increased.

Note: Multiple methods could be selected, so totals exceed 100 percent.

Methods of Consumption Among Maryland Adults Who Currently Use Cannabis (Past 30 Days) (2022-2023)



Pregnancy & Cannabis



Data is limited on cannabis use in pregnancy. Available data shows about **4 percent** of Maryland women reported using cannabis during their last pregnancy. Population-level data on cannabis use while breastfeeding has not been collected and is a gap area.

2020-2021 → **2021-2022**
4.2% → **4.2%**

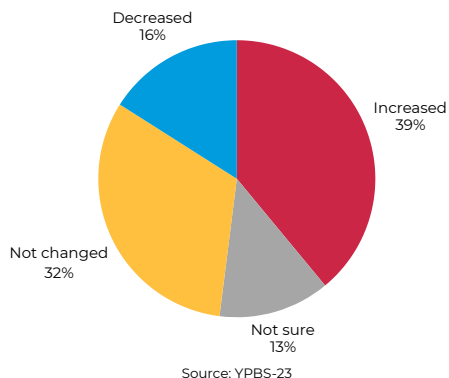
Source: Maryland PRAMS 2019-2020 and 2021-2022.

Note: CDC defines the minimum overall response rate threshold to publish data externally as 50 percent. In 2021 and 2022, Maryland PRAMS had a weighted response rate of 44.1 and 43 percent, respectively, and thus did not meet the threshold. Therefore, Maryland PRAMS 2021 and 2022 data should be interpreted with caution.

Perceptions of Risk

Maryland teens think more of their peers are using cannabis since adult-use legalization and risk perceptions related to cannabis use have continued to fall in all age groups.

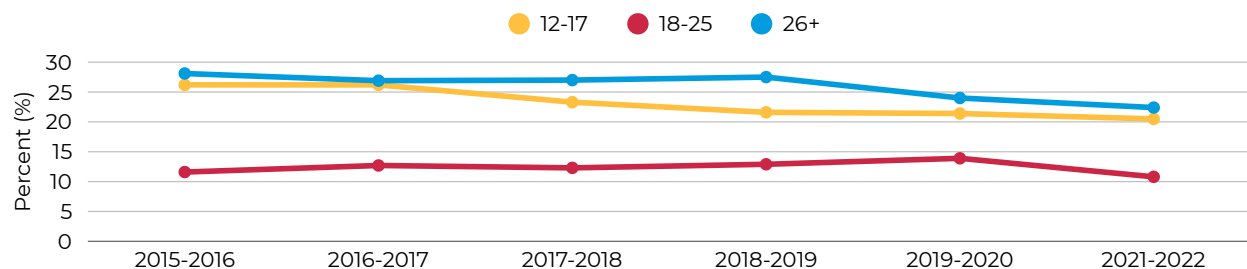
Perceived Change in Teen Cannabis Use Since Adult-Use Legalization in Maryland (2023)



71% of teens aged 14-19 think teen cannabis use has increased or stayed the same since adult-use legalization.

The perception of “great risk” from smoking cannabis once a month has **trended down** since 2015 among both adolescents (ages 12 to 17) and adults (26 years and older) and was lowest among young adults (18 to 25 years).

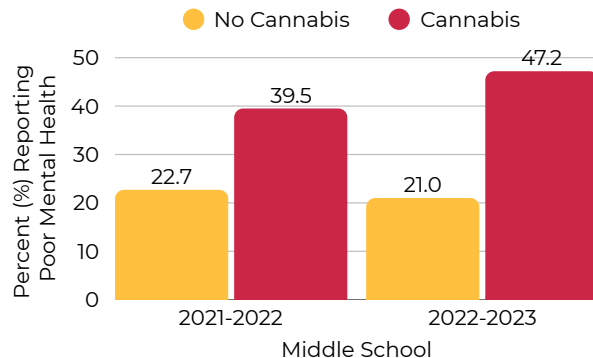
Perceptions of “Great Risk” from Smoking Cannabis Monthly Among Maryland Residents Ages 12+ (2015-2022)



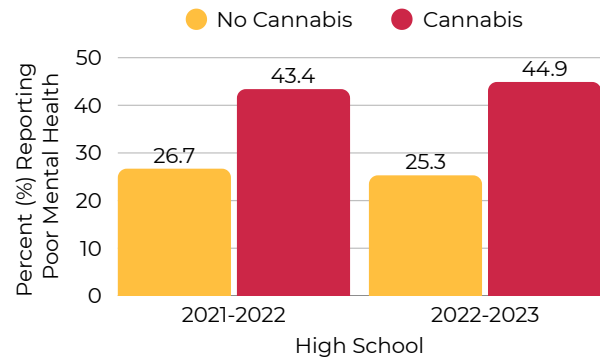
Cannabis & Mental Health

Past 30-day cannabis use was **higher** in both youth and adults who reported having one or more days each month that their mental health was not good.

Current Cannabis Use (Past 30 Days) Among Middle and High School Students Who Report Poor Mental Health (2021-2022 and 2022-2023)



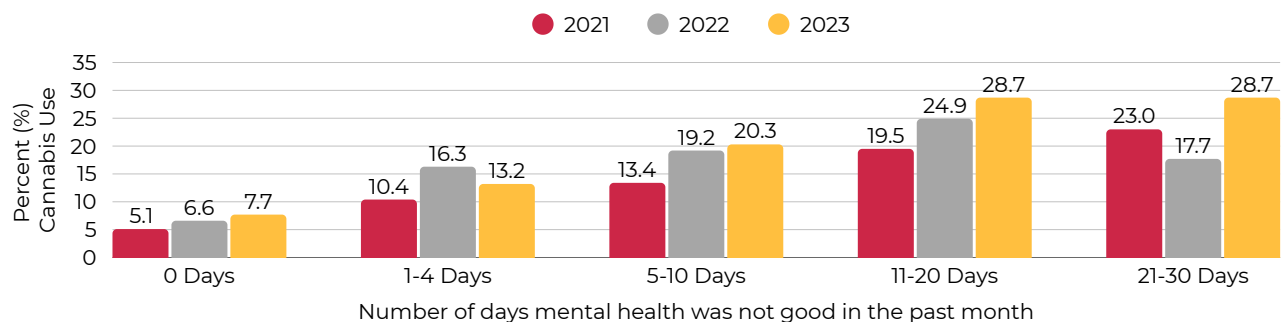
Source: Maryland YRBS/YTS 2021-2022 and 2022-2023



Source: Maryland YRBS/YTS 2021-2022 and 2022-2023

Past 30-day cannabis use was nearly **four times greater** in adults with ten or more poor mental health days compared to those with zero poor mental health days in the past month (29 versus 8 percent, respectively). It is not clear whether those already reporting poor mental health use cannabis, or if cannabis use contributes to poorer mental health.

Percent of Current Cannabis Use (Past 30 Days) Among Maryland Adults by Mental Health Status (2021-2023)



Source: Maryland BRFSS 2021-2023

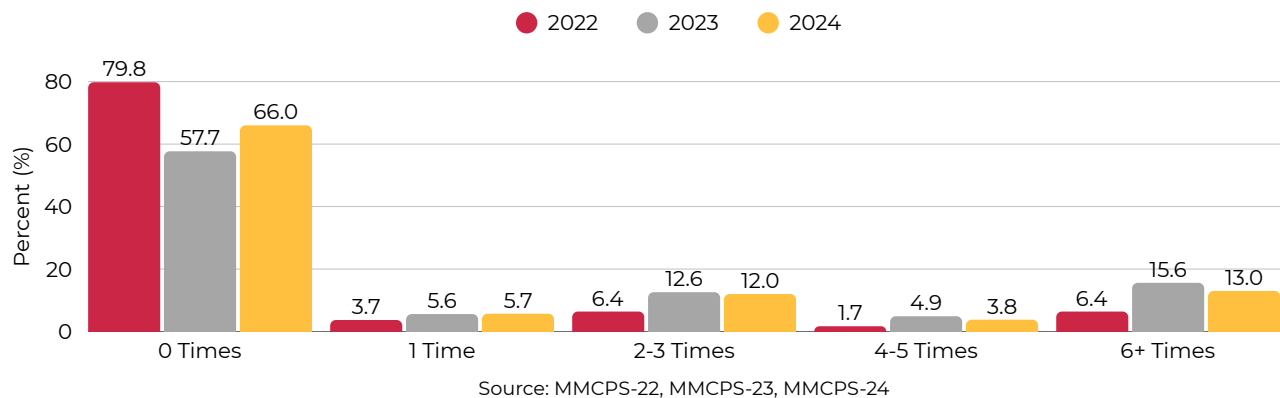


Cannabis use does not always help or improve mental health conditions. In fact, research tends to show that cannabis may be harmful, rather than helpful, for mental health conditions. Mental health concerns should be evaluated and treated by a healthcare professional.

Cannabis-Impaired Driving

Rates of **driving under the influence of cannabis** or within three hours of consuming cannabis (“DUIC”) among certified medical cannabis patients increased following adult-use legalization. From 2022 (pre-legalization) to 2023 (post-legalization), DUIC doubled from 18 to 39%. In 2024, DUIC fell slightly to 34%.

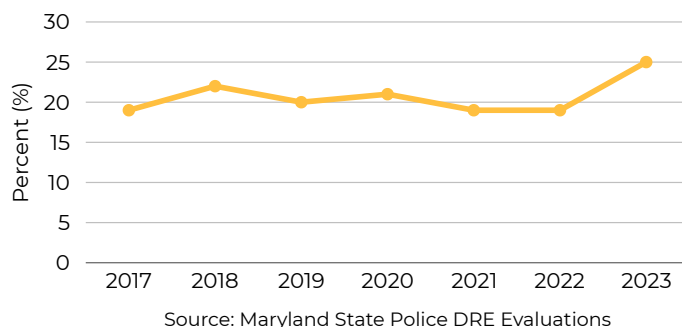
Frequency of Past-Month Driving Within 3 Hours of Consuming or While Under the Influence of Cannabis Among Medical Cannabis Patients (2022-2024)



Data sources specific to cannabis-impaired driving are limited, in part because a biological standard like blood alcohol content (BAC) does not exist for cannabis. Data from Maryland State Police on driver evaluations reported as positive for cannabis by specially trained drug recognition experts (DREs) is presented below.

A DRE evaluation typically occurs following an impaired driving arrest by a non-DRE officer who suspects drug impairment. Drug impairment is usually suspected when the impairment is not consistent with the driver's alcohol level as determined by a chemical test (i.e., breathalyzer or blood alcohol measurement). If the DRE evaluation is positive for drugs, the DRE will identify the category(s) of drug(s), based on shared patterns of effects, causing the impairment. DRE evaluations are not always conducted when a non-DRE officer suspects cannabis use. The number of DREs in the state varies over time and there may not be a DRE-certified officer available in that location or at the time to conduct an evaluation. As a result, DRE evaluations are reported as percentages to help make data comparable over time.

Percent of Cannabis-Positive Impaired Driving Evaluations by DREs in Maryland (2017-2023)

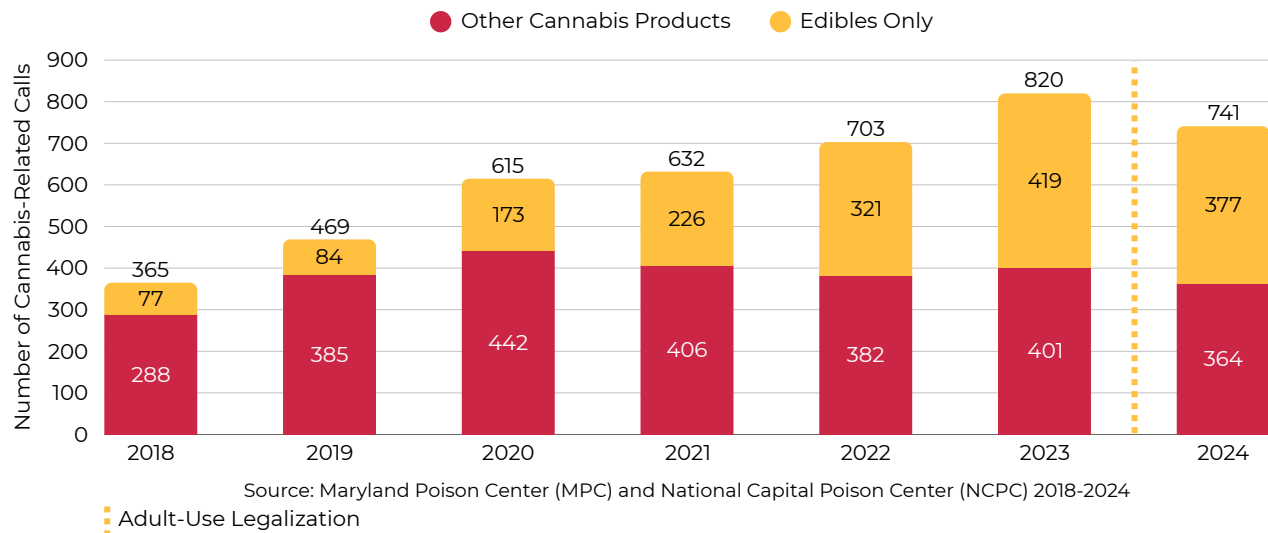


Smoking/consuming cannabis while driving and driving while impaired is **illegal** in Maryland and DUI citations can be issued by law enforcement. This has always been the case (i.e., impaired driving laws did not change with adult-use legalization).

Cannabis-Related Calls to Poison Control

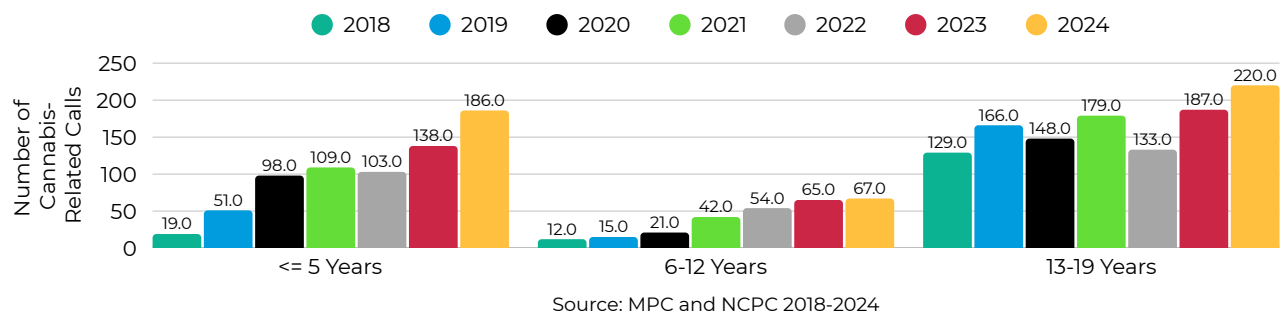
Cannabis-related calls to poison centers trended upward prior to adult-use legalization, with an increasing proportion of cannabis-related calls for edible cannabis products. Total calls and the number of calls for edible cannabis products decreased from 2023 to 2024, the year after adult-use legalization.

Total Number of Cannabis-Related Calls to Maryland Poison Centers by Product Type



Although overall and edible-related calls dropped in 2024, the **upward trend in calls for youth exposures** continued to climb, especially for children aged 5 and under.

Comparison of Cannabis-Related Calls to Maryland Poison Centers for Youth Under Age 20 (2018-2024)

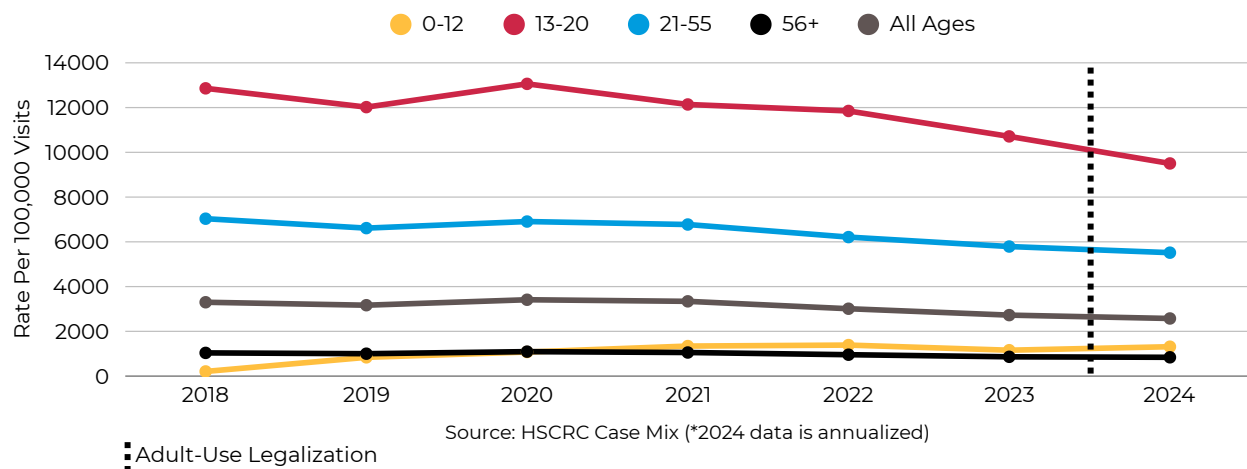


For a majority of calls to Maryland poison centers (72%), the product source (i.e., where cannabis was obtained) was unknown or attributed to an **unregulated source**, such as gas or convenience store, vape/smoke shop, or online retailer. Unregulated products may pose added risks since final contents have not been state-tested or inspected prior to sale.

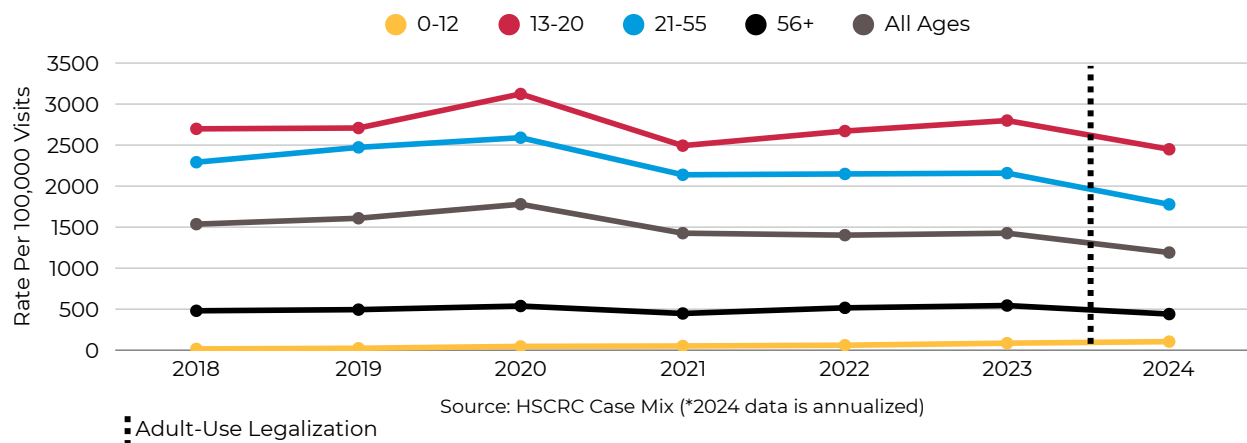
Cannabis-Related Hospitalizations & ED Visits

Rates of cannabis-related hospitalizations and ED visits have generally **trended down** over the years, including the initial period after adult-use legalization. However, rates of cannabis-related hospitalizations and ED visits were highest among those aged 13-20 from 2018 to 2024, and rates for those aged 0-12 have trended upward since 2018.

Cannabis-Related Hospitalizations in Maryland by Age Group (2018-2024)



Cannabis-Related ED Visits in Maryland by Age Group (2018-2024)



Data note: Cannabis-related emergency department (ED) visits and hospitalizations are based on diagnostic codes (known as ICD-10 codes), which are assigned by providers following each healthcare encounter. As multiple diagnostic codes can be assigned per encounter, it's possible to report cannabis-related visits by the first/primary code, any selection of codes (i.e., the top 3, 4, or 5, etc.), or anytime a cannabis code appears in the encounter details. The data here reflect anytime a cannabis code appeared since cannabis is often a contributor rather than the direct cause of a healthcare visit, and health systems have different coding practices (i.e., they may position specific codes differently).

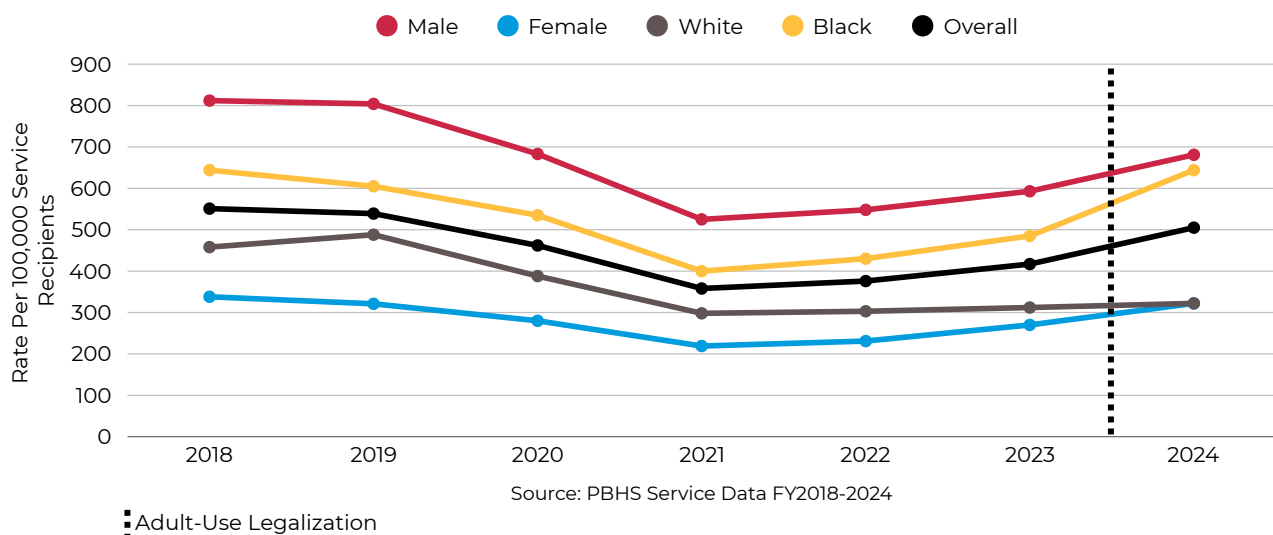
Problematic Cannabis Use

Problem cannabis use refers to the continued use of cannabis despite it having negative consequences such as problems at work, school, or with relationships. While problem use and cannabis use disorder (CUD) are sometimes used interchangeably, CUD is a psychiatric disorder defined in the Diagnostic and Statistical Manual (DSM). CUD can range from mild to severe (addiction).

Rates of individuals in the public behavioral health system (PBHS) receiving cannabis-related disorder treatment services have been increasing since 2021. Notably, the COVID-19 pandemic may have impacted 2020-2021 data. Additional data sources are needed to help assess the rate of CUD in the general population.

CUD diagnostic criteria include meeting two or more of the following over a 12 month period: Continuing to use cannabis despite physical or psychological problems; continuing to use cannabis despite social or relationship problems; craving cannabis; difficulty controlling or cutting down cannabis use; giving up or reducing other activities in favor of cannabis use; problems at work, school, and home as a result of cannabis use; spending a lot of time on cannabis use; taking cannabis in high-risk situations; taking more cannabis than intended; tolerance to cannabis; withdrawal symptoms when discontinuing cannabis.

Rate of Individuals Receiving Treatment Services in the PBHS for Cannabis-Related Disorders, by Demographics (FY2018-2024)



High THC concentrates have been approved for sale in the Maryland adult-use market since July 2024. The effects of high THC products on the body and brain, as well as potential impacts on problem use are unknown. Close monitoring and consumer education efforts are warranted.

Action Steps

Findings call for the following actions to support public health and safety protections:



Continue to improve public knowledge/awareness with mass reach media campaigns, on topics including youth prevention, mental health, cannabis impaired driving, cannabis ingestions/poisonings in young children, reducing use in high-risk groups (pregnant persons, LGBT youth), smoke-free public spaces, and adult-use consumer education about regulated and other sources of cannabis.



Close surveillance gaps, especially related to cannabis use in pregnancy and breastfeeding and problem use/addiction.



Support research on:

- (1) cannabis and mental health;
- (2) risks associated with high potency THC products;
- (3) the contribution of unregulated intoxicating hemp products on rates of use and public health and safety measures (i.e., poisonings, ED visits).



Provide resources to support Marylanders who would like help reducing or stopping cannabis use.



Support health care provider training efforts, especially related to screening and referrals for problem cannabis use and/or mental health among those who report cannabis use.



Develop new point-of-sale educational materials for all dispensary licensees on risks associated with high potency THC products.



Continue to strengthen public health and public safety collaborations to align and promote education efforts, including training programs (i.e., driver's education, drug recognition expert training).



Expand grant awards to all 24 Maryland Local Health Departments (LHDs) to strengthen the capacity of local public health education and outreach efforts.

About Our Methodology

About the Maryland Cannabis Use Biannual Study

Maryland's Health-General Article, Title 13, Subtitle 44 requires the Maryland Cannabis Administration to conduct a comprehensive biannual study of cannabis use in the state that includes a survey of patterns of use, perceptions, public health and safety, and cannabis-related healthcare utilization, and report findings to the Maryland Governor and the General Assembly. The Administration consulted agency partners named in statute as well as additional partners who provided data in the baseline study to obtain updated biannual study data.

Data Sources

The Administration compiled data from the following public health surveys and state programs as well as from hospital billing codes: the National Survey of Drug Use and Health (NSDUH), the Maryland Behavioral Health Risk Factor Surveillance System (BRFSS), the Maryland Youth Risk Behavior Survey/Youth Tobacco Survey (YRBS/YTS), the Maryland Youth Pandemic Behavioral Survey (YPBS), the Pregnancy Risk Assessment Monitoring System (PRAMS), the Maryland Medical Cannabis Patient Survey (MMCPs), the Maryland Young Adult Survey on Alcohol (MYSA), the Maryland Poison Center (MPC) and National Capital Poison Center (NCPC) cannabinoid exposure reports, the Fatality Analysis Reporting System (FARS), District Court of Maryland arrest reports, Maryland State Police Drug Recognition Expert evaluations, the Health Services Cost Review Commission's (HSCRC) case mix data, and the Public Behavioral Health Services (PBHS) reporting system.



cannabis.maryland.gov