

Vermont Cannabis Data Pages

Last Updated: February 2023



Table of Contents

Introduction History of Cannabis Legislation in Vermont Key Terms and Acronyms Data Notes and Survey Methodology Executive Summary Cannabis Use in Vermont Compared to Other States Cannabis Use Among Vermont High School Students Cannabis Use Among Vermont Middle School Students Adult Cannabis Use Cannabis Use Among Pregnant Vermonters Cannabis Use and Driving Cannabis-related Hospital Data Inpatient Hospitalizations Emergency Department Visits Poison Center Calls Related to Cannabis Exposure Treatment for Cannabis Use **DSU Resources Related to Cannabis**

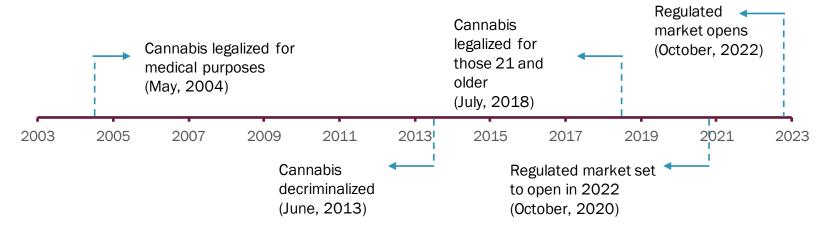
Please help us improve this document by taking this <u>survey</u>.

Introduction

The legal status of cannabis has changed significantly in Vermont over the past few years. In addition to previous laws that permitted medicinal cannabis use for approved patients, consumption and limited cultivation are now legal for those aged 21 and older in Vermont. The passage of <u>S.54</u> in 2020 created a legal (at the State level) market that opened in October 2022. In the context of these changes, it is necessary to provide information regarding cannabis use and potential health effects. The following pages include trends, demographics, and county-level data and will be updated as new data become available.

History of Cannabis Legislation in Vermont

In 2004, the Vermont legislature voted to legalize the use of cannabis for medical purposes and in 2013 penalties for possession of one ounce or less were reduced to a fine. In July 2018, legislation went into effect legalizing possession, private consumption, and limited cultivation among persons aged 21 years and older. Most recently, the Vermont legislature voted to create a regulated market which opened in October 2022. Cannabis remains illegal at the federal level.



Timeline of Cannabis-Related Legislation in Vermont

Key Terms and Acronyms

When presenting demographic data, some terms have been abbreviated to conserve space:

WnH – White, non-Hispanic BIPOC – Black, Indigenous, and people of color

Het/Cis – Heterosexual/cisgender

LGBT – Lesbian, gay, bisexual, or transgender

Data Notes – General Information

- Due to rounding, some percentages might not add up to 100%.
- Year-to-year changes and demographic comparisons are described as statistically significant or statistically similar in the text but are not indicated on graphs.
- Where possible, data are presented by county and demographic data. Depending on sample size and suppression rules, some measures may not be presented in the slides.
- This document uses "cannabis" to reflect updated terminology. We should note that some of the sources used in preparing these data pages use "marijuana."

Data Notes – General Information (Continued)

- Suppression varies by dataset, but in some cases, results are not presented because the numerator and/or denominator of the percentage or rate is too small to provide an accurate estimate. Suppression may also be used to avoid publishing potentially identifiable information (typically in the context of geographic or demographic data).
- <u>Detailed data notes about cannabis-related emergency</u> <u>department visits and hospitalizations can be found</u> <u>here.</u>

Data Notes – Sources and Methodology

For more information regarding the data used throughout this report, please click the following links:

- National Survey on Drug Use and Health (NSDUH)
- Youth Risk Behavior Survey (YRBS)
- Behavioral Risk Factor Surveillance System (BRFSS)
- <u>Pregnancy Risk Assessment Monitoring System (PRAMS)</u>
- <u>Northern New England Poison Center (NNEPC)</u>
- <u>Vermont Uniform Hospital Discharge Data System</u> (VUHDDS)
- <u>Vermont Medicaid Claims</u>

Executive Summary

- Vermont has the highest prevalence of cannabis use in the U.S. (NSDUH)
- While cannabis use among Vermont middle and high school students generally decreased between 2009 and 2015 (years vary based on measure and population), use has increased in more recent years. (YRBS)
 - Addison, Bennington, Lamoille, Rutland, Washington, and Windham Counties have higher rates of use than Vermont overall.
 - Caledonia, Chittenden, Franklin, and Grand Isle Counties have lower rates of use than Vermont overall.

Executive Summary

- Adult use increased steadily between 2013 and 2019 but decreased (though not statistically) between 2019 and 2020. (BRFSS)
 - Lamoille and Washington Counties have higher rates of adult cannabis use than Vermont overall, while Grand Isle County has a lower rate of use.
- Vaping of cannabis has increased among high school students while consumption of edibles has increased among adults. (BRFSS and YRBS)
- While cannabis use and driving has been stable among youth and adults, the rate of high school and middle school students reporting riding with someone who had been using cannabis has significantly increased since 2017. (BRFSS and YRBS)

Executive Summary (continued)

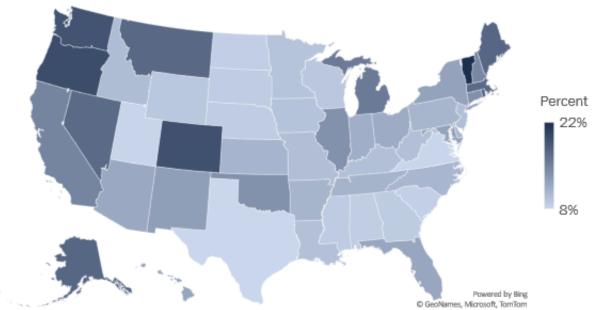
- Cannabis use among pregnant Vermonters before pregnancy increased significantly between 2016 and 2020, while use during pregnancy has been rising during the same period (though not statistically). (PRAMS)
- Hospitalizations and emergency department visits associated with cannabis use have increased significantly since 2016. (VUHDDS)
- Poison center calls related to cannabis exposure increased from 3 calls in 2012 to 34 in 2021. (NNEPC)
- Fewer Vermonters accessed treatment for cannabis use between 2017 and 2020. (VT Medicaid Claims)

Cannabis Use in Vermont Compared to Other States National Survey on Drug Use and Health (NSDUH)

*Data in this section are presented as pooled, 2-year estimates. Two years of NSDUH data are typically combined to allow for larger sample sizes which produce more precise estimates.

Vermont has the highest percentage of people 12 and older reporting past 30-day cannabis use

Past 30-day cannabis use among those 12 and older was highest in Vermont (22%) compared to other states in 2019/2020. Overall, 12% of people in the U.S. who were 12 and older reported using cannabis in the past 30 days.

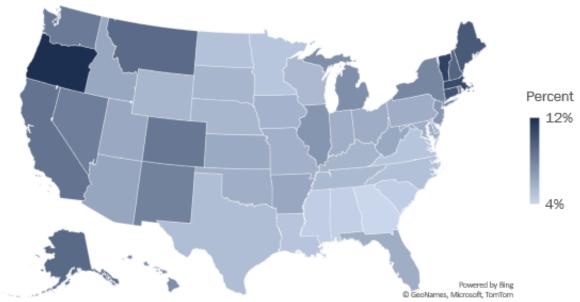


Past 30-Day Cannabis Use Among Those 12 and Older (2019/2020)

Data source: National Survey on Drug Use and Health

Vermont has the second highest percentage of people 12-17 reporting past 30-day cannabis use

Past 30-day cannabis use among those 12 to 17 years old was second highest in Vermont (11%), behind Oregon (12%), in 2019/2020. Overall, 7% of people in the U.S. between the ages of 12 and 17 reported using cannabis in the past 30 days.

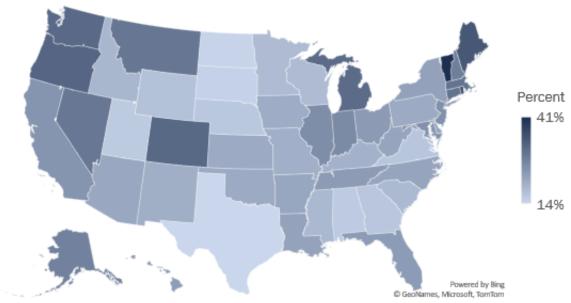


Past 30-Day Cannabis Use Among Those 12 to 17 (2019/2020)

Data source: National Survey on Drug Use and Health

Vermont has the highest percentage of people 18-25 reporting past 30-day cannabis use

Past 30-day cannabis use among those 18 to 25 years old was highest in Vermont (41%) compared to other states in 2019/2020. Overall, 23% of people in the U.S. between the ages of 18 and 25 reported using cannabis in the past 30 days.



Past 30-Day Cannabis Use Among Those 18 to 25 (2019/2020)

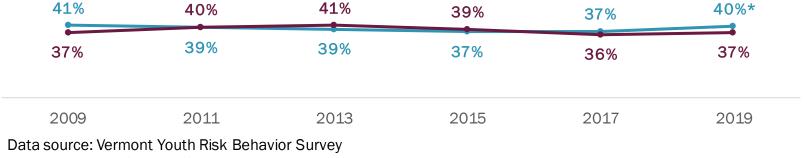
Data source: National Survey on Drug Use and Health

Cannabis Use Among Vermont High School Students Vermont Youth Risk Behavior Survey (YRBS)

Lifetime cannabis use among high school students has remained stable

The percentage of Vermont high schoolers who have ever tried cannabis (lifetime use) has remained similar between 2009 and 2019. Lifetime use significantly increased between 2015 and 2019. Use was statistically higher among students in Vermont than the US overall in 2019.

Lifetime Cannabis Use Among High School Students in Vermont and US (2009-2019)

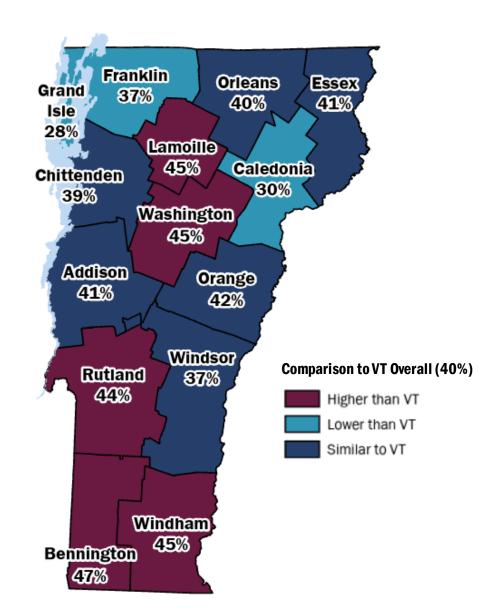


*Indicates a significant difference between VT and US in same year.

Jump to Table of Contents

Lifetime Cannabis Use by County (2019)

- More high schoolers in Bennington, Lamoille, Washington, Windham, and Rutland Counties used cannabis than Vermont overall.
- Lifetime cannabis use was lower in Grand Isle, Caledonia, and Franklin Counties than Vermont overall.

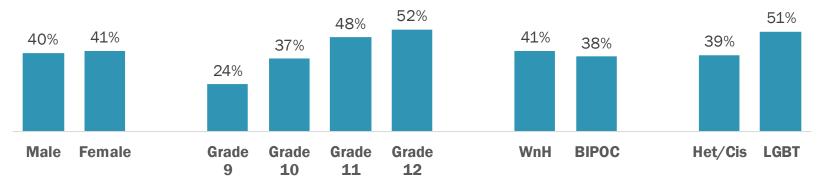


Data source: Vermont Youth Risk Behavior Survey

Lifetime cannabis use among Vermont high school students increases with grade level

Lifetime cannabis use significantly increases with each grade level. White, non-Hispanic and LGBT high schoolers are statistically more likely to have ever used cannabis than BIPOC and heterosexual/cisgender students in 2019, respectively.

Lifetime Cannabis Use Among Vermont High School Students by Demographics (2019)



Data source: Vermont Youth Risk Behavior Survey

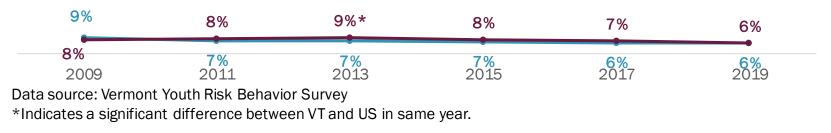
Vermont Department of Health

Jump to Table of Contents

Cannabis use before age 13 among high school students has decreased

The percentage of Vermont high schoolers who have **tried cannabis before age 13** significantly decreased between 2009 and 2019. Use was statistically lower among students in Vermont than the US overall in 2013.

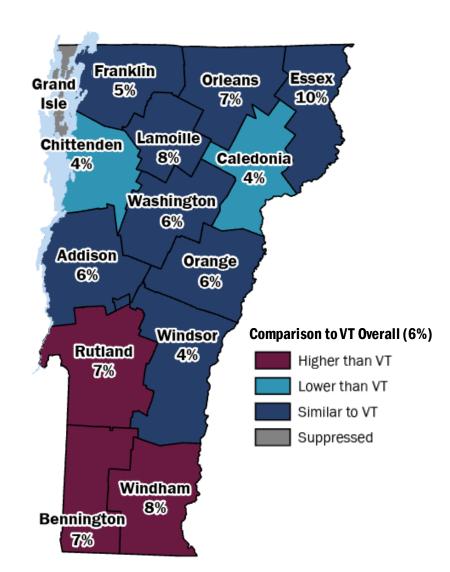
Cannabis Use Before Age 13 Among High School Students in Vermont and US (2009-2019)



Jump to Table of Contents

Cannabis Use Before Age 13 by County (2019)

- More high schoolers in Windham, Rutland, and Bennington Counties used cannabis before age 13 than Vermont overall.
- Cannabis use before age 13 was lower in Caledonia and Chittenden Counties than Vermont overall.

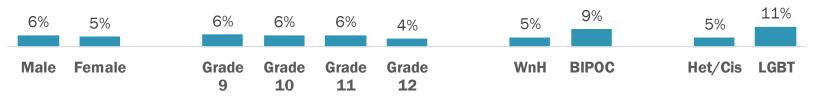


Data source: Vermont Youth Risk Behavior Survey

Cannabis use before age 13 among Vermont high school students is higher among BIPOC and LGBT students

Cannabis use before age 13 was significantly higher among younger students than those in 12th grade, in 2019. BIPOC and LGBT high schoolers are statistically more likely to have used cannabis before age 13 than white, non-Hispanic and heterosexual/cisgender students, respectively.

Cannabis Use Before Age 13 Among Vermont High School Students by Demographics (2019)



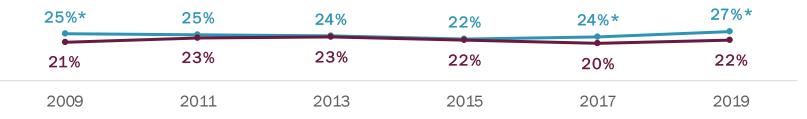
Data source: Vermont Youth Risk Behavior Survey

Past 30-day cannabis use among high school students is higher than the US rate

Past 30-day cannabis use among Vermont high schoolers significantly increased between 2017 and 2019 but was similar between 2009 and 2019. Use was statistically higher among students in Vermont than the US overall in 2009, 2017, and 2019.

Past 30-Day Cannabis Use Among High School Students in Vermont and US (2009-2019)

-Vermont -US

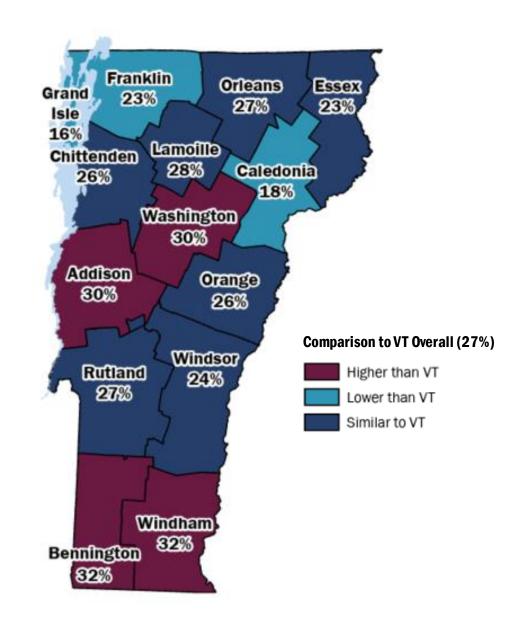


Data source: Vermont Youth Risk Behavior Survey *Indicates a significant difference between VT and US in same year.

Jump to Table of Contents

Past 30-Day Cannabis Use by County (2019)

- More high schoolers in Bennington, Windham, Addison, and Washington Counties used cannabis in the past 30 days than Vermont overall.
- Past 30-day cannabis use was lower in Grand Isle, Caledonia, and Franklin Counties than Vermont overall.

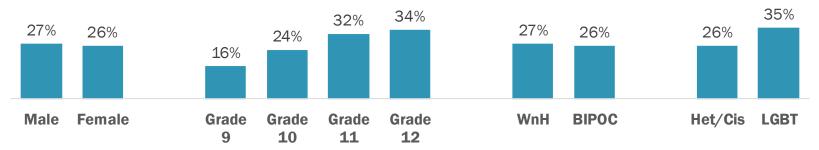


Data source: Vermont Youth Risk Behavior Survey

Vermont high school students in higher grades and those who identify as LGBT have higher rates of past 30-day cannabis use

Past 30-day cannabis use was higher among older students than younger students in 2019. LGBT students were significantly more likely to have used cannabis in the past 30 days than heterosexual/cisgender students.

Past 30-Day Cannabis Use Among Vermont High School Students by Demographics (2019)



Data source: Vermont Youth Risk Behavior Survey

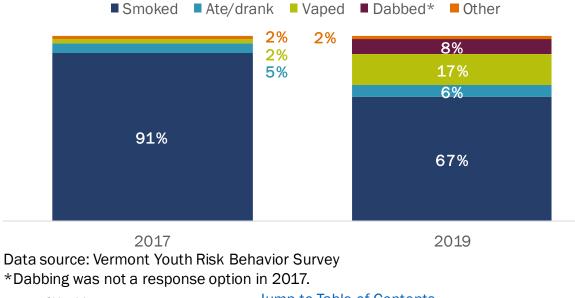
Vermont Department of Health

Jump to Table of Contents

Smoking is the primary method of cannabis use among Vermont high school students who use cannabis, but it has decreased significantly between 2017 and 2019

Vermont high school students reporting past 30-day cannabis use **primarily consume cannabis** by smoking it. However, this method significantly decreased between 2017 and 2019. Vaping increased eight-fold (2% to 17%), and 8% of students reported dabbing as their primary method of use in 2019 (dabbing was not a response option in 2017).

Primary Method of Cannabis Consumption Among Vermont High Schoolers Reporting Past 30-Day Use

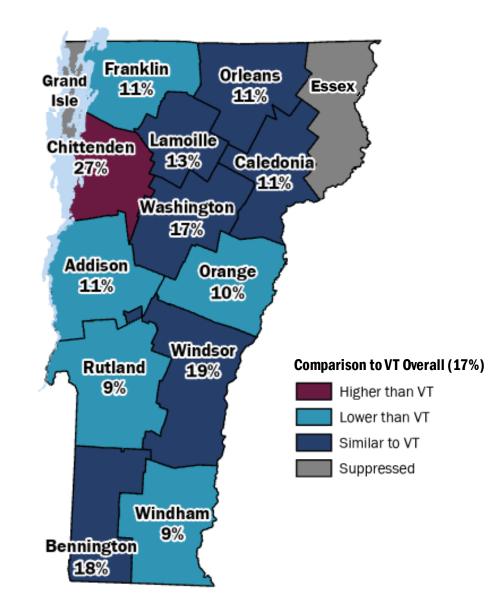


Vermont Department of Health

Jump to Table of Contents

Vaping as a Primary Method of Cannabis Use Among High School Students Who Use Cannabis by County (2019)

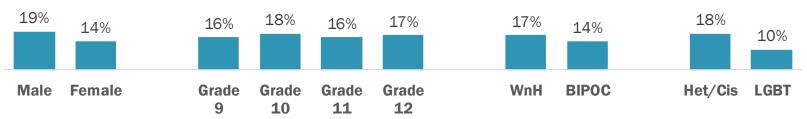
- More high schoolers who reported using cannabis in the past 30 days reported vaping as their primary method of use in Chittenden County than Vermont overall.
- Vaping as a primary method of cannabis use was lower in Windham, Rutland, Orange, Addison, and Franklin Counties than Vermont overall.



Data source: Vermont Youth Risk Behavior Survey Vaping as a primary method of cannabis use among Vermont high school students who use cannabis is higher for males and those who identify as Het/Cis

Vaping as a primary method of cannabis use among students reporting past 30day cannabis use was significantly higher among males, white non-Hispanic students, and heterosexual/cisgender students compared with female, BIPOC, and LGBT students, respectively.

> Vaping as a Primary Method of Cannabis Use Among Vermont High Schoolers Reporting Past 30-day Use by Demographics (2019)

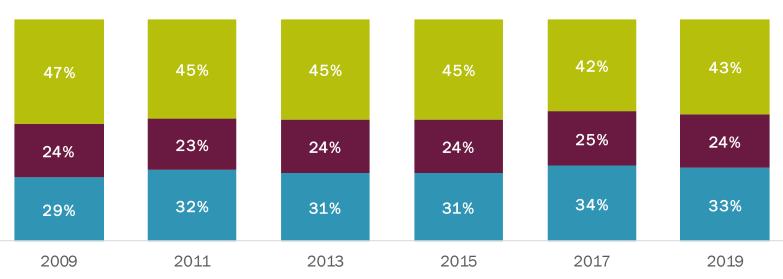


Data source: Vermont Youth Risk Behavior Survey

Frequency of cannabis use among Vermont high school students who use cannabis has been similar over time

Frequency of cannabis use among high schoolers reporting past 30-day use has not changed significantly between 2015 and 2019 or between 2017 and 2019.

Frequency of Cannabis Use Per 30 Days Among Vermont High Schoolers Reporting Past 30-day Use (2009-2019)



■ 1 or 2 times ■ 3 to 9 times ■ 10+ times

Data source: Vermont Youth Risk Behavior Survey

Vermont Department of Health

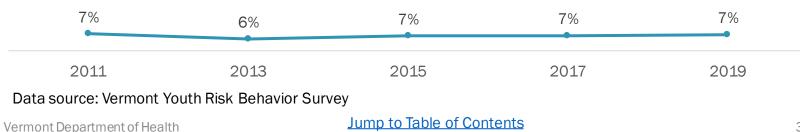
Jump to Table of Contents

Cannabis Use Among Vermont Middle School Students Vermont Youth Risk Behavior Survey (YRBS)

Lifetime cannabis use among Vermont middle school students has remained stable since 2015

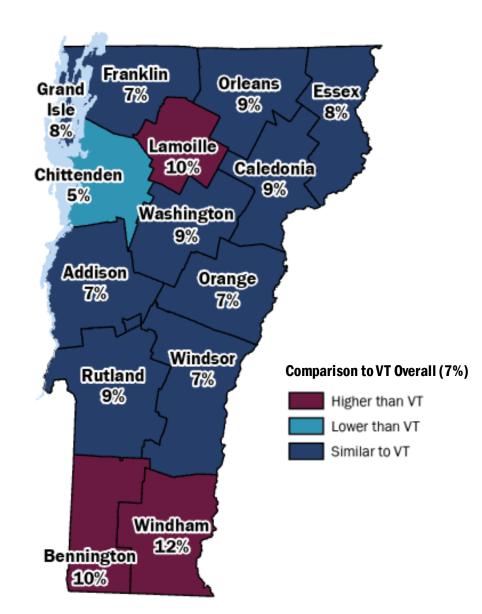
The percentage of Vermont middle schoolers who have ever tried cannabis (lifetime use) remained similar between 2011 and 2019, however, use significantly increased between 2013 and 2019.

Lifetime Cannabis Use Among Vermont Middle School Students (2011-2019)



Lifetime Cannabis Use by County (2019)

- More middle schoolers in Windham, Bennington, and Lamoille Counties used cannabis than Vermont overall.
- Lifetime cannabis use was lower in Chittenden County than Vermont overall.

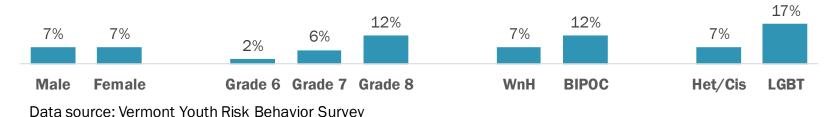


Data source: Vermont Youth Risk Behavior Survey

Vermont middle school students who either identify as LGBT, are BIPOC, or are in a higher grade have higher lifetime cannabis use

Lifetime cannabis use significantly increases with each grade level. BIPOC and LGBT middle schoolers are statistically more likely to have ever used cannabis than white, non-Hispanic and heterosexual/cisgender students in 2019, respectively.

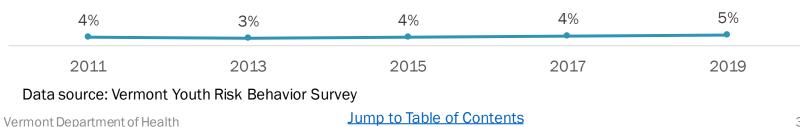
Lifetime Cannabis Use Among Middle School Students by Demographics (2019)



Any cannabis use in the past 30 days by Vermont middle school students significantly increased between 2011 and 2019

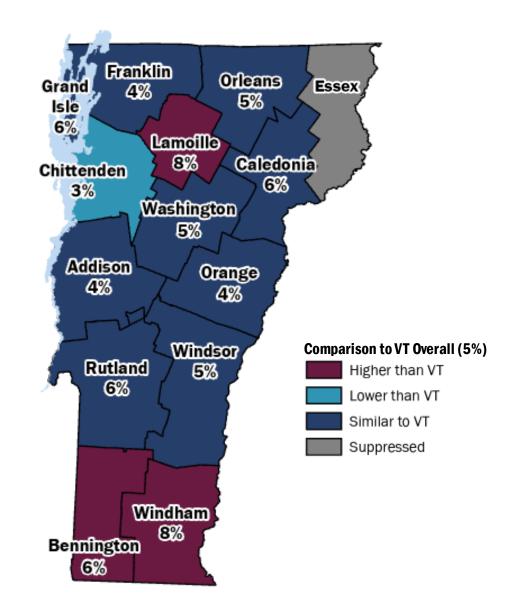
Past 30-day cannabis use among Vermont middle schoolers significantly increased between 2011 and 2019.

Past 30-Day Cannabis Use Among Vermont Middle School Students (2011-2019)



Past 30-Day Cannabis Use by County (2019)

- More middle schoolers in Windham, Lamoille, and Bennington Counties used cannabis in the past 30 days compared to Vermont overall.
- Past 30-day cannabis use was lower in Chittenden County compared to Vermont overall.



Data source: Vermont Youth Risk Behavior Survey

Cannabis use in the past 30 days among Vermont middle school students is higher among students who are **BIPOC**, students who identify as LGBT, and with increasing grade level

Past 30-day cannabis use significantly increases with each grade level. BIPOC and LGBT middle schoolers are statistically more likely to have used cannabis in the past 30 days than white, non-Hispanic and heterosexual/cisgender students in 2019, respectively.

> Past 30-Day Cannabis Use Among Middle School Students by Demographics (2019)



Adult Cannabis Use

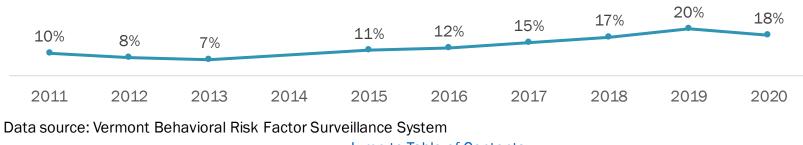
<u>Vermont Behavioral Risk Factor Surveillance System (BRFSS)</u>*

* Please note: this report includes BRFSS data through 2020. Data collected in 2021 are summarized in the <u>2021 BRFSS Annual Data Summary Report</u>. This report will be updated soon.

The use of cannabis in the past 30 days by Vermont adults increased from 2011-2019, then decreased in 2020

Past 30-day cannabis use among Vermont adults significantly increased between 2013 and 2019. Use decreased slightly between 2019 and 2020, although not statistically.

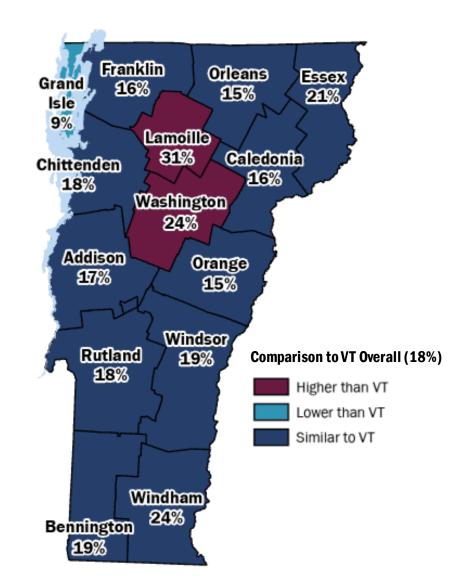
Past 30-Day Cannabis Use Among Vermont Adults (2011-2020)



Vermont Department of Health

Past 30-Day Cannabis Use by County (2019-2020)

- More Vermonters in Lamoille and Washington Counties used cannabis than Vermont overall.
- Past 30-day cannabis use was lower in Grand Isle County than Vermont overall.



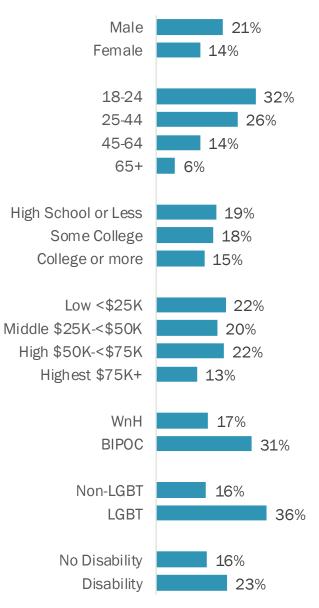
Data source: Vermont Behavioral Risk Factor Surveillance System

Adult Cannabis Use by Demographics

Past 30-day cannabis use is significantly higher among males, BIPOC Vermonters, people identifying as LGBT, and those with a disability compared to females, white, non-Hispanic Vermonters,

heterosexual/cisgender adults, and those without a disability, respectively. Use is statistically higher among 18 to 44 year olds compared to those 45 and older and Vermonters making less than \$75K per year versus those making at least \$75K.

Past 30-Day Cannabis Use Among Vermont Adults by Demographics (2020)

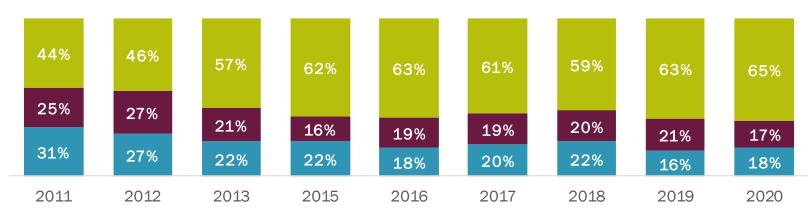


Data source: Vermont Behavioral Risk Factor Surveillance System

Nearly two-thirds of Vermont adults who use cannabis used 10 or more days per month in 2020

Frequency of cannabis use among Vermont adults reporting past 30-day use changed significantly between 2011 and 2020. Nearly two-thirds (65%) of Vermont adults reporting past 30-day cannabis use did so 10 or more days in the past month in 2020 compared to 44% in 2011, a significant increase.

Frequency of Cannabis Use Per 30 Days Among Vermont Adults Reporting Past 30-day Use (2011-2020)



■ 1 or 2 days ■ 3 to 9 days ■ 10+ days

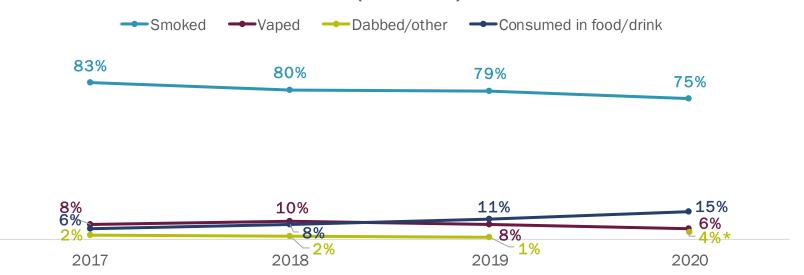
Data source: Vermont Behavioral Risk Factor Surveillance System

Vermont Department of Health

Smoking is the primary method of cannabis use among Vermont adults, but is decreasing

Vermont adults reporting past 30-day cannabis use **primarily use cannabis** by smoking it, however consuming it in food or a drink has significantly increased since 2017.

Primary Method of Cannabis Use Among Vermont Adults Reporting Past 30-Day Use (2017-2020)



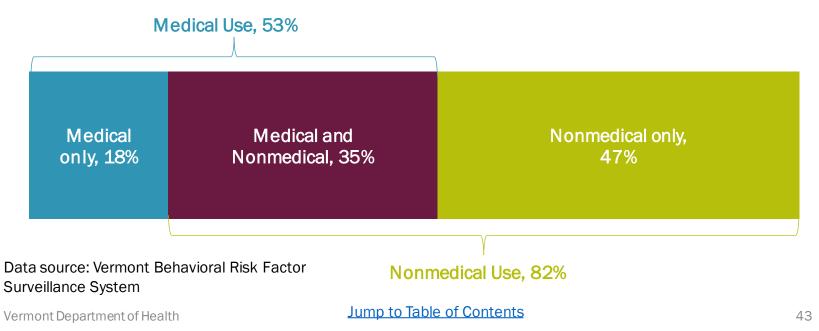
Data source: Vermont Behavioral Risk Factor Surveillance System

*A response option of "Use it in some other way" was added to the 2020 survey. That response has been combined with "Dabbed" and therefore, any changes in this category should be interpreted with caution.

Most Vermont adults who use cannabis do so for nonmedical reasons, although many also report use for medical reasons

Most Vermont adults reporting past 30-day cannabis use did so for nonmedical reasons. Nearly half (47%) reported using cannabis solely for nonmedical reasons, while 35% used cannabis for both nonmedical and medical reasons. Almost one-fifth (18%) used cannabis exclusively for medical reasons.



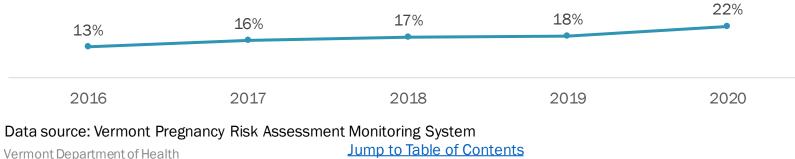


Cannabis Use Among Pregnant Vermonters Vermont Pregnancy Risk Assessment Monitoring System (PRAMS)

Using cannabis before pregnancy has significantly increased among Vermonters from 2016 to 2020

Cannabis use in the month before pregnancy increased significantly between 2016 and 2020.

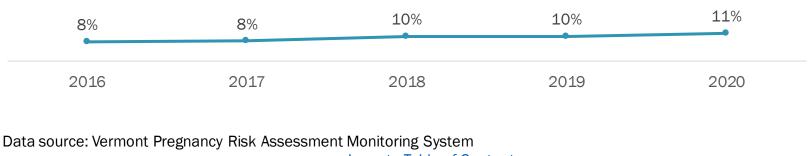
Cannabis Use in the Month Before Pregnancy Among Recently Pregnant Vermonters (2016-2020)



Using cannabis during pregnancy has increased among Vermonters from 2016 to 2020, but the increase is not statistically significant

Cannabis use during pregnancy increased slightly between 2016 and 2020, though not statistically.

Cannabis During Pregnancy Among Recently Pregnant Vermonters (2016-2020)



Vermont Department of Health

Cannabis Use and Driving

<u>Vermont Youth Risk Behavior Survey (YRBS)</u> <u>Vermont Behavioral Risk Factor Surveillance System (BRFSS)</u> <u>Vermont State Highway Safety Office</u> Significantly fewer high school students rode with a driver in the past 30 days who had been using cannabis in 2019 compared to 2009, but the rate significantly increased between 2017 and 2019

Significantly fewer high school students **rode with a driver in the past 30 days who had been using cannabis** in 2019 compared to 2009, however, the rate significantly increased between 2017 and 2019. Among students who drove during the past 30 days, **driving after using cannabis** remained statistically similar between 2013 and 2019.

Cannabis Use and Driving Among Vermont High School Students (2009-2019)

- ----Rode with a driver who had been using cannabis, past 30 days
- --- Drove under the influence of cannabis, past 30 days (among those who drive)

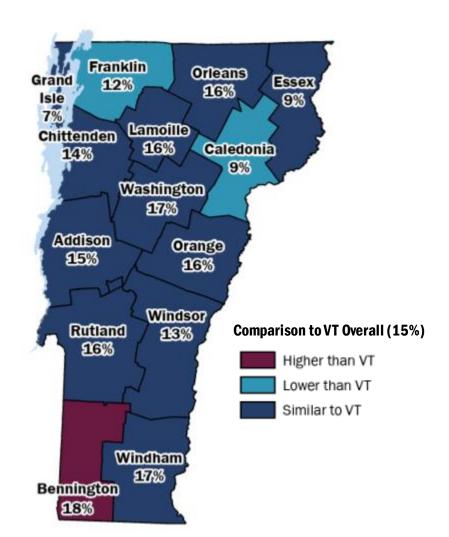


Data source: Vermont Youth Risk Behavior Survey

Vermont Department of Health

High School Students who Drove After Using Cannabis by County, Past 30 Days (2019)

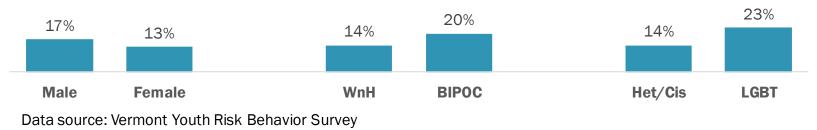
- Of high school students who drove after using in the past 30 days, more in Bennington County drove under the influence of cannabis than Vermont overall.
- Driving after using cannabis was lower in Caledonia and Franklin Counties than Vermont overall.



Data source: Vermont Youth Risk Behavior Survey Driving after using cannabis was significantly higher among Vermont high school students who identify as LGBT, those who are BIPOC, or those who are male

Among students who drove during the past 30 days, **driving after using cannabis** was significantly higher among males than females in 2019. BIPOC students and those identifying as LGBT were statistically more likely to drive after using cannabis than white, non-Hispanic and heterosexual/cisgender students, respectively.

> Driving Under the Influence of Cannabis Among High School Students by Demographics, Past 30 Days (2019)

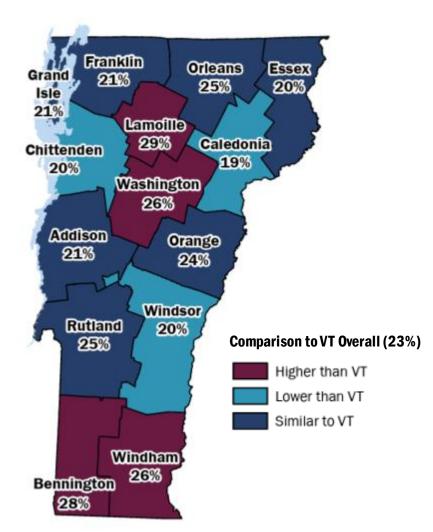


Vermont Department of Health

High School Students who Rode With a Driver who Had Been Using Cannabis by County, Past 30 Days (2019)

- More high schoolers in Lamoille, Bennington, Washington, and Windham Counties rode with a driver who had been using cannabis than Vermont overall.
- Riding with a driver who had been using cannabis was lower in Caledonia, Chittenden, and Windsor Counties than Vermont overall.

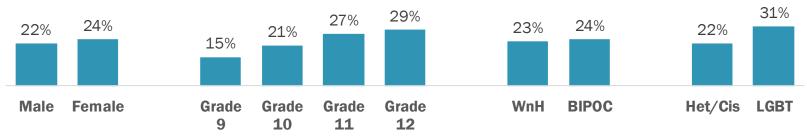
Data source: Vermont Youth Risk Behavior Survey



Riding in a car with a driver who had been using cannabis increases at higher grade levels and is higher for Vermont high school students who identify as LGBT

The percentage of students who, in the past 30 days, rode with a driver who had been using cannabis was significantly higher among older students than younger students. Additionally, LGBT high schoolers were statistically more likely to ride with an impaired driver than heterosexual/cisgender students.

Rode With an Impaired Driver Among High School Students by Demographics, Past 30 Days (2019)



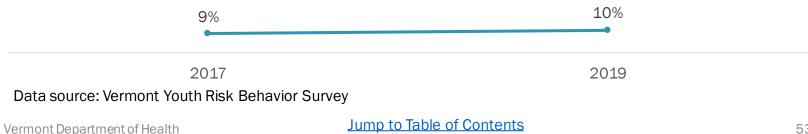
Data source: Vermont Youth Risk Behavior Survey

Vermont Department of Health

The percentage of Vermont middle school students who had ever ridden in a car driven by someone who had been using cannabis significantly increased between 2017 and 2019

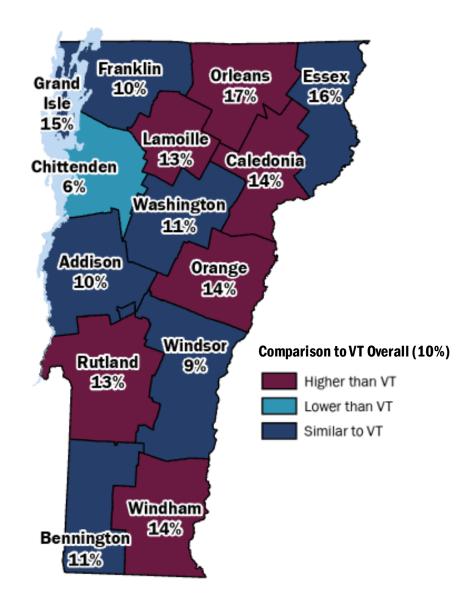
The percentage of Vermont middle school students who had ever ridden in a car driven by someone who had been using cannabis significantly increased between 2017 and 2019.

> Ever Rode in a Car with Someone Who Had Been Using Cannabis Among Vermont Middle School Students (2017-2019)



Middle School Students who Ever Rode With a Driver who Had Been Using Cannabis by County (2019)

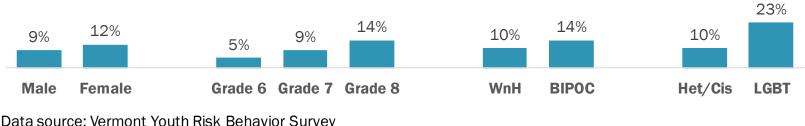
- More middle schoolers in Orleans, Orange, Windham, Caledonia, Lamoille, and Rutland Counties had ridden with a driver who had been using cannabis than Vermont overall.
- Riding with a driver who had been using cannabis was lower in Chittenden County than Vermont overall.



Data source: Vermont Youth Risk Behavior Survey Vermont middle school students riding in a car with a driver who had been using cannabis increases by grade level and is higher for students who are female, BIPOC, or identify as LGBT

Riding with a driver who had been using cannabis significantly increases with each grade level among Vermont middle schoolers. Females, BIPOC students, and LGBT students were statistically more likely to ride with a driver who had been using cannabis than males, white, non-Hispanic, and heterosexual/cisgender students, respectively.

Ever Rode With a Driver Who Had Been Using Cannabis Among Middle School Students by Demographics (2019)

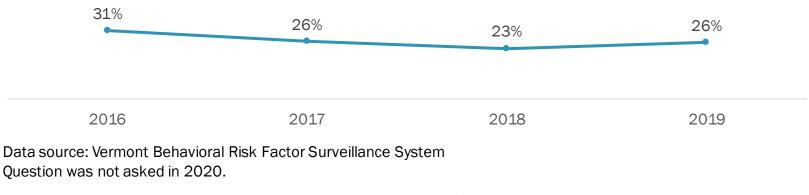


Vermont Department of Health

After decreasing, cannabis use and driving among Vermont adults who use cannabis increased in 2019, though not statistically

Among adults who report using cannabis in the past 30 days, **driving within three hours after using cannabis** has not statistically changed from 2016 to 2019.

Cannabis Use and Driving Among Vermont Adults who Used Cannabis in Past 30 Days (2016-2019)



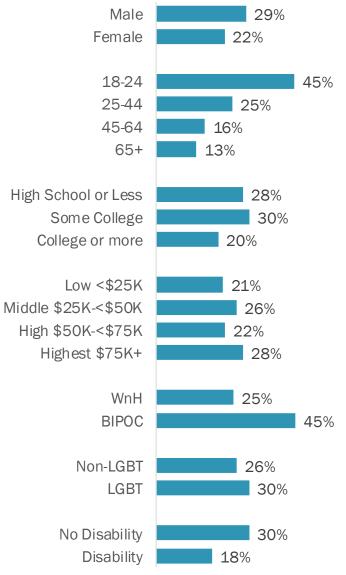
Vermont Department of Health

Adult Cannabis Use and Driving by Demographics

Among Vermont adults who used cannabis in the past 30 days, driving within three hours after use is significantly greater among 18 to 24 year olds compared to those 45 and older. Using cannabis before driving is statistically similar across all other demographic groups.

Data source: Vermont Behavioral Risk Factor Surveillance System

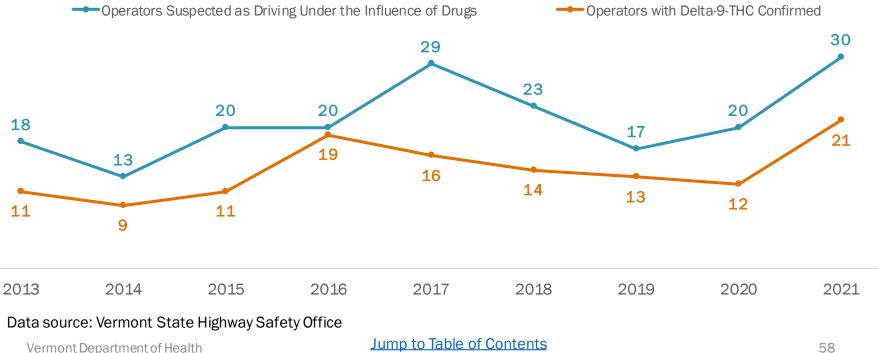
Cannabis Use and Driving Among Vermont Adults who Used Cannabis in Past 30 Days by Demographics (2019)



The number of drivers with confirmed presence of delta-9-THC who were involved in fatal crashes trended downward between 2016 and 2020 but increased between 2020 and 2021

The number of motor vehicle operators with confirmed presence of delta-9-THC (the psychoactive component of cannabis) who were involved in fatal crashes trended downward between 2016 and 2020 but increased between 2020 and 2021.

Motor Vehicle Operators in Fatal Crashes in Vermont (2013-2021)

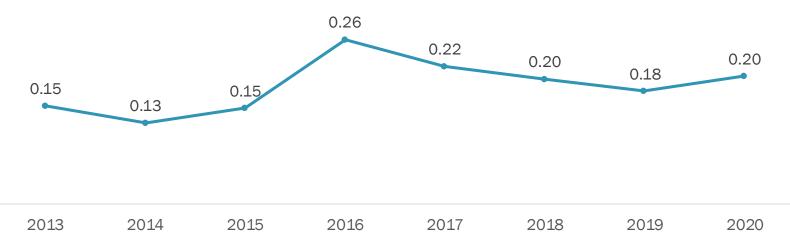


58

The rate of fatal crashes per 100 million vehicle miles travelled involving operators with confirmed delta-9-THC decreased from 2016 to 2019 but increased in 2020

The rate of **crashes per 100 million vehicle miles travelled involving operators where delta-9-THC was confirmed** decreased between 2016 and 2019 but increased slightly between 2019 and 2020.

> Rate of Crashes With Operators With Active Cannabis Confirmed Per 100 Million Vehicle Miles Travelled (VMT)*



Data source: Vermont State Highway Safety Office

*VMT is defined as the total number of miles travelled in a given year. These data can be accessed <u>here</u>.

Cannabis-Related Hospital Data – Data Notes and Methodology Vermont Uniform Hospital Discharge Data System (VUHDDS)

What is the purpose of this section?

The purpose of this section is to explain the methodology used for the hospitalization and emergency department data being presented, as well as any caveats related to the interpretation of data. These notes apply to cannabisrelated emergency department (ED) visits and hospitalizations, including those due to poisonings and cannabinoid hyperemesis syndrome.

<u>Cannabinoid hyperemesis syndrome (CHS) is characterized</u> by chronic, heavy use of cannabis, recurrent episodes of severe nausea and intractable vomiting, and abdominal pain.

Things to know about cannabis-related hospital data

- ED and hospitalization data are mutually exclusive. For example, if someone goes to the ED but is later admitted, their visit will only be included in the inpatient hospitalization dataset.
- The data measures presented in their respective sections are not mutually exclusive. For example, it is possible for someone to be hospitalized with a diagnosis of cannabis poisoning and to be diagnosed with cannabinoid hyperemesis syndrome in the same visit.
- The slides for ED visits and hospitalizations use the terms, "primary diagnosis" and "any mention." The term, "primary diagnosis" refers to the condition reported as the patient's first diagnosis code (DX1). "Any mention" refers to the condition reported as any of the patient's diagnoses (DX1-DX20).
- If a diagnosis is presented in the "any mention" category throughout this report, it is possible that it is not the main reason for the person's visit. Rather, the diagnosis could be included because it is incidental to the visit in question.

Things to know about cannabis-related hospital data (continued)

- All data presented here include Vermont residents who received care at hospitals in Vermont. Therefore, counties where hospitals are located may be overrepresented while other counties whose residents might go to hospitals out of state for care may be underrepresented.
- As a result of the COVID-19 pandemic, the total number of hospitalizations and ED visits – used as denominators for the rates presented in this section – decreased substantially. Therefore, 2020 rates might be inflated. It is also possible that rates could be underreported due to fewer Vermonters receiving hospital care.

Case definitions for cannabis-involved ED visits and hospitalizations

Case Definition for Cannabis-involved ED Visits and Hospitalizations	
Indicator	ICD-10-CM code and description
Cannabis Poisonings	 T40.7X1: Poisoning by cannabis (derivatives), accidental T40.7X2: Poisoning by cannabis (derivatives), intentional self-harm T40.7X3: Poisoning by cannabis (derivatives), assault T40.7X4: Poisoning by cannabis (derivatives), undetermined T40.7X5: Adverse effect of cannabis (derivatives) Only includes: 7th character of A or missing (reflects initial encounter, active treatment, or missing encounter)
Cannabinoid Hyperemesis Syndrome*	F12.188, F12.288 OR F12, T40.7 AND R11.15

*Cannabinoid hyperemesis syndrome (CHS) is characterized by chronic, heavy use of cannabis, recurrent episodes of severe nausea and intractable vomiting, and abdominal pain.

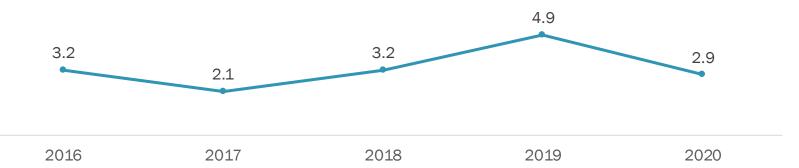
Inpatient Hospitalizations Vermont Uniform Hospital Discharge Data System (VUHDDS)

* Data notes and methodology can be found here.

The rate of inpatient hospitalizations involving cannabis poisonings peaked in 2019

The annual rate of **inpatient hospitalizations involving any mention of a cannabis poisoning diagnosis** was relatively low between 2016 and 2020. The rate peaked in 2019 (4.9 per 10,000 visits) but decreased in 2020 (2.9 per 10,000 visits).

Annual Rate of Inpatient Hospitalizations for Cannabis Poisonings per 10,000 Visits, Any Mention (2016-2020)*



Data source: Vermont Uniform Hospital Discharge Data System

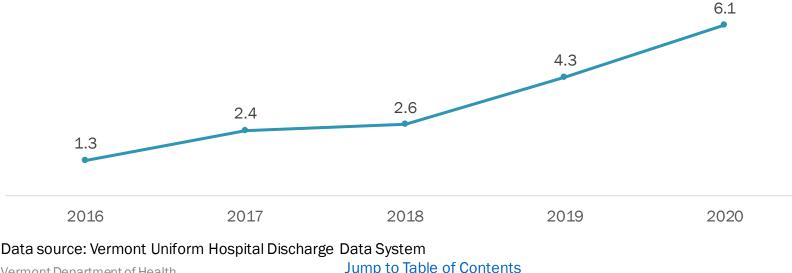
*'Any mention' indicates the presence of a cannabis-related ICD code in any of the 20 diagnosis fields. However, this does not always mean that cannabis use was the reason the individual was hospitalized or admitted to the ED, and it is possible that they did not receive care for the cannabis-related diagnosis.

Vermont Department of Health

The rate of inpatient hospitalizations involving cannabinoid hyperemesis syndrome has significantly increased

The annual rate of inpatient hospitalizations for cannabinoid hyperemesis syndrome significantly increased between 2016 and 2020. The rate per 10,000 visits increased by more than 400% between 2016 (1.3) and 2020 (6.1).

> **Annual Rate of Inpatient Hospitalizations for Cannabinoid Hyperemesis** Syndrome per 10.000 Visits (2016-2020)



Vermont Department of Health

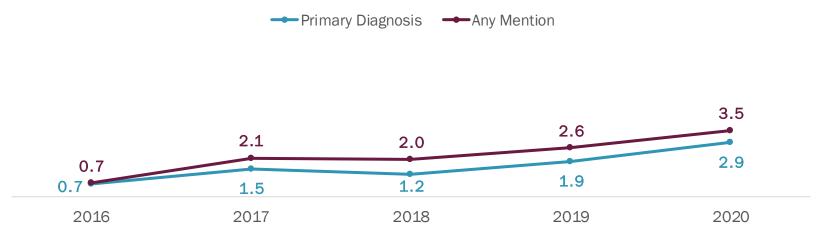
Emergency Department Visits <u>Vermont Uniform Hospital Discharge Data System (VUHDDS)</u>

* Data notes and methodology can be found here.

The rate of emergency department visits involving cannabis poisonings has increased

The annual rate of **emergency department visits for cannabis poisonings** was relatively low between 2016 and 2020, however the rate increased significantly for visits involving any mention or a primary diagnosis of cannabis poisoning in this time.

Annual Rate of Emergency Department Visits for Cannabis Poisonings per 10,000 Visits (2016-2020)*



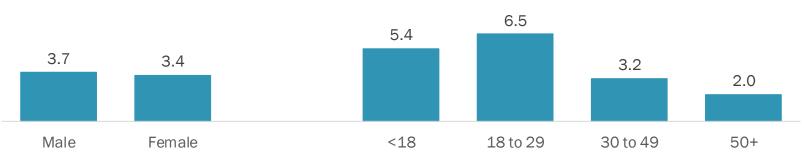
Data source: Vermont Uniform Hospital Discharge Data System

*'Any mention' indicates the presence of a cannabis-related ICD code in any of the 20 diagnosis fields. However, this does not always mean that cannabis use was the reason the individual was hospitalized or admitted to the ED, and it is possible that they did not receive care for the cannabis-related diagnosis.

Vermont Department of Health

Emergency department visits involving cannabis poisonings is most common for people aged 18-29

The annual rate of **emergency department visits involving any mention of a cannabis poisoning diagnosis** is statistically similar between males and females in 2020. Adults between the ages of 18 and 29 have the highest rates of emergency department visits for cannabis poisoning, with rates decreasing as age increases. The rate of visits is significantly lower among people 50 and older compared to those 29 years old and younger.



Annual Rate of Emergency Department Visits for Cannabis Poisoning per 10,000 Visits, Any Mention by Demographics (2020)*

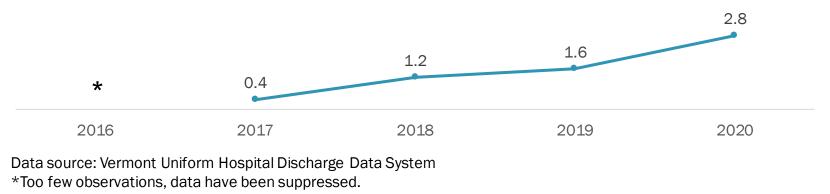
Data source: Vermont Uniform Hospital Discharge Data System

*'Any mention' indicates the presence of a cannabis-related ICD code in any of the 20 diagnosis fields. However, this does not always mean that cannabis use was the reason the individual was hospitalized or admitted to the ED, and it is possible that they did not receive care for the cannabis-related diagnosis.

Emergency department visits involving cannabinoid hyperemesis syndrome have statistically increased

The annual rate of **emergency department visits for cannabinoid hyperemesis syndrome** steadily increased between 2017 and 2020. The rate per 10,000 visits increased by 700% in this time – a significant change.

> Annual Rate of Emergency Department Visits for Cannabinoid Hyperemesis Syndrome per 10,000 Visits (2016-2020)



Vermont Department of Health

Poison Center Calls Related to Cannabis Exposure Northern New England Poison Center

Data notes related to poison center data

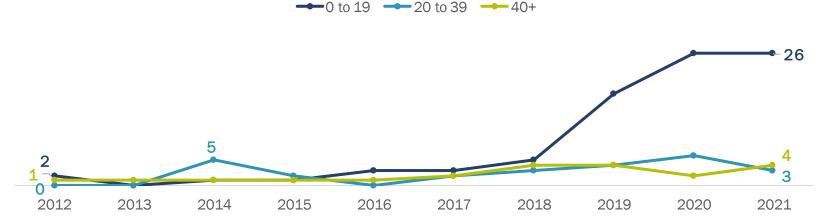
- The data include cases where someone called for help from a residence or other location about themselves, their child, a friend, etc. Cases where a healthcare facility called for consultation about a patient already at the facility are also included, however, hospitals have no requirement to call about such exposures.
- The data **include** all reasons for exposure (attempts to get high, therapeutic uses, accidental ingestions, etc.) and all routes of exposure (e.g., smoking, ingesting edibles).
- Data through 2018 may include cannabidiol (CBD).

Data notes related to poison center data (continued)

- Pharmaceutical preparations of THC/CBD (e.g., Marinol) and synthetic cannabinoids (e.g., K2, Spice) are excluded.
- The data **exclude** cases where another substance was involved in the exposure.
- It is important to note that there may be an element of self-selection to these data, as patients/providers could be less likely to call regarding more minor effects in teenage and adult patients.

Poison center calls related to cannabis exposure have increased, especially for people under age 20

Calls made to the Northern New England Poison Control Center for cannabis exposure increased from 3 calls in 2012 to 34 in 2021. Most calls involved people under the age of 20. Cannabis-related poison center calls among people between 0 and 19 years old are described in further detail on the next slide.



Cannabis-related Poison Center Calls by Age* (2012-2021)

Data source: Northern New England Poison Center

*Between 2012 and 2021, four people are missing age – one each in 2013, 2018, 2019, and 2021. Therefore, totals in the text might not match the graph.

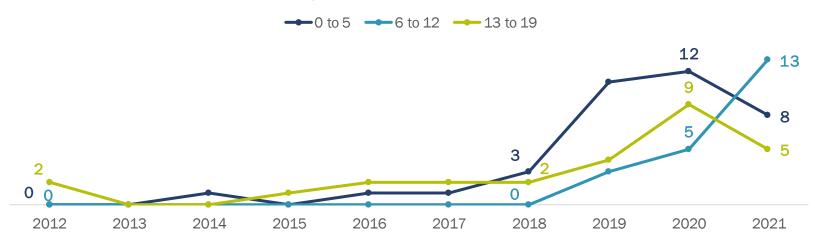
Vermont Department of Health

Jump to Table of Contents

Cannabis-related poison center calls have been increasing for those age 6-12

Cannabis-related poison center calls among Vermonters between 0 and 19 years old increased from 2 calls in 2012 to 26 in 2021. In recent years, people between 0 and 5 years old had the highest number of cannabis-related poison center calls, but 6 to 12 year olds surpassed the other age groups in 2021.

Cannabis-related Poison Center Calls Among Vermonters Ages 0 to 19* (2012-2021)

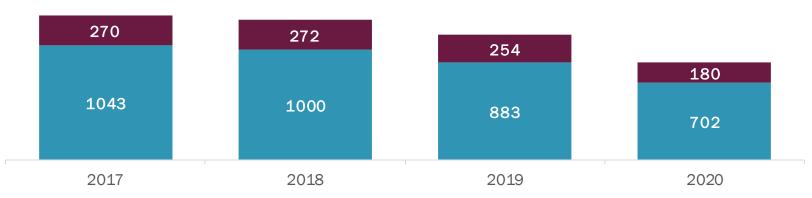


Data source: Northern New England Poison Center *Between 2012 and 2021, four people are missing age – one each in 2013, 2018, 2019, and 2021. Therefore, totals in the text might not match the graph. Vermont Department of Health

Treatment for Cannabis Use Vermont Medicaid Claims

Fewer Vermonters are accessing treatment for cannabis*

The number of Vermonters accessing treatment for cannabis use decreased between 2017 and 2020. This is true for adults (18+) and youth (<18, although the number decreased only between 2018 and 2020). During this timeframe, the total number of Vermonters in treatment for cannabis use decreased by 33%.



Vermonters Accessing Treatment for Cannabis Use by Age (2017-2020)

■ Age 18+ ■ Age <18

Data source: Vermont Medicaid Claims

*Includes claims for cannabis as a primary substance.

Division of Substance Use Programs (DSU) Resources Related to Cannabis

DSU Resources – Web

DSU Cannabis Webpage

<u>Cannabis Use in Vermont</u>

Cannabis Data Products from DSU:

- <u>Marijuana Use in Vermont</u> (August 2021)
- <u>Vermont Cannabis Use Highlights</u> (April 2022)
- <u>Literature Review Update to the Health</u> <u>Impact Assessment: Marijuana</u> <u>Regulation in Vermont</u> (March 2020)

Treatment for Cannabis Use

 <u>Vermont Helplink for Alcohol &</u> <u>drug support center</u>



DSU Resources - Campaigns

Let's Talk Cannabis

LET'S TALK CANNABIS Cannabis resources for adults, youth, parents, and providers. LetsTalkCannabisVT.com



ParentUp

Guidance for parents about talking to kids about substance use and mental wellness.

ParentUpVT.org



One More Conversation

Information and resources on substance use during pregnancy, including cannabis use.

1MoreConversation.com

Healthy at Home

Healthy **t** Home

Steps to keeping your home, and everyone in it, healthy and safe – including keeping alcohol, cannabis and medications out of reach.

Healthvermont.gov/healthyathome



Teen Cannabis and Alcohol Prevention Campaign

Youth-focused campaign designed to create a substance-free movement amongst Vermont teens. Intentionally not branded as a health department campaign.

Vermont Department of Health

Jump to Table of Contents

DSU Resources – External

Vermont Alcohol and Drug Information Clearinghouse (VADIC):

VADIC.org

- VADIC is a program of The Vermont Association for Mental Health and Addiction Recovery. Resources made available through VADIC are free to all Vermonters.
- <u>VADIC's Cannabis-specific page</u>

Vermont Youth Cannabis Conference 2021

(hosted by the Center for Health and Learning)

• Youth Cannabis Prevention Conference 2021 - recorded sessions

Do you have feedback? Please take this survey.

https://survey.alchemer.com/s3/7202517/Cannabis-data-pages-feedback



Thank you!

Questions?

Email: AHS.VDHDSU@vermont.govWeb: www.healthvermont.govSocial: @healthvermont