

CANNABIS

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INTRODUCTION

In spring 2023, the Colorado State Epidemiological Outcomes Workgroup (SEOW) published this seven-part document as an overview of opioids, cannabis, alcohol, tobacco, and stimulant use and related harms in Colorado. Each substance is presented in its own profile, with demographics and mental health profiles provided for additional state context. The profiles were designed to be readily usable to all people working in fields related to substance use. They include many data sources and aim to present the most current and actionable findings.

This profile is a snapshot of cannabis consumption and health effects among Coloradans. Data are presented for adults and youth, with a special section on youth protective factors against cannabis use.

Certain considerations were taken into account in compiling these data, including time frame and the intended audience. First, the profiles contain all publicly available data. This ensures that anyone can access the original source for more information on any data point in the profile. It was also important to use a timespan in which the most complete data could be found within and across substances. Lag-time for data to become publicly available can vary widely. While the profiles were in development during the summer and fall of 2022, the most complete data were found and used for calendar year 2021. Exceptions include figures/charts featuring trend data prior to 2021, data collected biennially for which 2020 was the most recent year, and aggregate data when no single year yields a large enough sample size to make definitive statements.

All Healthy Kids Colorado Survey (HKCS) data presented are for public high school students, grades 9-12.

Each page includes data sources and years. For more detailed information on references, please see our [references page](#).

The SEOW compiled the profiles with deliberate attention to our intended audience. They were designed to be practical and useful for all Coloradans who are interested in talking to others in their communities about substance use and related harms. This includes anyone from youth groups and community organizations to school superintendents and state legislators. The eight profiles can be used as stand-alone products or in conjunction with each other, as hard copy hand-outs or as a part of presentations.

WE STRONGLY RECOMMEND REVIEWING AND USING THE DEMOGRAPHICS AND MENTAL HEALTH PROFILES TO PROVIDE IMPORTANT CONTEXT TO DATA PRESENTED IN THE SUBSTANCE PROFILES.

We hope the profiles facilitate conversation among Coloradans about the state of our state. For this reason, the profiles feature data from a variety of sources, include regional data when available, and introduce easily relatable use of benchmarks, such as national comparisons.

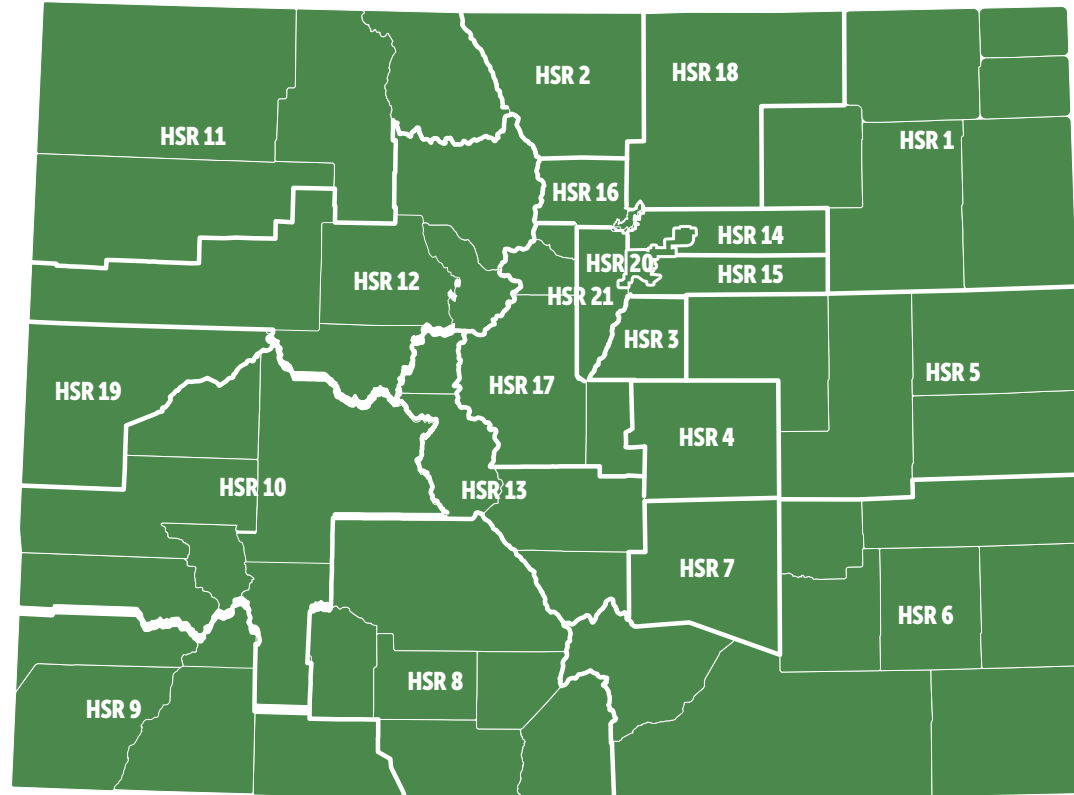
The SEOW partnered with The Evaluation Center – University of Colorado Denver on the development of the profiles, including the interpretation and visualization of data.

For more information, contact SEOW representative Sharon Liu (sharon.liu@state.co.us) at the Colorado Department of Public Health and Environment.

HEALTH STATISTICS REGIONS

Colorado is divided into 21 Health Statistics Regions (HSR)

The boundaries of these regions were developed by the Colorado Department of Public Health and Environment and local public health professionals and agencies based on demographic and statistical criteria. Data within Colorado are frequently collected and presented at the HSR level.



HSR 1: Logan, Morgan, Phillips, Sedgwick, Washington, Yuma
HSR 2: Larimer
HSR 3: Douglas
HSR 4: El Paso
HSR 5: Cheyenne, Elbert, Kit Carson, Lincoln

HSR 6: Baca, Bent, Crowley, Huerfano, Kiowa, Las Animas, Otero, Prowers
HSR 7: Pueblo
HSR 8: Alamosa, Conejos, Costilla, Mineral, Rio Grande, Saguache
HSR 9: Archuleta, Delores, La Plata, Montezuma, San Juan

HSR 10: Delta, Gunnison, Hinsdale, Montrose, Ouray, San Miguel
HSR 11: Jackson, Moffat, Rio Blanco, Routt
HSR 12: Eagle, Garfield, Grand, Pitkin, Summit
HSR 13: Chaffee, Custer, Fremont, Lake
HSR 14: Adams
HSR 15: Arapahoe

HSR 16: Boulder, Broomfield
HSR 17: Clear Creek, Gilpin, Park, Teller
HSR 18: Weld
HSR 19: Mesa
HSR 20: Denver
HSR 21: Jefferson

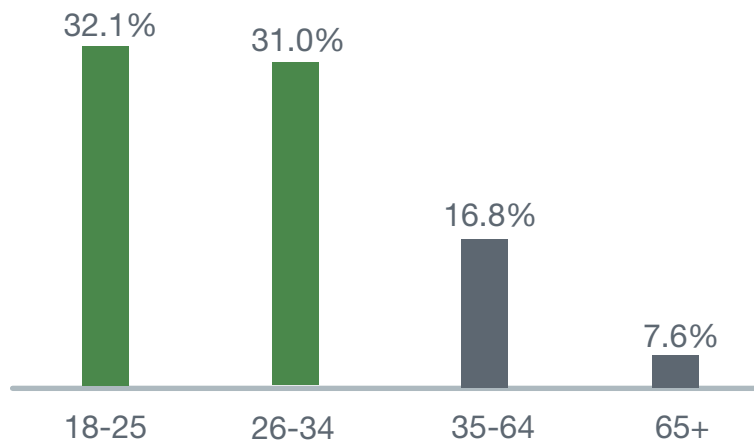


ADULT CONSUMPTION



19.0%
of adults (age 18+) in Colorado used cannabis at least once in the past 30 days in 2021.

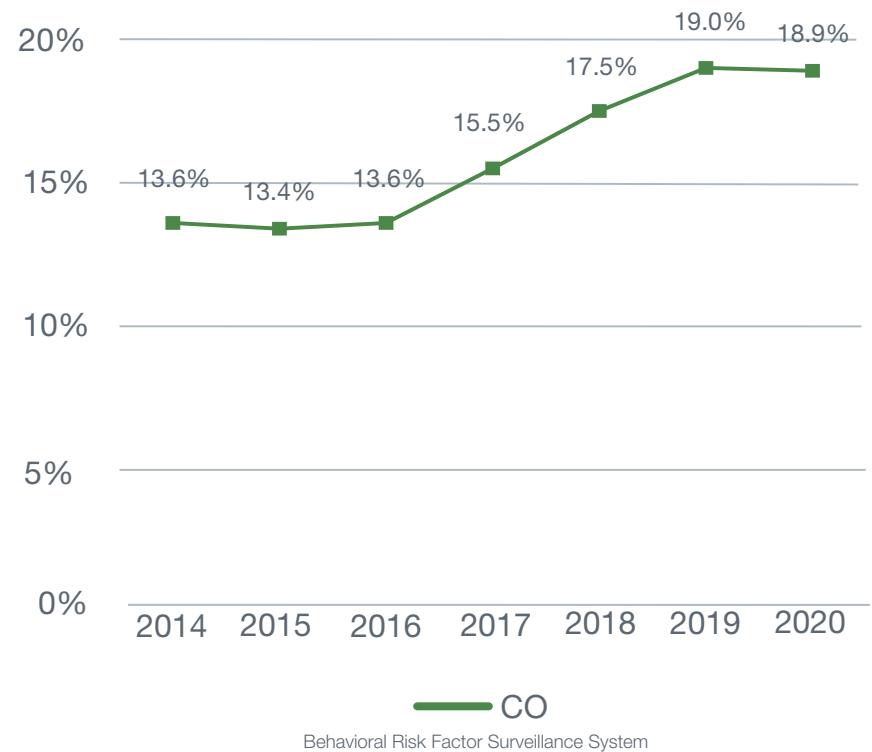
Use remains higher among younger Coloradans. **18-25** and **26-34** year olds use at similar rates.



Percent among each age group that currently uses cannabis

From 2019 to 2021 there was no significant change in current use among any age groups.

Past 30-day use in Colorado has increased since retail cannabis became available in 2014. **However, Coloradans have not increased use significantly in recent years.**

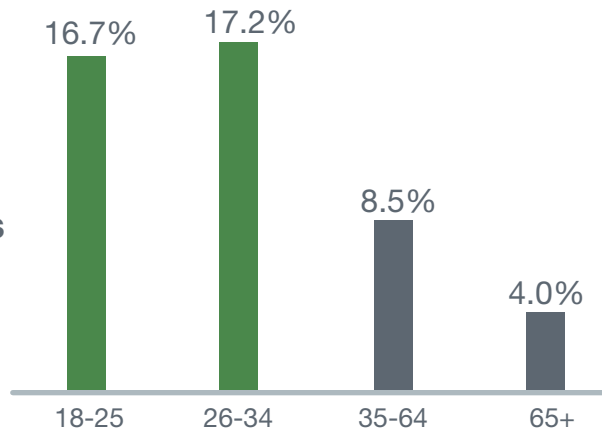


Nationally, use increased significantly annually from 2018 to 2020.

Since retail cannabis became available in Colorado in 2014, the percent of adults who use daily or near-daily in 2021 **increased significantly to 10%**.

However, daily or near-daily use did not change significantly between 2019-2021.

Daily or near-daily use is highest among adults ages **18-25 and 26-34**.



AMONG ADULTS WHO CURRENTLY USE,

52.3%

USE DAILY OR NEAR-DAILY

20.0%

PERCEIVE DAILY OR NEAR-DAILY USE AS HAVING MODERATE OR GREAT RISK OF HARM

SUBSTANTIAL EVIDENCE INDICATES HEALTH EFFECTS OF DAILY OR NEAR-DAILY CANNABIS USE:

DAILY OR NEAR-DAILY CANNABIS SMOKING IS ASSOCIATED WITH:

- pre-cancerous lesions in the airway.
- chronic bronchitis, with cough, wheezing, and mucus.

ADULTS WHO USE CANNABIS DAILY OR NEAR-DAILY ARE MORE LIKELY THAN NON-USERS:

- to have impaired memory for at least seven days after last use.
- to be diagnosed with a psychotic disorder, such as schizophrenia.

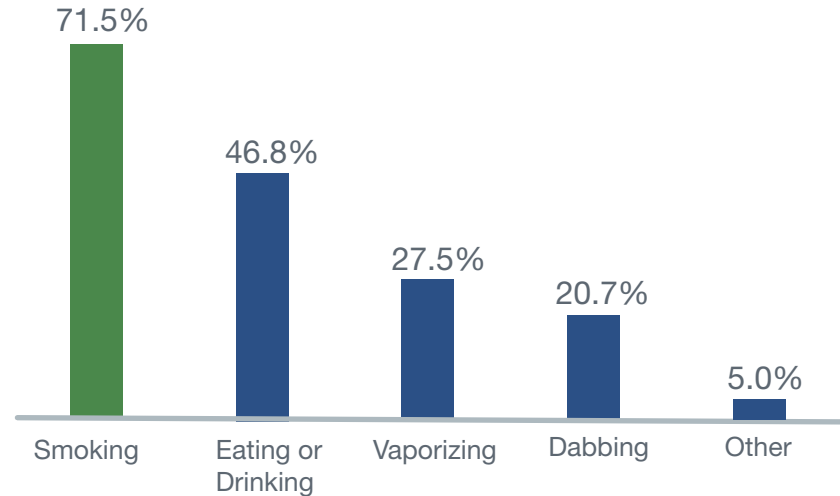
ADOLESCENTS AND YOUNG ADULTS WHO USE CANNABIS WEEKLY OR MORE FREQUENTLY ARE MORE LIKELY THAN NON-USERS:

- to experience ongoing cognitive and academic impairment for at least 28 days after last use.
- to not graduate from high school or gain a college degree.
- to develop future psychotic disorders like schizophrenia in adulthood.

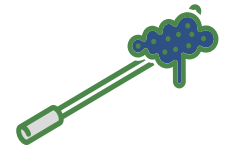
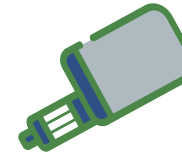
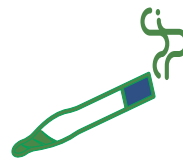
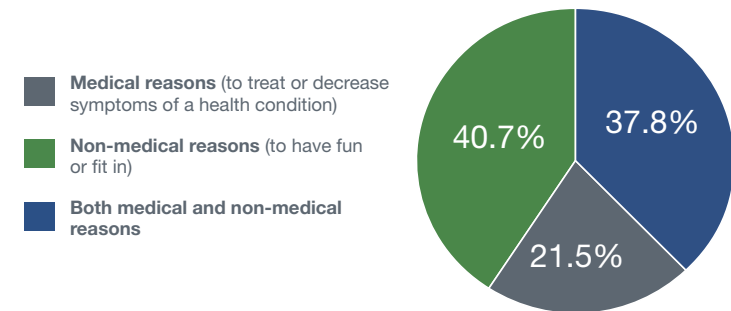
SOURCES: BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS), 2021; RETAIL MARIJUANA PUBLIC HEALTH ADVISORY COMMITTEE, COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, 2021

SMOKING REMAINED THE MOST COMMON METHOD OF CANNABIS USE

AMONG COLORADO ADULTS WHO CURRENTLY USED IN 2021.



In 2021, among Coloradans who used cannabis, **most used it for non-medical reasons.**



SMOKING: Cannabis can be smoked using a joint, pipe, or bong. This is the most common way people use cannabis.

EDIBLES: The effects of edibles, teas, and sodas can take longer to peak and last longer than smoking. Sometimes this can cause people to take too much. It can take up to four hours to feel the full effects, and effects can last up to ten hours. A serving size is 10 mg, so it is recommended not to start with more than that.

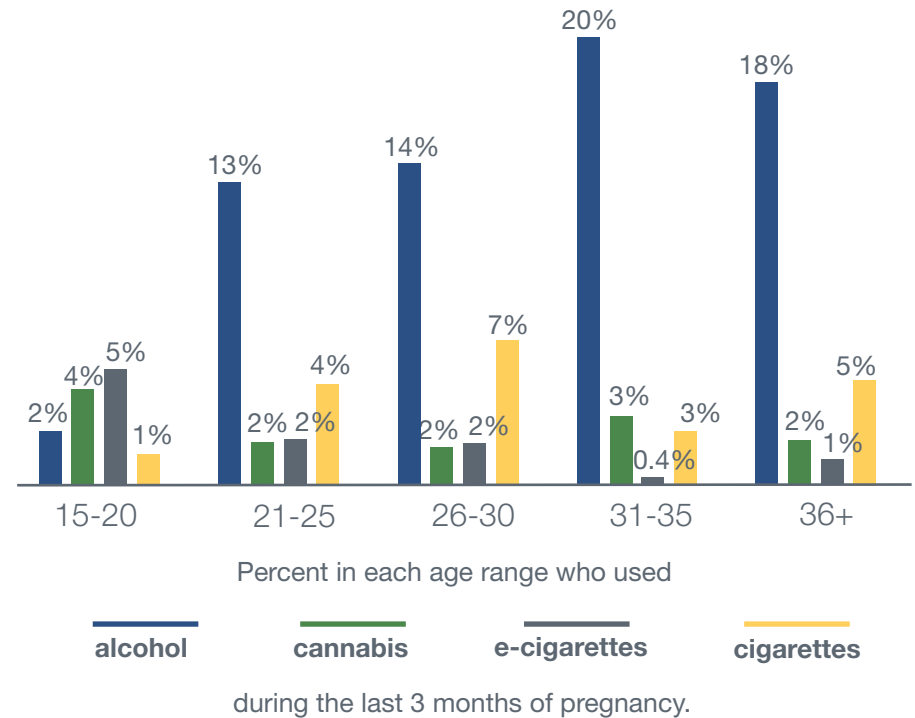
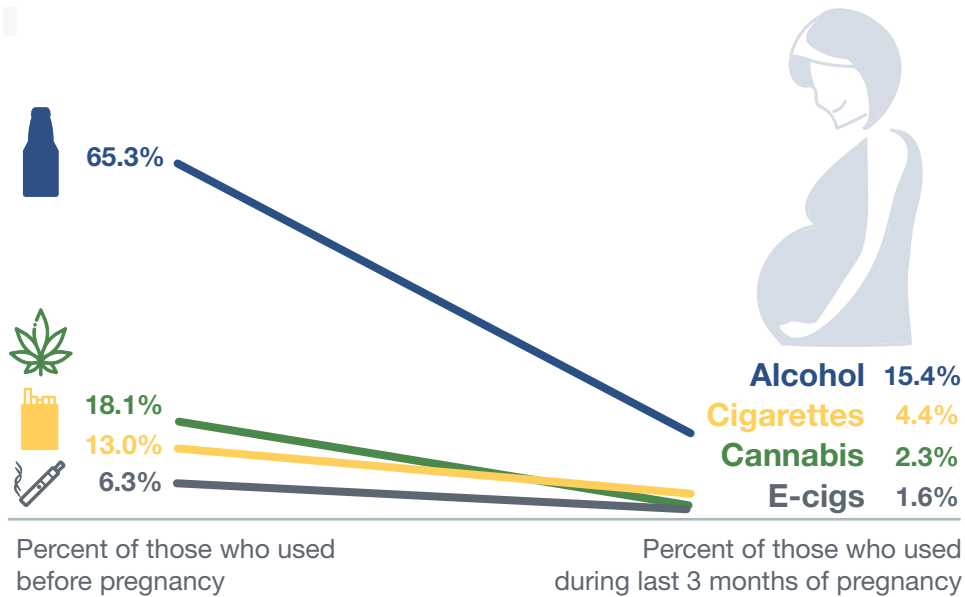
VAPING: Vaporizers heat cannabis to release THC, the active ingredient in cannabis, and the vapor is inhaled. Vape products can contain nicotine, cannabis (THC or CBD), or other substances like flavoring agents or additional chemicals. While vaping products have grown in popularity, outbreaks of lung illnesses has been linked to vaping.

DABBING/HASH OIL: THC extract from cannabis, also called hash oil, shatter or concentrates, can contain up to 60-80% THC and may take effect very quickly. When dabbing, the oil is heated and the vapor is inhaled.

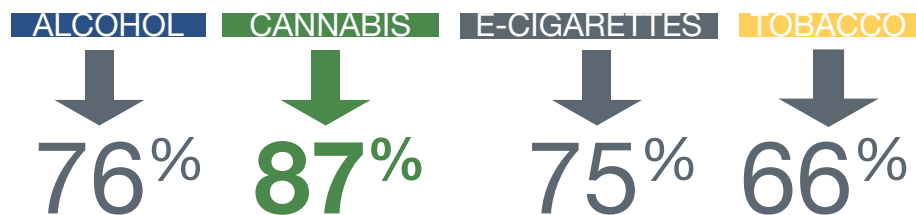
TOPICALS: Infused lotions, salves, and balms are sold for localized pain and inflammation related to skin problems or pain but do not make the user feel high if they do not contain THC and are not ingested. Some topicals contain active THC that can produce intoxicating effects if ingested.

SOURCE: RESPONSIBILITYGROWSHERE.COM

Most of those who were pregnant in Colorado did not use any substance during the last 3 months of pregnancy in 2020.



Cannabis use decreased the most from before pregnancy to during the last 3 months of pregnancy.



According to the Health eMoms survey, **5.0%** OF THOSE WHO ARE 12-14 MONTHS POSTPARTUM USE CANNABIS PRODUCTS AS A COPING ACTIVITY WHEN FEELING DOWN OR DEPRESSED



YOUTH CONSUMPTION

From 2019 to 2021, cannabis use among Colorado youth **SIGNIFICANTLY DECREASED TO 13.3%.**

We cannot fully know the “why” behind youth substance use trends because the Healthy Kids Colorado Survey is a snapshot year-over-year rather than a longitudinal study that follows the same youth over time. What we know is schools were back in person in fall 2021 at the time of survey administration.

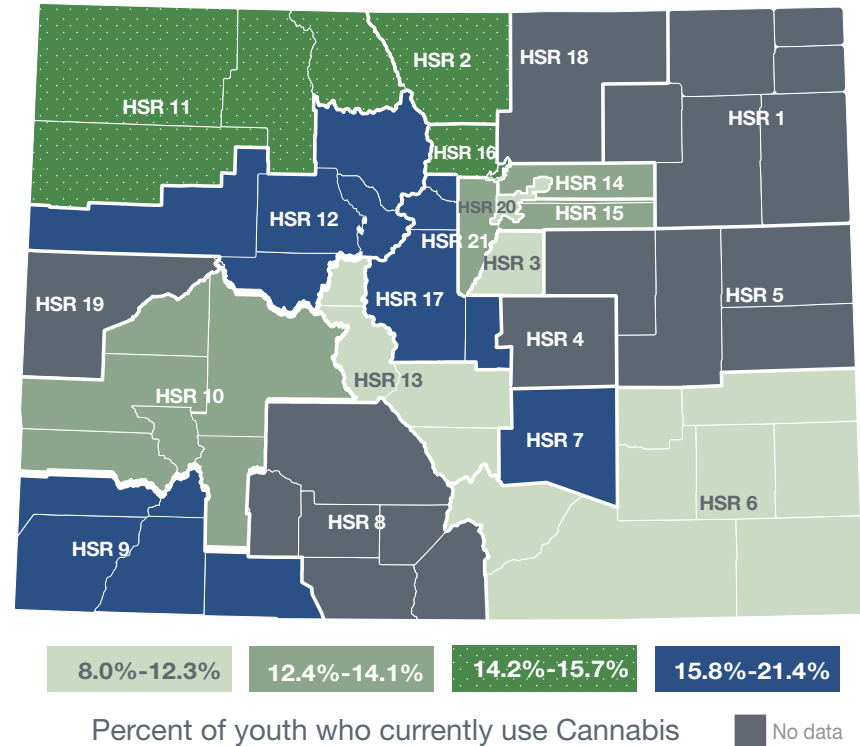
We observed decreases in sexual activity, decreases in participation in extracurricular activities and sports teams, and increases in parental monitoring — which all speaks to a continued, large-scale social disruption for young people at that time of the pandemic despite being back at school. We are very interested to see if these downward trends continue in 2023.

WHITE, BLACK OR AFRICAN AMERICAN, AND HISPANIC OR LATINX YOUTH CONSUME AT SIMILAR RATES.

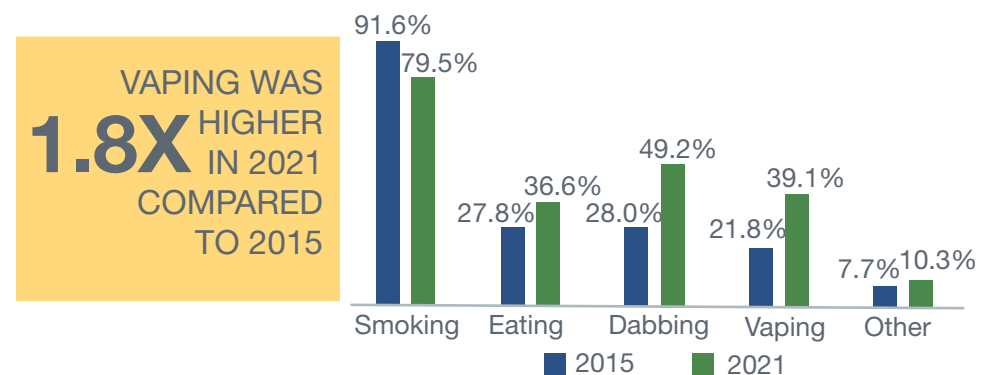
The use rates of youth who are bisexual and gay or lesbian are significantly higher than rates for youth who identify as heterosexual.

Neither race nor sexual orientation determines a propensity to use illegal substances. Rather, the environments in which young people grow up shape their behaviors. Many young people of color and youth who are bisexual, gay, and lesbian do not have access to the same protective factors that their peers benefit from, increasing their risk of susceptibility to substance use.

NOTE: THESE HEALTHY KIDS COLORADO SURVEY RESULTS ARE REPRESENTATIVE OF YOUTH WHO ATTEND PUBLIC HIGH SCHOOLS IN COLORADO
SOURCES: HEALTHY KIDS COLORADO SURVEY (HKCS), HIGH SCHOOL, 2021; COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, 2020



Method of usual use* among youth who currently use has changed since legalization.



*The usual method used for cannabis consumption in the past 30-days.

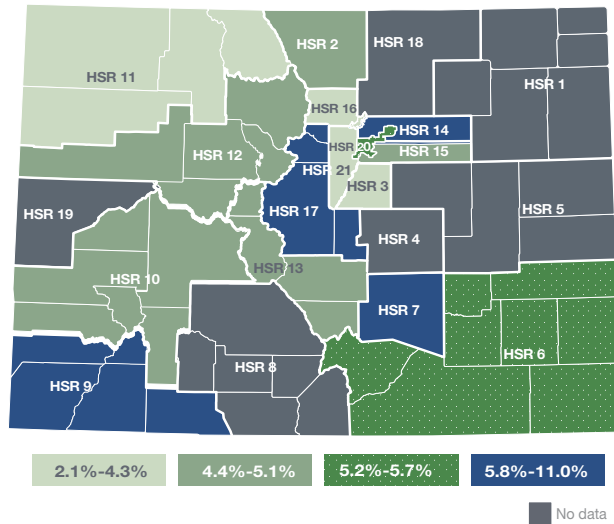
Early initiation

USE BEFORE 13:

5.0%

of students who attend public high school tried cannabis before age 13.

Any early cannabis use is significantly associated with higher rates of addiction, psychosis, and lower school achievement.*



Percent of students who tried Cannabis before age 13

* COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE), 2020

Access

EASY TO GET CANNABIS:

40.3%

of public high school students report that it would be “sort of easy” or “very easy” to get cannabis if they wanted.

Perception of peer use

INACCURATE PERCEPTIONS:

39.5%

of public high school students overestimate how many of their peers use cannabis.

OF PUBLIC HIGH SCHOOL STUDENTS WHO USED CANNABIS IN THE PAST 30 DAYS,

21.1%

USUALLY GOT IT FROM AN ADULT.

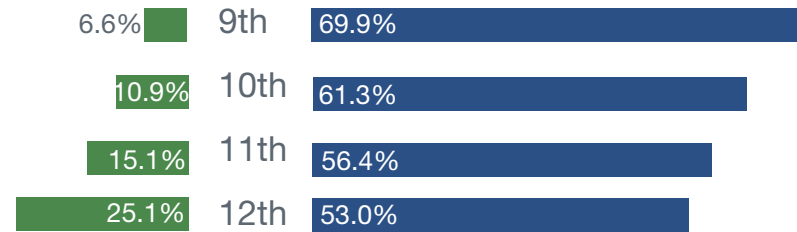


According to the National Institute on Drug Abuse, research suggests that adolescence (at about age 13) is a risky period for drug abuse due to the challenges youth face at this age, coupled with the greater exposure to drugs.

NOTE: THESE HEALTHY KIDS COLORADO SURVEY RESULTS ARE REPRESENTATIVE OF YOUTH WHO ATTEND PUBLIC HIGH SCHOOLS IN COLORADO

SOURCE: HEALTHY KIDS COLORADO SURVEY (HKCS), HIGH SCHOOL, 2021

As youth who attend public high school in Colorado reach older grades, **PERCEPTION OF HARM** decreases, and **current use increases**.

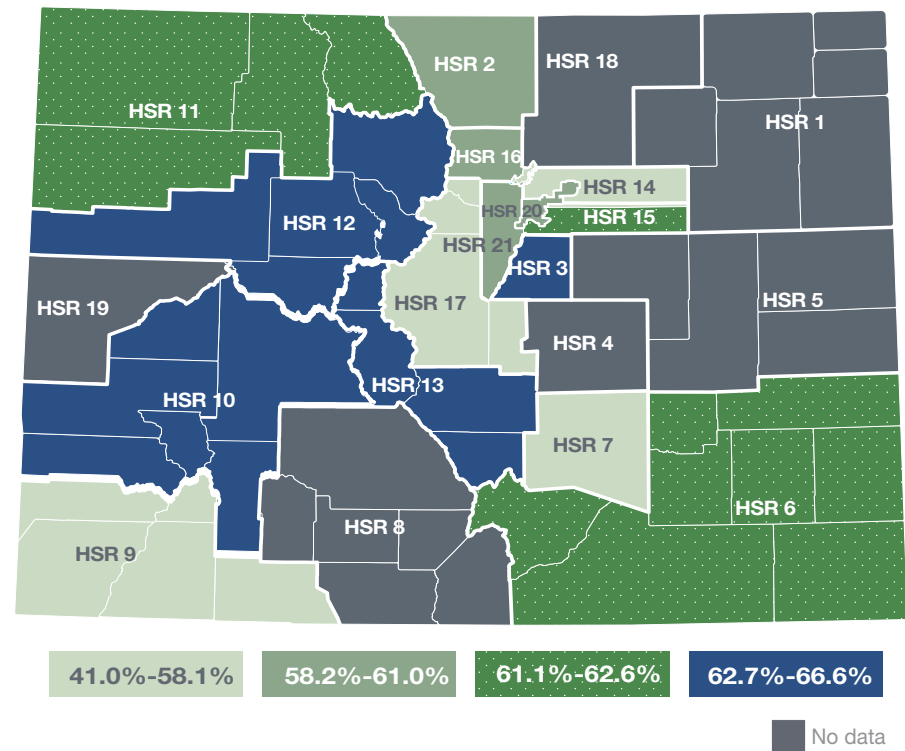


88% OF YOUTH IN COLORADO THINK THEIR PARENT OR GUARDIAN WOULD FEEL IT IS WRONG IF THEY USE CANNABIS.

64% OF YOUTH IN COLORADO THINK IT IS WRONG FOR SOMEONE THEIR AGE TO USE CANNABIS.

60% OF YOUTH IN COLORADO THINK PEOPLE WHO USE CANNABIS REGULARLY HAVE MODERATE OR GREAT RISK OF HARM.

PERCENT OF STUDENTS WHO THINK PEOPLE WHO USE CANNABIS REGULARLY HAVE A MODERATE OR GREAT RISK OF HARM



NOTE: THESE HEALTHY KIDS COLORADO SURVEY RESULTS ARE REPRESENTATIVE OF YOUTH WHO ATTEND PUBLIC HIGH SCHOOLS IN COLORADO
 SOURCE: HEALTHY KIDS COLORADO SURVEY (HKCS), HIGH SCHOOL, 2021

USE OF CANNABIS DIFFERS AMONG YOUTH WHO REPORT THE PRESENCE OF PROTECTIVE FACTORS IN THEIR LIFE.

AMONG YOUTH WHO ATTEND PUBLIC HIGH SCHOOLS WHO:

have an adult to go to for help with a serious problem

11.8% use Cannabis

COMPARED TO

17.1%

who do not report this protective factor.



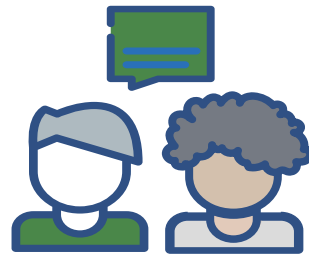
think family has clear family rules

12.8% use Cannabis

COMPARED TO

29.7%

who do not report this protective factor.



have parents/guardians who ask if their homework is done

12.1% use Cannabis

COMPARED TO

20.8%

who do not report this protective factor.



feel they belong at their school

10.3% use Cannabis

COMPARED TO

18.1%

who do not report this protective factor.

feel safe at school

12.9% use Cannabis

COMPARED TO

24.0%

who do not report this protective factor.

think their teacher notices when they're doing a good job and lets them know

11.6% use Cannabis

COMPARED TO

17.4%

who do not report this protective factor.

NOTE: THESE HEALTHY KIDS COLORADO SURVEY RESULTS ARE REPRESENTATIVE OF YOUTH WHO ATTEND PUBLIC HIGH SCHOOLS IN COLORADO

SOURCE: HEALTHY KIDS COLORADO SURVEY (HKCS), HIGH SCHOOL, 2021



HARMFUL EFFECTS

The number of cannabis exposures reported to the Poison Center has steadily risen since 2010, with a large increase occurring in 2014 when retail cannabis became available.

In 2021 there were 310 cannabis exposures reported to the Poison Center. Of those 56.5% were in the form of edibles and 57.7% were unintentional.

CANNABIS EXPOSURES AMONG CHILDREN AGES 0-5 BEGAN INCREASING IN 2012 WITH THE HIGHEST NUMBER OF CASES IN 2021.

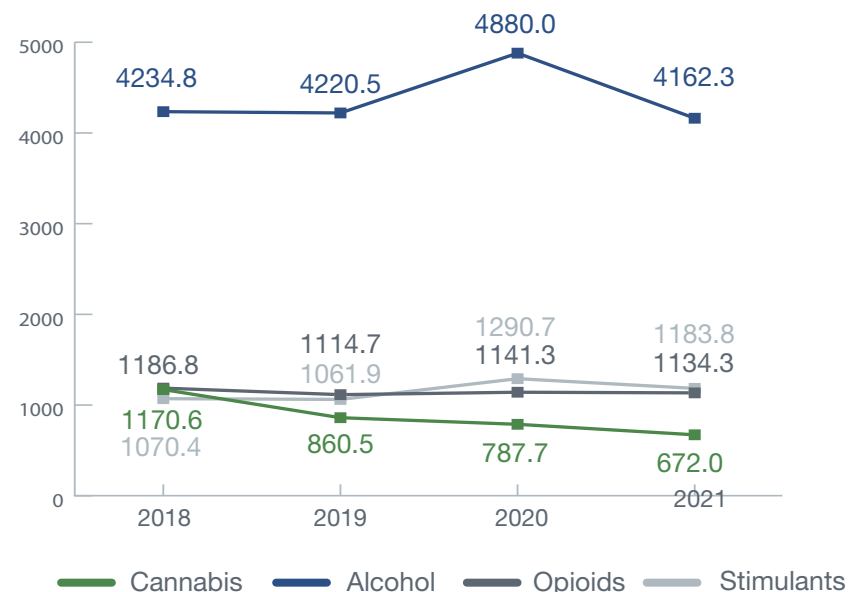
Among all exposures from cannabis in 2021

48.7% were for CHILDREN AGES 0-5.



ACCORDING TO THE COLORADO HOSPITAL ASSOCIATION, **In 2021, cannabis-related emergency department visits were the lowest since 2014.**

Annual crude rate of emergency department visits with all substance-related billing codes per 100,000 discharges.



Despite overall decreases, visits among children ages 0-5 have increased.

ED visits related to cannabis are most common among **18-25 YEAR-OLDS** and **MALES**.

In Colorado in 2021

879

MOTOR VEHICLE FATALITIES INVOLVING
ALCOHOL AND/OR OTHER DRUGS OCCURRED

Out of this total,

21%

involved cannabis.

According to the Colorado Department of Transportation, “Five nanograms of active tetrahydrocannabinol (THC) in their blood creates a permissible inference that the driver is under the influence of cannabis. However, there is no roadside device in Colorado to detect THC, so law enforcement officers, including those trained as drug recognition experts (DREs), base arrests on observed impairment. Under Colorado law, officers can arrest someone who uses cannabis for medicinal purposes for driving under the influence (DUI) if an officer observes impairment.”

12.5%

of public high school students who recently rode in a car report **the driver had been using cannabis.**

Among youth who have recently driven a car or other vehicle, the percent who have driven while using cannabis is

5.5%

Less high school students drive after using alcohol than after using cannabis, indicating that they better understand the risks associated with driving under the influence of alcohol than cannabis.

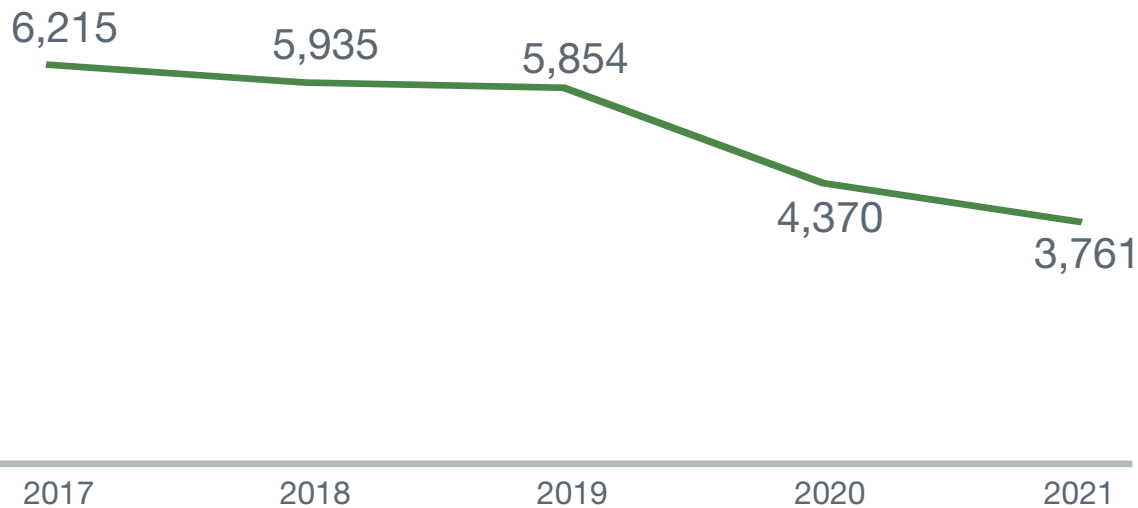


DRIVING AFTER USING CANNABIS IS 3X MORE COMMON AMONG GENDERQUEER AND NONBINARY PUBLIC HIGH SCHOOL STUDENTS (16.0%) THAN FEMALE AND MALE STUDENTS (4.8% AND 5.5%)



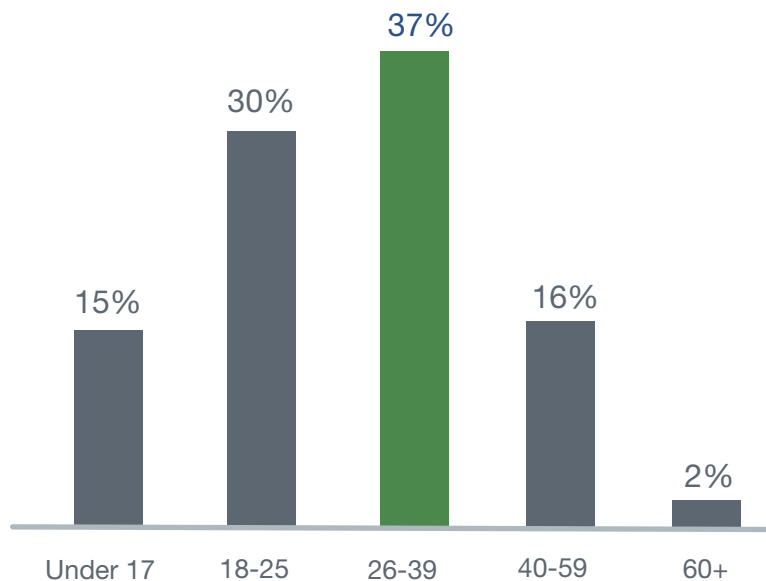
TREATMENT

TREATMENT ADMISSIONS IN COLORADO FOR CANNABIS
DECREASED BY 60% FROM 2017 TO 2021



Of the **3,761** admissions for cannabis in 2021,

MOST WERE AMONG 26-39 YEAR-OLDS.



Cannabis is the primary substance for 5% of all treatment admissions in 2021.

Among those seeking treatment, cannabis has the youngest age of first use at 14 years old.

On average, people seeking treatment for Cannabis had used for 15 years prior.

Treatment admissions refer to facilities licensed by the Colorado Behavioral Health Administration and do not include clients who received service through private pay, third party insurance providers, or non-Behavioral Health Administration licensed facilities.

KEY TERMS

Aggregate	A mathematical computation using a set of values rather than a single value
Average	A calculated central value of a set of numbers
Cisgender	Denoting a person whose sense of personal identity and gender corresponds with their assigned birth sex
Dabbing	A method of Cannabis use where a small amount of Cannabis concentrate is place on a pre-heated surface, creating a concentrated Cannabis vapor to be inhaled
Daily/Near Daily Use	The prevalence of all adults 18 years and older in Colorado that used Cannabis or cannabis between 20 and 30 days in the past 30 days
Delta-9 THC	A cannabinoid molecule in Cannabis that is the main psychoactive ingredient, or the ingredient which causes people who use the substance to feel high
Edible	Short for Cannabis edible; any product containing tetrahydrocannabinol (THC) that is fit to be eaten
Health Statistics Region	A geographic grouping based on demographic profiles and statistical criteria. Colorado has 21 Health Statistics Regions which correspond with existing county boundaries
Legalization	Recreational Cannabis use became legal in Colorado in 2014. https://www.colorado.gov/marijuana
Per capita	Per person
Prevalence	The proportion of a population who have specific characteristics in a given time period. Prevalence may be reported as a percentage (5%, or 5 people out of 100), or as the number of cases per 10,000 or 100,000 people
Proportion	Two ratios that have been set equal to each other
Protective Factors	Characteristics within the individual or conditions in the family, school or community that help someone cope successfully with life challenges
Quartile	A group that contains 25% of the data set
Ranking	Relative position
Rate	The ratio between two related quantities
Risk Factors	Characteristics within the individual or conditions in the family, school, or community that increase the likelihood someone will engage in unhealthy behaviors
Safe storage	Storing in a childproof container or packaging
Significance	The probability is less than .05 that the difference or relationship happened by chance
Vaping	A method of Cannabis use where Cannabis vapor, rather than smoke is inhaled



We appreciate your feedback!

[Click here](#) or scan above to let us know what you think.

For more information

on the Colorado SEOW and additional publications, please visit our website:

www.coloradoseow.org