IMPACTS OF MARIJUANA LEGALIZATION IN COLORADO, 2025
A REPORT PURSUANT TO *C.R.S. 24-33.4-516*

2025 Report with Data Spanning 2008-2023

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EXECUTIVE SUMMARY

In 2013, following the passage of Amendment 64 which allows for the retail sale and possession of marijuana, the Colorado General Assembly enacted Senate Bill 13-283. This bill mandated that the Division of Criminal Justice in the Department of Public Safety conduct a study of the impacts of Amendment 64, particularly as these relate to law enforcement activities. This report presents the data for the metrics specified in S.B. 13-283 (C.R.S. 24-33.4-516).

The following is a summary of findings:

Public Safety

Arrests

- The total number of marijuana arrests decreased by 82% between 2012 and 2022 and went from 13,225 to 2,235. The largest category of arrests, possession arrests, dropped by 87% from 2012-2022.
    - Marijuana arrests for youths under 18 declined by only 58%, compared to the 91% decrease in arrests for adults aged 21 and over.
    - The nine largest Colorado counties by population (Adams, Arapahoe, Boulder, Douglas, El Paso, Jefferson, Larimer, Mesa, and Weld) showed declines in marijuana arrests between 2012 and 2022 ranging from -96% (Denver) to -85% (Boulder).
- The arrest records show disparities by gender and race/ethnicity, highlighting the unequal burden of marijuana enforcement that has fluctuated over the measurement period.
    - The arrest rate for males (64 per 100,000) was 2.3 times that for females (27 per 100,000) (Table 2.5) in 2022.
    - For Non-Hispanic (NH) Whites, there were 34 arrests per 100,00 residents aged 10 and older, compared to 67 per 100,000 for Hispanics, and 83 per 100,000 for NH Blacks.
    - The disparity ratio for NH Black versus NH Whites arrests hit a period-low of 1.7 in 2018. Since then, the ratio has increased by approximately 41%, reaching 2.42.

Court filings

- The number of marijuana-related case filings declined 73% between 2012 and 2021, from 9,925 to 2,741.
    - Filings with possession charges dropped by 98% (9,777 to 220).
    - From 2012 to 2021, felony filings have fluctuated in frequency, ranging from 418 to 986; in 2021, filings were down to 479.

    - This contrasts with the consistent decline in misdemeanors (-60%) and petty offenses (- 88%) between 2012 and 2021.
- In terms of organized crime, the number of court filings charged with the Colorado Organized Crime Control Act (C.R.S.18-17.104) that were linked to some marijuana charge increased from 31 in 2012 to 119 in 2017; these filings dropped back down to 29 in 2021.
    - In 2021, these filings accrued 51 conspiracy charges and 40 charges of possession with intent to sell.

Traffic Safety

- There were 21,066 DUI case filings in 2020, and of these 7,705 were screened for cannabinoids, which is almost double the number of filings that were screened in 2016. 3,357 filings had Delta-9 THC detected, and of these, 75% tested positive for an additional substance besides marijuana.
- Colorado State Patrol's citation records show a 21% drop in impaired driving citations between 2014 (5,705) and 2022. 2022 had the fewest number of perceived marijuana impaired driving citations (n = 637)
- Colorado had 763 motor vehicle crash fatalities in 2022. The percentage of drug-tested drivers who tested positive for some cannabinoid (alone or in combination with some other drug) increased from 16% in 2013 to 29% in 2022
    - The number of fatalities with cannabinoid-only or cannabinoid-in-combination positive drivers increased 140%, from 55 in 2013 to 167 in 2022. This presence of cannabinoids in drivers also increased from 39% 2019 to 2022. Additionally, there were 130 fatalities in 2022 where at least one driver tested positive for a cannabinoid and an additional substance
    - However, note that the detection of any cannabinoid in blood is not an indicator of impairment but only indicates presence in the body.

Probationers testing positive for THC

- Overall, 28% of adult probationers tested positive for THC at least once during the year, from 2012-2021. The proportion of probationers testing positive for marijuana increased during this time. HB16-1359 passed and went into effect in 2016, which gave judges discretion to allow medical marijuana use in individuals in probation, but it is unknown how many individuals this would have impacted.

Illegal cultivation on public land

- The number of plants seized on public lands increased overall since 2012, but there was a lot of variability in seizures from year-to-year. In 2022, there were 98,246 plants seized, which was a two-fold increase from 2012.

Diversion to other states

- The Colorado Information Analysis Center (CIAC), located in the Department of Public Safety, compiled data from the El Paso Intelligence Center (EPIC), manages a database in which law enforcement agencies can voluntarily report drug seizures. The number of seizures reported increased from 2012 (286) to 2015 (768) but then declined, with 93 seizures reported to EPIC in 2022.

Public Health

Adult usage rates

The Colorado Behavioral Risk Factor Surveillance System (BRFSS) is a statewide telephone survey conducted by the Colorado Department of Public Health and Environment (CDPHE). In 2014, the BRFFS was expanded to include questions about marijuana use.

- Marijuana use has significantly increased, with 19% of Colorado adults reporting using marijuana in the past 30 days in 2022, up from 2014's estimated level of 13.6%. Over half of Coloradans who reported using marijuana reported daily or near daily consumption (52%).
- There were some disparities in past 30-day use, and males, adults aged 18-34, and those who identified as LGBTQ+ reported significantly use more compared to the general population.

Hospitalizations and emergency department visits

- The Colorado Department of Public Health and Environment (CDPHE) analyzed data from the Colorado Hospital Administration (CHA) with these findings:
    - Due to a change in hospital billing codes in October of 2015, it is difficult to determine the degree to which the increase in marijuana-related hospitalization rates from 2012 to 2021 indicated a greater need for healthcare services. In 2022, there were 3,259 marijuana-related hospitalizations per 100,000 hospitalizations.
    - Visits to emergency departments with marijuana billing codes varied widely from 2011 to 2021, and after the transition to the new billing coding, rates peaked in 2018 with 1,171 visits per 100,000 ED visits and then dropped. In 2021, there were 672 visits per 100,000 ED visits.

Poison control

- The number of calls to poison control mentioning human marijuana exposure increased over the past 10 years. There were 45 calls in 2006 and 222 in 2017. Between 2014 and 2017, the frequency of calls reporting human marijuana exposure stabilized. However, call frequencies increased from 2018 to 2021 and reached 310 calls in 2021.

Youth Impacts

Usage rates

- Youth use rates were estimated using the Healthy Kids Colorado Survey (HKCS) with 52,799 middle school and high school student responses in 2021.
    - The percentage of high school students who reported past 30-day use of marijuana significantly declined from 2013 (19.7%) to 2021 (13.6%).
        - Among students who reported marijuana use, fewer students reported using between 40 or more times per month from 2013 to 2021.
        - In 2021, 30-day substance use of alcohol (23.6%) and E-vapor tobacco products (16.1%) were higher than self-reported use of marijuana.
        - Each grade level increase coincided with an estimated 4 percentage point rise in the prevalence of past 30-day use in 2021.
        - Among high school students who reported using marijuana in the past month, the most common use methods were: smoking (79.5%), dabbing (49.2%) and vaporizing (39.1%).
    - Middle school students had a lower use rate of past 30-day use in 2021 (3.0%) compared to 2019 (5.2%), but these rates were not significantly different.

Arrests

- Arrests from 2021 to 2022 increased by 36%, and in 2022, 1,366 youth were arrested for a marijuana-related offense, which equates to a rate of 233 arrests per 100,000 residents. Despite this increase, arrests in 2022 were still far below the number of arrests seen in 2012 (n = 3,265).
- Throughout 2012 to 2022, males have had higher arrests and rates compared to females, but there was a disproportionate decline in arrest rates in males (-68%) compared to females (-35%) during this time.
- In 2012, NH Black juveniles had an arrest rate that was 8% higher than the rate for NH Whites (727 vs. 667 arrests per 100,000), but by 2022, the NH Blacks had a 73% higher arrest rate compared to NH Whites (399 vs. 233 arrests per 100,000).

Law enforcement contacts with students

- Marijuana-related contacts were the most prevalent contact type. The 839 marijuana ones account for 18% of all contacts reported in the 2021 to 2022 school year (4,550).

Probationers testing positive

- In 2021, the percentage of the 10-to 14-year-old group testing positive for THC one or 2 times has remained relatively stable, at about 20%, while the percentage testing positive 3 or more times rose

from 16% to 25% from 2012 to 2021. In 2021, there were 471 fewer 10–14 year-olds on probation (-72%) compared to 2012, and the overall population decline makes these changes more difficult to interpret. The percentage of 15- to 17-year-olds testing positive one or two times or at three or more times were both estimated at 27% in 2021.

School suspension/expulsion rates

- Between the 2012-2013 and 2022-2023 school years, drug expulsions decreased by overall by 66%, while suspensions increased by 63%.
- The 2016-2017 school year was the first full year of reporting marijuana separately from other drugs as a disciplinary reason. In 2022-2023, there were 5,490 suspensions, 166 expulsions and 649 referrals to law enforcement for marijuana. These levels correspond to a 74% increase in suspensions, a 21% decline in expulsions and a 24% drop in referrals to law enforcement compared to the 2016-2017 school year.
- Note that Senate Bill 12-046 and House Bill 12-1345 targeted reform of "zero tolerance" policies in schools, and appear to have decreased expulsions, suspensions, and referrals to law enforcement.[1]

Drug-endangered children

- To assess drug-endangered children, as required in S.B. 13-283, poison center data was used as a proxy indicator.
- In 2012, there were 49 calls to poison centers concerning incidents in youths under the age of 20, with 15 of those calls occurring in children aged five and under, or 14% of total calls. By 2021, there were 237 calls for youths under the age of 20 with 151 calls occurring in youths aged five and under. Calls involving children under the age of five accounted for 49% of the total calls related to marijuana exposures.

Additional Information

- The total number of marijuana business licenses issued increased sharply for the first two years after legalization, up 36% from 2014 (2,249) to 2017 (3,051). In 2023, the total number of licensed premises was 2,580, which represents a decline of 15 % from 2017's peak level of 3,051 (Table 5.1). This contraction started in the medical market in 2018, while the retail market had increased in size until 2022. From 2022 to 2023, the number of licensed premises in the retail market dropped by 10%. Denver (994), El Paso (292), and Pueblo (276) are the counties with the most licensed premises.
- From the calendar years 2014 to 2021, the total marijuana tax revenue grew by more than six-fold, going from $67,594,325 up to $423,486,053. This revenue increase was driven by the sales taxes,

[1] See Rosa, J., Krueger, J., and Severson, A. (May 2015). *Moving from Zero Tolerance to Supportive School Discipline Practices*. Office of Dropout Prevention and Student Re-engagement, Colorado Department of Education.

excise taxes, licenses, and fees for retail marijuana. After the peak year in 2021, revenue dropped by close to $100 million in 2022, or 23%. In 2023, tax revenue continued to fall and was reported at $274,121,044.

- Between 2014 and 2023, marijuana sales and excise taxes have contributed $855 million dollars directly to school construction or other public school needs

Summary. Again, please note that fundamental measurement challenges interfere with our ability to confidently interpret the information presented here. As previously discussed, legalization may result in reports of increased use, which may be a function of the decreased stigma and legal consequences associated with use rather than actual changes in use patterns. Likewise, those reporting to poison control, emergency departments, or hospitals may feel more comfortable discussing their recent use or abuse of marijuana for purposes of treatment. Finally, complex and sometimes conflicting laws have caused law enforcement officials and prosecuting attorneys to modify policies and practices that cannot be disentangled from available data. For these reasons, it is critical to avoid ascribing changes in many social indicators solely to marijuana legalization.

SECTION ONE
INTRODUCTION

This section provides a brief overview of the statutory mandate behind this report, data limitations, data sources and analytical approaches. It also describes federal and state marijuana laws, including the federal responses to Colorado's Amendment 64 which was passed by voters in 2012.

Background

In 2013, following the passage of Amendment 64 allowing for the retail sale and possession of marijuana, the Colorado General Assembly enacted Senate Bill 13-283. This bill mandated that the Division of Criminal Justice in the Department of Public Safety conduct a study of the impacts of Amendment 64, particularly as these relate to law enforcement activities. This report seeks to present the measures for the metrics specified in S.B. 13-283 (C.R.S. 24-33.4-516). These metrics, which guide the structure of this report and the data elements analyzed, are presented below and were derived from a state-funded Marijuana Data Discovery and Gap Analysis Summary Report.[2]

Public Safety Impacts and Statutory Category and Definition:

- Marijuana-initiated contacts by law enforcement: contacts broken down by judicial district and by race and ethnicity
- Marijuana Criminal Arrest Data: arrest data including amounts of marijuana with each arrest, broken down by judicial district and by race and ethnicity
- Marijuana-related traffic accidents: crashes, including fatalities and serious injuries related to being under the influence of marijuana
- Out-of-State Diversion: tracking of illicit marijuana exports
- Marijuana Site Operational Crime Statistics: crime occurring in and relating to marijuana establishments
- Marijuana Transfer Using Parcel Services: Utilization of parcel services for the transfer of marijuana
- Probation Data
- Outdoor marijuana cultivation: number of facilities operating
- Money laundering: in relation to both licensed and unlicensed marijuana

Impacts on Youth with Statutory Categories and Definitions:

- Comprehensive School Data: both statewide and by individual school, including suspensions, expulsions and police referrals related to drug use and sales, broken down by specific drug categories
- Drug Endangered Children: specific data on marijuana-involved incidents
- Diversion to minors: incidents involving persons under 21 years of age

Impacts on Public Health with Statutory Categories and Definitions:

- Data on Emergency Room Visits and Poison Control
    - Outcome data from emergency room visits related to the use of marijuana
    - Data on calls to the Rocky Mountain Poison & Drug Safety

[2] Rebound Solutions. (2014). Marijuana Data Discovery and Gap Analysis Summary Report.

- Monitor Health Effects of Marijuana (Colorado Department of Public Health and Environment)
    - Monitor changes in drug use patterns, broken down by race and ethnicity, and the emerging science and medical information relevant to the health effects associated with marijuana use.
    - Produce a systematic review on the health effects of marijuana featuring input from an appointed panel of health care professionals with expertise in cannabinoid physiology.
    - Document adverse health events involving marijuana use from the all-payer claims database, hospital discharge data, and behavioral risk factors.

Data limitations

It is critical to state at the outset that important caveats must be considered prior to drawing firm conclusions about the impacts of marijuana legalization. First, it is not possible to definitively separate the change in marijuana laws from other changes that have occurred in Colorado, both societal and legal. Second, changes in reported marijuana use may be the result of decreased social stigma and legal ramifications. For example, an adult may be more willing to divulge marijuana use upon admission to an emergency department now that it is legal. Third, legalization has heightened awareness of the need to gather data on marijuana and, in some cases, has led to improvements in data collection that then make analyzing historical trends difficult. For example, the Colorado Department of Transportation improved its data collection systems on fatal crashes, allowing for better analysis of current data but has made some of the historical data not comparable. For these reasons, we caution readers about gaps in data that impede our comprehensive understanding of the impact of the legalization of retail marijuana in Colorado.

Data Sources

The information presented in this report was compiled from data made available from the following entities:

Colorado State Government

- Colorado Attorney General's Office, Peace Officer Standards and Training
- Colorado Department of Education
- Colorado Department of Human Services, Behavioral Health Administration
- Colorado Department of Local Affairs, Office of Demography
- Colorado Department of Public Health and Environment, Center for Health and Environmental Data
- Colorado Department of Public Health and Environment, Disease Control and Environmental Epidemiology Division
- Colorado Department of Public Health and Environment, Laboratory Services Division
- Colorado Department of Public Health and Environment, Marijuana Health Monitoring and Research Program
- Colorado Department of Public Health and Environment, Prevention Services Division
- Colorado Department of Public Safety, Colorado Bureau of Investigation
- Colorado Department of Public Safety, Colorado Information Analysis Center
- Colorado Department of Public Safety, Colorado State Patrol
- Colorado Department of Public Safety, Division of Criminal Justice
- Colorado Department of Revenue, Marijuana Enforcement Division
- Colorado Department of Revenue, Taxation Division
- Colorado Department of Transportation
- Colorado Governor's Office of State Planning and Budgeting

Colorado Division of Criminal Justice, Office of Research & Statistics

- Colorado Judicial Branch, Court Services Division
- Colorado Judicial Branch, Probation Services Division

Municipal and Private

- Chematox Laboratory
- City and County of Denver, Office of Marijuana Policy
- Coalition of Colorado Alcohol and Drug Educators
- Colorado Hospital Association
- Denver County Court
- Denver Police Department
- Rocky Mountain Poison & Drug Safety

Federal

- Rocky Mountain High Intensity Drug Trafficking Area
- U.S. Bureau of Land Management
- U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration
- U.S. Department of Justice, Drug Enforcement Administration
- U.S. Forest Service
- U.S. National Park Service

Data Collection Methodology

The data were collected and analyzed in several ways. First, many entities provide public information on agency websites in the form of reports, briefing papers, and downloadable spreadsheets (e.g., the National Survey on Drug Use and Health). When this was the case, the analysis was conducted by Division of Criminal Justice (DCJ) researchers, and links to the original source material are provided in footnotes. Second, summary data were analyzed and provided by several entities; this information was made available for this report and is not published elsewhere (e.g., CDPHE's analysis of marijuana users who report driving after consuming). Third, several entities provided individual-level, nonpublic data (e.g., CBI's arrest data), and these data were analyzed by DCJ researchers. All analyses and graphic presentations were sent to the original data sources for review to ensure the information is accurately represented.

Brief History of Marijuana Laws

Federal Law

The Federal Controlled Substances Act (CSA)[3] classifies marijuana as a Schedule I drug. Drugs classified as Schedule I are considered the most dangerous class of drugs with no currently accepted medical use and a high potential for abuse. Some examples of other Schedule I drugs include heroin, MDMA (ecstasy, Molly), LSD, mescaline (peyote), and psilocybin (mushrooms).

The Schedule I classification puts state laws legalizing medical or recreational marijuana at odds with the CSA. As of June 2024, there were 24 states plus the District of Columbia allowing for the sale of recreational marijuana in addition to medical marijuana, 13 states allowing only medical marijuana, nine states allowing

[3] 21 U.S.C. § 811.

cannabidiol[4] exclusively, and three states that do not allow any legal cannabis products.[5] The widespread growth of medical marijuana legalization over the past 20 years has put an increasing number of states, including Colorado, in conflict with the CSA. Figures 1.1 to 1.3 give snapshots of state marijuana laws at three different points in time to demonstrate the evolution of legalization.

The 2018 federal farm bill[6] legalized the growth, production, transportation, and sales of hemp plants as well as hemp products. The definition of hemp in the farm bill (and Amendment 64) is a plant with less than 0.3% THC. There is no discernible difference in the appearance of hemp and marijuana, which makes determining if a field of shipment of hemp meets the legal definition regarding THC content.

There are a number of products that can be derived from hemp, but the most notable is an extract called cannabidiol (CBD), CBD is used in a variety of products, including tinctures, oils, food, lotions, and many others. These products were declared legal and removed from the enforcement of the CSA.

Marijuana's legal status might be subject to change in the future. In 2022, President Biden requested that the Department of Health and Human Services and the Attorney General conduct a review of the appropriateness of marijuana's categorization, and HHS released recommendations that it be changed to a Schedule III drug. In May of 2024, the Department of Justice initiated a request for public comments related to changing marijuana's classification to a Schedule III drug.

Colorado Laws

The following bullets reflect five distinct eras in both the legal status and commercial availability of marijuana in Colorado:

- Prior to 2000: Illegal to possess or grow.
- 2000–2009: Amendment 20 approved and medical marijuana is legalized. Colorado Department of Public Health and Environment (CDPHE) issues registry identification cards to individuals who have received recommendations from a doctor that marijuana will help a debilitating medical condition. It is legal to possess up to two ounces and grow 6 plants (or more with doctor's recommendation) with a registry identification card. No regulated market exists. Individual grow operations or caregiver grow operations limited to five patients is allowed.
- 2010–2012: Medical marijuana is commercialized and regulated with licensed dispensaries, grow operations, and product manufacturers open in jurisdictions allowing these types of businesses.
- 2013: Amendment 64 takes effect. Personal possession and grow limits for recreational marijuana are in place but sales are not commercialized. Medical continues as a regulated, commercial market.
- 2014 to present:[7] Recreational and medical marijuana fully regulated and commercialized. Licensed retail stores opened January 1, 2014.

[4] Cannabidiol (CBD) is a non-psychoactive substance derived from cannabis with potential medical uses. For a review of some relevant research, see Scuderi, C. et al. (2009). Cannabidiol in medicine: a review of its therapeutic potential in CNS disorders, *Phytotherapy Research*, *23* (5), 597-602.

[5] National Conference of State Legislatures. (2024). *State Medical Marijuana Laws*.

[6] Agriculture Improvement Act of 2018, Senate Bill, 2017 -2018 Session, (2018).

[7] Others group 2010–2013 as the era of medical commercialization and do not differentiate 2013 as it did not increase the availability of marijuana in the commercial market.

Amendment 20

In 2000, Colorado passed Amendment 20 allowing those suffering from certain debilitating medical conditions to grow and possess a limited amount of marijuana with a doctor's recommendation that it may help their condition.[8] Patients are required to register with the Colorado Department of Public Health and Environment (CDPHE) and obtain a registry identification card that indicates their status as a certified medical marijuana patient. The list of conditions eligible for a card includes cachexia, cancer, glaucoma, HIV/AIDS, muscle spasms, post-traumatic stress disorder, autism spectrum disorders, seizures, severe nausea, any condition for which an opioid is prescribed and severe pain. Amendment 20 provides an affirmative defense from prosecution for cardholders who are allowed to grow six plants (three mature, three immature) and possess up to two ounces of finished product, unless a doctor determines that additional marijuana is needed to treat a patient's condition. Patients can choose to grow their own marijuana or designate a caregiver to grow it for them.

Initially, a caregiver was limited to growing medical marijuana for five patients and his/herself if he/she was a medical marijuana cardholder. The justification for this limit was challenged in Denver District Court, and was overturned.[9] In 2009, the Colorado Board of Health rejected the five-patient limit for caregivers. That same year, the U.S. Department of Justice issued what is known as the Ogden Memo, which gave guidance to U.S. Attorneys regarding prosecution for marijuana offenses. Specifically, the Ogden Memorandum told U.S. Attorneys that they should not "focus federal resources in your States on individuals whose actions are in clear and unambiguous compliance with existing state laws providing for the medical use of marijuana." [10] The combination of the Court decision, the Board of Health's rejection of the five-patient caregiver limit, and the Ogden Memorandum set the stage for the commercialization of medical marijuana. In 2010, two laws were passed: a medical marijuana code was promulgated by the Legislature through the passage of House Bill 10-1284, which established a regulatory structure within the Colorado Department of Revenue (DOR) and the Colorado Department of Public Health and Environment (CDPHE); and Senate Bill 10-109, which clarified the definition of a "bona fide physician patient relationship." The Marijuana Enforcement Division (MED) was created within DOR to license and regulate the medical marijuana industry in Colorado.[11]

The commercialization of medical marijuana followed and the number of patients registered with CDPHE increased dramatically, from about 5,000 in 2009 to almost 119,000 in 2011. The number of registered patients dropped to 85,814 as of December 2020.

Amendment 64

Prior to the passage of Amendment 64 in 2012, Initiative 44 was on the ballot in 2006 in an attempt to legalize the possession of one ounce or less of marijuana for adults 21 and older. The initiative failed, with 59% of

[8] Colo. Const. Art. XVIII, § 14. Additional information can be accessed at Ballotpedia, Colorado Medical Use of Marijuana, Initiative 20. A detailed review of the history of medical marijuana in Colorado and the recent status of the medical marijuana code can be found in the Colorado Department of Regulatory Agencies' *2014 Sunset Review: Colorado Medical Marijuana Code*. In 2021, the Colorado legislature passed HB21-1317, which instituted changes to the medical marijuana registry process and tracking of medical marijuana inventory and purchases. These changes took into effect January 1, 2022. Please see the bill text.

[9] *Lagoy v. Colorado*, 2007 CV 6089 (Denver County District Court, 2nd Judicial District, November 15, 2007; Denver County District Court, 2nd Judicial District, November 5, 2009).

[10] U.S. Department of Justice (2009). Ogden memo: Investigations and prosecutions in states authorizing the medical use of marijuana.

[11] Medical Marijuana Code: C.R.S. 12-43.3-101 *et seq*. See the MED page for more information about the program.

Colorado voters saying no to the question of allowing possession and use.[12] In 2012, a more expansive initiative was placed on the ballot that would not simply allow for possession but would create the first legal marketplace for recreational marijuana in the world. Amendment 64 passed, with 55% of voters saying yes to the question.[13]

Amendment 64 allows individuals 21 years and older to grow up to six plants (three mature and three immature) and keep all of the marijuana produced on the same premises, possess up to one ounce of marijuana, and give away without remuneration up to one ounce of marijuana to someone 21 years and older. It also instructed Colorado's Marijuana Enforcement Division (MED) to create rules, regulations, and licenses to allow for the first recreational marijuana marketplace by July 1, 2013. This included rules for licensing, ownership, security, labeling, production control, reduction of diversion, health and safety standards, advertising, and privacy guarantees. These rules resulted in the Retail Marijuana Code.[14]

The MED began accepting applications for retail stores on October 1, 2013. At that time applicants needed to have a current medical marijuana license to be eligible for a retail license. The first stores opened on January 1, 2014.[15]

Additional rule-making was conducted by the Department of Revenue, Department of Public Health and Environment, Department of Agriculture, and the Department of Regulatory Affairs to clarify a variety of issues that have arisen with the advent of the first legal marijuana marketplace.[16] Examples include issues regarding pesticide application, testing for mold and solvents, THC homogeneity in manufactured products, among others.

Federal Response

In the wake of Amendment 64 and other recreational legalization efforts throughout the country, in 2013 the United States Department of Justice (USDOJ) issued what is known as the Cole Memorandum.[17] This gave guidance to U.S. Attorneys across the country. The Cole Memo set forth USDOJ's enforcement priorities, including:

1. Preventing distribution of marijuana to minors
2. Preventing revenue from going to criminal enterprises, gangs, and cartels
3. Preventing diversion of marijuana from states where it is legal under state law in some form to other states
4. Preventing state-authorized marijuana activity from being used as a cover or pretext for the trafficking of other illegal drugs or other illegal activity
5. Preventing violence and the use of firearms in the cultivation and distribution of marijuana

[12] Ballotpedia, Colorado Marijuana Possession, Initiative 44 (2006).
[13] Ballotpedia, Colorado Marijuana Legalization Initiative, Amendment 64 (2012).
[14] C.R.S. 44-10-101
[15] For a detailed review of the history of the regulation of retail marijuana see Department of Regulatory Agencies (2015), *2015 sunset review: Colorado retail marijuana code*.
[16] A compendium of amendments, statutes, and rules is available in the *Colorado marijuana laws and regulations 2022.* (2023). LexisNexis: Charlottesville, VA. This publication is updated annually to reflect changes in statutes and rules.
[17] U.S. Department of Justice (2013). *Cole memo: Guidance regarding marijuana enforcement*.

6. Preventing driving under the influence of drugs (DUID) and exacerbation of other adverse public health consequences associated with marijuana use
7. Preventing growth on public lands with attendant public safety and environmental damages
8. Preventing marijuana possession or use on federal property

The General Accounting Office (GAO) reported in 2015 that USDOJ's Office of the Deputy Attorney General was monitoring the effects of marijuana legalization in two ways.[18] First, according to the GAO report, "U.S. Attorneys prosecute cases that threaten federal marijuana enforcement priorities and consult with state officials about areas of federal concern, such as the potential impact on enforcement priorities of edible marijuana products. Second, officials reported they collaborate with DOJ components, including the Drug Enforcement Administration (DEA) and other federal agencies, including the Office of National Drug Control Policy, and assess various marijuana enforcement-related data these agencies provide." The GAO report indicated that the USDOJ has not documented its monitoring approach, leading to a gap in knowledge about state-level adherence to the Cole memo. In Colorado, the Rocky Mountain High Intensity Drug Trafficking Area (RMHIDTA), funded by the Office of National Drug Control Policy, is tracking the impact of marijuana legalization in the state and has produced five reports of findings.[19]

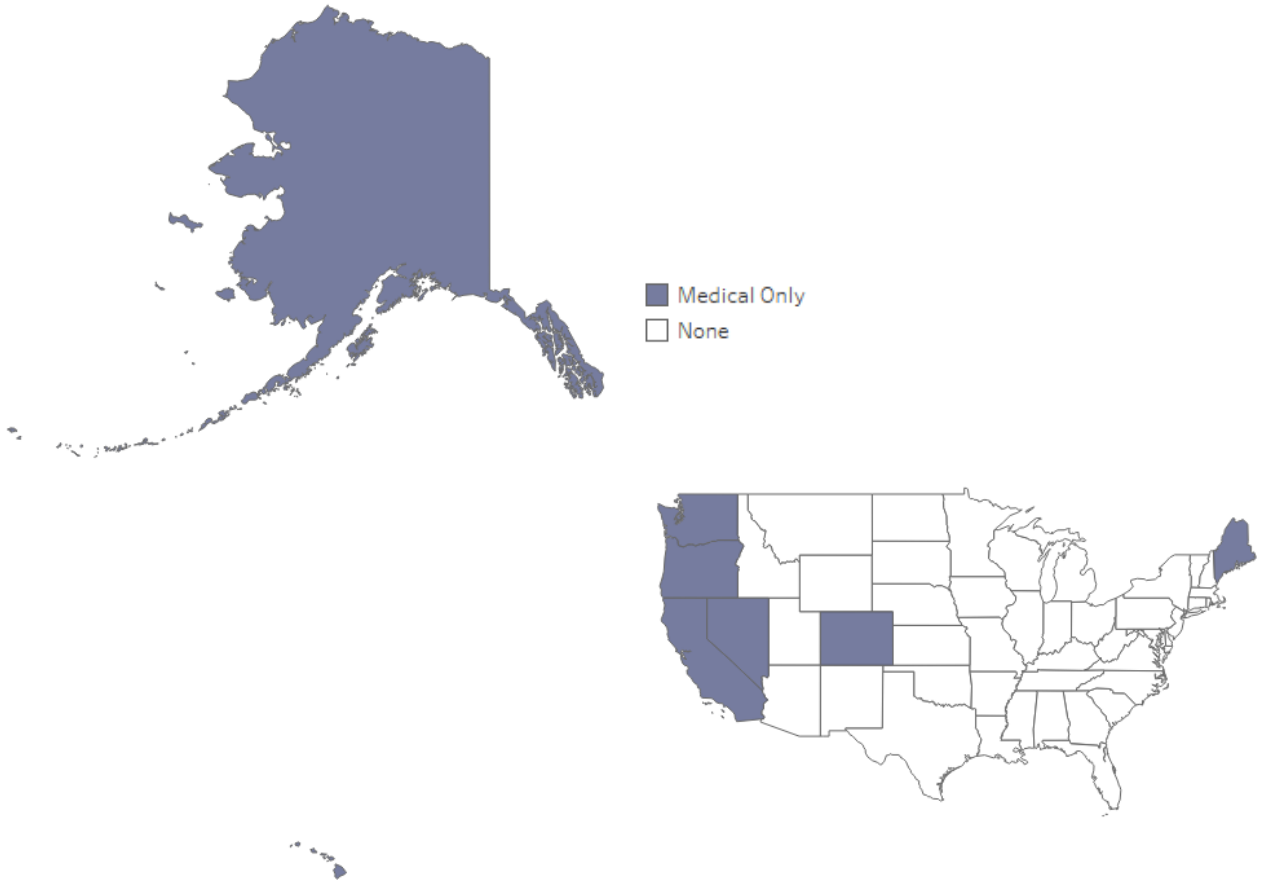
Attorney General Jeff Sessions rescinded the Cole Memo on January 4, 2018 and gave full discretion on the investigation and prosecution of marijuana offenses to the U.S. Attorneys' offices. This means that a case no longer must include violations of Cole Memo factors before it is pursued for Federal prosecution.

[18] U.S. Government Accountability Office (2015). *State Marijuana Legalization: DOJ Should Document its Approach to Monitoring the Effects of Legalization*.
[19] RMHIDTA (2017). *The Legalization of Marijuana in Colorado: The Impact*.

State Marijuana Legal Landscape

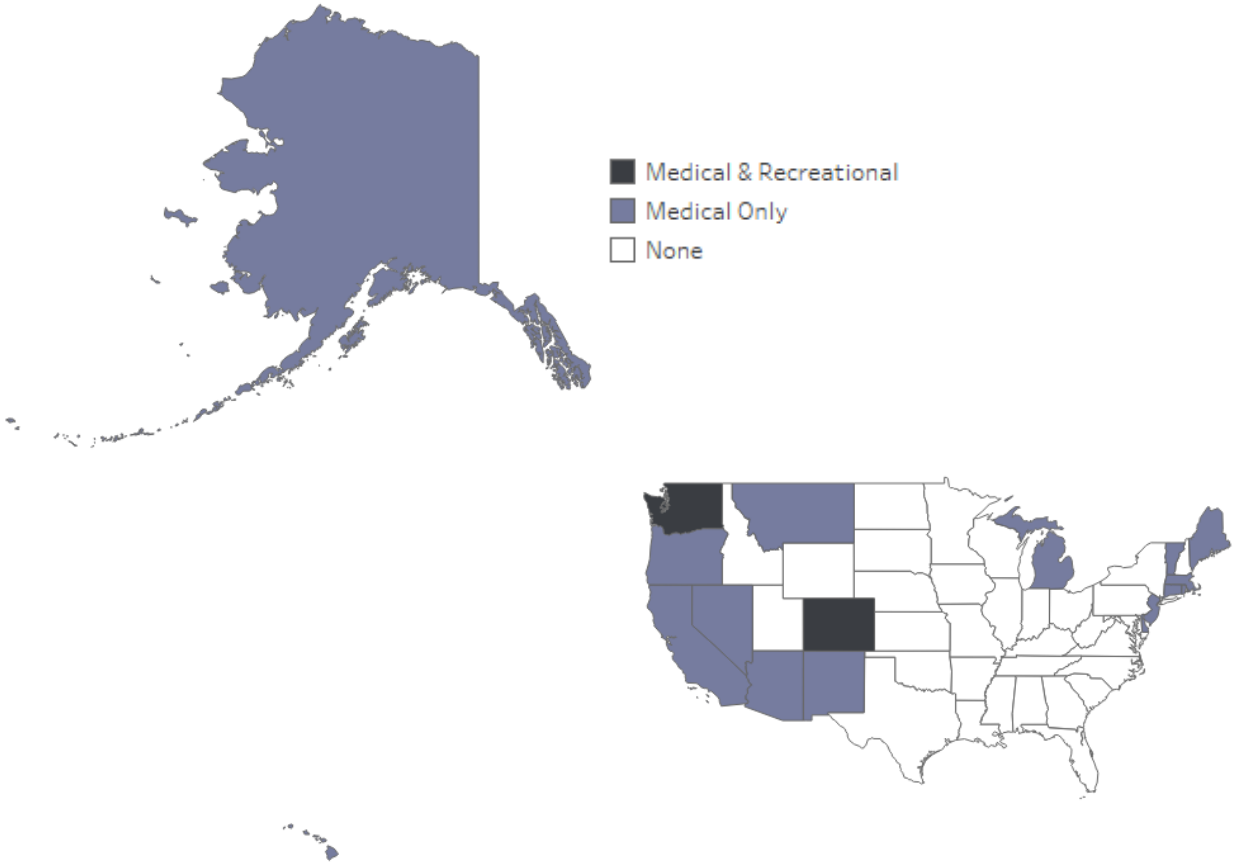
The evolution of state-level marijuana laws is presented in Figures 1-3. It is important to realize that while medical, retail, and CBD legalization are grouped in these maps they represent different approaches to legalization and the National Conference of State Legislatures' source site should be consulted for additional details. In 2000, there were eight states that allowed legal medical marijuana (Figure 1.1). In 2012, two states allowed legal retail/recreational marijuana and 17 allowed medical marijuana (Figure 1.2). By 2023, 26 states allowed retail/recreational marijuana, 13 allowed medical marijuana, and an additional 9 allowed cannabidiol (Figure 1.3).

Figure 1.1 State marijuana legalization status, 2000



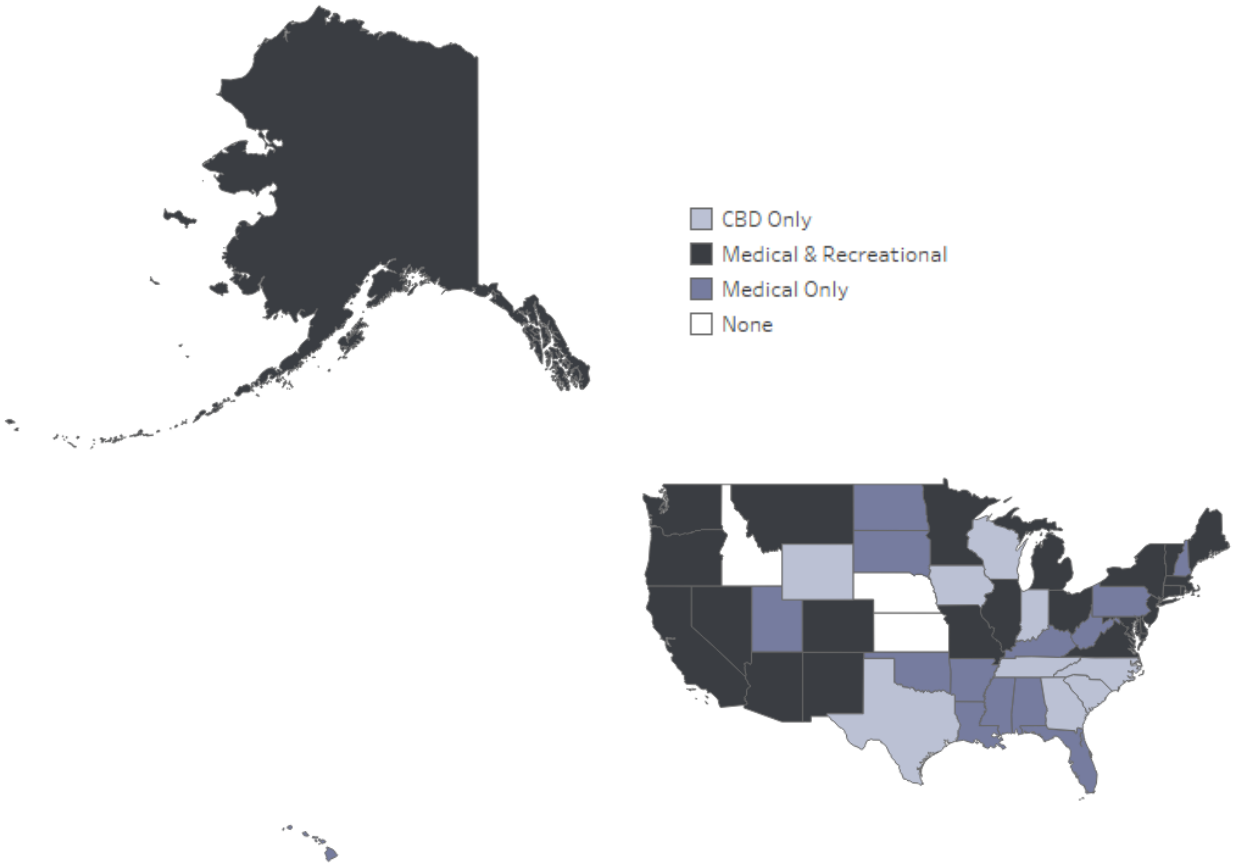
Source: National Conference of State Legislatures, State Medical Cannabis Laws.

Figure 1.2 State marijuana legalization status, 2012



Source: National Conference of State Legislatures, State Medical Cannabis Laws.

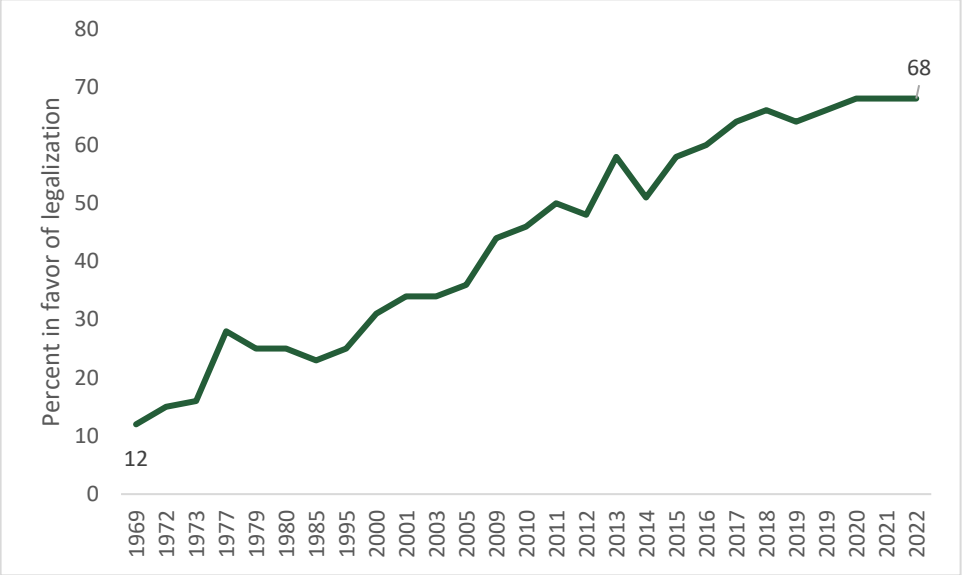
Figure 1.3 State and territory marijuana legalization status, 2023



Source: National Conference of State Legislatures, State Medical Cannabis Laws*.*

Gallup has asked about people's opinion regarding marijuana legalization since 1969. The percent expressing support for legalization has increased over time, and in 2022, 68% indicated that marijuana should be legalized (Figure 1.4).

Figure 1.4 American opinion regarding marijuana legalization, 1969-2022



Source: Gallup, at: https://news.gallup.com/poll/405086/marijuana-views-linked-ideology-religiosity-age.aspx

Organization of this Report

Section Two focuses on the public safety impacts of marijuana legalization while Section Three presents information concerning public health and behavioral services. Section Four presents impacts on youth, and Section Five provides additional information that may be of interest to the reader.

Summary

This report presents data from multiple sources in an effort to provide information for assessing the impact of the commercialization of marijuana on public safety, public health, behavioral services, and youth access in Colorado, drawing from a myriad of data sources. It is critical to remember that important data limitations exist, and these issues are discussed throughout the report. The history of marijuana laws in Colorado, along with the Ogden and Cole Memos, reflect the dynamic environment in which regulations and enforcement are critical components. The impact of Amendment 64 on public safety is the focus of the next section.

SECTION TWO
IMPACT ON PUBLIC SAFETY

Overview

The potential impacts to public safety from the legalization of marijuana were of concern to the legislature, law enforcement officials, district attorneys, and other public safety stakeholders across the state. Since no jurisdiction had yet legalized marijuana for recreational purposes, the public safety impacts were unknown. The Cole Memo (see Appendix B; see Section One) provided guidance on several public safety impacts of concern to the U.S. Department of Justice. The specific public safety areas of interest addressed in Senate Bill 2013-283 (see Section One for a description of this bill), some of which were influenced by the Cole Memo, included the following:

- Marijuana-initiated law enforcement contacts
- Marijuana arrests
- Crime around marijuana establishments
- Marijuana-related traffic accidents and DUID
- Organized crime and money laundering
- Probation infractions
- Illegal cultivation on public land
- Diversion out of state
- Transfer using parcel services

Data Collection Challenges

Meeting the reporting requirements of Senate Bill 2013-283 remains challenging. For example, "marijuana-initiated law enforcement contacts," a data point mandated in the bill, is not a term used by any law enforcement agency. Furthermore, this data is not compiled in the law enforcement contacts and use of force data, which was created in 2023.[20] This information does not exist and therefore cannot be included in this analysis.

Information on arrests is available, but only from 2012 due to improvements in data reporting. Previously to 2012, the Colorado Bureau of Investigation only produced aggregate estimates for statewide crime statistics that were then reported to the Federal Bureau of Investigation (FBI) as part of their Uniform Crime Reporting (UCR) system. In 2012, Colorado became a National Incident Based Reporting System (NIBRS) compliant state, and began reporting more detailed information to the FBI. NIBRS has significantly more information than the Uniform Crime Reporting (UCR) system, including information about drug type, which is not available in UCR data. For this reason, information concerning Colorado arrests related to marijuana offenses is unavailable for analysis prior to 2012.

[20] Reed, J., Leapley, C., & Hernandez, K. (2024). *Report on Contacts and Use of Force in Colorado (2022): Pursuant to CRS 24-31-093.* Lakewood, CO: Colorado Division of Criminal Justice.

Data on crime around marijuana establishments are not collected in any central repository, but the Denver Police Department began a process in 2012 to assess whether such crime was a significant problem, and this information is reported below.

Likewise, information on diversion of marijuana out of state and transfer using parcel services is not collected in any central location. Trends in diversion might not reflect changes in the distribution or availability of illicit marijuana, but rather how law enforcement agencies prioritize their time and resources. During the first years of marijuana, agencies might have devoted more manpower towards marijuana enforcement but given the rise of illicitly manufactured fentanyl in recent years, might have shifted their focus to seizing synthetic narcotics.[21]

Significant challenges exist in the collection of information on traffic accidents and driving under the influence. The state statute on impaired driving does not differentiate between driving under the influence of alcohol and driving under the influence of drugs. Further, there is no central repository for toxicology results from drivers that would allow for an examination of impaired driving throughout the state. The current data system that collects information on roadway fatalities does not capture the specific toxicology results that would indicate impairment, does not consistently capture information on surviving drivers involved in fatalities, and is limited to testing results from three drugs detected in the driver's system.

S.B. 13-283 mandates the analysis of "probation data." To this end, probationer drug tests associated with marijuana use were analyzed,[22] but the State Judicial Branch's database does not capture whether an infraction or revocation was marijuana-related or even related to drugs in general.

Despite significant challenges in meeting all of the statute's reporting requirements, data that are available were analyzed to help inform stakeholders about these issues.

Offenses and Arrests[23]

Data on marijuana arrests and offenses for the period 2012–2022 were obtained from the Colorado Bureau of Investigation's (CBI) National Incident-Based Reporting System (NIBRS) database. The NIBRS database includes detailed information on arrests and offenses, which the previous UCR summary reporting system did not provide. Colorado became fully NIBRS compliant in 2012, which limits the years of historical data available for analysis.

Marijuana Offenses

Overall, marijuana-related offenses dropped from 2012 to 2022. Prior to the legalization of retail marijuana in 2012, law enforcement agencies reported 12,498 marijuana-related crimes, and in 2013, law enforcement reported 5,498 fewer crimes, which was a 54% decline in just one year (see Table 2.1). From 2014-2022, marijuana crimes have largely decreased from year-to-year, and in particular from 2019-2020, law

[21] Palamar, J. J., Ciccarone, D., Rutherford, C., Keyes, K. M., Carr, T. H., & Cottler, L. B. (2022). Trends in seizures of powders and pills containing illicit fentanyl in the United States, 2018 through 2021. *Drug and alcohol dependence*, 234, 109398.

[22] Juvenile probation data is presented in *Section Four: Impacts on Youth.*

[23] While offenses and arrests are related, they are not the same and may display different patterns. An offense is counted when a crime is reported to law enforcement, regardless of whether there is an arrest. For example, there may be a reported burglary with no related arrest. An arrest is a response to a crime, and there may be multiple arrests for a single offense. For example, one robbery committed by two suspects can result in two arrests.

enforcement agencies reported a 44% drop in marijuana crimes. This decline coincides with the start of the COVID-19 pandemic and the enactment of HB19-1263 on March 1, 2020 which changed the possession amounts required to be charged with certain drug offenses. Both of these events might have disrupted law enforcement activities and priorities in law enforcement practices.

From 2012-2019, agencies reported nearly 3-fold more amphetamine/methamphetamine-related crimes, which rose from 2,054 incidents to 6,258 (see Table 2.1). Additionally, amphetamine/methamphetamine-related incidents overtook marijuana-related incidents as the top reported category in 2017, and in 2022, represented 42% of all offenses in these substance-related offense categories shown in Table 2.1.

Certain drug offenses did not follow the trend of declining counts from 2019-2022 and instead grew exponentially. Synthetic narcotic-related offenses, which include fentanyl-associated incidents, quadrupled from 2019-2022, and in 2022 represented the third highest category of substance-related offenses (n = 1,860). Opium and other derivative drug-related offenses, which could include prescription sources, also increased over four-fold from 2019-2022, going from 182 to 833.

Hallucinogen-related offenses, which includes psilocybin, lysergic acid diethylamide (LSD) among other drugs, had very stable levels from 2012 to 2022.

Table 2.1 Drug Reports by Drug Type, Colorado, 2012-2022

Year	Marijuana	Amphetamine/ Methamphetamine	Cocaine	Heroin	Synthetic Narcotic*	Opium & Derivatives	Hallucinogens
2012	12,498	2,054	1,515	678	532	150	220
2013	5,808	2,796	1,385	961	512	157	208
2014	6,337	3,294	1,295	1,358	424	159	203
2015	6,335	4,133	1,423	1,746	447	157	216
2016	5,947	4,998	1,575	2,144	431	157	274
2017	5,851	6,258	1,621	2,280	447	172	279
2018	5,595	7,194	1,739	2,701	454	143	330
2019	4,697	7,603	1,691	2,707	454	182	362
2020	2,638	5,143	964	1,947	384	197	287
2021	2,361	5,580	825	1,259	795	457	262
2022	2,402	4,891	743	554	1,860	833	243

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System. Analyzed by the Division of Criminal Justice.
Notes: *Fentanyl-related offenses are categorized in synthetic narcotic group. The totals for drug crime type are slightly larger than the count of total people arrested.

Marijuana Arrests

Overall

The total number of marijuana arrests decreased by 82% between 2012 and 2022, from 13,225 to 2,235 (Table 2.2). Like marijuana drug reports, the steepest declines in arrests occurred between 2012 and 2013 (-50%) and between 2019 and 2020 (-36%). Marijuana possession arrests, which make up the majority of all marijuana arrests, were cut by 87% from 2012-2022. Marijuana sales arrests decreased by 53% from 2012-2022. Marijuana production arrests also dropped significantly (77%). Marijuana arrests that were unspecified, meaning the specific reason for the arrest was not provided by law enforcement, in 2022, constituted 30% of

all marijuana arrests, which is a significant rise from 2012, where they constituted only 10%. This growth in unspecified marijuana arrests could have inflated the declines in each category.

As shown in Table 2.3, the arrest rates (per 100,000 population aged 10 and older) between 2012 and 2022 followed similar trends, with the rates for possessions dropping by 89%, sales by 57%, and production by 75%.

Table 2.2 Marijuana arrests by arrest type, 2012–2022

Year	Total	Possession	Sales	Production	Smuggling	Unspecified
2012	13,225	11,360	301	179	6	1,379
2013	6,637	5,404	224	111	5	893
2014	7,128	5,962	229	176	0	761
2015	6,998	5,974	174	192	4	654
2016	6,502	5,416	221	256	8	601
2017	6,483	5,113	249	274	3	844
2018	5,970	4,683	232	258	13	784
2019	4,290	3,265	133	185	4	703
2020	2,733	1,842	171	120	4	596
2021	2,208	1,406	116	63	1	622
2022	2,355	1,454	141	42	2	716

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System; Analyzed by the Division of Criminal Justice.

Table 2.3 Marijuana arrest rates (per 100,000 residents aged 10 and older) by crime type, 2012–2022

Year	Total	Possession	Sales	Production	Smuggling	Unspecified
2012	293	252	7	4	0	31
2013	145	118	5	2	0	19
2014	153	128	5	4	0	16
2015	147	125	4	4	0	14
2016	134	111	5	5	0	12
2017	131	104	5	6	0	17
2018	119	93	5	5	0	16
2019	84	64	3	4	0	14
2020	53	36	3	2	0	12
2021	43	27	2	1	0	12
2022	46	28	3	1	0	14

Sources: Colorado Bureau of Investigation, National Incident-Based Reporting System; Colorado State Demography Office Data; Analyzed by the Division of Criminal Justice. Note: The population estimates came from the Colorado State Demography Office. We calculated rates based on the total population 10 years of age and older.

Age Group

Arrests declined from 2012 to 2022 across all age groups. Arrests of adults aged 21 and older had the largest decline over the time period and decreased by 91% (see Table 2.4). This trend coincides with the decriminalization of possession of one ounce or less from 2013-2019, and two ounces or less in 2020 for adults 21 and over. Similarly, arrests in 18-20-year-olds decreased by 88% from 2012 to 2022. Marijuana arrests for youth under 18 declined by only 58%. Additionally, while both adult age groups saw year-to-year declines from 2020 to 2022, marijuana arrests increased in youth under the age of 18 by 36% from 2020-2022.

Due to the diverging trends in adults and children, the burden of marijuana arrests has shifted. In 2022, juveniles accounted for over half (62%) of all marijuana arrests compared to 25% in 2012.

The age group with the highest arrest rate in 2022 was children under 18, at 233 arrests per 100,000 residents (Table 2.4). 18- to 20-year-olds had the second highest rate at 165 arrests per 100,000. Adults aged 21 and older only had 14 arrests per 100,000.

Table 2.4 Marijuana arrests and rates (per 100,000 residents aged 10 years and older) in Colorado by age group, 2012–2022

Year	Total Count	Under 18 Count	18 to 20 Count	21 and older Count	Total Rate	Under 18 Rate	18 to 20 Rate	21 and older Rate
2012	13,225	3,265	3,392	6,568	293	599	1,527	176
2013	6,637	3,122	2,304	1,211	145	565	1,025	32
2014	7,128	3,379	2,278	1,471	153	602	1,016	38
2015	6,998	3,019	2,124	1,855	147	528	941	47
2016	6,502	2,648	2,098	1,756	134	456	922	43
2017	6,483	2,701	2,173	1,609	131	461	941	39
2018	5,970	2,573	1,971	1,426	119	436	835	34
2019	4,290	2,064	1,194	1,032	84	349	498	24
2020	2,733	1,005	888	840	53	170	368	20
2021	2,208	1,004	557	647	43	171	229	15
2022	2,355	1,366	400	589	46	233	165	14

Sources: Colorado Bureau of Investigation, National Incident-Based Reporting System; Colorado State Demography Office Data; Analyzed by the Division of Criminal Justice.
Note: Rates are calculated using data obtained from the Colorado State Demography Office. The rates are calculated based on the total population 10 years of age and older for each age group.

Gender

Between 2012 and 2022 the number of males arrested for marijuana offenses (Table 2.5) decreased 85% compared to a decline of 72% for females. The arrest rate for males (64 per 100,000) was 2.4 times that for females (27 per 100,000) (Table 2.5) in 2022. This corresponds to a reduction in the gender arrest rate disparity where in 2012, the disparity rate ratio was 4.3. For details on arrest type, see Appendix A, Table 5.

Table 2.5 Marijuana arrests and rates (per 100,000 residents aged 10 years and older) in Colorado by gender, 2012–2022

Year	Total Count	Male Count	Female Count	Total Rate	Male Rate	Female Rate
2012	13,225	10,716	2,509	293	476	111
2013	6,637	5,379	1,258	145	235	55
2014	7,128	5,626	1,502	153	241	64
2015	6,998	5,529	1,469	147	232	62
2016	6,502	5,056	1,446	134	208	59
2017	6,483	4,937	1,546	131	200	63
2018	5,970	4,344	1,626	119	173	65
2019	4,290	3,175	1,115	84	125	44
2020	2,733	2,064	669	53	81	26
2021	2,208	1,555	653	43	60	25
2022	2,355	1,656	699	46	64	27

Sources: Colorado Bureau of Investigation, National Incident-Based Reporting System; Colorado State Demography Office Data; Analyzed by the Division of Criminal Justice.
Note: Rates are calculated using data obtained from the Colorado State Demography Office. The rates are calculated based on the total population 10 years of age and older for each gender.

Race/Ethnicity

As shown in Table 2.6, from 2012 to 2022, the decrease in the number of marijuana arrests by race/ethnicity was greatest for Non-Hispanic (NH) White arrestees (-86%) compared to Hispanics (-69%) and NH Blacks (-81%). The 2022 marijuana arrest rates still demonstrate disparities by race/ethnicity. For NH Whites, there were 34 arrests per 100,00 residents aged 10 and older, compared to 67 per 100,000 for Hispanics, and 83 per 100,000 for NH Blacks (Table 2.6). However, it should be noted that the arrest totals and rates for all races have decreased significantly post-legalization.

Table 2.6 Marijuana arrests and rates (per 100,000 residents aged 10 years and older) in Colorado by race/ethnicity, 2013–2022

Year	Total Count	NH White Count	Hispanic Count	NH Black Count	NH Other Count	Total Rate	NH White Rate	Hispanic Rate	NH Black Rate	NH Other Rate
2012	13,225	9,573	2,455	982	215	293	293	283	516	119
2013	6,637	4,574	1,396	552	115	145	138	156	282	61
2014	7,128	4,663	1,603	721	141	153	139	175	357	73
2015	6,998	4,543	1,615	681	159	147	133	171	327	78
2016	6,502	4,292	1,476	561	173	134	124	152	262	82
2017	6,483	4,276	1,510	496	201	131	122	151	226	92
2018	5,970	3,855	1,514	424	177	119	109	147	188	78
2019	4,290	2,721	1,112	365	92	84	76	107	160	40
2020	2,524	1,596	629	231	68	49	45	59	113	21
2021	2,003	1,137	629	168	69	39	32	58	81	21
2022	2,149	1,197	726	172	54	42	34	67	83	17

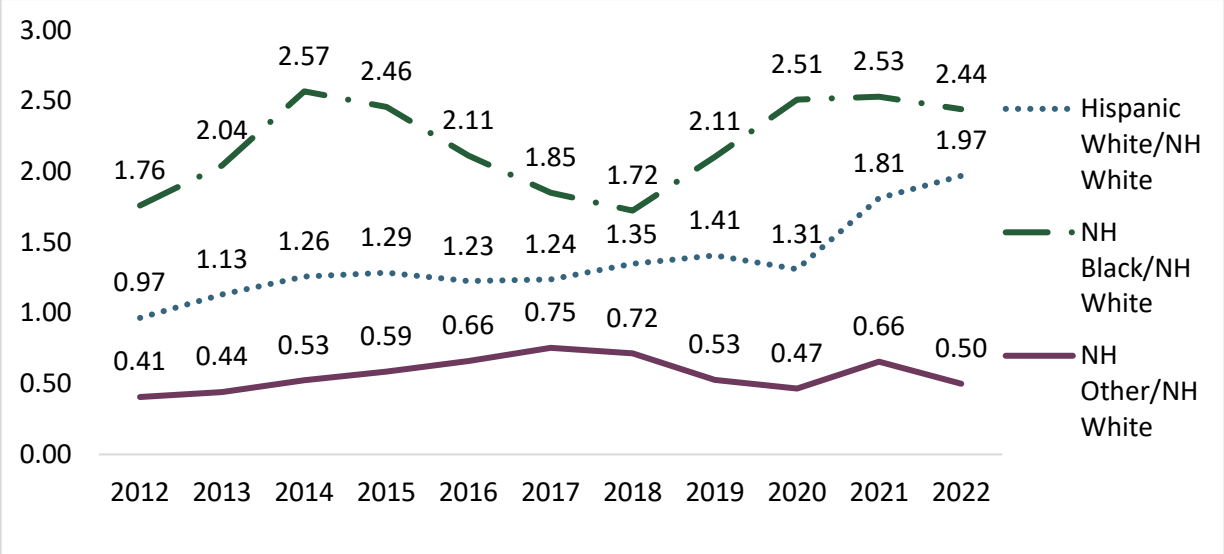
Sources: Colorado Bureau of Investigation, National Incident-Based Reporting System; Colorado State Demography Office Data; Analyzed by the Division of Criminal Justice.

Notes: Rates are calculated using data obtained from the Colorado State Demography Office, using the total population of Coloradans 10 years of age and older for each race/ethnicity group as the denominator. NIBRS does not collect information on more than one race, and individuals assigned to Asian, Pacific Islander, American Indian/Alaskan Native were classified in the "Other" category due to small numbers. If ethnicity was marked as "missing" or "unknown," the individual was assigned to NH (Non-Hispanic). This decision might have contributed to misclassification bias.

Racial and ethnic disparities in marijuana arrests have fluctuated from 2012 to 2022 and differ by group. Using NH Whites as the comparison group, the NH Other racial group consistently had lower arrest rates compared to NH Whites. In 2022, there was a 0.50 disparity rate ratio, meaning that for every arrest of someone in the NH Other group, there were two arrests in NH Whites. The lowest disparity rate ratio occurred in 2012 (0.41), and the highest was recorded in 2017 (0.75). Hispanic Whites had a comparable arrest rate to NH Whites in 2012, but by 2022, the arrest disparity peaked to 1.97, meaning that for every arrest of a NH White, there were roughly 2 arrests made for Hispanic Whites. Consistently, NH Blacks have had the highest arrest rate disparities compared to the other racial groups in this analysis. From 2012 to 2014, the arrest rate disparity peaked at 2.57, meaning that for every two arrests of NH Whites, there were 5 arrests of NH Blacks. As legalization continued, the disparity rate ratio steadily dropped, and by 2018, the disparity was down to its lowest level at 1.72. However, by 2022, the disparity rate ratio was back at 2.44. This increase in the disparities

suggests that NH Blacks might not have benefited from the arrest reductions associated with the pandemic and changes in the marijuana criminal code arrest to the extent that NH Whites in Colorado have.

Figure 2.1 Marijuana arrest rate ratios by race/ethnicity, 2012-2022



Sources: Colorado Bureau of Investigation, National Incident-Based Reporting System; Colorado State Demography Office Data; Analyzed by the Division of Criminal Justice.

Notes: Rates are calculated using data obtained from the Colorado State Demography Office, using the total population of Coloradans 10 years of age and older for each race/ethnicity group as the denominator. NIBRS does not collect information on more than one race, and individuals assigned to Asian, Pacific Islander, American Indian/Alaskan Native were classified in the "Other" category due to small numbers. If ethnicity was marked as "missing" or "unknown," the individual was assigned to NH (Non-Hispanic). This decision might have contributed to misclassification bias.

Arrest Type

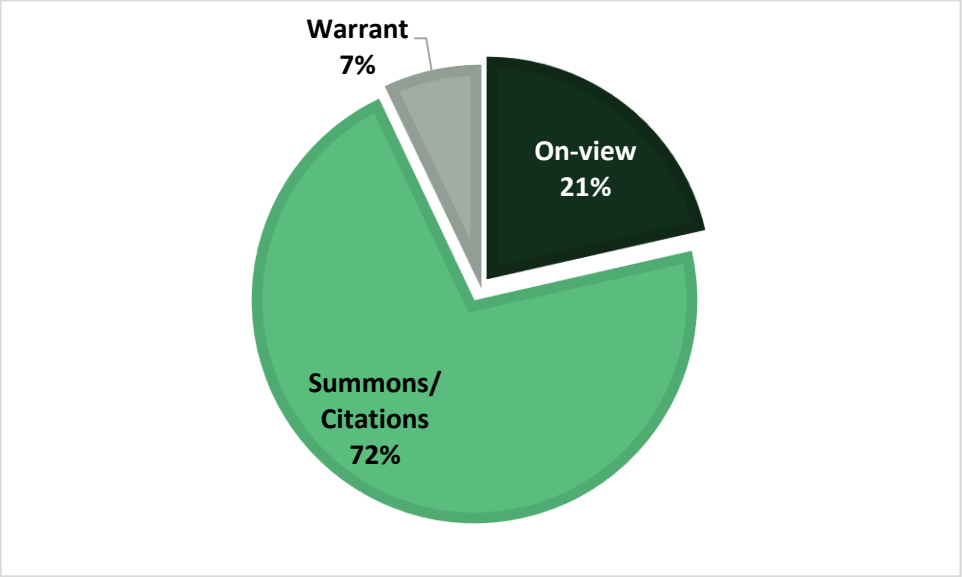
There are three general arrest types reported by law enforcement in NIBRS. *On-view* are custodial arrests without a warrant or previous incident report. *Warrants* are custodial arrests based on a warrant or previous incident report. *Summons/citations* are non-custodial arrests where a citation is issued and the person is instructed to appear in court at a later date. As can be seen in Table 2.7, after legalization the proportion of arrests that resulted in a summons or citation increased 10% between 2012 and 2015, and on-view arrests decreased by 8%. This trend reversed in 2016 when the ratio of on-view to summons/citation arrests was back to pre-legalization levels. In 2022, arrests initiated via a warrant increased to 11%, summons/citations-initiated arrests represented 69%, and on-view arrests comprised 19% of arrests. These numbers are slightly different than the average rates, as shown in Figure 2.2.

Table 2.7 Marijuana arrests in Colorado by arrest type, 2013–2022

Arrest Type	Total	On-view N	Summons/ Citations N	Warrant N	On-view %	Summons/ Citations %	Warrant %
2012	13,225	3,326	8,982	917	25%	68%	7%
2013	6,637	1,340	4,912	385	20%	74%	6%
2014	7,128	1,216	5,526	386	17%	78%	5%
2015	6,998	1,213	5,456	329	17%	78%	5%
2016	6,502	1,437	4,594	471	22%	71%	7%
2017	6,483	1,462	4,551	470	23%	70%	7%
2018	5,970	1,323	4,238	409	22%	71%	7%
2019	4,290	926	2,994	370	22%	70%	9%
2020	2,733	637	1,776	320	23%	65%	12%
2021	2,208	498	1,486	224	23%	67%	10%
2022	2,355	458	1,635	262	19%	69%	11%

Sources: Colorado Bureau of Investigation, National Incident-Based Reporting System; Colorado State Demography Office Data; Analyzed by the Division of Criminal Justice.
Note: The totals for drug crime type are slightly larger than the count of total people arrested. On-view are custodial arrests without a warrant or previous incident report. Warrants are custodial arrests based on a warrant or previous incident report. Summons/citations are non-custodial arrests where a citation is given to the person, and they are instructed to appear in court at a later date.

Figure 2.2 Marijuana arrests, by arrest type, 2012–2022



Source: Colorado Bureau of Investigation, National Incident-Based Reporting System. Analyzed by the Division of Criminal Justice.
Note: On-view are custodial arrests without a warrant or previous incident report. Warrants are custodial arrests based on a warrant or previous incident report. Summons/citations are non-custodial arrests.

Tables 2.8 to 2.10 present detailed data on the different types of marijuana arrests by age, race/ethnicity, and gender. In 2022, youth under 18 were more likely to receive a summons/citation (89%) than an on-view arrest (9%) or a warrant arrest (2%). Young adults 18-20 years old were also more likely to receive a summons/citation (70%) than an on-view arrest (22%) or a warrant arrest (8%). Adults 21 years and older were

more likely to get an on-view arrest (37%) compared to the other types. However, the proportion of arrests initiated via a warrant comprised one out of every three arrests compared to roughly one out of five in 2019. Females had a higher proportion of receiving a summons/citation compared to males (83% vs. 70%) (Table 2.9). NH Whites were equally as likely to experience an on-view arrest (16%) as Hispanics (17%) but less often than NH Blacks (23%) (Table 2.10). Arrest type proportions in the NH Other group varied more compared to the other racial groups, but this group had consistently low numbers overall (as shown in Table 2.6), and any differences from year-to-year should be interpreted with caution.

Table 2.8 Marijuana arrests, by arrest type and age, 2012–2022

Year	Under 18 On-view	Under 18 SC*	Under 18 Warrant	18 to 20 On-view	18 to 20 SC	18 to 20 Warrant	21 and older On-view	21 and older SC	21 and older Warrant
2012	10%	86%	40%	19%	76%	5%	36%	55%	9%
2013	11%	85%	4%	21%	74%	5%	41%	46%	12%
2014	11%	85%	3%	17%	79%	4%	30%	59%	11%
2015	11%	86%	3%	18%	79%	3%	27%	64%	9%
2016	14%	82%	4%	19%	75%	6%	38%	48%	14%
2017	13%	83%	4%	19%	77%	5%	44%	39%	16%
2018	13%	83%	3%	16%	79%	4%	46%	37%	17%
2019	10%	86%	4%	20%	75%	5%	46%	32%	22%
2020	14%	82%	3%	18%	77%	5%	37%	38%	25%
2021	10%	88%	2%	22%	71%	7%	39%	39%	22%
2022	9%	89%	2%	22%	70%	8%	37%	30%	33%

*: SC refers to offenses involving summons or citations.
Source: Colorado Bureau of Investigation, National Incident-Based Reporting System. Analyzed by the Division of Criminal Justice.
Note: On-view are custodial arrests without a warrant or previous incident report. Warrants are custodial arrests based on a warrant or previous incident report. Summons/citations are non-custodial arrests.

Table 2.9 Marijuana arrests, by arrest type and gender, 2012–2022

Year	Male On-view	Male SC*	Male Warrant	Female On-view	Female SC	Female Warrant
2012	26%	67%	7%	23%	71%	6%
2013	21%	73%	6%	17%	79%	5%
2014	18%	76%	6%	12%	84%	3%
2015	18%	77%	5%	15%	82%	3%
2016	24%	69%	8%	17%	77%	6%
2017	23%	69%	8%	20%	74%	6%
2018	24%	68%	7%	16%	78%	5%
2019	24%	67%	9%	15%	77%	8%
2020	22%	67%	11%	21%	72%	8%
2021	24%	67%	10%	13%	82%	5%
2022	19%	70%	11%	11%	83%	6%

*: SC refers to offenses involving summons or citations.
Source: Colorado Bureau of Investigation, National Incident-Based Reporting System. Analyzed by the Division of Criminal Justice.
Note: On-view are custodial arrests without a warrant or previous incident report. Warrants are custodial arrests based on a warrant or previous incident report. Summons/citations are non-custodial arrests.

Table 2.10 Marijuana arrests, by arrest type and race, 2012–2022

Year	NH White On-view	NH White SC*	NH White Warrant	Hispanic On View	Hispanic SC	Hispanic Warrant	NH Black On-View	NH Black SC	NH Black Warrant	NH Other On-view	NH Other SC	NH Other Warrant
2012	24%	70%	7%	28%	63%	8%	31%	64%	6%	27%	65%	9%
2013	19%	75%	6%	22%	72%	6%	24%	73%	3%	19%	72%	9%
2014	17%	78%	5%	18%	76%	6%	18%	77%	5%	12%	82%	6%
2015	17%	79%	5%	18%	77%	5%	20%	78%	3%	21%	73%	6%
2016	18%	75%	7%	27%	64%	9%	37%	58%	5%	31%	61%	8%
2017	19%	74%	7%	25%	65%	10%	36%	58%	7%	35%	60%	4%
2018	18%	76%	6%	25%	65%	10%	38%	56%	6%	46%	47%	7%
2019	21%	72%	7%	19%	69%	12%	30%	63%	7%	33%	52%	15%
2020	20%	72%	7%	23%	64%	13%	29%	59%	11%	19%	34%	47%
2021	19%	74%	7%	20%	72%	8%	23%	65%	12%	33%	41%	26%
2022	16%	76%	9%	17%	74%	9%	23%	67%	10%	15%	50%	35%

*: SC refers to offenses involving summons or citations.

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System. Analyzed by the Division of Criminal Justice.

Note: On-view are custodial arrests without a warrant or previous incident report. Warrants are custodial arrests based on a warrant or previous incident report. Summons/citations are non-custodial arrests.

County

As shown in Appendix A, Table 1, of the counties with marijuana arrests in 2012 and 2022, nearly all showed a decrease in arrests (39 out of 42). The nine largest Colorado counties by population (Adams, Arapahoe, Boulder, Douglas, El Paso, Jefferson, Larimer, Mesa, and Weld) showed declines in marijuana arrests between 2012 and 2022 ranging from -96% (Denver) to -85% (Boulder). In 2022, Jefferson county had the highest number of arrests at 395, and among rural counties, Garfield had the most arrests with 61. The county rates are presented in Appendix A, Table 2. In 2022, Mesa county had the highest rate at 134 arrests per 100,000 residents aged 10 and older, and was nearly three times higher than the Colorado rate as a whole (46 arrests per 100,000). Pueblo had the lowest rate at 9 arrests per 100,000. Twenty-one rural counties did not have any arrests in 2022.

Agency

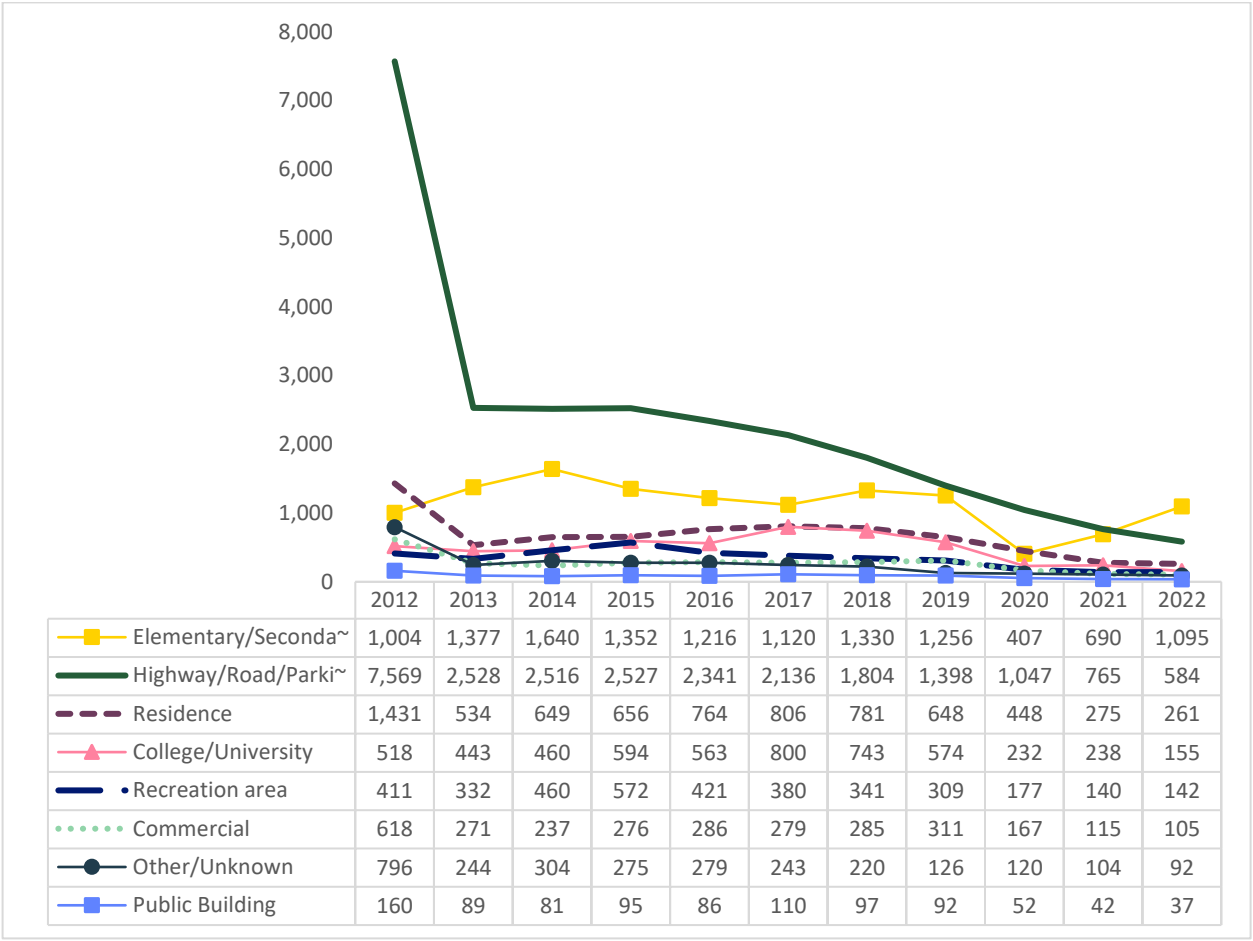
The trends for each agency reporting marijuana arrests to the National Incident Based Reporting System (NIBRS) are presented in Appendix A, Table 4. Nearly all large departments reported decreases in marijuana arrests from 2012 to 2022; in 2012, on average law enforcement agencies reported around 115 arrests, and by 2022, the average number of arrests per agency dropped to 20. Greenwood Village Police Department had the largest decrease in marijuana arrests from 2012 to 2022(-99%), followed by the University of Colorado Police Department – Boulder (-97%), see Appendix A, Table 4. In 2022, Thornton Police Department had the highest number of marijuana arrests (132), followed by Lakewood Police Department (130), Aurora Police Department (127), Grand Junction Police Department (115) and Colorado Springs Police Department (107).

Offense Location

NIBRS captures information on the place an offense was reported to have occurred. There are 45 categories, including public transportation, bars, convenience stores, homes, parks/playgrounds, parking lots, primary/secondary schools, colleges, among others. Data for offenses grouped by place are presented in Figure 2.3 and data for all places may be found in Appendix A, Table 5.

Overall, the number of offenses decreased by 80%, from 12,507 in 2012 to 2,471 in 2022. The known locations showing the largest drops were highway/road/street (-92%) and commercial locations (-83%). The location category with an increased number of offenses was elementary/secondary school (+9%). Overall in 2022, the majority of offenses occurred in Elementary/Secondary schools (44%), highway/road/parking areas (24%), and residential areas (11%).

Figure 2.3 Marijuana arrests by offense location categories, 2012-2022



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Elementary/Seconda~	1,004	1,377	1,640	1,352	1,216	1,120	1,330	1,256	407	690	1,095
Highway/Road/Parki~	7,569	2,528	2,516	2,527	2,341	2,136	1,804	1,398	1,047	765	584
Residence	1,431	534	649	656	764	806	781	648	448	275	261
College/University	518	443	460	594	563	800	743	574	232	238	155
Recreation area	411	332	460	572	421	380	341	309	177	140	142
Commercial	618	271	237	276	286	279	285	311	167	115	105
Other/Unknown	796	244	304	275	279	243	220	126	120	104	92
Public Building	160	89	81	95	86	110	97	92	52	42	37

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System data. Analyzed by the Division of Criminal Justice.
Note: The categories were updated from prior reports that were published, and will not match previous reports that were published. In order to have consistency in the categorization, the data was also re-extracted from NIBRS for the creation of this report, and they will not match prior reports.

Marijuana Court Case Filings

The Colorado State Judicial Branch's data system[24] was queried for marijuana cases filed[25] between 2008 and 2021. The State Judicial data system captures information from county and district courts statewide, with the exception of Denver County Court. The data include information on statute, charge description, charge classification, judicial district, defendant age, and defendant race.[26] The charges were categorized according to the text entered into the charge description field. Filing data are based on a calendar year.

Much like arrests, marijuana-related court case filings showed a marked decline in the past ten years. The number of marijuana-related case filings declined 73% between 2012 and 2021, from 9,925 to 2,741 (Table

[24] Misdemeanor and petty offense filings from Denver County Court are not part of the statewide Judicial database and are therefore not included in the Marijuana Court Case Filings section. District Court filings from Denver are included.
[25] This includes charges under C.R.S. 12-43.4-901, 18-8-203, 18-13-122, 18-18-406 (excluding the subsections for synthetics and salvia), 18-18-414, and 42-4-1305.5).
[26] Judicial does not systematically collect Hispanic ethnicity and will not be used here. For example, upon examining the data for 2019, only 7% of defendants were characterized as Hispanic compared to 21% of the general population and 23% of the marijuana arrestee population.

2.11).[27] The sharpest decreases occurred from 2012-2013 with filings dropping by 59%. Males saw a 74% fall in total marijuana cases filed while females experienced a 64% decline from 2012 to 2021 (Table 2.11).

Table 2.11 Cases with marijuana filings, by gender, 2008-2021

Year	Total	Female	Male	Unknown
2008	11,761	1,968	9,757	36
2009	10,906	1,793	9,083	30
2010	10,108	1,729	8,342	37
2011	9,791	1,716	8,055	20
2012	9,925	1,786	8,114	25
2013	4,042	708	3,313	21
2014	4,618	859	3,725	34
2015	4,939	1,016	3,888	35
2016	4,919	965	3,935	19
2017	5,340	1,133	4,175	32
2018	5,219	1,224	3,977	18
2019	4,489	1,007	3,456	26
2020	3,194	685	2,497	12
2021	2,741	647	2,083	11

Source: Colorado State Judicial Branch. Analyzed by the Division of Criminal Justice.

To assess the numbers of judicial filings on juveniles, young adults and adults, we grouped filings into three age categories, as seen in Table 2.12. Between 2012 and 2021, case filings declined by 62% in the 10- to 17-year-old group; 74% in the 18- to 20-year-old group; and 74% in the 21 and older age group.

[27] The overall totals and totals for those under 21 are higher than in the 2016 version of this report due to the addition of a minor in possession charge that was not included in the original 2016 query.

Table 2.12 Cases with marijuana filings, by age group, 2008-2021

Year	Total	10-17 years old	18-20 years old	21 years and older
2008	11,735	1,755	3,093	6,887
2009	10,890	1,616	2,785	6,489
2010	10,094	1,640	2,451	6,003
2011	9,778	1,544	2,456	5,778
2012	9,908	1,624	2,381	5,903
2013	4,034	1,492	1,491	1,051
2014	4,615	1,532	1,578	1,505
2015	4,931	1,766	1,613	1,552
2016	4,911	1,497	1,622	1,792
2017	5,319	1,610	1,706	2,003
2018	5,214	1,660	1,556	1,998
2019	4,481	1,407	1,146	1,928
2020	3,193	710	791	1,692
2021	2,740	608	613	1,519

Source: Colorado State Judicial Branch. Analyzed by the Division of Criminal Justice.

The distribution of marijuana cases by most serious law classification is presented in Table 2.13. In May of 2013, Colorado introduced marijuana traffic infractions, including consumption in a vehicle and open container prohibitions. The first recorded offenses in this category occurred in 2013. From 2014 to 2021, traffic infractions increased in frequency by twenty percentage points, while petty offenses decreased by 37 percentage points. In 2021, 38% of marijuana charges were classified as traffic offenses, and 36% were classified as petty offenses. From 2012 to 2021, felony filings fluctuated in frequency, ranging from a high of 986 to a low of 418. In 2021, felony filings were down by 40% compared to 2019.

Table 2.13 Cases with marijuana charges, by highest marijuana law class* in case, 2008-2021

Year	F	M	PO	T	Total	% F	% M	% PO	% T
2008	1,435	776	9,549	NA	11,760	12%	7%	81%	0%
2009	1,412	694	8,794	NA	10,900	13%	6%	81%	0%
2010	1,349	637	8,120	NA	10,106	13%	6%	80%	0%
2011	1,018	627	8,143	NA	9,788	10%	6%	83%	0%
2012	986	595	8,341	NA	9,922	10%	6%	84%	0%
2013	628	406	2,932	76	4,042	16%	10%	73%	2%
2014	418	531	2,830	837	4,616	9%	12%	61%	18%
2015	585	428	3,230	694	4,937	12%	9%	65%	14%
2016	792	430	3,007	689	4,918	16%	9%	61%	14%
2017	947	483	3,194	716	5,340	18%	9%	60%	13%
2018	869	407	3,085	853	5,214	17%	8%	59%	16%
2019	806	315	2,402	965	4,488	18%	7%	54%	22%
2020	651	312	1,196	1,033	3,192	20%	10%	37%	32%
2021	479	237	975	1,048	2,739	17%	9%	36%	38%

Note: [*] The law classes refer to felony (F), misdemeanor (M), petty offense (PO), and traffic (T).
Source: Colorado State Judicial Branch. Analyzed by the Division of Criminal Justice.

The charge of marijuana possession underwent a change in 2014 with the addition of the specific charge of *possession of marijuana under the age of 21*. Consequently, examining the trend in possession filings requires adding both of these charges together prior to 2015 since that was the first full year the new charge was consistently used. As described earlier, HB19-1263 increased the possession amounts required to be charged with certain drug offenses and also impacted marijuana case filings.

Between 2012 and 2021 (Table 2.14), total possession filings dropped by 98% (9,777 to 220), possession with intent to distribute was effectively unchanged (526 to 524), distribution dropped 55% (497 to 224), manufacture increased 14% (534 to 608), and conspiracy decreased 35% (176 to 109). The number of offenses for possession under the age of 21 has shown considerable variation, with the 1,035 filings in 2021 being the lowest since it was fully parsed out as a unique offense in 2015.

Table 2.14 Marijuana charges filed, by type of charge, 2008-2021

Year	Conspiracy	Manu-facture	Distri-bution	Possession with Intent	Possession	Public Use	Possession under age 21	Possession or use in vehicle
2008	101	378	486	937	10,998	126	NA	NA
2009	149	394	507	951	10,756	179	NA	NA
2010	194	534	513	734	9,924	204	NA	NA
2011	218	543	482	595	9,580	202	1	NA
2012	176	534	497	526	9,777	218	NA	NA
2013	133	193	465	379	3,701	259	3	94
2014	74	158	339	308	2,859	327	784	1,030
2015	126	363	368	507	1,406	223	3,182	883
2016	182	628	426	644	957	175	3,530	835
2017	271	753	510	836	998	241	3,816	870
2018	103	685	330	758	761	144	4,005	1,008
2019	114	608	224	530	505	90	3,071	1,129
2020	101	457	223	520	346	61	1,243	1,058
2021	109	162	115	524	220	41	1,035	1,070

Source: Colorado State Judicial Branch. Analyzed by the Division of Criminal Justice.

The number of charges based on level is presented in Table 2.15. The number of felony charges has varied considerably since legalization in 2012. There was a drop down to 759 in 2014, followed by a gradual increase from 2014 to 2017. From 2017 on, filings began to decrease, and in 2021, they were back to the 2014 level at 795. In 2021, dismissal rates for felony charges plunged to 47%. In prior years, dismissal rates ranged from 61% to 81%.

The number of misdemeanor filings has gradually decreased since legalization, reaching a low of 294 in 2021. Dismissal rates have varied considerably from 2008 to 2021 for misdemeanor charges, ranging from 32% to 64%. In 2021, a little less than half of misdemeanor charges were dismissed. The number of petty offenses followed a similar trend to felonies, with an initial drop followed by an increase, then a decrease through 2021. In 2021, almost three out of four petty offense charges were dismissed. Finally, there were some traffic offenses created regarding possession of an open container of marijuana. Those figures have hovered around 1,000 since full implementation in 2014.

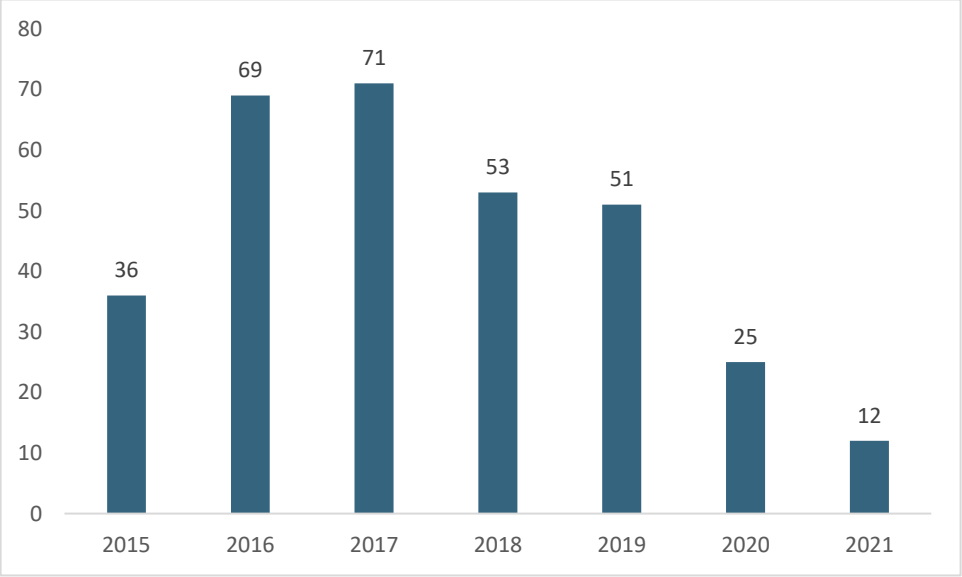
Table 2.15 Marijuana charges filed, by classification and percent dismissed, 2008–2019

Year	Felonies % dismissed	Felonies Total charges	Misdemeanors % dismissed	Misdemeanors Total charges	Petty Offenses % dismissed	Petty Offenses Total charges	Traffic % dismissed	Traffic Total charges	All Charges % dismissed	All charges
2008	73.5%	2,542	32.5%	1,257	75.7%	9,248	NA	NA	71.1%	13,048
2009	74.9%	2,554	32.3%	1,221	78.3%	9,161	NA	NA	73.3%	12,939
2010	76.4%	2,374	39.0%	1,126	79.6%	8,627	NA	NA	75.2%	12,128
2011	75.1%	1,989	47.5%	1,011	82.4%	8,624	NA	NA	78.1%	11,625
2012	80.7%	1,916	50.3%	1,000	84.1%	8,831	NA	NA	80.6%	11,750
2013	77.9%	1,259	48.5%	641	84.3%	3,241	91.5%	94	78.5%	5,235
2014	71.4%	759	59.0%	744	80.1%	3,345	80.7%	1,029	76.4%	5,880
2015	76.6%	1,305	62.2%	643	76.9%	4,232	82.3%	881	76.2%	7,063
2016	74.6%	1,781	64.7%	682	77.5%	4,088	82.5%	834	76.2%	7,386
2017	70.5%	2,323	64.4%	727	75.4%	4,394	83.1%	870	73.9%	8,314
2018	65.6%	1,813	56.8%	628	77.3%	4,352	81.9%	1,004	73.5%	7,802
2019	--	1,416	--	416	--	3,314	--	1,128	--	6,276
2020	60.8%	1,149	57.1%	422	76.7%	1,384	75.3%	1,056	69.8%	4,015
2021	47.2%	795	45.2%	294	71.8%	1,119	68.%	1,069	62.2%	3,279

Source: Colorado State Judicial Branch. Analyzed by the Division of Criminal Justice.

The number of court case filings for manufacturing concentrate (such as hash oil, wax, shatter) using an inherently hazardous substance, such as butane (C.R.S. 18-18-406.6, effective date July 1, 2015), is presented in Figure 2.4. There were 71 filings for hazardous manufacturing of concentrates in 2017; these filings have since dropped to 12 in 2021.

Figure 2.4 Case filings with charge for hazardous extraction of marijuana concentrates, 2015–2021



Source: Colorado State Judicial Branch. Analyzed by the Division of Criminal Justice.

Note: The law making the hazardous extraction of concentrates illegal became effective July 1, 2015.

Organized Crime Charges

The number of court case filings in which the Colorado Organized Crime Control Act (COCCA) was charged in conjunction with a marijuana charge is presented in Table 2.16. One case filing can be associated with multiple charges, so the sum of charges will exceed the number of filings. The number of COCCA filings has fluctuated, from 15 in 2012, 119 in 2017, and down to 29 in 2021. The most common types of charges associated with COCCA filings were conspiracy (n = 51) and possession with intent to sell (n=40).

Table 2.16 Marijuana case filings and charges associated with Colorado Organized Crime Control Act, 2008-2021

Year	N COCCA case filings	Conspiracy Charges	Manufacture Charges	Distribution Charges	Possession with intent to sell Charges	Possession Charges	Other Charges
2008	3	0	2	4	1	0	0
2009	8	2	1	2	5	4	0
2010	18	30	42	33	10	1	6
2011	15	77	9	32	34	1	0
2012	31	56	25	43	32	4	0
2013	16	21	26	24	1	4	1
2014	1	0	0	0	1	0	0
2015	40	61	108	59	60	8	0
2016	81	73	111	98	75	15	0
2017	119	148	145	145	125	20	0
2018	13	10	28	11	7	0	0
2019	34	14	36	15	12	1	0
2020	27	34	38	20	20	0	0
2021	29	51	2	0	40	2	0

Source: Colorado State Judicial Branch. Analyzed by the Division of Criminal Justice.
Note: A single case filing can be associated with multiple charges, so the sum of charges will exceed the number of filings.

Crime around Marijuana Establishments

The number of crimes around marijuana establishments is difficult to measure. Colorado does not have a statewide database that places all reported crimes at a specific location. The Denver Police Department began a project to review all reported crimes to determine if there was a clear connection or relationship to marijuana. Additionally, the project identifies whether the crime was related to the marijuana industry or not. Data presented in this report covers the time period of January 2012 to 2022, which was the most current data available.

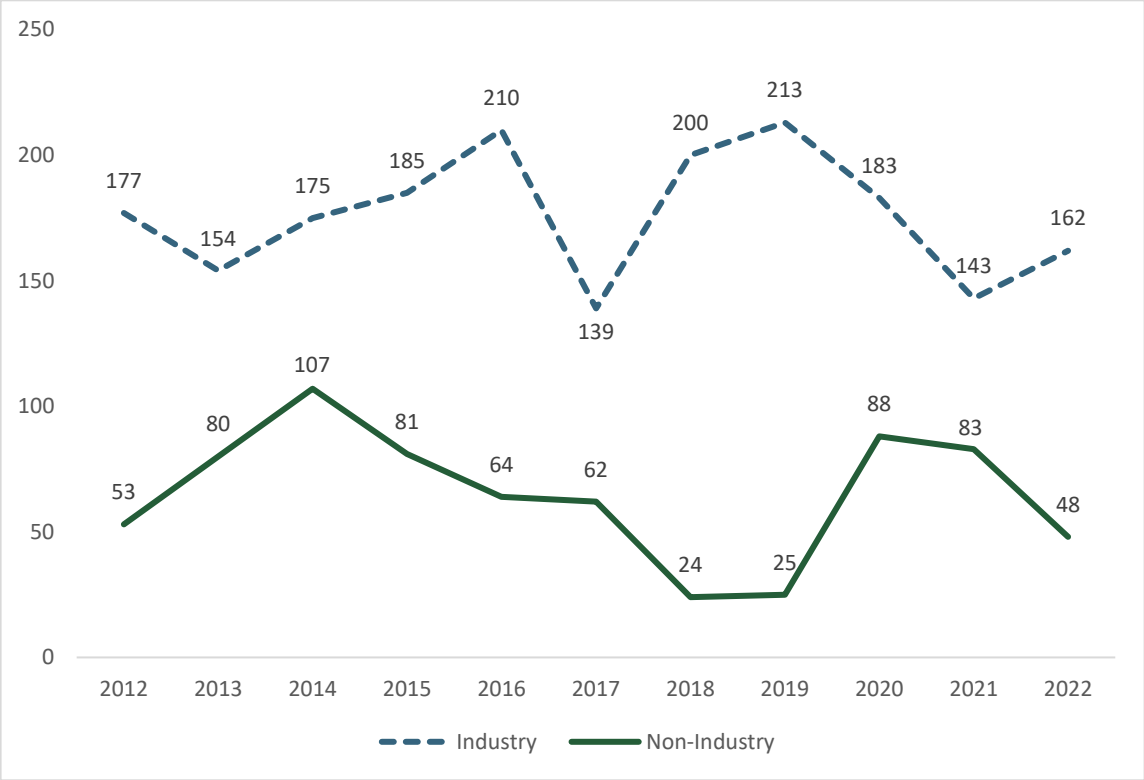
From 2014 to 2022, 70,294 total criminal offenses were recorded on average per year in Denver.[28] The number of marijuana industry-related crimes make up less than one percent of all crimes and ranged from 139 in 2017 to 213 in 2019 (see Figure 2.5). In 2022, the most common industry-related crime was burglary, which

[28] City and County of Denver (2023), The Denver Collaborative Approach: Leading the Way in Municipal Marijuana Management.

accounted for 96% of all industry-related crime.[28] There has been concern that, due to the cash-only nature of the industry, robbery would be prevalent but this has not been the case.

The number of non-industry-related marijuana crimes was small, and in 2022, there were only 48 reported offenses.

Figure 2.5 Marijuana crime in Denver, 2012–2022[29]



Source: Denver Open Data Catalog, Crime Marijuana; City and County of Denver (2023), The Denver Collaborative Approach: Leading the Way in Municipal Marijuana Management

[29] Note from the Denver Police Department: "Data in this file are crimes reported to the Denver Police Department which, upon review, were determined to have clear connection or relation to marijuana. These data do not include police reports for violations restricting the possession, sale, and/or cultivation of marijuana. This dataset is based upon the National Incident Based Reporting System (NIBRS) which includes all victims of person crimes and all crimes within an incident. The data is dynamic, which allows for additions, deletions and/or modifications at any time, resulting in more accurate information in the database. Due to continuous data entry, the number of records in subsequent extractions are subject to change. Industry-related crimes involve marijuana and licensed marijuana facilities. These reported crimes are committed against the licensed industry or by the industry itself. Non-Industry crimes are crimes reported where marijuana is the primary target in the commission of these crime but the marijuana has no readily apparent tie to a licensed operation."
The Denver Police Department changed its data system in 2013, therefore crime data prior to that time is not comparable.

Traffic Safety

Driving Under the Influence[30]

It is difficult to gauge the scope of DUID offenses for several reasons. First, there is no criminal charge that specifies that the driver is impaired by drugs instead of, or in combination with, alcohol. The current statute applies to driving under the influence of alcohol, drugs, or a combination of the two.[31] Second, there is no central repository of toxicology results that would allow for an analysis of trends. Third, at a traffic stop, law enforcement may choose not to pursue additional toxicology testing if the driver is exhibiting indicia of impairment from alcohol. The additional time and cost required for further toxicology testing may not be considered worthwhile if the burden of proof for impairment is already being met by a high blood alcohol content (BAC) level.

Colorado established a limit of 5 ng/mL of Delta 9-THC in whole blood that creates a permissible inference that a "defendant was under the influence of one or more drugs."[32] After an arrest, if the officer has probable cause to believe the suspect is impaired by drugs and/or alcohol,[33] the officer may transfer the suspect to a location where blood can be drawn for further toxicology screening. The Delta-9 THC level in blood decreases rapidly in the first hour after use, then gradually thereafter, making prompt testing critical.[34]

Importantly, the findings below should be considered in light of the fact that the number of peace officers who have been trained to identify driving impairment from drugs other than alcohol has increased substantially in recent years. Overall, the number of peace officers with Drug Recognition Expert certification has fluctuated from 2006-2022; Colorado started off with 107 officers in 2006, and by 2015, more than doubled its number of DRE officers to 244 (as shown in Figure 2.6). Interest in the program was at the highest level at this time. By 2022, the number of active DRE-certified officers dropped back to 107. Since DRE certifications last two years, the 2022 decline in program numbers might reflect lingering challenges in law enforcement staffing capacity that began in 2020. In addition to participating in the DRE certification program, hundreds of additional peace officers have also received training in Advanced Roadside Impaired Driving Enforcement (ARIDE) and/or taken part in a Green Lab course, which provides specific training on detecting marijuana impairment.

[30] In 2017 the Colorado General Assembly enacted House Bill 1315, mandating the Division of Criminal Justice (DCJ) to collect and analyze specific data regarding driving under the influence of drugs and alcohol. It includes a requirement to report on the number of convictions with evidentiary test results indicating impairment by alcohol, marijuana, Schedule I drugs (C.R.S., 18-18-203), other drugs, or any combination of these. The most recent revision of this report is available at https://cdpsdocs.state.co.us/ORS/Docs/Reports/2020-DUI_HB17-1315.pdf. Much of the information presented in this section is excerpted from this report.

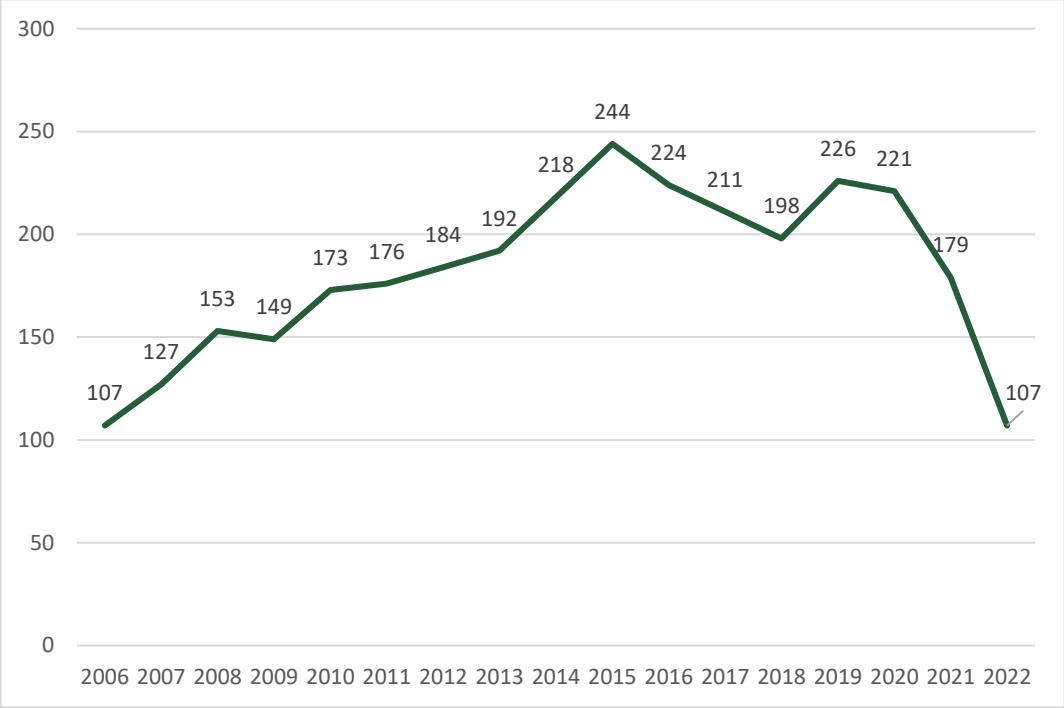
[31] C.R.S. 42-4-1301.

[32] C.R.S. 42-4-1301 (6)(a)(IV).

[33] An officer may also transport a suspect for blood screening when alcohol is the only substance suspected. There are evidentiary breath alcohol testers available to law enforcement that are easy to administer and that are available in jails and some police stations.

[34] Atha, M. (2000). *Blood and urine drug testing for cannabinoids*, available at http://www.idmu.co.uk/pdfs/drugtest.pdf

Figure 2.6 Certified Drug Recognition Experts in Colorado, 2006-2022

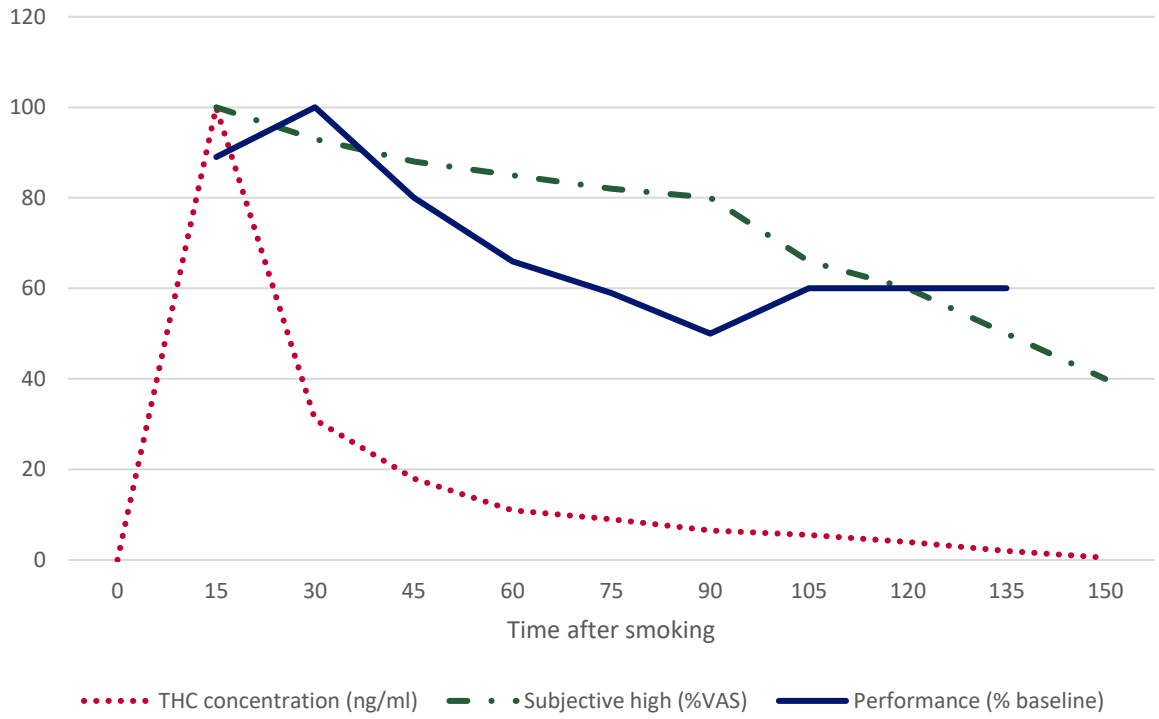


Source: Colorado Department of Transportation

Figure 2.7 depicts results from a study that examined Delta-9 THC concentration, subjective high, and performance of subjects.[35] It shows that THC concentration peaks early, but the impairing effects on driving-related performance tasks and subjective high continue long after the peak concentration. This suggests that there are performance deficits that follow the peak of THC concentration. Furthermore, high THC concentration in whole-blood does not perfectly correspond to impairment.

[35] Berghaus et al. 1998, Sticht and Käferstein 1998, and Robbe 1994 as cited in Compton, R. (2017, July). *Marijuana-Impaired Driving - A Report to Congress.* (DOT HS 812 440). Washington, DC: National Highway Traffic Safety Administration.

Figure 2.7 Time course of Delta-9 THC concentration, subjective high, and performance



Source: Berghaus et al. (1998); Sticht and Käferstein (1998); and Robbe (1994) as cited in Compton (2017).

Further compounding the problem of linking whole blood concentrations of THC with impairment is the context of individual consumption. Karschner et al. (2009) found that chronic cannabis users had measurable concentrations of Delta-9 THC during a seven-day abstinence period. The highest level observed at the conclusion of the seven days was 3.0 ng/mL, because of THC being stored in fat and its ability to slowly release from the tissue.[36] This becomes a problem for frequent and medicinal users who may continuously have THC detectable in their blood without noticeable impairing effects.

Despite the complicated relationship between the pharmacokinetics of cannabis and impairment, there have been developments in oral fluid (OF) roadside tests to detect cannabis. The benefits of this exam are many, but there are also many caveats. The Society of Forensic Toxicologists indicated that OF concentrations of THC were correlated with blood levels after three hours, and one study found that passive exposure to cannabis may result in a positive OF screen.[37, 38] In a review of the literature, NHTSA indicated that these screening devices "have not been shown to be completely reliable and accurate" in its 2017 *Marijuana-Impaired Driving*

[36] Experimental protocol with abstinence monitored, not self-reported, on 25 subjects. See Karschner, E. L., Schwilke, E. W., Lowe, R. H., Darxin, D., Pope, H. G., Herning, R., Lud Cadet, J., & Huestis, M. A. (2009). Do Δ^9-tetrahydrocannabinol concentrations indicate recent use in chronic cannabis users? *Addiction, 104*(12), 2041-2048. doi: 10.1111/j.1360-0443.2009.02705.x.

[37] See Oral Fluid FAQs document from the Society of Forensic Toxicologists at http://www.soft-tox.org/files/2017_OF_FAQ.pdf

[38] Passive, non-smoking participants showed some presence of THC in OF, but at much lower levels than observed for actively smoking participants and under extreme secondhand exposure. See Cone, E. J., Bigelow, G. E., Hermann, E. S., Mitchell, J. M., LoDico, C., Flegel, R., & Vandrey, R. (2015). Nonsmoker exposure to secondhand cannabis smoke. III. Oral fluid and blood drug concentrations and corresponding subjective effects. *Journal of Analytical Toxicology, 39*, 497-509. doi:10.1093/jat/bkv070.

report.[39] THC concentrations in OF fluid are known to have large variability among occasional and heavy users. Furthermore, the peak of THC concentration varies depending on the method of consumption, with higher concentrations and an initial spike in concentration when smoked as opposed to when ingested.

Colorado has invested resources in examining emerging drug impairment detection devices for use in law enforcement operations, as demonstrated by the passage of House Bill 22-1321 and publication of an evaluation of such a device.[40]

Marijuana and Driving

The information in this section was excerpted from the study of impaired driving filings published pursuant to HB 17-1315, which analyzed data for 2020 and included some trend data for 2016-2020.[41] Starting on July 1, 2019, CBI's forensic alcohol and drug testing laboratory began offering free drug and alcohol screening and confirmatory testing to all law enforcement agencies investigating impaired driving cases. Previously, agencies had to pay a modest fee of $40 for blood alcohol testing and then would have had to spend anywhere from $200-600 for a drugs of abuse testing screen. This policy change was intended to remove one of the barriers to drug testing in impaired driving cases, discover the prevalence of the presence of drugs other than alcohol in impaired driving cases, and increase detection of polydrug impairment.

Cannabinoid screening increased from 2016 to 2020 (see Table 2.17 below). The number of cases where drivers were screened for cannabinoids increased from 3,946 (14.5% of all DUIs) in 2016 to 7,705 (36.6% of all DUIs) in 2020. From 2019 to 2020, cannabinoid screenings increased by 37%, which was the largest one-year increase across the four years, which likely reflects the expansion of state-sponsored drug and alcohol screening.

The other noted change from 2016 to 2020 was the decrease in the percentage of screenings with cannabinoid positivity, which is logical given the expansion of testing to drivers who may not have been suspected to be impaired by marijuana. This change might mean that the positivity rate better reflects the toxicology of the general population of impaired drivers in Colorado. The percentage of screened cases testing positive at the initial cannabinoid screen went from 73.1% positive in 2016 to 48.9% in 2020. The cases which underwent confirmatory Delta-9 THC testing were stratified according to their Delta-9 level, as shown in (Table 2.18). Consistently, around half of the cases tested at or above the 5 ng/mL "permissible inference" level while another one-third tested between 1.0-4.9 ng/mL. The median level of Delta-9 THC has dropped from 5.9 ng/mL in 2016 to 4.1 ng/mL in 2018. The mean level of Delta-9 THC has gone from 8.7 ng/mL in 2016 to 7.6 ng/mL in 2020.

[39] Compton, R. (2017, July). Marijuana-Impaired Driving - A Report to Congress. (DOT HS 812 440). Washington, DC: National Highway Traffic Safety Administration.

[40] Lyon, C., Vanlaar, W., & Robertson, R. D. (2023, June). *CDOT cognitive roadside device evaluation study*. Traffic Injury Research Foundation.

[41] Rosenthal, A. & Reed, J. (2020). *Driving under the influence of drugs and alcohol: A report pursuant to House Bill 17-1315*. Lakewood, CO: Colorado Division of Criminal Justice. Available at https://cdpsdocs.state.co.us/ORS/Docs/Reports/2020-DUI_HB17-1315.pdf

Table 2.17 DUI case filings and cannabinoid testing and positivity, 2016-2020

Screen Result	Cannabinoids Not Present	Cannabinoids Present	Total Screenings
2016	1,061	2,885	3,946
2017	1,622	3,170	4,792
2018	1,697	3,335	5,032
2019	2,470	3,142	5,612
2020	3,937	3,768	7,705
2016 %	26.9%	73.1%	100.0%
2017 %	33.8%	66.2%	100.0%
2018 %	33.7%	66.3%	100.0%
2019 %	44.0%	56.0%	100.0%
2020 %	51.1%	48.9%	100.0%

Note: In July of 2019, the Colorado Bureau of Investigation began testing all blood toxicology submissions for both alcohol and other drugs of abuse. In the past, testing was conducted for alcohol, drugs or both based on the request of law enforcement agency or the district attorney's office. Additionally, breath testing was temporarily suspended in certain jurisdictions for 2020, and these jurisdictions could have opted for more blood testing for alcohol and drugs of abuse as opposed to alcohol-only breath testing. These changes could have contributed to the reduction in the overall cannabinoid positivity rate, but also could represent an improvement in the completeness of the measure to assess the toxicology of individuals charged with a DUI.
Sources: State Judicial Department, Denver County Court, Chematox and the Colorado Bureau of Investigation. Analyzed by the Division of Criminal Justice. Excerpted from Rosenthal, A. (2023). *Driving under the influence of drugs and alcohol: A report pursuant to C.R.S. 24-33.5-520.* Lakewood, CO: Colorado Division of Criminal Justice.

Table 2.18 DUI case filings by Delta-9 THC ng/mL levels, 2016-2020

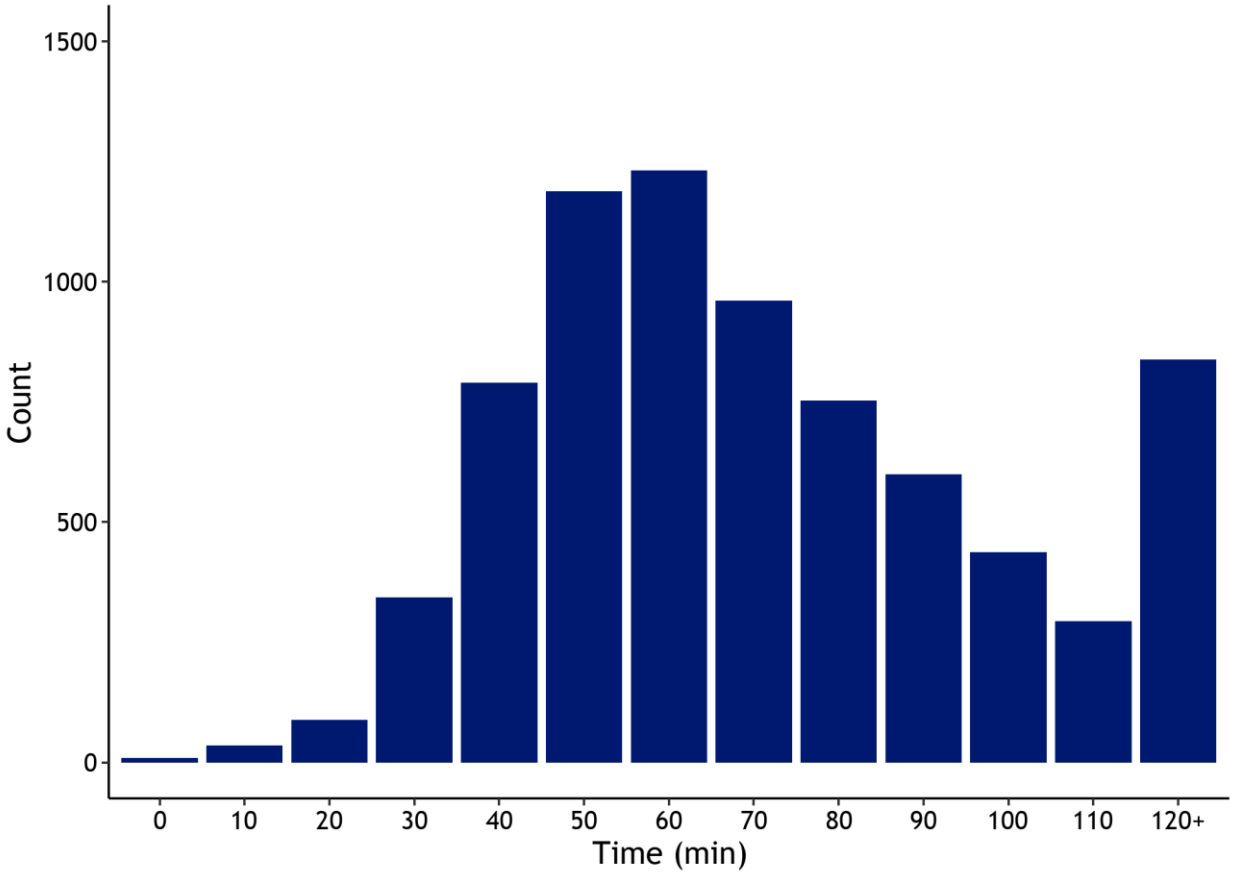
THC Levels	None Detected	Present but <1.0	1.0 - 4.9	5.0+	Total
2016	396	90	1,030	1,369	2,885
2017	431	63	1,069	1,607	3,170
2018	459	88	1,134	1,654	3,335
2019	328	216	1,069	1,563	3,176
2020	411	287	1,282	1,788	3,768
2016 %	13.7%	3.1%	35.7%	47.5%	100.0%
2017 %	13.6%	2.0%	33.7%	50.7%	100.0%
2018 %	13.8%	2.6%	34.0%	49.6%	100.0%
2019 %	10.3%	6.8%	33.7%	49.2%	100.0%
2020 %	10.9%	7.6%	34.0%	47.5%	100.0%

Notes: Delta-9 THC is only quantified when the initial cannabinoid screen is positive. In July of 2019, the Colorado Bureau of Investigation began testing all blood toxicology submissions for both alcohol and other drugs of abuse. In the past, testing was conducted for alcohol, drugs or both based on the request of law enforcement agency or the district attorney's office. Additionally, breath testing was temporarily suspended in certain jurisdictions for 2020, and these jurisdictions could have opted for more blood testing for alcohol and drugs of abuse as opposed to alcohol-only breath testing. These changes could have contributed to the increase in null findings ("none detected"), but also could represent an improvement in the completeness of Delta-9 THC levels to assess the toxicology of individuals charged with a DUI.
Sources: State Judicial Department, Denver County Court, Chematox and the Colorado Bureau of Investigation. Analyzed by the Division of Criminal Justice. Excerpted from Rosenthal, A. (2023). Driving under the influence of drugs and alcohol: A report pursuant to C.R.S. 24-33.5-520. Lakewood, CO: Colorado Division of Criminal Justice.

Time to Marijuana Test

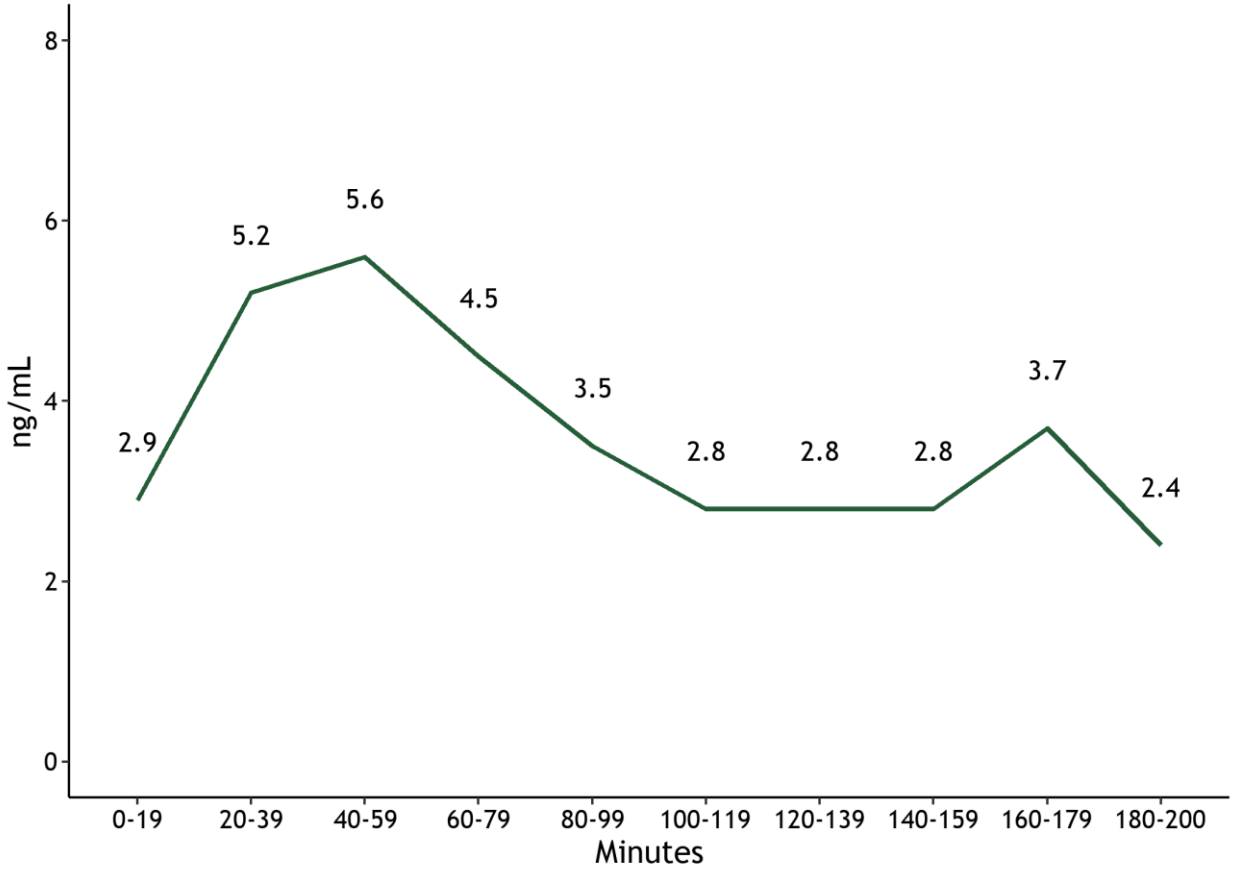
Time to blood draw by median Delta-9 THC values can be seen in Figure 8, including the number of cases at each time interval. Cases with an elapsed time of more than 200 minutes were excluded from the analysis. The majority of tests were completed at the 40- to 60-minute time intervals. Figure 9 reflects that median Delta-9 THC levels were highest when the time from offense to blood draw was between 40-59 minutes, reflecting the dissipation of Delta-9 THC levels in the blood.

Figure 2.8 Number of DUI case filings, by time in minutes from offense to blood draw categories, 2020



Sources: State Judicial Department, Denver County Court, and the Colorado Bureau of Investigation. Analyzed by the Division of Criminal Justice. Excerpted from Rosenthal, A. (2023). *Driving under the influence of drugs and alcohol: A report pursuant to C.R.S. 24-33.5-520.* Lakewood, CO: Colorado Division of Criminal Justice.

Figure 2.9 Median Delta-9 THC value by time to test and number of cases, 2020



Sources: State Judicial Department, Denver County Court, and the Colorado Bureau of Investigation. Analyzed by the Division of Criminal Justice. Excerpted from Rosenthal, A. (2023). *Driving under the influence of drugs and alcohol: A report pursuant to C.R.S. 24-33.5-520.* Lakewood, CO: Colorado Division of Criminal Justice.

Alcohol and Marijuana in Combination

Overall, 75% of positive Delta-9 THC DUI case filings had polydrug toxicology results, with 59% of filings also testing positive for alcohol. Table 2.19 shows BAC levels stratified by cannabinoid screening results and Delta-9 THC level categories. Mean BAC levels were highest in the case filings that underwent cannabinoid screening but were negative for all cannabinoids (0.159). For DUI case filings with positive Delta-9 THC results, mean BAC levels decreased as Delta-9 THC level increased. Filings with qualitative Delta-9 THC levels had a mean BAC of 0.132 versus those that tested positive at or above 5ng/mL had a mean BAC of 0.075, as shown in Table 20.

Regardless of the different Delta-9 THC toxicology testing status and/or level, nearly all of the mean BAC levels were above the 0.08 BAC, which is Colorado's legal impairment level.

Table 2.19 Mean blood/breath alcohol content (BAC) by Delta-9 THC levels among case filings with drug screening, 2020

Marijuana Toxicology/Delta-9 THC Group	Case Filings	Mean BAC	SD
Cannabinoids Not Present	3,937	0.159	0.10
Cannabinoids Present, THC Not Detected	411	0.121	0.11
Present but <1.0	287	0.132	0.11
1.0 - 4.9	1,282	0.119	0.10
5.0+	1,788	0.075	0.09

Sources: State Judicial Department, Denver County Court, and the Colorado Bureau of Investigation. Analyzed by the Division of Criminal Justice. Excerpted from Rosenthal, A. (2023). Driving under the influence of drugs and alcohol: A report pursuant to C.R.S. 24-33.5-520. Lakewood, CO: Colorado Division of Criminal Justice.

Polydrug use

In this analysis, substances found in toxicology reports are presented in three categories: alcohol, THC, and "other drug," which includes illicit drugs and prescription drugs. In 2020, 12,440 court case filings had toxicology tests conducted for alcohol as well as other drugs. From 2016-2020, most of these filings only had positive results for one substance. As shown in Table 2.20, alcohol was the primary substance detected for those with one drug present, followed by marijuana and, finally, other drugs. The other drugs category includes a multitude of substances, so this category does not identify any specific drug which may have impaired the driver. The proportion of filings with alcohol only results dropped considerably from 2016 to 2020, going from 78.8% to 59.2%, while filings with THC were stable, ranging from 5.4% to 6.7%.

Also shown in Table 2.20, the proportion of impaired driving filings with polydrug results has increased, going from 12.7% in 2016 to 29.3% in 2020. In 2020, 11.8% of all filings with toxicology results tested positive for alcohol and Delta-9 THC, and this category had the largest percentage point increase from 2016 to 2020. These increases might reflect the expansion of comprehensive drug screening, as described earlier. However, polydrug toxicology is still underrepresented because, when alcohol is obviously present, many officers might not request further drug testing due to the time and inconvenience associated with additional testing. This improved detection of polydrug results might facilitate better understanding of the dangerousness of polydrug substance use and its threat to roadway safety.

Table 2.20 Presence of any drug and polydrug use, 2016-2020

Drug Category	None Detected	Alcohol Only	THC Only	Single Other Drug	Alcohol and THC	Alcohol and Other	THC and Other	Alcohol, THC, and Other	Polydrug Not Alcohol or THC
2016	165	14,052	957	386	829	380	469	234	352
2017	170	13,449	1,083	415	958	430	447	251	276
2018	174	12,755	1,078	465	1,039	414	507	276	235
2019	288	11,792	907	300	1,188	579	412	341	202
2020	205	7,360	831	398	1,471	842	556	499	278
2016 %	0.9%	78.8%	5.4%	2.2%	4.7%	2.1%	2.6%	1.3%	2.0%
2017 %	1.0%	76.9%	6.2%	2.4%	5.5%	2.5%	2.6%	1.4%	1.6%
2018 %	1.0%	75.3%	6.4%	2.7%	6.1%	2.4%	3.0%	1.6%	1.4%
2019 %	1.8%	73.7%	5.7%	1.9%	7.4%	3.6%	2.6%	2.1%	1.3%
2020 %	1.6%	59.2%	6.7%	3.2%	11.8%	6.8%	4.5%	4.0%	2.2%

Notes: In July of 2019, the Colorado Bureau of Investigation began testing all blood toxicology submissions for both alcohol and other drugs of abuse. In the past, testing was conducted for alcohol, drugs or both based on the request of law enforcement agency or the district attorney's office. This change coincided with a decrease in alcohol-only results, and an increase in all other categories in 2019-2020. Additionally, the temporary reduction in the use of breath alcohol testing during the early period of the COVID-19 pandemic

Sources: State Judicial Department, Denver County Court, ChemaTox and the Colorado Bureau of Investigation. Analyzed by the Division of Criminal Justice. Excerpted from Rosenthal, A. (2023). Driving under the influence of drugs and alcohol: A report pursuant to C.R.S. 24-33.5-520. Lakewood, CO: Colorado Division of Criminal Justice.

Marijuana and DUI Dispositions

Table 2.21 shows the dispositions of DUI charges with a Delta-9 THC confirmation test and final case disposition (n=2,687). As with the previous table, this information includes all other charges that were amended, but does not show the specific disposition of final charges that were not DUI charges. In cases where Delta-9 THC was found without any additional drugs, the conviction rate was much higher when the amount of Delta-9 THC was above the 5.0 ng/mL permissible inference level (87.2%) than when it was below that level (35.2%). When other substances were present concurrently with the THC, the conviction rates were similar regardless of THC level.

Table 2.21 Conviction rate in cases with Delta-9 THC, by single/polydrug status and THC level, 2020

Delta-9 THC Bin	Number of Drugs	N	Conviction Rate
1.0 - 4.9	One Drug	152	38.2
1.0 - 4.9	Polydrug	931	89.5
5.0+	One Drug	533	83.5
5.0+	Polydrug	984	93.2

Sources: State Judicial Department, Denver County Court, and the Colorado Bureau of Investigation. Analyzed by the Division of Criminal Justice. Excerpted from Rosenthal, A. (2023). Driving under the influence of drugs and alcohol: A report pursuant to C.R.S. 24-33.5-520. Lakewood, CO: Colorado Division of Criminal Justice.

Colorado State Patrol

The Colorado State Patrol (CSP) accounted for about 23% of all arrests for driving under the influence in Colorado in 2022. [42] CSP began collecting information on the perceived impairing substance(s) of drivers at the beginning of 2014. CSP has the most drug recognition experts of any law enforcement agency in the state, with 27 officers or 25% of all DRE certified officers in 2022. These factors highlight CSP's expertise in detecting alcohol and drug impaired driving.

Colorado State Patrol's citation records show a 21% drop in impaired driving citations between 2014 (5,705) and 2022 (4,495) (Table 2.22). Citations in which alcohol was the only perceived impairing substance decreased by 47% (4,820 in 2014 to 2,535 in 2022). The number and proportion of citations in which marijuana-alone or marijuana-in-combination was recorded peaked in 2020 with 1,516 citations, representing 31.4%. However, 2022 had the fewest number of perceived marijuana impaired driving citations (n = 637), and the highest number of unknown impaired driving citations (n = 715; 16% of all citations). This amount of missing data does limit our ability to report on trends.

[42] Colorado Bureau of Investigation (2021). *Colorado Crime Statistics, DUI/Drugs 2020* https://coloradocrimestats.state.co.us/tops/report/drugs-dui/colorado/2020

Table 2.22. Driving under the influence citations issued by Colorado State Patrol, by perceived impairing substance, 2014–2022

Measure	2014	2015	2016	2017	2018	2019	2020	2021	2022
N citations	5,705	4,898	4,605	4,858	5,168	5,250	4,828	4,934	4,495
Marijuana only	359	335	388	336	426	391	418	309	234
Marijuana & alcohol	213	210	239	217	469	455	872	634	265
Marijuana & other drugs	112	107	153	169	190	193	226	217	138
Other drugs only	201	204	245	259	536	477	631	451	223
Alcohol only	4,820	4,042	3,580	3,877	3,258	3,734	2,681	2,811	2,535
Unknown impairment	0	0	0	0	289	0	0	183	715
Marijuana-involved*	684	652	780	722	1,085	1,039	1,516	1,160	637
Marijuana only %	6.3%	6.8%	8.4%	6.9%	8.2%	7.4%	8.7%	6.3%	5.2%
Marijuana & alcohol %	3.7%	4.3%	5.2%	4.5%	9.1%	8.7%	18.1 %	12.8 %	5.9%
Marijuana & other drugs %	2.0%	2.2%	3.3%	3.5%	3.7%	3.7%	4.7%	4.4%	3.1%
Other drugs only %	3.5%	4.2%	5.3%	5.3%	10.4 %	9.1%	13.1 %	9.1%	5.0%
Alcohol only %	84.5 %	82.5 %	77.7 %	79.8 %	63.0 %	71.1 %	55.5 %	57.0 %	56.4 %
Unknown impairment	NA	NA	NA	NA	5.6%	NA	NA	NA	NA
Marijuana-involved*	12.0 %	13.3 %	16.9 %	14.9 %	21.0 %	19.8 %	31.4 %	23.5 %	14.2 %

Source: Colorado State Patrol (2020).

Note: Impairment type is based on the trooper's assessment at the time of the citation and may not reflect toxicology results.

*Includes impairment from marijuana only, marijuana and alcohol, and marijuana and other drugs.

Mandated Treatment for Driving Under the Influence

Drivers convicted of driving under the influence in Colorado are mandated to attend approved treatment classes before their driver's license privileges can be reinstated. When they are admitted into treatment, the primary substance of use is captured in the Drug/Alcohol Coordinated Data System (DACODS). The proportion of individuals participating in DUI treatment with alcohol as the primary substance declined from 93% in 2012 to 84% in 2022. During that same time, clients reporting marijuana as their primary substance of use increased from 5% to 10% of DUI admissions (Table 2.23).

Table 2.23. Treatment admissions for DUI, by primary substance of use, 2008–2022

Year	Total DUI treatment	MJ	Alcohol	Any other drug	MJ %	Alcohol %	Any other drug %
2008	33,600	1,308	31,751	541	4%	94%	2%
2009	32,989	1,312	31,226	451	4%	95%	1%
2010	29,356	1,306	27,566	484	4%	94%	2%
2011	27,652	1,444	25,657	551	5%	93%	2%
2012	27,860	1,487	25,779	594	5%	93%	2%
2013	28,027	1,675	25,662	690	6%	92%	2%
2014	29,454	1,910	26,797	747	6%	91%	3%
2015	28,883	2,207	25,841	835	8%	89%	3%
2016	27,018	2,377	23,826	815	9%	88%	3%
2017	24,700	2,370	21,379	951	10%	87%	4%
2018	23,471	2,534	19,998	939	11%	85%	4%
2019	21,715	2,634	18,186	895	12%	84%	4%
2020	16,424	1,795	13,782	847	11%	84%	5%
2021	16,471	1,686	13,872	913	10%	84%	6%
2022	13,753	1,387	11,513	853	10%	84%	6%

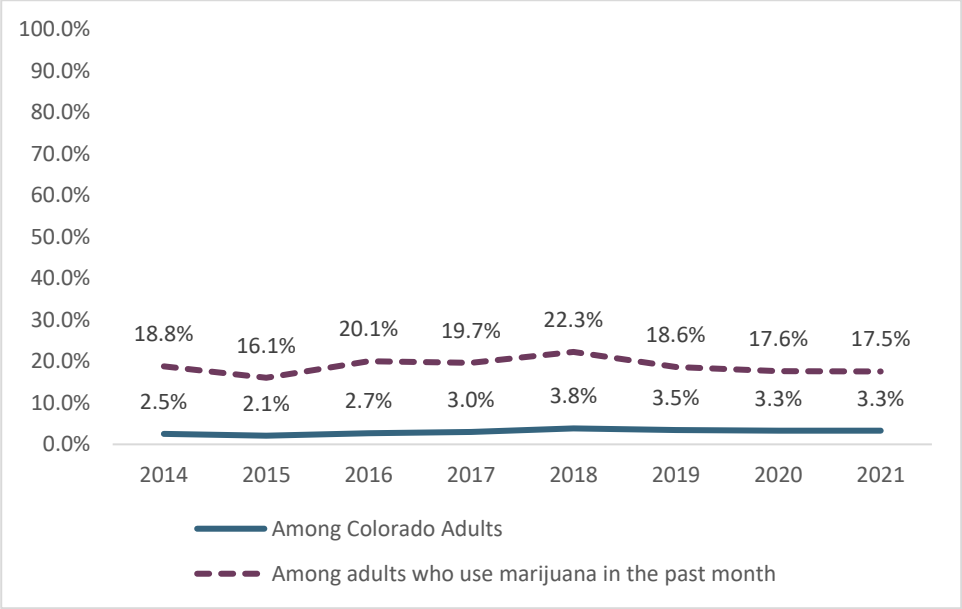
Source: Colorado Department of Human Services, Behavioral Health Administration, Drug/Alcohol Coordinated Data System. Analyzed by the Division of Criminal Justice.

Reported Driving Behavior

The Colorado Behavior Risk Factor Surveillance System (BRFSS) has been assessing self-reported driving after marijuana use since 2014.[43] Between 2% and 4% of adults reported driving within two- to three-hours of using marijuana; however, there has been a statistically significant rise in this behavior between 2014 and 2019 (Figure 2.10). Figure 2.10 also presents the results for those who reported current use of marijuana, with between 16% and 22% of adult users reporting driving within two- to three-hours of using marijuana. We also acknowledge that self-reported behaviors assessed in BRFSS may be subject to social desirability bias, and that these rates may underestimate the true rate of driving after marijuana use.

[43] For more information on this survey, please see *Section Three: Impact on Public Health and Behavioral Health Services*.

Figure 2.10 Percentage of adults and adults who used marijuana in the past month reporting driving within 2-3 hours of using marijuana, 2014–2021



Source: Colorado Behavioral Risk Factor Surveillance System, Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.

Fatality Analysis Reporting System

The Fatality Analysis Reporting System (FARS) is a program administered federally by the National Highway Traffic Safety Administration and statewide by the Colorado Department of Transportation (CDOT). FARS contains data derived from a census of fatal traffic crashes within the 50 states, the District of Columbia, and Puerto Rico. To be included in FARS, a crash must involve a motor vehicle traveling on a traffic way customarily open to the public and must result in the death of at least one person (occupant of a vehicle or a non-motorist) within 30 days of the crash.

The FARS database includes 143 data elements that characterize the crash, the vehicles, and the people involved.[44] FARS includes information from toxicology testing of drivers and others involved in the crash when available. For the period of 2013-2022, the percentage of drivers tested for drugs remained consistent (between 45% - 50%) according to information provided by CDOT. The status of the driver has an impact on testing prevalence, with 88% of deceased drivers tested compared to 18% of living drivers in 2022 (data not presented). This limits conclusions that can be drawn about the prevalence of drug impaired driving in Colorado.

Additionally, in 2013, the Rocky Mountain High Intensity Drug Trafficking Area (RMHIDTA) began working with CDOT to enhance the collection of toxicology data. In 2012, 9% of drivers had a drug test conducted, but the results were not reported to CDOT. The partnership between CDOT and RMHIDTA, where additional contact was made with coroners or law enforcement to obtain results, has virtually eliminated this problem of missing

[44] National Highway Traffic Safety Administration (2014), Fatality Analysis Reporting System, at http://www-nrd.nhtsa.dot.gov/Pubs/811992.pdf

data. This improvement in the completeness of Colorado's FARS data, however, makes comparisons to years prior to 2013 difficult.

One limitation of the FARS toxicology data is that impairment from nonalcoholic drugs historically has not been able to be inferred. As discussed earlier regarding Figure 2.7, the primary compound in cannabis that produces psychoactive effects is Delta-9-THC, which begins to dissipate in blood rapidly after consumption. There are other active metabolites of Delta-9 THC (11-hydroxy-THC) which dissipate quickly and inactive metabolites (11-nor-9-carboxy-THC) that are detectable in blood for longer periods of time.[45] It is not always possible to tell in the FARS data if the test detected psychoactive Delta-9-THC or the other metabolites of THC. However, new methods of looking at the detection ratios between Delta-9 THC and other cannabinoids might yield improvements in future analyses[46].

Information regarding the number of fatalities, drivers, and crashes, and the prevalence of drug and alcohol testing, is presented in Table 2.24. In 2022, 48% of all drivers involved in fatal crashes were tested for alcohol. Tables 2.25 and 2.26 show different testing indicators with different units of analysis. In 2022, rates measured whether at least one driver was drug tested in a crash (68%) or whether at least one driver involved in a fatality was tested out of all fatalities (71%) were higher compared to the driver testing rates.

[45] Huestis, M., Henningfield, J., and Cone, E. (1992). Blood cannabinoids I: Absorption of THC and formation of 11-OH-THC and THC-COOH during and after marijuana smoking, *Journal of analytical toxicology*, *16*, 276-282.

[46] Kosnett, M. J., Ma, M., Dooley, G., Wang, G. S., Brown, T., Henthorn, T. K., Brooks-Russell, A., Kosnett, M. J., Ma, M., Dooley, G., Wang, G. S., Brown, T., Henthorn, T. K., & Blood, A. B. (2023). Blood cannabinoid molar metabolite ratios are superior to blood THC as an indicator of recent cannabis smoking indicator of recent cannabis smoking, *Clinical Toxicology.*

Table 2.24 Drivers involved in fatal motor vehicle crashes and screening rates, Colorado, 2013–2022

Year	Drivers	Drivers drug tested	% drivers drug tested	Drivers alcohol tested	% drivers alcohol tested
2013	627	294	47%	337	54%
2014	684	310	45%	339	50%
2015	787	361	46%	397	50%
2016	880	386	45%	408	46%
2017	940	439	47%	455	48%
2018	890	426	48%	443	50%
2019	866	405	47%	422	49%
2020	878	434	49%	447	51%
2021	1,013	511	50%	517	51%
2022	1,082	515	48%	531	49%

Source: Colorado Department of Transportation, Data Intelligence Group, Toxicology Data (2022). Analyzed by the Colorado Department of Public Safety, Division of Criminal Justice, Office of Research and Statistics.

Table 2.25 Fatalities in motor vehicle crashes and driver toxicology screening rates, Colorado, 2013–2022

Year	**Fatalities**	**Fatalities with at least one driver alcohol tested**	**% fatalities with at least one driver alcohol tested**	**Fatalities with at least one driver drug tested**	**% fatalities with at least one driver drug tested**
2013	482	345	72%	313	65%
2014	488	338	69%	318	65%
2015	547	391	72%	369	68%
2016	608	414	68%	403	66%
2017	648	448	69%	439	68%
2018	632	435	69%	429	68%
2019	597	428	72%	416	70%
2020	622	453	73%	442	71%
2021	691	497	72%	494	71%
2022	763	551	71%	540	71%

Source: Colorado Department of Transportation, Data Intelligence Group, Toxicology Data (2022). Analyzed by the Colorado Department of Public Safety, Division of Criminal Justice, Office of Research and Statistics.

Table 2.26 Fatal motor vehicle crashes and driver toxicology screening rates, Colorado, 2013–2022

Year	Crashes	Crashes with at least one driver alcohol tested	% crashes with at least one driver alcohol tested	Crashes with at least one driver drug tested	% crashes with at least one driver drug tested
2013	431	304	71%	274	64%
2014	451	305	68%	286	63%
2015	506	356	70%	334	66%
2016	558	369	67%	357	64%
2017	600	405	68%	396	66%
2018	588	399	68%	392	67%
2019	544	382	70%	370	68%
2020	574	409	71%	398	69%
2021	638	452	71%	449	70%
2022	700	488	70%	479	68%

Source: Colorado Department of Transportation, Data Intelligence Group, Toxicology Data (2022). Analyzed by the Colorado Department of Public Safety, Division of Criminal Justice, Office of Research and Statistics.

The number and percentage of fatalities where a driver involved in the crash was impaired at the legal limit with a Blood/Breath Alcohol Content measuring at or above 0.08 is presented in Table 2.27. In 2022, an estimated third of fatalities occurred when a driver was legally impaired by alcohol.

Table 2.27 Colorado fatalities where at least one driver had a Blood/Breath Alcohol Content (BAC) above ≥ .08, 2013–2021

Measure	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*
Total fatalities	482	488	547	608	648	632	597	622	691	763
N fatalities driver BAC ≥ .08	140	160	151	163	177	192	160	188	216	263
% fatalities driver BAC ≥ .08	29%	33%	28%	27%	27%	30%	27%	30%	31%	34%

Source: National Highway Traffic Safety Administration, Traffic Safety Facts: Colorado, 2017-2021 (2023); Colorado Department of Transportation, Data Intelligence Group, Toxicology Data (2022).
Note: a) NHTSA statistically imputes BAC results for drivers with missing tests, which allows them to base percentages on all fatalities rather than just those with a reported test. [*] indicates that the most recent data was not available and that the fatalities involving a driver who tested above the legal limit is an estimate.

Historically, this report has also monitored the number of fatalities involving a driver who tested positive for Delta-9 THC at or above 5ng/mL. In 2022, 19% of fatalities where at least one driver involved was drug tested had at least one driver who tested positive for Delta-9 THC at the 5 ng/mL, which is the highest percentage since 2016 (Table 2.28). It should be noted that the improved reporting for the specific level of Delta-9 THC occurred in 2016, which makes comparison to prior years invalid. Additionally, there is no scientific definition of impairment based on Delta-9 THC toxicology levels. Furthermore, this dataset did not distinguish between ante- and post-mortem toxicology testing, and results from both are likely included in this indicator

calculation. This undermines the reliability of this indicator, since ante- and post-mortem cannabinoid toxicology have noted differences and are not comparable.[47]

Table 2.28 Colorado fatalities with driver's Delta-9 THC level ≥ 5ng/ml, 2016–2022

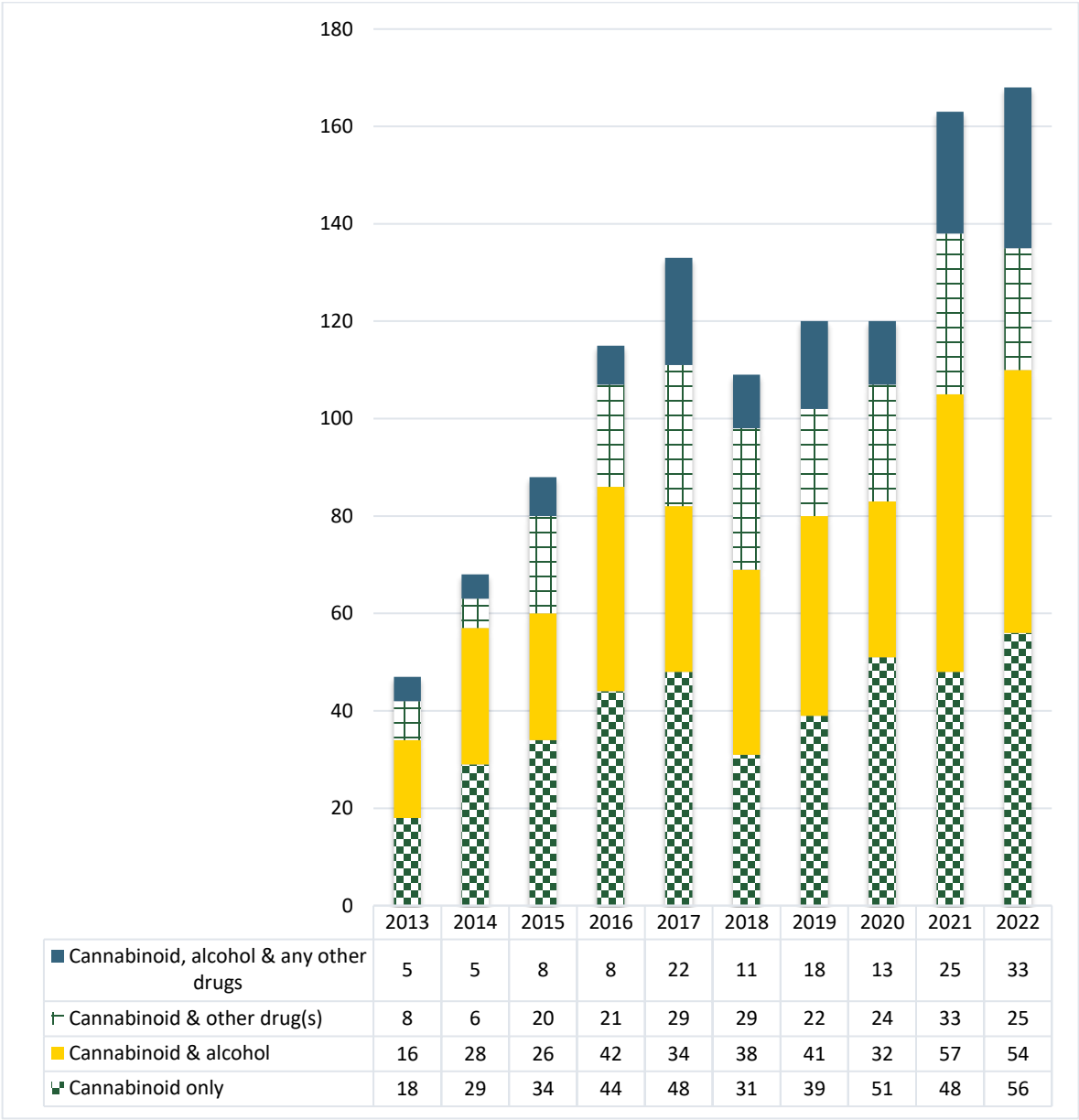
Measure	2016	2017	2018	2019	2020	2021	2022
Fatalities with at least one driver tested	403	439	429	416	422	489	540
N fatalities driver Delta-9 THC level ≥ 5ng/ml	52	35	42	56	52	92	101
% fatalities driver Delta-9 THC level ≥ 5ng/ml	13%	8%	10%	13%	12%	19%	19%

Source: Colorado Department of Transportation, Data Intelligence Group, Toxicology Data (2022).
Note: a) Percentages are based only on fatal crashes where at least one driver in the crash was drug tested; these results could include post-mortem toxicology tests, which can be elevated compared to toxicology testing in living individuals. These results should be interpreted with caution. b) Delta-9 THC level established in C.R.S. 42-4-1301 (6)(a) (IV) states "If at such time the driver's blood contained five nanograms or more of delta 9-tetrahydrocannabinol per milliliter in whole blood, as shown by analysis of the defendant's blood, such fact gives rise to a permissible inference that the defendant was under the influence of one or more drugs."

CDOT has monitored the presence of cannabinoids in drivers since 2013; the following analysis does not concern quantification. It is important to remember that presence of a cannabinoid does not indicate impairment from marijuana. The number of drivers testing positive for cannabinoid-only or cannabinoid-in-combination increased from 47 in 2013 to 112 in 2022 (Figure 2.11); this amounts to nearly three quarters of all drivers who tested positive for cannabis tested positive for an additional substance. The percentage of drug-tested drivers who tested positive for some cannabinoid (alone or in combination with some other drug) increased from 16% in 2013 to 29% in 2022. Although these rates are high, only about half of all drivers involved in fatal crashes were tested for drugs and are therefore not representative of all drivers involved in crashes.

[47] Kacinko, S. L., Isenschmid, D. S., & Logan, B. K. (2024). Postmortem Cannabinoid Concentrations Forensically Reliable? *The American Journal of Forensic Medicine and Pathology*, *45*(1), 92–93. https://doi.org/10.1097/PAF.0000000000000887

Figure 2.11 Colorado drivers in fatal crashes involving cannabinoids, 2013–2022

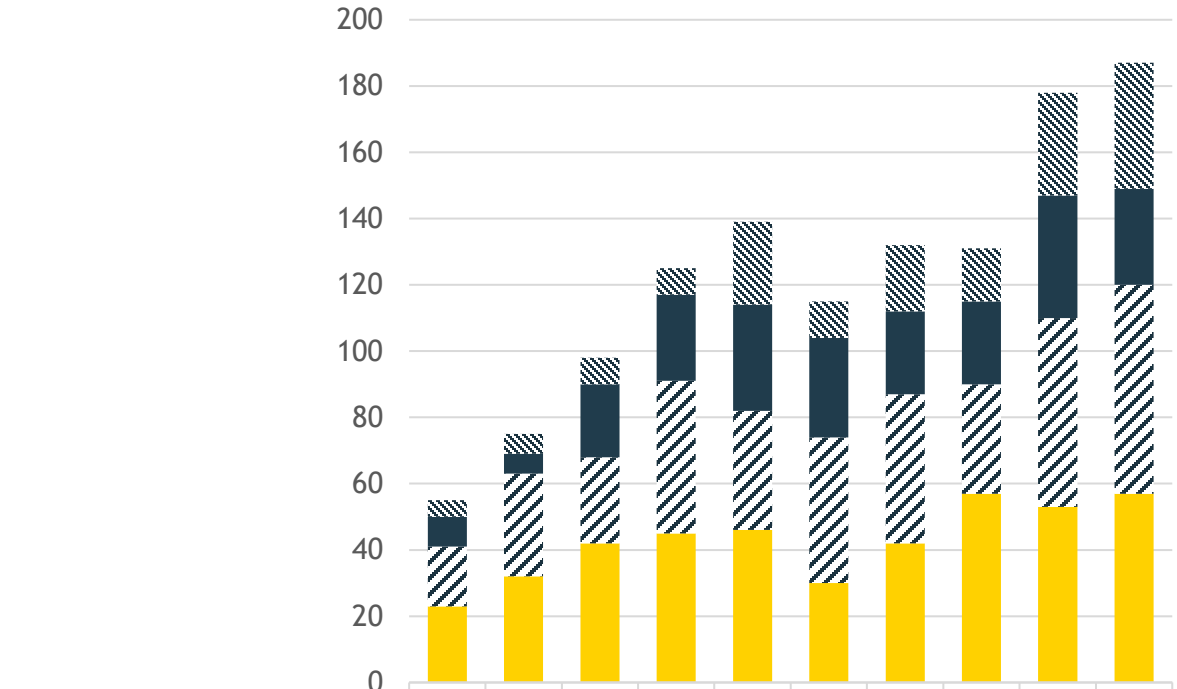


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Cannabinoid, alcohol & any other drugs	5	5	8	8	22	11	18	13	25	33
Cannabinoid & other drug(s)	8	6	20	21	29	29	22	24	33	25
Cannabinoid & alcohol	16	28	26	42	34	38	41	32	57	54
Cannabinoid only	18	29	34	44	48	31	39	51	48	56

Source: Colorado Department of Transportation, Data Intelligence Group, Toxicology Data (2022). Analyzed by the Colorado Department of Public Safety, Division of Criminal Justice, Office of Research and Statistics.

The number of fatalities in which an involved driver tested positive for cannabinoid-only or cannabinoid-in-combination increased from 55 in 2013 to 187 in 2022 (Figure 2.12). The number of fatalities in which the driver tested positive for cannabinoid-only increased from 23 in 2013 to 56 in 2022. There were 130 fatalities in 2022 where at least one driver tested positive for a cannabinoid and an additional substance. Again, it should be noted that only about half of all drivers were tested for drugs, and that we may be undercounting the number of cannabis-involved fatalities.

Figure 2.12 Colorado fatalities involving drivers testing positive for cannabinoids, 2013–2022



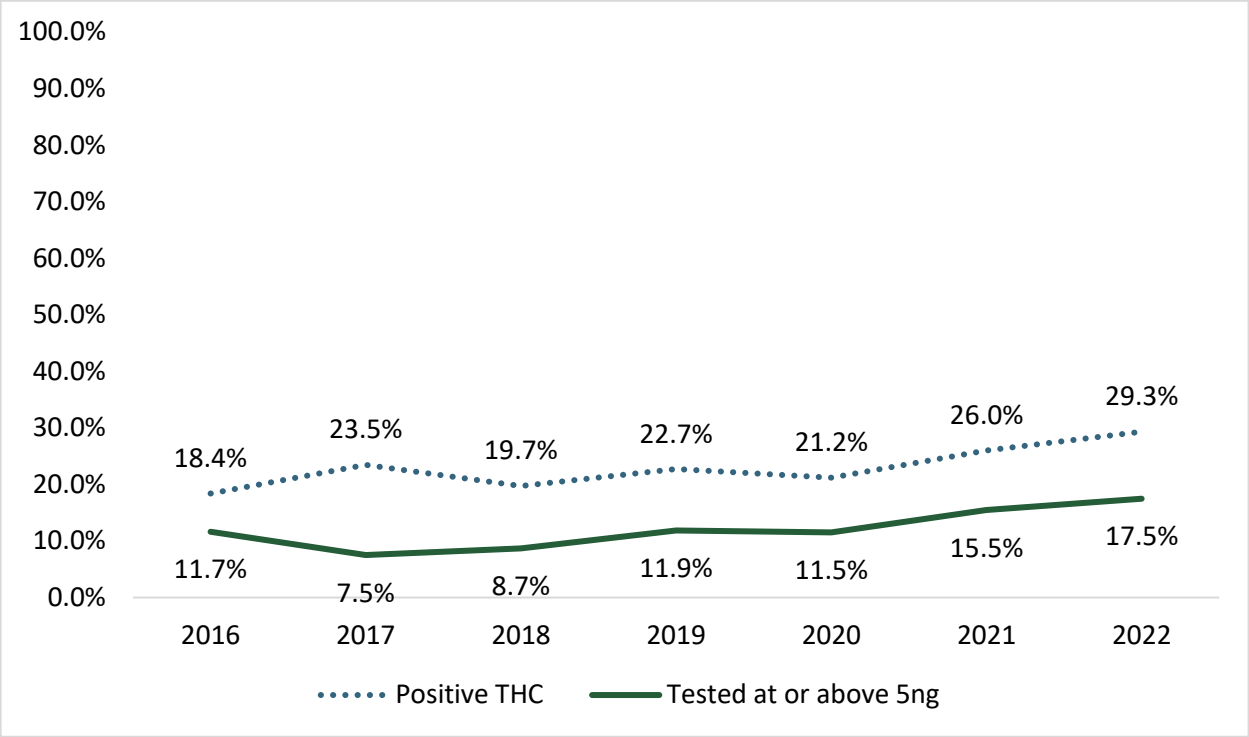
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Cannabinoid, alcohol & any other drugs	5	6	8	8	25	11	20	16	31	38
Cannabinoid & other drug(s)	9	6	22	26	32	30	25	25	37	29
Cannabinoid & alcohol	18	31	26	46	36	44	45	33	57	63
Cannabinoid only	23	32	42	45	46	30	42	57	53	57

Source: Colorado Department of Transportation, Data Intelligence Group, Toxicology Data (2022)
Notes: Numbers are based on toxicology results where at least one driver was tested for drugs after a crash. See Table 16 for number and percent of drivers tested each year. The presence of a cannabinoid does not necessarily indicate recent use of marijuana or impairment.

In 2016, CDOT improved data collection on the specific metabolites present in the blood of drivers, especially Delta-9 THC. Figure 2.13 presents the 2016 through 2022 data on drivers with Delta-9 THC detected in their blood. The number of drivers with *any* detectable Delta-9 THC increased from 71 (18% of tested drivers) in 2016 to 151 (29% of tested drivers) in 2022. However, when the drivers who test positive at the 5 ng/mL level were examined separately, there were 90 (18% of tested drivers) who tested positive at the 5 ng/mL[48] level in 2022. As noted earlier, evaluating the concentrations of Delta-9 THC in drivers both living and dead is not recommended due to the redistribution of Delta-9 THC in the blood upon death.

[48] Delta-9 THC level established in C.R.S. 42-4-1301 (6)(a) (IV) states "If at such time the driver's blood contained five nanograms or more of delta 9-tetrahydrocannabinol per milliliter in whole blood, as shown by analysis of the defendant's blood, such fact gives rise to a permissible inference that the defendant was under the influence of one or more drugs."

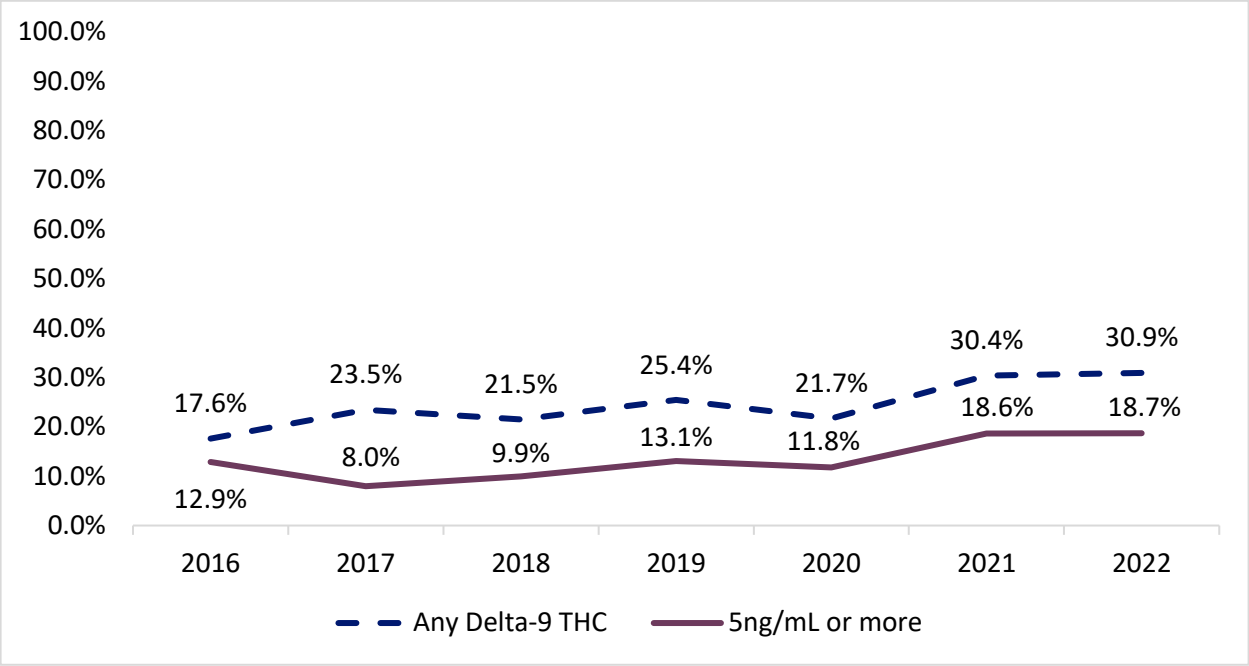
Figure 2.13 Drug tested drivers in fatal crashes & Delta-9 THC toxicology, Colorado, 2016–2022



Source: Colorado Department of Transportation, Data Intelligence Group, Toxicology Data (2022).
Note: Numbers are based on toxicology results where at least one driver was tested for drugs after a crash. See Table 16 for number and percent of drivers tested each year.

From 2016 to 2022, Colorado has seen an increase in fatalities where the driver tested positive for any Delta-9 THC compared to all fatalities with a drug tested driver (see Figure 2.14). In 2016, 71 fatalities (18%) involved a Delta-9 THC positive driver, and in 2022, the number of such fatalities grew to 167 (31%).

Figure 2.14 Fatalities involving drug tested drivers & Delta-9 THC toxicology, Colorado, 2016–2022



Law Enforcement Training to Detect Impairment

Starting in fiscal year (FY) 2015, the Peace Officer Standards and Training (POST) program in the Colorado Department of Law received funding from the Marijuana Tax Revenue Funds from Senate Bill 14-215 to administer enforcement training. In prior reports, we included information about sobriety checkpoint trainings and DUI report writing, but POST has not offered those trainings since FY 2017.[49] For this report, we collected training data from both POST and the Colorado Department of Transportation since the POST transitioned to having the Colorado Department of Transportation (CDOT) handle all DRE training in 2019. POST provided the DRE and ARIDE program data from July 1, 2014, through June 30, 2019. The Colorado Department of Transportation provided data on their DRE training for fiscal years 2020-21.

The DRE program provides an opportunity for officers to learn to recognize, document and articulate impairment in drivers who are under the influence of drugs other than, or in addition to, alcohol. The course to become a DRE is 56 hours, the DRE instructor course is an additional 24 hours, and an annual eight-hour update is required. From FY 2015, the POST and CDOT have trained 275 operators and 131 DRE instructors. In 2023, a total of 107 DREs were certified statewide (Figure 2.6), which represents a drop of 56% from 2015's peak level of 244 DRE-certified officers . This reduction in the number of DRE officers statewide suggests the challenges law enforcement agencies are having in retaining and recruiting officers and in supporting their staff to complete an intensive and lengthy training program.

The Advanced Roadside Impaired Driving Enforcement (ARIDE) program was created to address the gap in training between the Standardized Field Sobriety Testing and the Drug Recognition Expert program. ARIDE bridges the gap between these two programs by providing officers with general knowledge related to drug

[49] Reed, J. (2021). Impacts of Marijuana Legalization in Colorado: A Report Pursuant to C.R.S. 24-33.4-516. *Colorado Department of Public Safety*. https://cdpsdocs.state.co.us/ors/docs/reports/2021-SB13-283_Rpt.pdf

impairment and by promoting the use of DREs. ARIDE training is 16 hours long. In fiscal year 2021, ARIDE training was completed by 112 peace officers (Table 2.29).

Table 2.29 Law enforcement impaired driving training

Fiscal Year	DRE Operator Classes	DRE Operators Trainees	DRE Instructor Classes	DRE Instructor Trainees	Annual update Classes	Annual Updated Trainees	ARIDE Classes	ARIDE Trainees
2015	3	56	2	17	2	160	35	562
2016	4	23	2	17	2	94	15	136
2017	2	16	0	0	1	55	6	143
2018	5	58	1	13	0	0	5	75
2019	10	112	4	77	0	0	11	188
2020*	0	0	0	0	1	30	5	87
2021	1	10	1	7	5	105	7	112

Data source: Department of Law, Peace Officer Standards and Training & Colorado Department of Transportation, Highway Safety Office.
Note: [*] indicates that trainings were canceled due to the COVID-19 pandemic.

Probationer Drug Test Results

Colorado's Probation Departments conduct drug tests on adult probationers. The frequency of testing is determined by assessment, court orders, and other case-related information. There is no link between probationer drug testing results and probation status, so it is not known if changes in drug use patterns are affecting probation violations. Additionally, in 2016 HB16-1359 was passed that gave judges the ability to determine if there is "any material evidence, that a prohibition against the possession or use of medical marijuana is necessary and appropriate to accomplish the goals of sentencing."[50] It is unknown if the number of probationers using medical marijuana was sufficient to affect the testing trends after 2016.

Overall, 28% of adult probationers tested positive for THC at least once during the year, from 2012-2021. Table 2.30 presents information on the percentage of probationers tested who were positive for Delta-9 THC, categorized by the number of times they tested positive in a year. In 2020, 10,658 fewer adults aged 18 and older were tested compared to 2019 (or a 17% decline), which might have been due to disruptions in testing due to the COVID-19 pandemic. The 2021 count of adults on probation who were tested was down 5% compared to 2019's number.

Each year, 18-25-year-olds had the lowest proportion who always tested negative for THC (range: 52%-68%). The percentage testing positive three times or more doubled for those 18 to 25 years old (12% in 2012 to 24% in 2021). The percentage of probationers using three or more times nearly tripled for the 26 to 35 age group (7% in 2012 to 19% in 2021) and tripled for the 36 and older age group (5% in 2012 to 15% in 2021).

[50] C.R.S 18-1.3-204(VIII)(A).

Table 2.30 Adult probationer drug test results for Delta-9 THC, by age group and number of times positive in a year, 2012-2021

Year	18-25 years (N)	18-25 years (No Positive tests %)	18-25 years (1-2 positive tests %)	18-25 years (3+ tests %)	26-35 years (N)	26-35 years (No Positive tests %)	26-35 years (1-2 positive tests %)	26-35 years (3+ tests %)	36+ years (N)	36+ years (No Positive tests %)	36+ years (1-2 positive tests %)	36+ years (3+ tests %)
2012	17,231	68%	21%	12%	15,851	79%	13%	7%	16,594	86%	9%	5%
2013	15,983	69%	18%	12%	16,192	81%	12%	8%	17,561	88%	8%	5%
2014	18,832	66%	18%	16%	21,290	79%	11%	10%	23,543	86%	8%	7%
2015	17,845	64%	18%	19%	21,582	75%	12%	12%	24,016	84%	8%	8%
2016	16,916	61%	18%	21%	21,944	72%	12%	15%	23,937	81%	9%	10%
2017	16,305	58%	18%	23%	22,078	69%	13%	18%	24,324	78%	9%	12%
2018	15,285	55%	19%	26%	22,140	66%	15%	19%	25,012	76%	11%	14%
2019	14,377	53%	20%	27%	21,906	63%	15%	21%	25,760	73%	12%	15%
2020	10,888	52%	21%	27%	17,616	62%	16%	22%	22,881	73%	12%	15%
2021	12,445	59%	16%	24%	20,869	69%	13%	19%	25,576	76%	10%	15%

Note: Percentages may not sum to 100 due to rounding.
Source: Data provided by Colorado State Judicial Department. Analyzed by the Division of Criminal Justice

Marijuana Seizures in Colorado

Seizures by Colorado law enforcement

Seizures of marijuana are reported in NIBRS using the property field. The quantity of marijuana is noted, either by weight, liquid volume, dosage units, or number of plants.[51] The type of marijuana seized, such as flower/bud, concentrates, edibles, oils, etc. is not indicated. Additionally, sometimes the quantity of seized marijuana is not reported. Table 2.31 presents a trend of the quantity of marijuana seized and the number of reports from 2012-2022. Most marijuana seizures were reported by weight in 2022, and the amount seized weighed 4,201 pounds, which is 944 fewer pounds compared to the median weight from 2012-2022 of 5,145. Also in 2022, law enforcement agencies recorded seizing 2,396 plants, which is the lowest on record throughout 2012 to 2022; in 2018, which was the peak year for plant seizures from 2012 to 2022, law enforcement reported 38,044 seized plants.

[51] The possible weight categories include grams, kilograms, ounces, or pounds. Liquid volume includes milliliters, liters, fluid ounces, or gallons. Dosage units are individual items, such as edibles. Plants are physical plants seized.

Table 2.31 Quantity of marijuana seized and number of reported seizures, by measurement type, 2012–2022

Year	Weight (lb)	N Reports by Weight	Liquid Volume (Gallons)	N reports by Gallon	Dosage units	N reports by Dosage Units	Plants	N reports by Plant	N Unreported
2012	7,697	11,762	15	12	1,632	169	28,284	115	398
2013	3,364	5,183	1	2	431	50	1,228	26	555
2014	3,010	5,077	1	3	31,131	60	2,840	22	772
2015	5,103	4,623	60	10	592	90	4,000	21	900
2016	5,145	4,614	6	14	8,779	130	10,076	64	582
2017	10,358	4,889	41	10	5,243	199	25,255	95	399
2018	10,974	4,622	8	8	6,058	163	38,044	114	395
2019	27,367	3,600	12	13	5,279	220	27,807	98	255
2020	8,105	2,270	16	13	1,091	127	12,100	73	154
2021	5,141	2,245	7	18	474	93	8,906	42	110
2022	4,201	2,315	27	27	429	115	2,396	23	66

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System. Analyzed by the Division of Criminal Justice.
Note: [*] In the most recently analyzed data, 2020-2022, there were 1,278 reports of seizures that amounted to less than one gram, which is equivalent to the weight of marijuana in 1-2 joints. In these three years, 548 seizure reports were recorded as less than 0.1 gram. These reports might suggest undercounting of the weight of marijuana seized.

Colorado Bureau of Investigation, Illicit Market Marijuana Team

The Colorado Bureau of Investigation's (CBI) Special Investigations Illicit Marijuana (SIIM) works in conjunction with local law enforcement around the state, especially those located in rural areas—to identify and dismantle illegal marijuana grows in Colorado. Created in late 2018, the team is comprised of 18 investigative agents and two analysts.

Multiple team teams operate in Colorado covering all regions of the state. Agents are stationed in Grand Junction, Durango, Denver and Pueblo, and provide support to local law enforcement in an assist or lead capacity and work closely with local district attorney offices.[52]

In 2022, the SIIM participated in 42 cases, resulting in the dismantling of 27 illegal grow sites and 14 arrests. The team seized 5,023 pounds of processed marijuana and 28 firearms (Table 2.32). From 2019 to 2022, the seizure of oils and concentrates has grown exponentially; in 2020, SIIM seized 35 pounds of oils and/or concentrates, and by 2022, SIIM had recorded capturing 4,712 pounds.

[52] Description of the team excerpted from the Colorado Bureau of Investigation's *2019 CBI Annual Report.*

Table 2.32 CBI Illicit Market Marijuana Team activity, 2019-2022

Year	2019	2020	2021	2022
Total cases	36	39	35	42
Arrests	49	13	24	14
Grow sites dismantled	82	50	60	27
Processed marijuana (lbs)	5,487	2,107	2,111	5,023
Oils and concentrates (lbs)	0	35	3,516	4,712
Firearms seized	64	86	40	28

Source: Colorado Bureau of Investigation (2020). *2019 CBI Annual Report*; 2020 data provided by CBI.
Note: The seizures reported by the SIIM will be a subset of the total marijuana seizures reported in Table 2.31.

Illegal Cultivation on Public Lands

Data from the National Forest Service, Bureau of Land Management, National Park Service, and the Colorado Division of Parks and Wildlife were obtained to determine what enforcement actions have been undertaken regarding cultivation of marijuana on public lands. National agency totals are shown in Table 2.32 The National Park Service only had 4 plants recorded as being seized in 2009, and Bureau of Land Management only had three years with recorded plants seized from 2009 to 2022. The National Forest Service plant seizure totals varied widely throughout the time period (range: 1,502 to 409,841). The peak number of seizures occurred in 2020, and the most seizures occurred in Kentucky and California.

Table 2.32 Marijuana plants seized on US public land, by agency, 2009–2022

Year	National Forest Service Grows seized	National Forest Service Seized Plants	Bureau of Land Management Seized Plants	National Park Service Seized Plants	Total number of plants
2009	8	29,200	177	4	29,381
2010	5	15,665	0	0	15,665
2011	4	3,970	0	0	3,970
2012	11	46,662	0	0	46,662
2013	3	4,980	0	0	4,980
2014	4	4,484	0	0	4,484
2015	6	22,830	2,200	0	25,030
2016	8	63,602	0	0	63,602
2017	22	71,626	9,200	0	80,826
2018	9	1,502	0	0	1,502
2019	10	33,361	0	0	33,361
2020	415	409,841	0	0	409,841
2021	80	89,908	0	0	89,908
2022	35	98,246	0	0	98,246

Sources: Data provided by National Forest Service, National Park Service, and Bureau of Land Management. Analyzed by the Division of Criminal Justice.

Table 2.33 shows marijuana offenses that the National Park Service recorded happened in Colorado from 2017-2022. In 2022, the most common outcomes for a federal marijuana offense on National Park Lands were warnings (170, 62%) or a federal violation notice (98, 36%) with very few (3) receiving a custodial arrest.

Table 2.33 Marijuana offenses in Colorado National Parks, 2017-2022

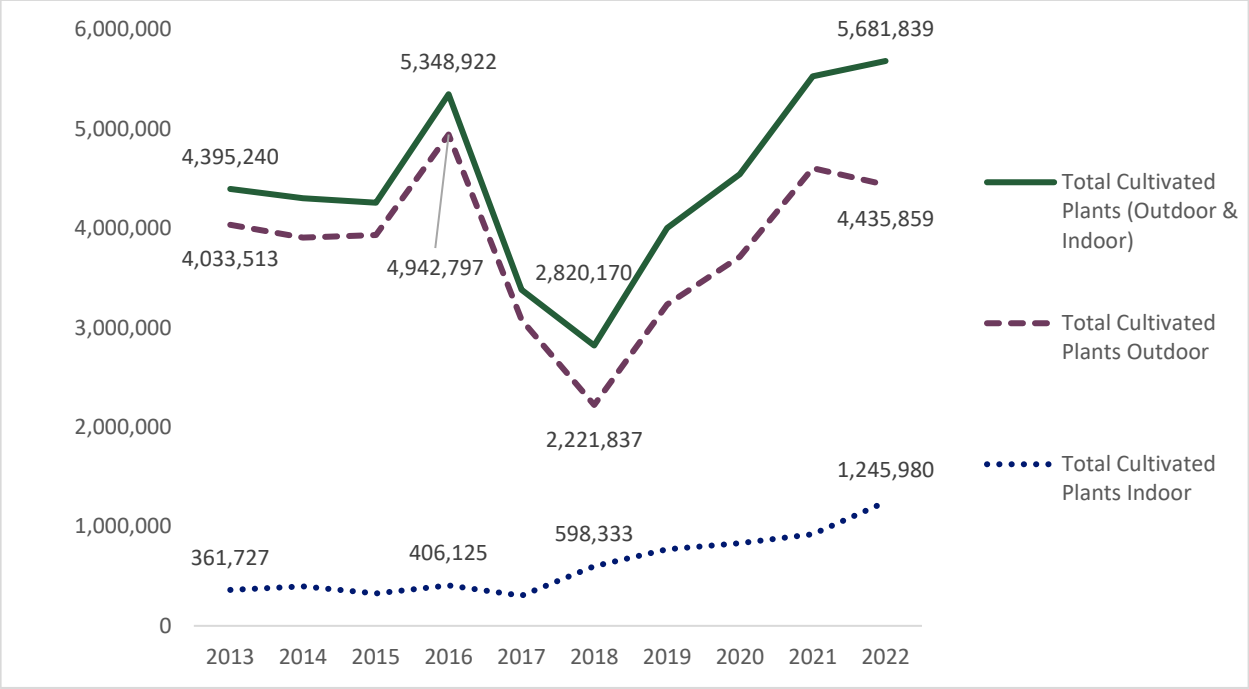
Charge status	2017	2018	2019	2020	2021	2022
Arrest/physical custody	1	6	6	1	5	3
Criminal complaint	0	1	0	0	0	0
Federal violation notice	34	78	83	87	207	98
State/local citation	0	0	2	0	0	0
Warning	48	126	170	48	126	170
Unknown	2	0	5	0	0	0
Grand Total	85	211	266	136	338	271

Source: Data provided by the National Park Service.
Note: These comprise offenses of 36 CFR 2.35(b)(2), Unlawful possession of controlled substance (Misdemeanor).

Drug Enforcement Administration Cannabis Eradication Program

The Drug Enforcement Administration (DEA) initiated the Domestic Cannabis Eradication/Suppression Program (DCE/SP), which is the only nationwide law enforcement program that exclusively targets drug trafficking organizations (DTOs) involved in cannabis cultivation. Through its nationwide cannabis eradication efforts, the DEA provided resources to support 115 state and local law enforcement agencies that actively participated in the program in 2022. This assistance allows for the enhancement of already aggressive eradication enforcement activities throughout the nation. From 2013-2022, this program has seized 4.42 million plants per year on average nationwide, with seizures ranging from 2.82 million plants seized in 2018 to a high of 5.7 million plants seized in 2022. See Figure 2.15 for the general trends and variability in plant seizures.

Figure 2.15 Drug Enforcement Administration cannabis eradication/suppression program marijuana plant seizures in United States, 2013–2022



Source: U.S. Department of Justice, Drug Enforcement Administration. Cannabis Eradication, at https://www.dea.gov/domestic-cannabis-suppression-eradication-program,

The DCE/SP has reported marijuana seizures in Colorado, but starting in 2020, its activity in Colorado dropped significantly, and in 2021 and 2022, the program reported no seizures in the state. Like the national statistics, there has been a lot of variability in the program's indicators from year-to-year in Colorado. The peak number of plants seized from outdoor grow sites occurred in 2009 (n = 29,655), whereas the peak number of plants seized in indoor grow sites happened in 2019 (n = 57,71). From 2006-2020, the program resulted in the arrests of 616 people, with 74% occurring prior to legalization. The program has also seized 357 weapons in these operations.

Table 2.36. Drug Enforcement Administration cannabis eradication/suppression program in Colorado, 2006–2019

Year	Outdoor grow sites	Outdoor plants	Indoor grow sites	Indoor plants	Bulk processed marijuana (pounds)	Number of arrests	Weapons seized	Assets seized (value)
2006	14	3,819	47	3,667	1,727	193	19	$932,679
2007	31	2,498	45	2,430	57	143	29	$903,944
2008	17	5,564	29	24,469	64	36	0	$3,094,240
2009	28	29,655	7	235	62	5	0	$12,500
2010	7	6,331	50	5,492	0	60	0	$153,674
2011	16	26,020	3	4	125	11	0	$15,626
2012	3	21,235	7	2,069	515	9	47	$354,325
2013	2	5,562	19	11,042	1,636	2	11	$257,938
2014	3	2,630	18	5,426	381	6	23	$2,066,855
2015	6	26,545	2	527	159	14	0	$0
2016	13	23,823	78	18,010	3,659	15	66	$2,320,552
2017	9	2,059	37	3,706	3,550	24	79	$475,412
2018	13	12,427	114	46,428	6,039	64	43	$1,259,720
2019	13	4,247	118	57,711	19,731	34	40	$1,576,568
2020	1	16,433	0	0	0	4	0	0
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0

`Source: U.S. Department of Justice, Drug Enforcement Administration. Cannabis Eradication, at https://www.dea.gov/domestic-cannabis-suppression-eradication-program, *Sourcebook of Criminal Justice Statistics*, at http://www.albany.edu/sourcebook

Diversion Out of State

The amount of marijuana diverted out of Colorado is difficult to estimate, because a relatively small percentage of illicit market drugs are seized according to law enforcement officials. There is also no central database to which all law enforcement agencies report drug seizures and the originating state of the drug. The Colorado Information Analysis Center (CIAC), in the Department of Public Safety, is developing a comprehensive overview of where and how marijuana is being diverted out of Colorado. At present, staff is working to identify data sources that can reliably report on marijuana that is diverted from Colorado to other states. Currently, the best data available on diversion out of the state comes from the National Seizure System maintained by the El Paso Intelligence Center (EPIC). EPIC is an organization that provides intelligence and operational support to law enforcement agencies at all levels. EPIC has a data portal where law enforcement can enter information about drug seizures (among other things) including state of origin, state of interdiction, and destination state.

The number of seizures reported increased from 2012 (286) to 2015 (768) but then declined, with 93 seizures reported to EPIC in 2022 (Table 2.3). Seizures used to be almost exclusively of marijuana flower, with that accounting for 90% of reported seizures in 2012. By 2022, flower dropped to 55% of all seizures (Table 2.3).

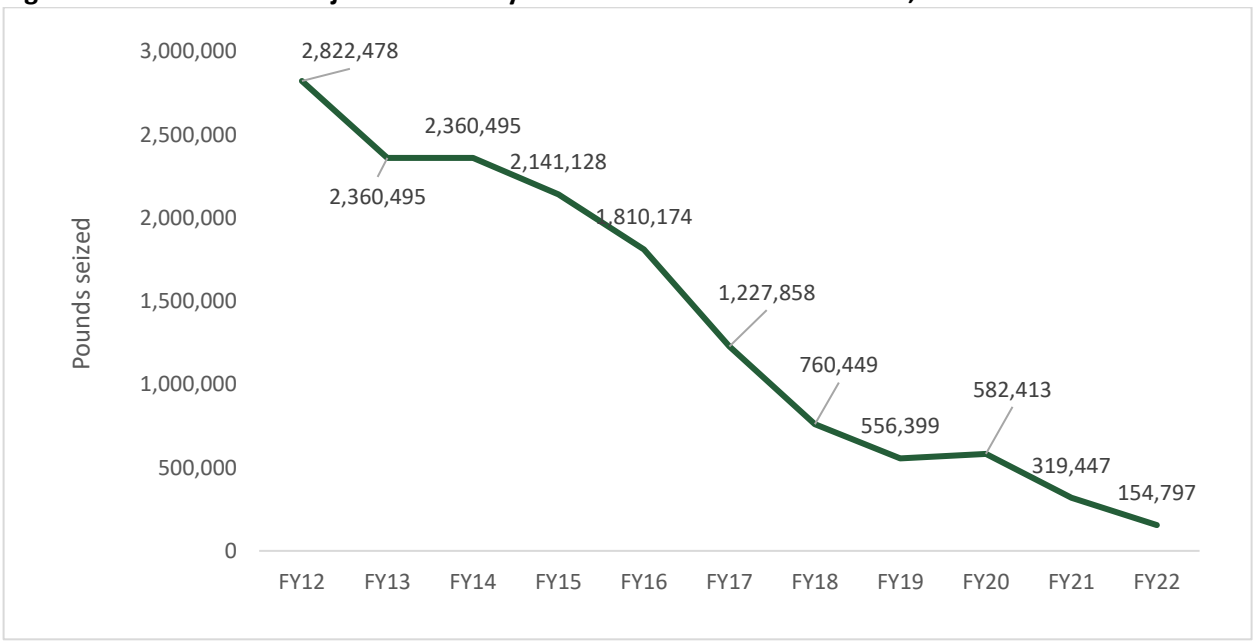
Table 2.3 Seizures of Colorado-sourced marijuana, by type, 2010–2022

Year	Flower/bud	Concentrate/ hashish	Edibles	Other	Total
2010	216	9	0	0	225
2011	299	24	0	3	326
2012	257	26	2	1	286
2013	265	38	4	2	309
2014	373	86	9	0	468
2015	503	160	103	2	768
2016	444	129	97	3	673
2017	351	157	100	0	608
2018	211	83	42	0	336
2019	179	59	26	2	266
2020	204	117	67	0	388
2021	109	70	39	2	220
2022	52	26	15	0	93

Source: Colorado Information Analysis Center, data extracted from National Seizure System.

Figure 2.16 does not directly apply to marijuana seized in Colorado, but instead shows the amount seized at the nation's borders by the United States Customs and Border Protection. The amount of marijuana seized at the border decreased exponentially between FY 2012 and FY 2022; in FY 2012, CBP seized 2.82 million pounds, whereas in 2022, the agency only seized roughly 155,000 pounds. This reduction in the volume of seizures has not been mirrored by the trends of other drugs, where methamphetamine, and fentanyl seizures have shown marked increases (data not presented). This reduction in marijuana importation might reflect the growth of the legal market in the United States better meeting the demand.

Figure 2.16 Pounds of Marijuana Seized by Customs and Border Protection, FY 2012-FY 2022



Source: U.S. Customs and Border Protection, CBP Enforcement statistics: https://www.cbp.gov/document/stats/nationwide-drug-seizures

SECTION THREE
IMPACT ON PUBLIC HEALTH AND BEHAVIORAL HEALTH SERVICES

Overview

This section summarizes several sources of data to examine the impact of marijuana legalization on public health and behavioral health services in Colorado. The Colorado Department of Public Health and Environment (CDPHE) monitors environmental and public health for the state and is statutorily mandated to measure and report on public health impacts. CDPHE produces a report every two years that provides an in-depth understanding of the public health concerns in the state; the most recent report was published in January 2021.

CDPHE is required by statute to monitor marijuana use patterns and potential adverse health effects. To this end, CDPHE uses the Behavioral Risk Factor Surveillance System (BRFSS), the National Survey of Drug Use and Health (NSDUH), a population health survey conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA), and data provided by the Colorado Hospital Association and the Rocky Mountain Poison and Drug Center. In prior years, this report[53] has showcased findings from NSDUH to compare Colorado's substance use nationally, but SAMHSA has not released updated data with 2019-2020 findings due to pandemic-related disruptions in the data[54].

The American College Health Association administers the National College Health Assessment, an annual survey of college students that asks a few questions about marijuana. These data are discussed below.

Data provided by the Colorado Department of Human Services, Behavioral Health Administration, inform two treatment topics in this section. The first focuses on licensed facilities that report treatment admissions in which marijuana is listed as the client's primary drug of abuse. The second reviews trends in the frequency of use by clients in treatment for marijuana abuse.

Adult Usage

Behavioral Risk Factor Surveillance System

The Colorado Behavioral Risk Factor Surveillance System (BRFSS), sponsored by the Centers for Disease Control and Prevention, is a telephone survey of adults 18 and older that monitors lifestyles and behaviors related to the leading causes of mortality and morbidity.[55] Colorado has been participating in this survey program since 1990[56] and from the beginning has collected information on alcohol and tobacco use.[57]

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[53] Reed, J. (2021). Colorado Department of Public Safety. *Impacts of Marijuana Legalization in Colorado: a report pursuant to C.R.S. 24-33.4-516.*

[54] Substance Abuse and Mental Health Services Administration. (n.d). State Data Tables and Reports From the 2019-2020 NSDUH.

[55] Colorado Department of Public Health and Environment. (n.d), Behavioral Risk Factor Surveillance System (BRFSS) data.

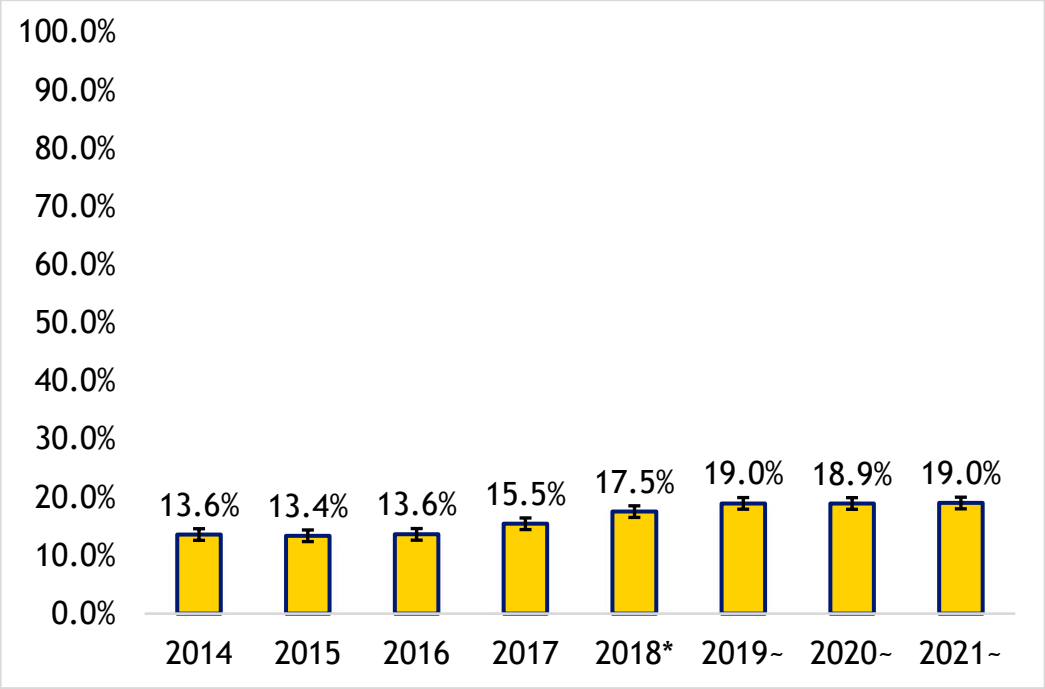
[56] Centers for Disease Control and Prevention. (2024). Behavioral Risk Factor Surveillance System: CDC – List of States Conducting Surveillance by Year.

[57] Centers for Disease Control and Prevention. (2023). Behavioral Risk Factor Surveillance System: BRFSS Questionnaires.

In 2014, questions were added to the Colorado BRFSS regarding lifetime and past 30-day marijuana use, age of first use, and whether respondents drove after recent use. In 2015, questions were added to estimate methods and frequency of marijuana use, and respondents' perception of harm from use. In 2016, the questions about lifetime use and age of first use were removed. By continuing collection of these data over time, CDPHE will be able to monitor any changes in marijuana use patterns among Colorado adults.

Marijuana use has significantly increased, with 19% of Colorado adults reporting using marijuana in the past 30 days in 2022, up from 2014's estimated level of 13.6%. The first significant increase occurred from 2014 to 2018 (Figure 3.1).

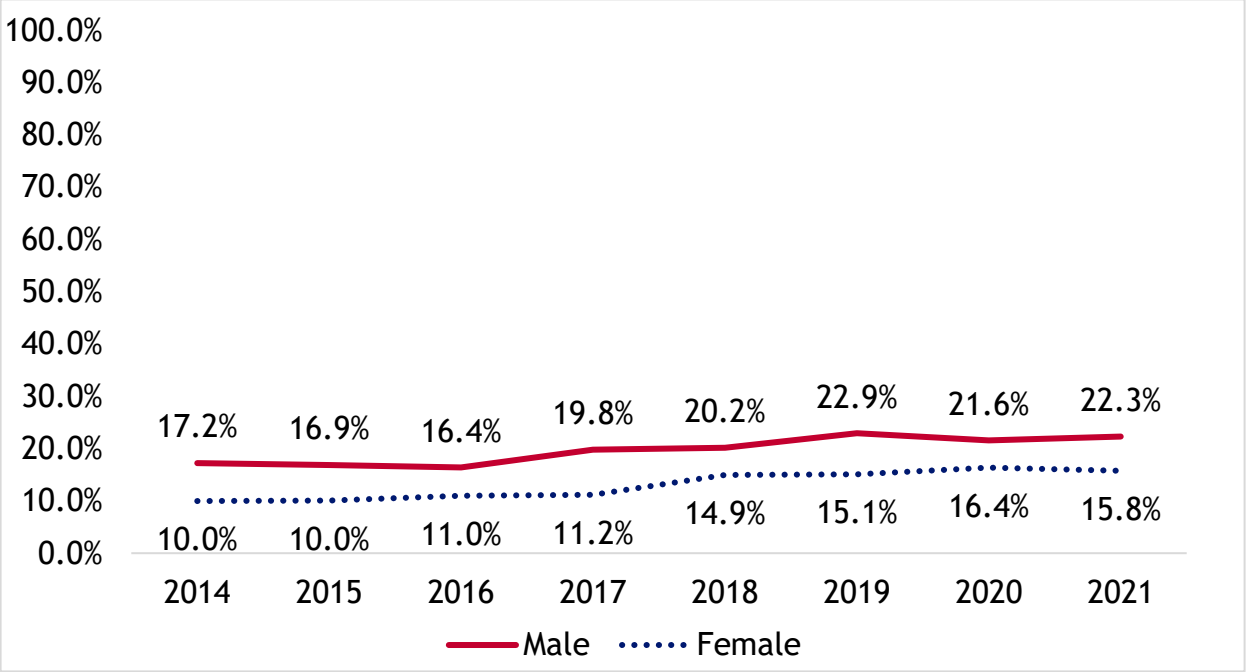
Figure 3.1 Past 30-day adult marijuana use, 2014–2021



Source: Behavioral Risk Factor Surveillance System, Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.
Notes: [*] indicates the rate is significantly above the 2014 rate. [~] indicates the rate is significantly above the 2017 rate

Prevalence of marijuana use differed by age, gender, race/ethnicity, and sexual orientation. From 2014-2021, use in both sexes has risen significantly, and males have consistently had significantly higher rates of current use than females. In 2021, 22.3% of males reported past month marijuana, whereas 15.8% of females. (Figure 3.2).

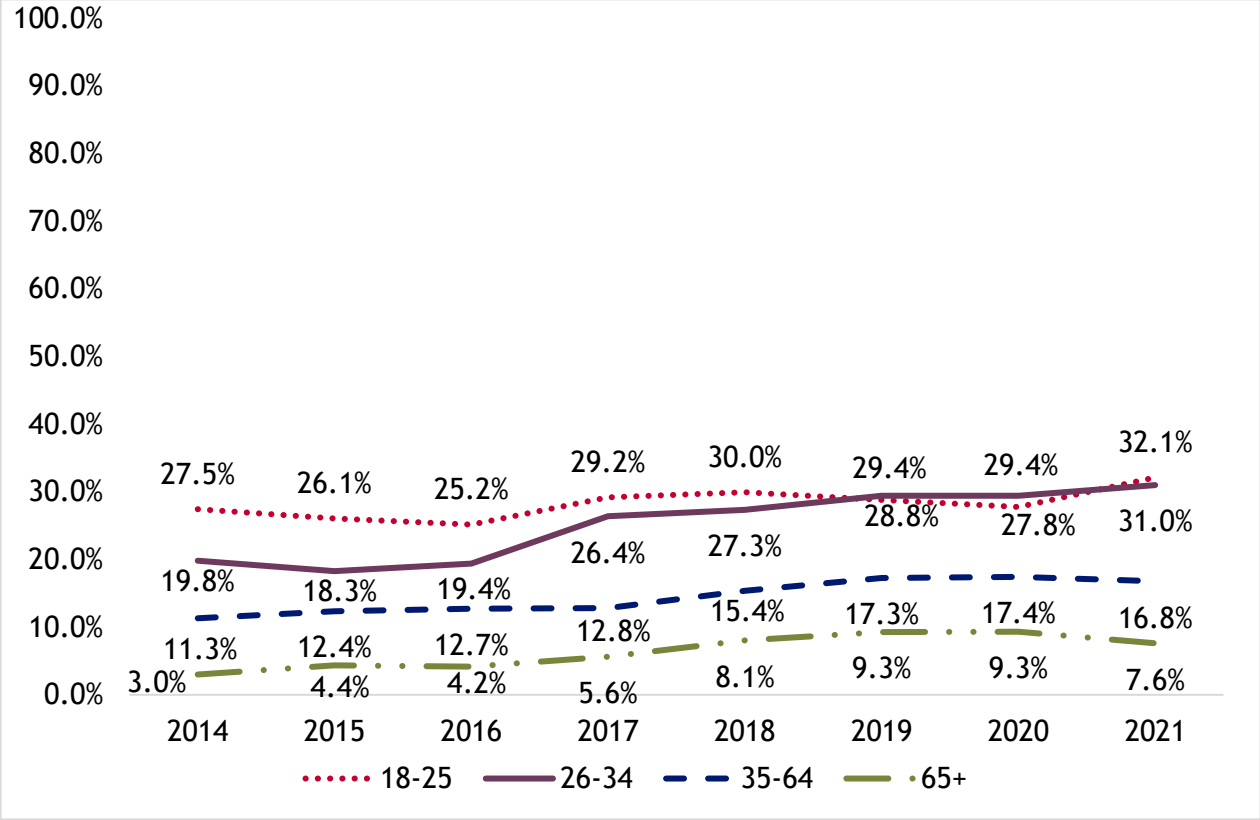
Figure 3.2. Past 30-day adult marijuana use, by gender, 2014–2021: BRFSS



Source: Behavioral Risk Factor Surveillance System, Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.
Note: See Appendix B, Table 1 for the confidence levels.

Figure 3.3 presents trend data for past 30-day marijuana use stratified by age group. In 2021, past 30-day marijuana use among 18- to 25-year-old respondents (32.1%) was not significantly different from 26- to 34-year-olds (31.1%). However, both of those age groups reported significantly higher past 30-day use compared 35- to 64-year-olds (16.8%) and those 65 and older (7.8%). With the exception of the 18-25-year old age group, past month use has significantly increased in all groups from 2014-2021, although use patterns have been stable from 2018-2021.

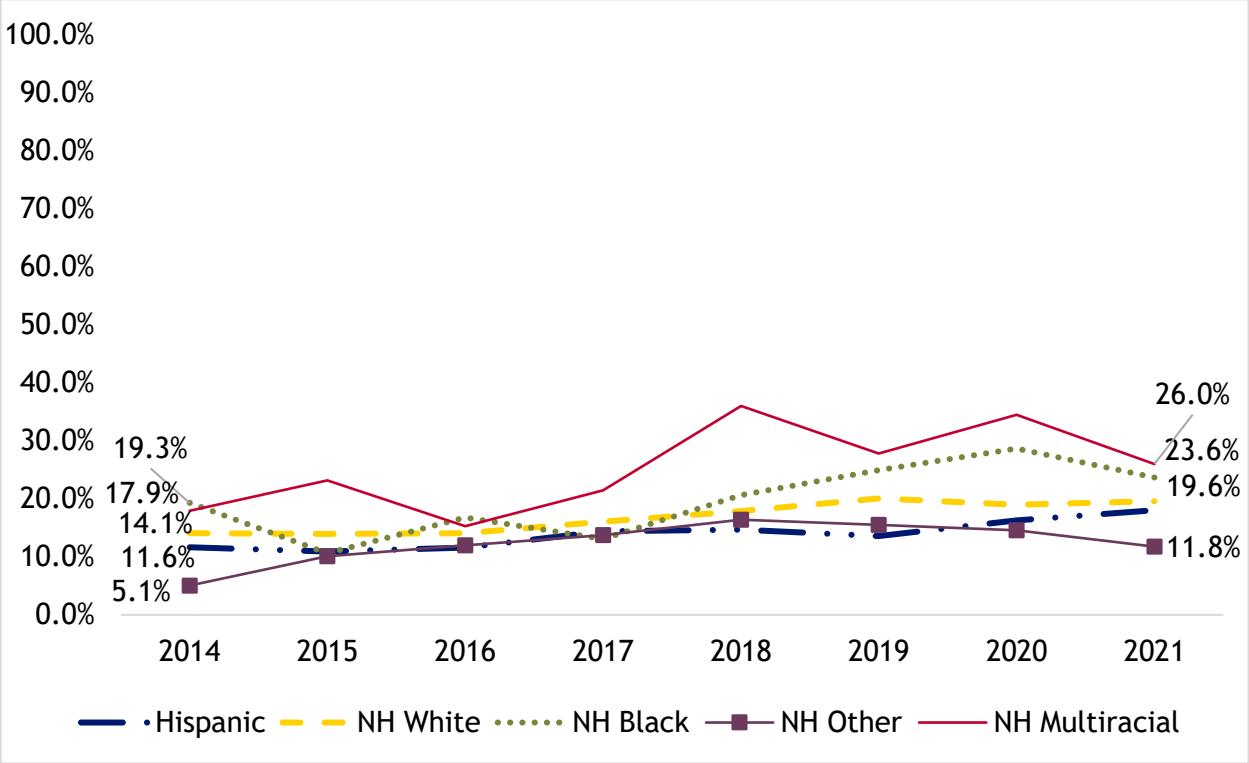
Figure 3.3. Past 30-day adult marijuana use, by age group, 2014–2021: BRFSS



Source: Behavioral Risk Factor Surveillance System, Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.
Note: See Appendix Table 2 for the confidence levels.

Past 30-day marijuana use estimates did not significantly differ by race/ethnicity, but their high variability limited our ability to detect differences (Figure 3.4). For example, the Non-Hispanic Multiracial group had estimates that ranged from 15.3% to 36.0% from 2014 to 2021. In 2021, 19.6% of White non-Hispanics reported using marijuana in the past month, which represents a significantly higher rate from the 2014 and 2017 level. Rates of reported past-month use in Hispanic Coloradans have also significantly risen from 2014-2021, going from 11.6% to 18.0%.

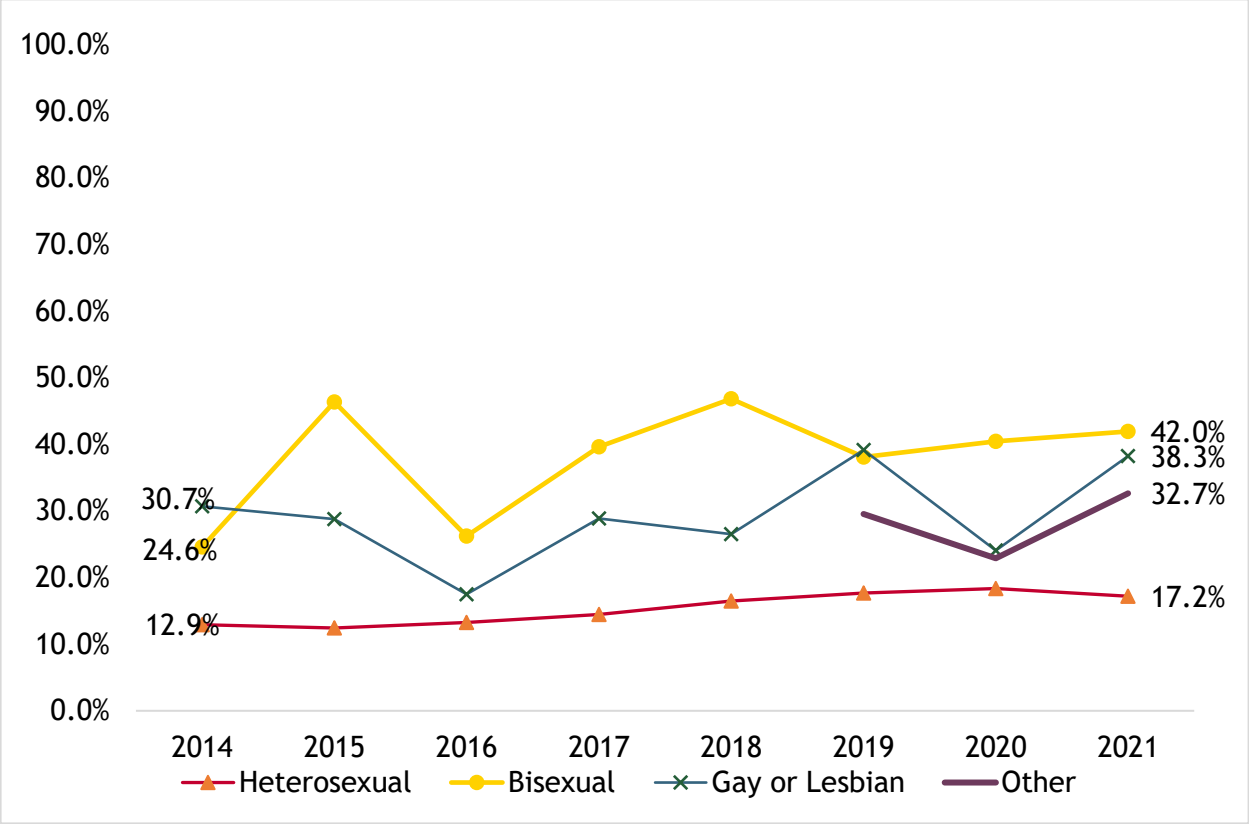
Figure 3.4 Past 30-day adult marijuana use, by race/ethnicity, 2014–2021: BRFSS



Source: Behavioral Risk Factor Surveillance System, Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.
Note: See Appendix B Table 3 for confidence levels.

Sexual orientation was related to past 30-day marijuana use, but variability in these estimates also made tracking trends and differences by group difficult (Figure 3.4). In 2019, CDPHE added a fourth sexual orientation category of "other" and began reporting trends in this group. In 2021, individuals who identified as bisexual (42%), gay/lesbian (38.3%) or other (32.7%) all had significantly higher past-month use rates compared to individuals who identified as heterosexual (17.2%).

Figure 3.5 Past 30-day adult marijuana use, by sexual orientation, 2014–2021: BRFSS

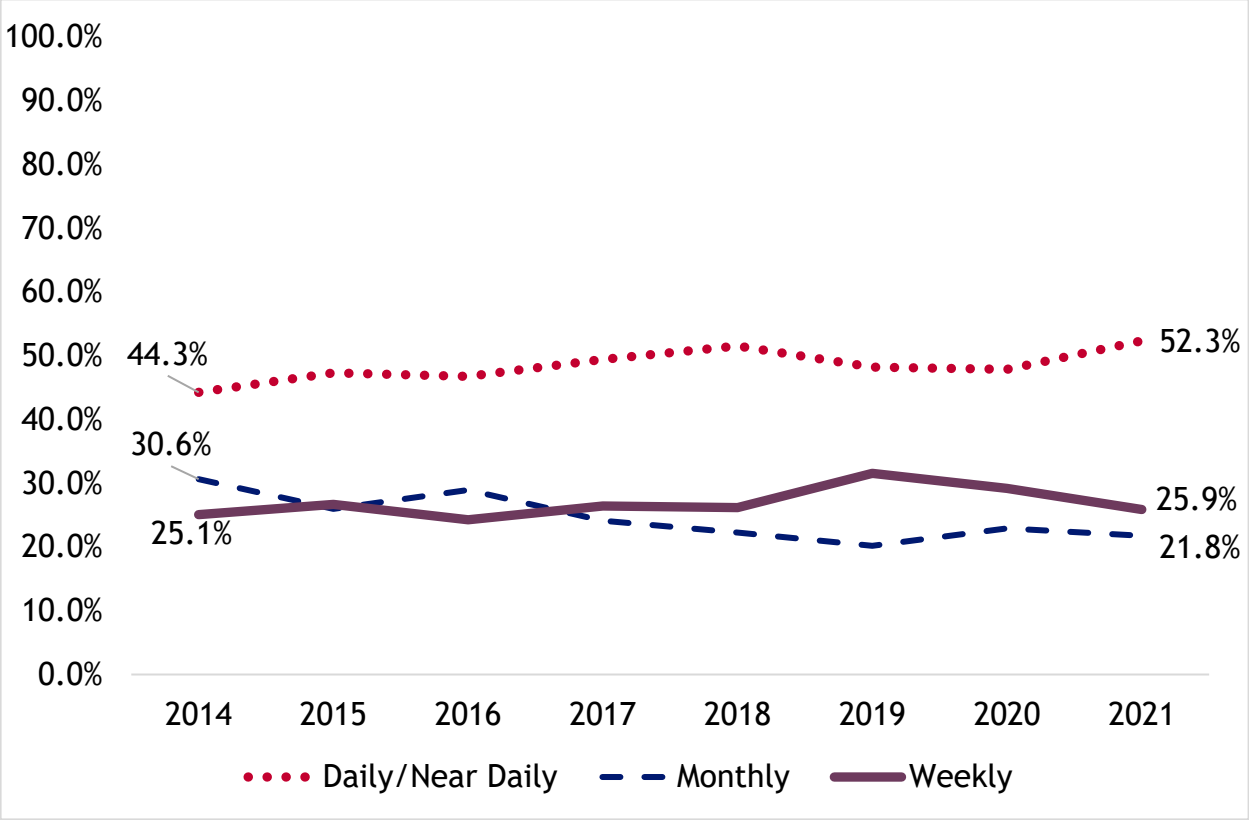


Source: Behavioral Risk Factor Surveillance System, Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.

Note: See Appendix B Table 4 for the confidence levels.

Among adults who reported current use, heavy use has been on the rise from 2014 to 2021 (Figure 3.5). Over half (55.2%) of past-month users reported using daily/near daily (between 20-30 days per month) in 2021, which is a significant increase from 2014's rate of 44.3%. In contrast, monthly use (between 1-13 days per month) dipped nearly 10-percentage points from 2014-2021, and in 2021, was estimated at 21.8%. Weekly use (between 4-19 days) among past-month users has been largely stable and was estimated at 25.9% in 2021.

Figure 3.6 Frequency of adult marijuana use among past-month users, 2014-2021: BRFSS

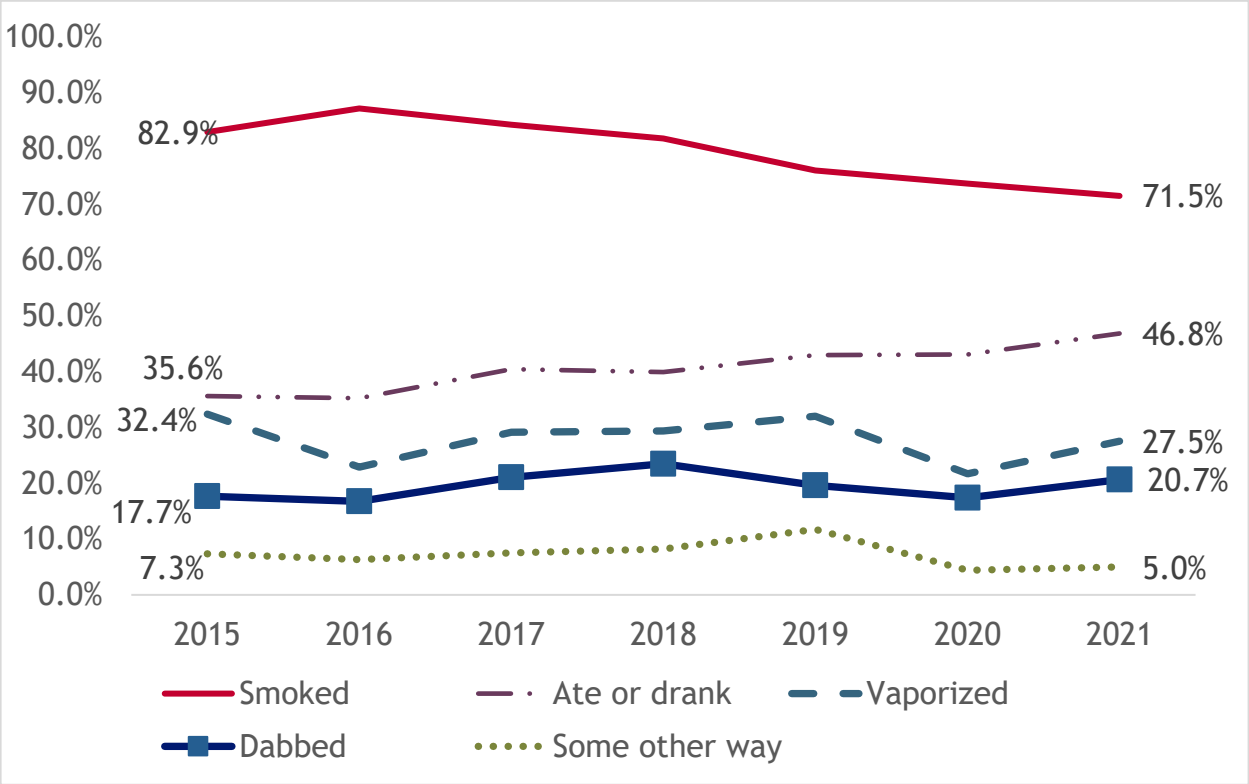


Source: Behavioral Risk Factor Surveillance System, Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.

Notes: See Appendix B Table 5 for the confidence levels. Daily/Near Daily use refers to use between 20-30 days per month; weekly refers to use between 4-19 days per month; monthly refers to use between 1-13 days per month.

Figure 3.7 shows trends in methods of use among current marijuana users from 2015 to 2021. Individuals often report multiple methods of use. In 2021, the most common methods of adult marijuana use (Figure 3.7) were smoking (71.5%), eating/drinking (46.8%), vaporizing (27.5%), dabbing (20.7%), and some other method (6.2%).

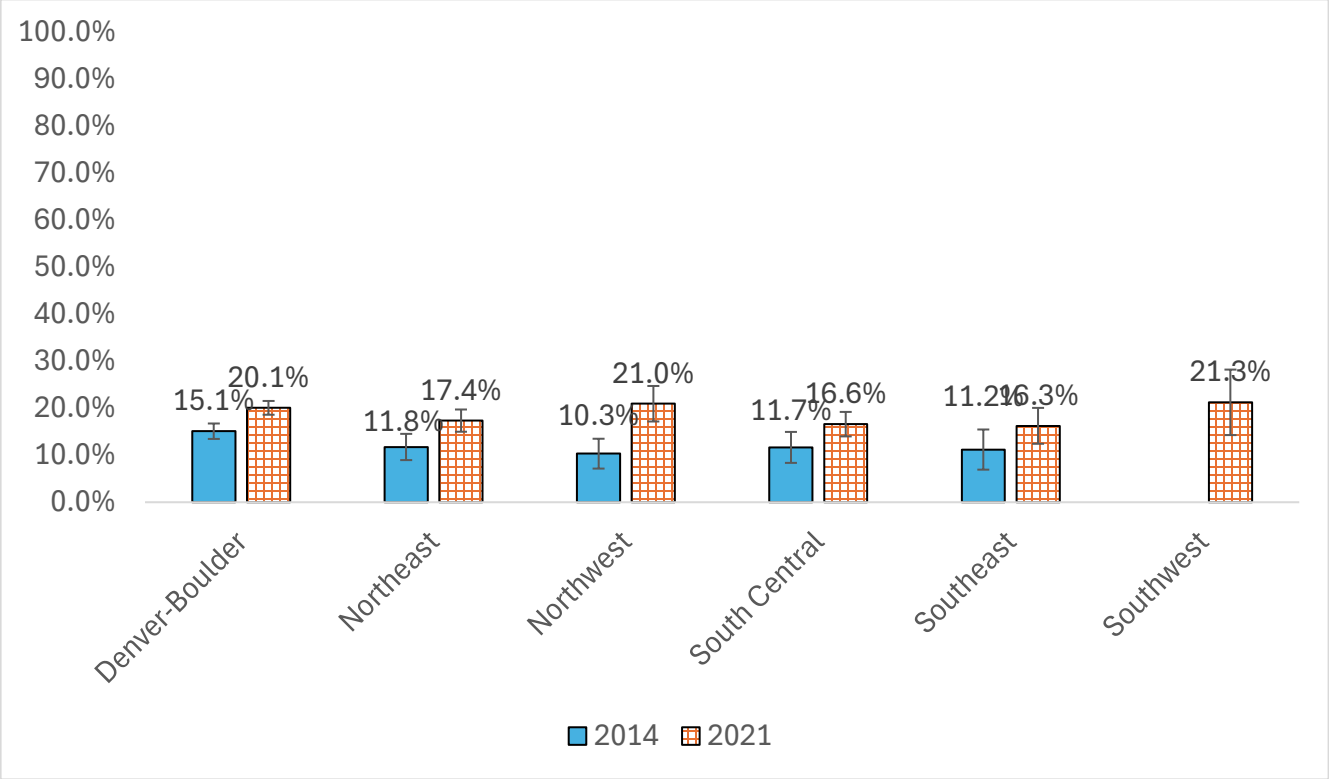
Figure 3.7 Method of marijuana use, 2015-2021: BRFSS



Source: Behavioral Risk Factor Surveillance System, Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.
Note: See Appendix B Table 6 for the confidence levels.

The geographic BRFSS current marijuana use estimates for Colorado are presented by region and county. The Colorado Department of Public Health and Environment's regional designations are shown in Appendix B, and regional comparisons for 2014 and 2021 annual estimates are pictured in Figure 3.8. Due to small sample size, the Southwest region estimate for 2014 was censored. The Denver/Boulder, Northeast, and Northwest regions all had significant increases in current use from 2014 to 2021. In 2021, the region with the lowest rate was the Southeast (16.3%) while the highest usage rates were in the Southwest region (21.3%) (Figure 27). There were no statistically significant differences between the regions.

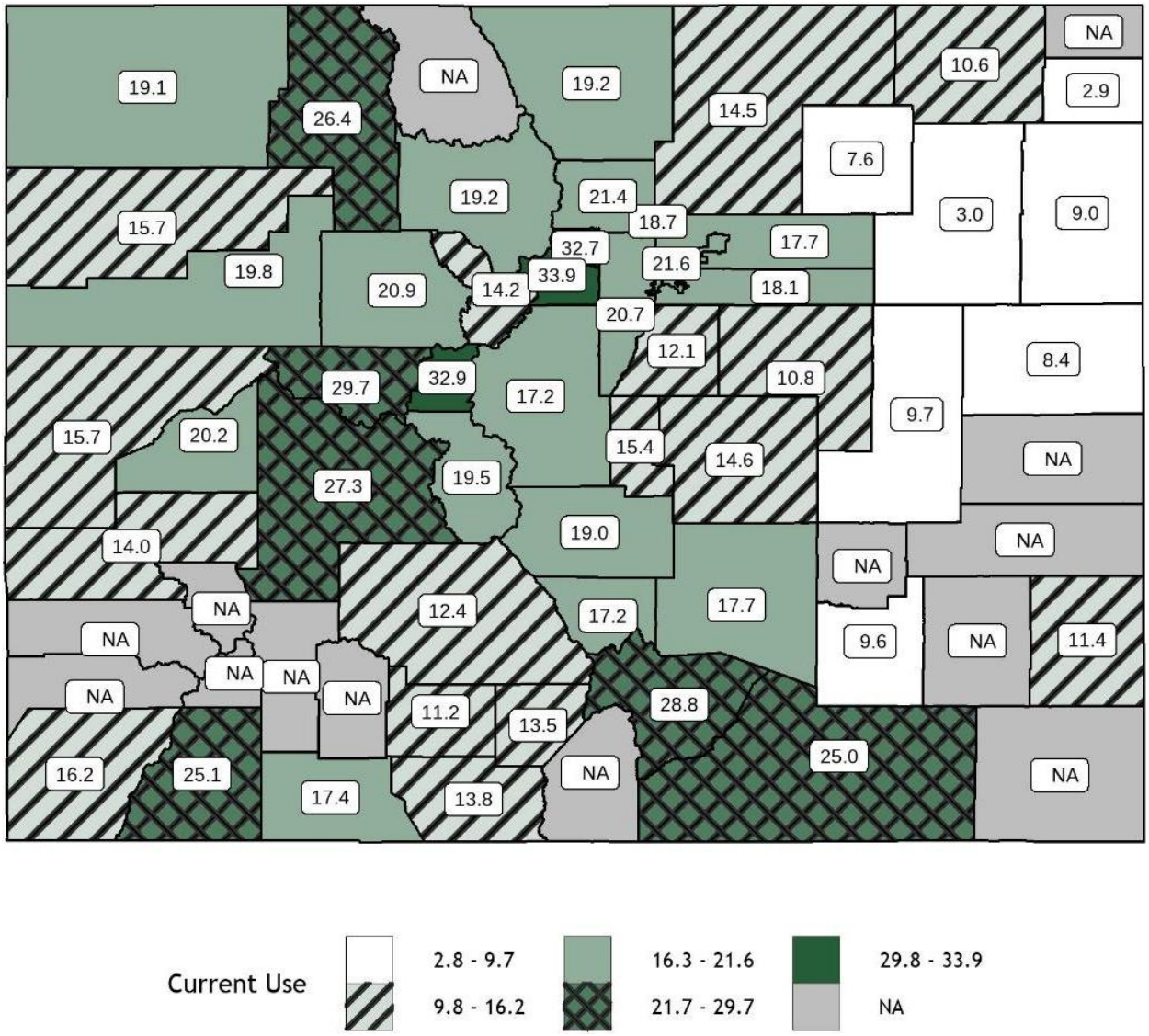
Figure 3.8 Past 30-day adult marijuana use by region, 2014 vs. 2021: BRFSS



Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.
Note: [*] indicates a significant increase between 2014 to 2021 in the region. Estimates in the Southwest region of 2014 were censored due to small sample size. See Appendix Table 7 for the regional categorization by county.

County-level estimates of past 30-day marijuana use are presented in Figure 3.9. Due to the relatively small number of responses in each county, the results are combined for the five-year period from 2017 to 2021; this aggregation also enabled the viewing of regional differences. During this period, current use of marijuana was estimated to be 18.0% (95% CI: 17.6-18.5%), and the following counties had current use estimates that were significantly above the state rate: Boulder (21.4%), Clear Creek (33.9%), Jefferson (20.7%), La Plata (25.1%) and Pitkin (29.7%). Ten counties had significantly lower rates of current use compared to the state as a whole, and these counties were: Douglas (12.1%), Elbert (10.8%), El Paso (14.6%), Kit Carson (8.4%), Logan (10.6%), Morgan (7.9%), Otero (9.6%), Phillips (2.9%), Weld (14.4%) and Yuma (9.0%).

Figure 3.9 Past 30-day adult marijuana use by county, 2017-2021 (combined): BRFSS



Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.
Note: Counties shaded in gray either had no data reported or did not have enough responses over the five-year period to develop reliable estimates.

Hospitalizations and Emergency Department Visits

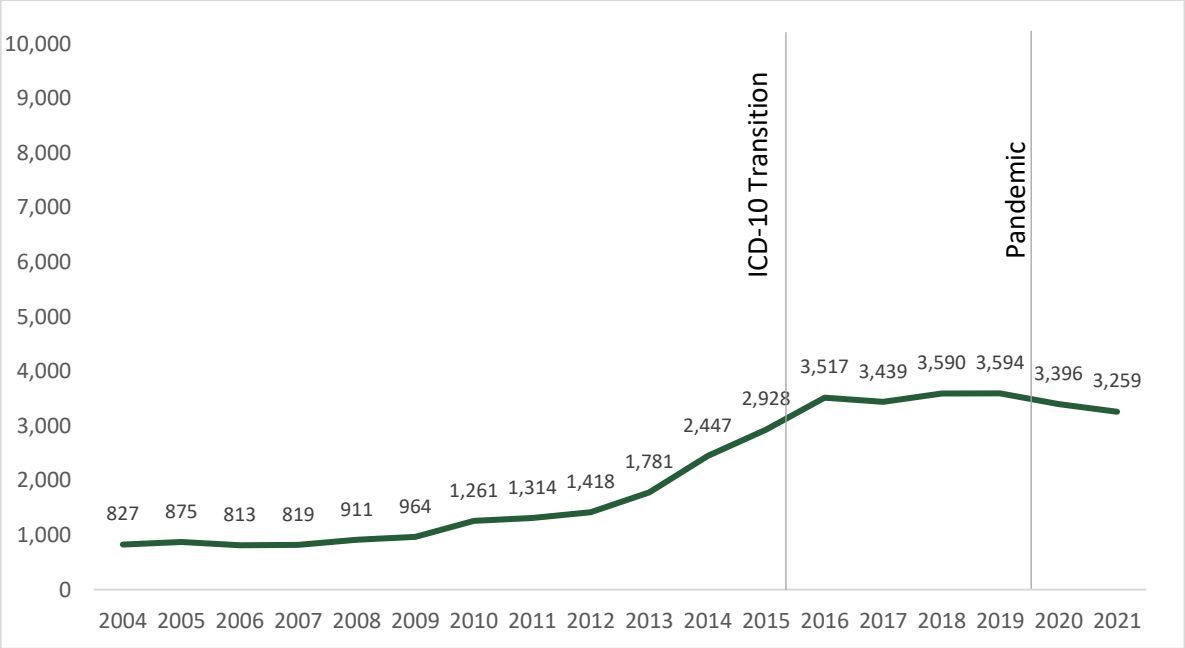
Marijuana consumption can lead to adverse health outcomes, and CDPHE assesses the burden of drug-related hospitalizations and emergency department (ED) visits by analyzing the Colorado Hospital Association (CHA)'s discharge records. CDPHE does not have access to physician notes or diagnoses, and instead, they estimate hospitalizations and ED visits by identifying discharge records with marijuana-related billing codes. In October of 2015, hospitals shifted from using the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) billing codes to ICD-10-CM codes. The transition from ICD-9-CM to ICD-10-CM expanded the number of available marijuana codes and increased the complexity of coding schemes. Due to these changes, CDPHE recommends caution in the interpretation of these data during this coding transition from 2014 to 2016. Additionally, the data are intended for billing purposes. Use of these codes does not mean

that the encounter was motivated by marijuana exposure but could also reflect changes in patient comfort in disclosing or provider screening practices.

The four ICD-9-CM codes used are: 305.2-Marijuana (Cannabis Abuse); 304.3-Marijuana (Cannabis Dependence); 969.6-Poisoning by psychodysleptics (hallucinogens); and E854.1-Accidental poisoning by psychodysleptics (hallucinogens). For the purposes of 969.6 and E854.1, hallucinogens can include cannabis, LSD, mescaline, and psilocybin (mushrooms). There are 53 separate codes for cannabis-related conditions in the ICD-10-CM coding system. All ICD-10-CM codes are specific to cannabis and include cannabis poisonings, use, abuse, and dependence. In the analyses below, cannabis events represent discharge records with at least one marijuana related ICD-9/10-CM code in the up to 30 listed billing codes.

Hospital discharge datasets for hospitalizations have data going back to 2004, which enabled analysis of three different eras of legalization in Colorado, as shown in Figure 3.10. These eras are: legal non-commercial medical marijuana (2004—2009), legal commercial medical marijuana (2010–2013), and legal commercial medical and retail marijuana (2014–2019). During the era of non-commercial medical marijuana, the hospitalization rate rose 17% (826.8 in 2003 to 963.5 in 2009). The era of medical marijuana commercialization (2010–2013) reflected a 100% jump, to 1,780.9 per 100,000 hospitalizations. The period from 2014 to 2016 reflects a transition from the ICD-9-CM to ICD-10-CM billings codes. While there is an increase during that period it should be interpreted with caution, as many more possible codes were included in the new methodology. From 2016 to 2019, rates of hospitalizations were stable. The COVID-19 pandemic also introduced another disruption in monitoring hospitalizations due to changes in the utilization of hospital resources for substance use-related health concerns during this crisis. Marijuana hospitalization rates declined by 6% in 2020 and 9% in 2021 from 2019's rate.

Figure 3.10 Rates of hospitalizations with a marijuana-related billing code per 100,000 hospitalizations, 2004-2021



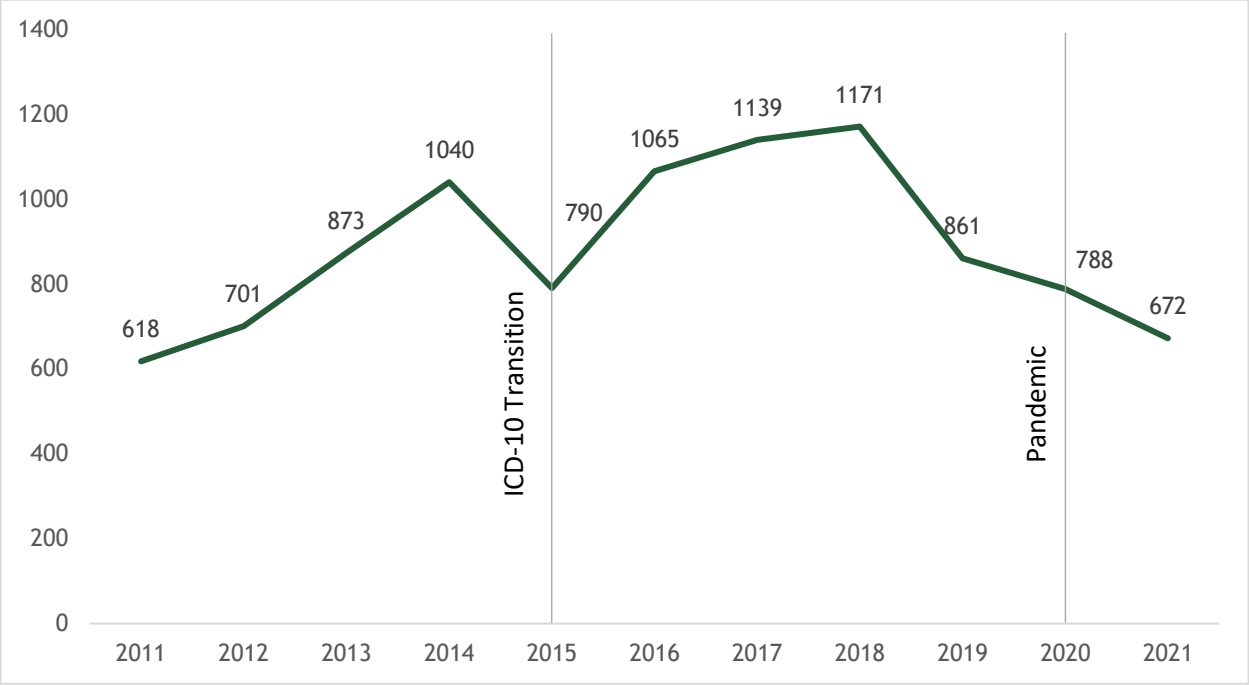
Source: Data provided by Colorado Hospital Association with analysis provided by Colorado Department of Public Health and Environment, Marijuana Health Monitoring Program.

Notes: (1) An individual can be represented more than once in the **hospitalization** data; therefore, the rate is hospitalizations with marijuana codes per 100,000 total hospitalizations**;** (2) The period from October 2015 onward should be interpreted with caution due

to the transition to ICD-10-CM coding from ICD-9-CM.

The data on Emergency Department (ED) visits are limited due to changes in reporting methods from the period prior to 2010 (Figure 3.11). There was a significant rate increase during the era of medical commercialization, from 618 in 2011 to 1,040 in 2014. In the period after the transition to ICD-10-CM there was an initial increase, which reversed in 2019. Marijuana-related ED visits continued to decline in 2020 and 2021. Again, this trend aligns with national dips in behavioral health-related ED visits during the COVID-19 pandemic, perhaps due to lack of capacity at hospitals and/or hesitations about seeking care.[58]

Figure 3.11 Rates of emergency department visits with a marijuana-related billing code per 100,000 emergency department visits, 2011-2021



Source: Data provided by Colorado Hospital Association with analysis provided by Colorado Department of Public Health and Environment, Marijuana Health Monitoring Program.
Notes: (1) An individual can be represented more than once in the emergency department visit data; therefore, the rate is emergency department visits with marijuana codes per 100,000 total emergency department visits; (2) The period from October 2015 onward should be interpreted with caution due to the changes in coding schemes.

Poison Control

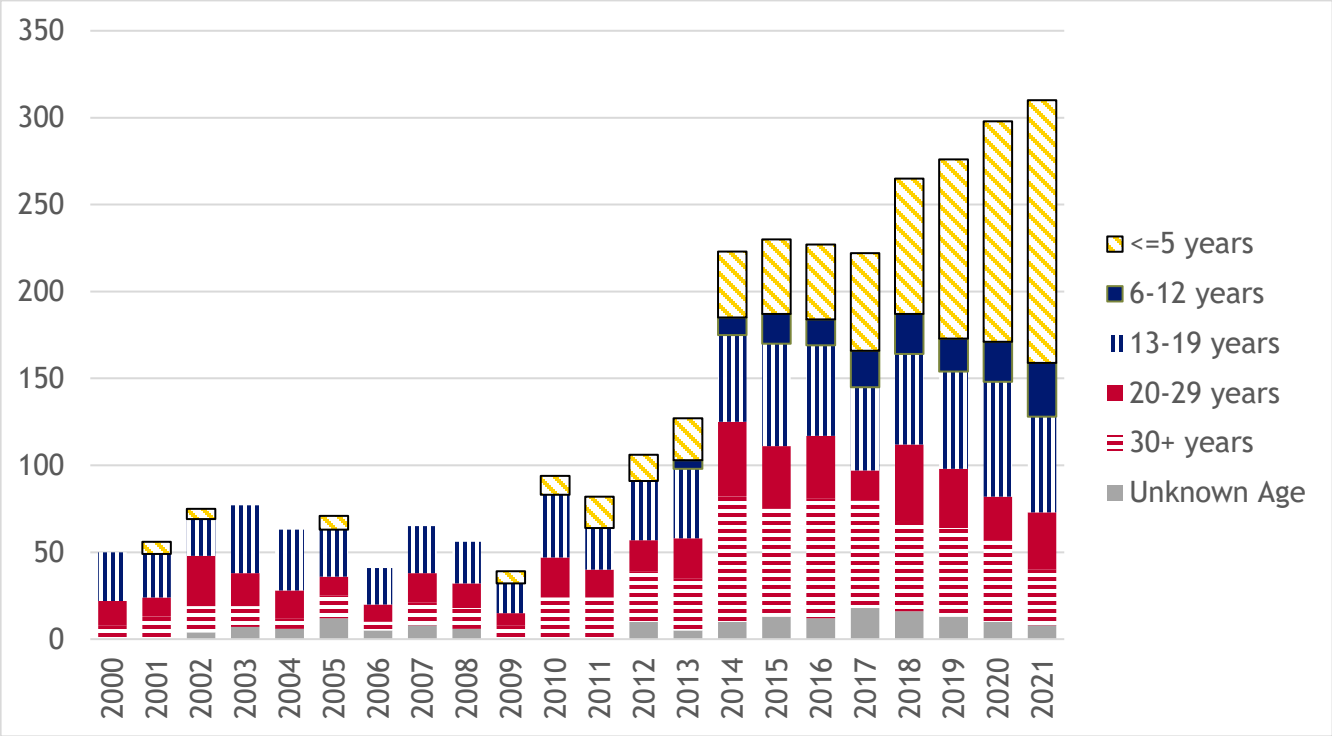
The Rocky Mountain Poison and Drug Safety (RMPDS) provided data on marijuana[59] exposures to CDPHE for analysis. The number of human exposures reported to poison control mentioning marijuana increased immediately after the legalization of recreational marijuana (Figure 3.12), with 106 calls in 2012 and 223 in 2014. These increases stabilized during 2014-2017. From 2018-2021, poison center calls steadily increased and

[58] Venkatesh, A. K., Janke, A. T., Kinsman, J., Rothenberg, C., Goyal, P., Malicki, C., D'Onofrio, G., Taylor, A., & Hawk, K. (2022). Emergency department utilization for substance use disorders and mental health conditions during COVID-19. *PLoS ONE*, *17*(1 January), 1–12. https://doi.org/10.1371/journal.pone.0262136

[59] Beginning in 2018 CBD only was added as an exposure code.

reached 310 calls in 2021. This rise was largely driven by an increase in calls for children 5 years or younger. In 2018, the proportion of calls on behalf of children five and under was 29%, and by 2021, the proportion jumped to 49%. The age group with the second highest number of calls in 2021 was 13-19 with 55 calls.

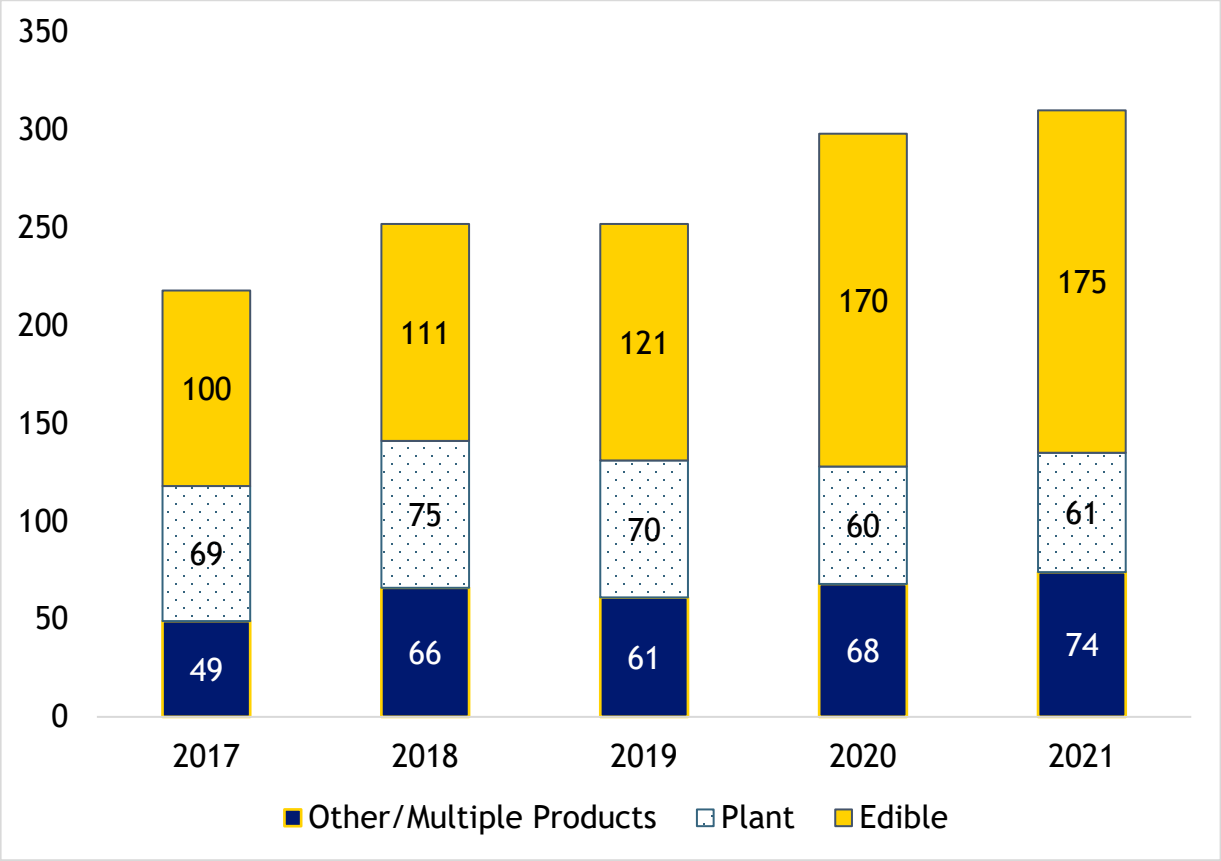
Figure 3.12 Human marijuana exposures reported to Rocky Mountain Poison and Drug Center, by age group, 2000–2021



Source: Data provided by Rocky Mountain Poison & Drug Safety (RMPDS), analyzed by Colorado Department of Public Health and Environment.
Note: Human marijuana exposures reported to RMPS were determined by the presence of the generic code "Marijuana-0083000" from the National Poison Data System.

The RMPDS began collecting additional data about marijuana exposures in mid-2014. CDPHE revised this reporting in 2017 and only data from 2017 through 2021 are available**.** Figure 3.13 highlights the increase in marijuana exposures associated with edible products, which increased 75% from 2017 to 2021. Additionally, the majority of poison calls edibles were related to unintentional exposures (64%); in contrast, only 30% of calls that were associated with plants were due to unintentional exposures and 37% of calls associated with other/multiple products were a result of unintentional exposures.

Figure 3.13 Marijuana products involved in exposure calls reported to Rocky Mountain Poison and Drug Center calls, 2017–2021



Source: Data provided by Rocky Mountain Poison & Drug Safety (RMPDS), analyzed by Colorado Department of Public Health and Environment.
Note: Human marijuana exposures reported to RMPS were determined by the presence of the generic code "Marijuana-0083000" from the National Poison Data System.

Treatment Trends

The Colorado Department of Human Services, Behavioral Health Administration (BHA), is required to collect and report substance use treatment data from licensed providers as a requirement of the Substance Abuse and Mental Health Service Administration's (SAMHSA) funding. The data are entered into the BHA's Drug/Alcohol Coordinated Data System (DACODS) and are the source of the information provided below. These data include the top three substances of use, demographic characteristics, referral source, referral reason, time in treatment, client residence, and more.

There were 136,873 treatment admissions from 2008 to 2022, where individuals seeking treatment reported marijuana as their primary substance of use, and on average there were 9,125 admissions per year. In the sections below, these events will be referred to as marijuana-related treatment admissions. Marijuana-related treatment admission rates (per 100,000 population) and number of admissions, broken out by age, are

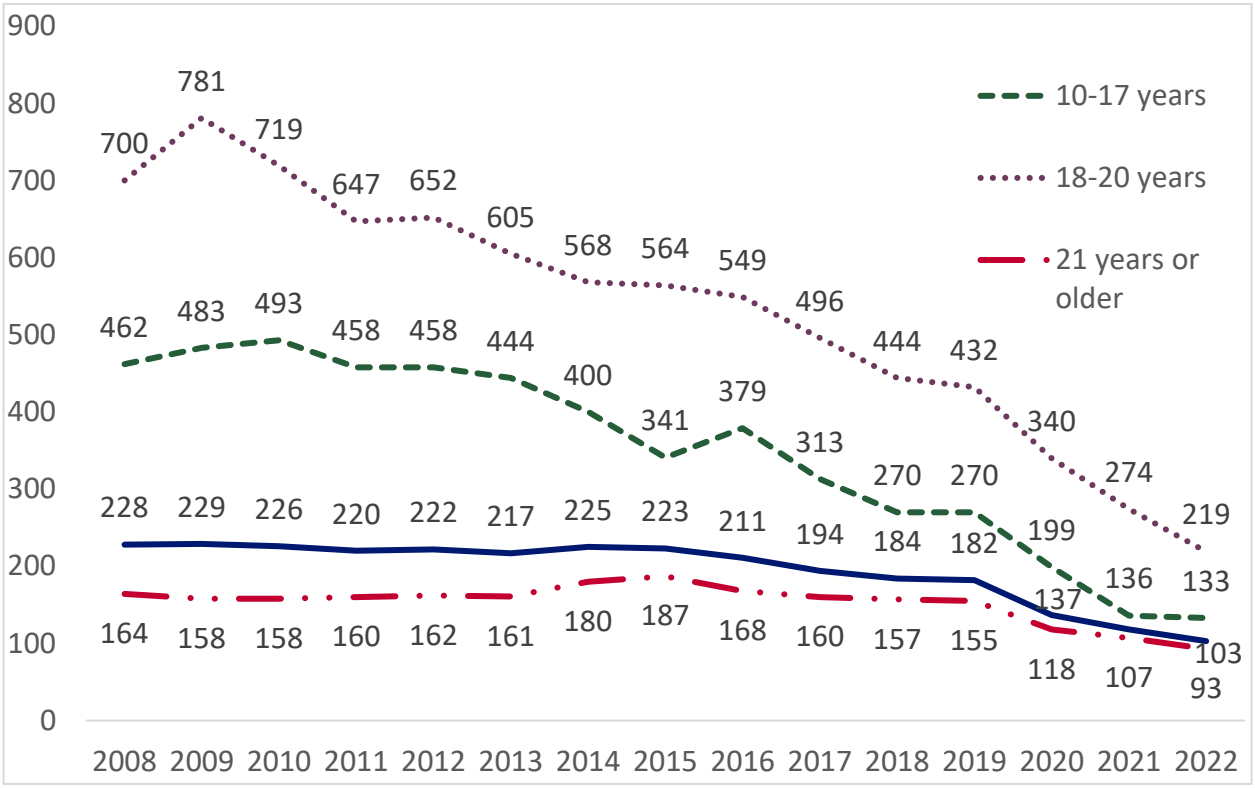
detailed in Figures 3.14 and 3.15. [60, 61] The age specific rates allow better comparison between rates in different age categories. The overall marijuana-related treatment admission rate had been stable from 2008 to 2016 and hovered in the range of 211 to 229 admissions per 100,000 residents. Starting in 2017, marijuana-related admissions started to decline and fell sharply from 2019 to 2022. These declines might correspond to a nationwide decline in treatment admissions from 2019 to 2020.[62] The treatment admission rate decreased by half for those under 18, from 270 in 2019 to 133 admissions per 100,000 population in 2022 (Figure 3.14). Similarly, the admission rate dropped by half for those in the 18–20 age group, from 432 admissions per 100,000 in 2019 to 219 in 2022. Admission rates also declined 40% for those 21 and older during this time period (155 per 100,000 in 2012 to 93 in 2022).

[60] The 2016 versions of this report calculated treatment rates based on whether the patient reported marijuana as *any* of their top three drugs of abuse. After consultation with the Office of Behavioral Health (now the Behavioral Health Administration), we changed our focus to only those patients reporting marijuana as their *primary* drug of abuse. Consequently, the rates presented in this report are lower than previously reported.

[61] For the purposes of this report all types of treatment types in the ADDSCODS database are being used. This includes in-patient treatment, out-patient treatment, Strategic Intensive Remediation Treatment (STIRT), withdrawal management, DUI education/services, and differential assessment. Consequently, the numbers in this report may be somewhat higher than other reports from OBH that focus solely on in-patient and out-patient treatment.

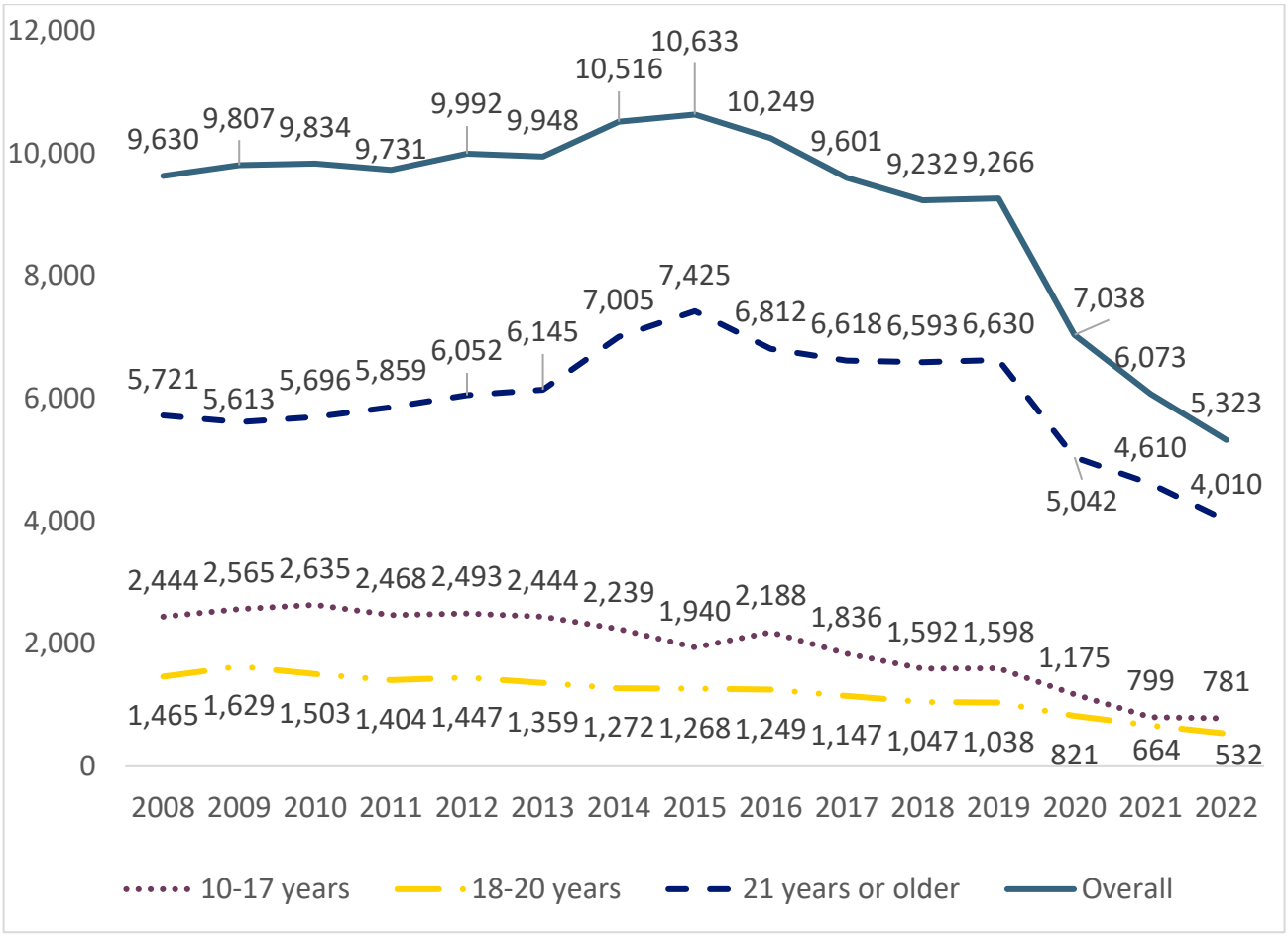
[62] Cantor, J. H., Whaley, C. M., Stein, B. D., & Powell, D. (2022). Analysis of Substance Use Disorder Treatment Admissions in the US by Sex and Race and Ethnicity before and during the COVID-19 Pandemic. *JAMA Network Open*, *5*(9), E2232795.

Figure 3.14 Treatment admission rate per 100,000 residents for those reporting marijuana as primary substance of use, by age group, 2008–2022



Sources: Colorado Department of Human Services, Behavioral Health Administration, Drug/Alcohol Coordinated Data System; Colorado Department of Local Affairs, State Office of Demography. Analyzed by the Division of Criminal Justice.

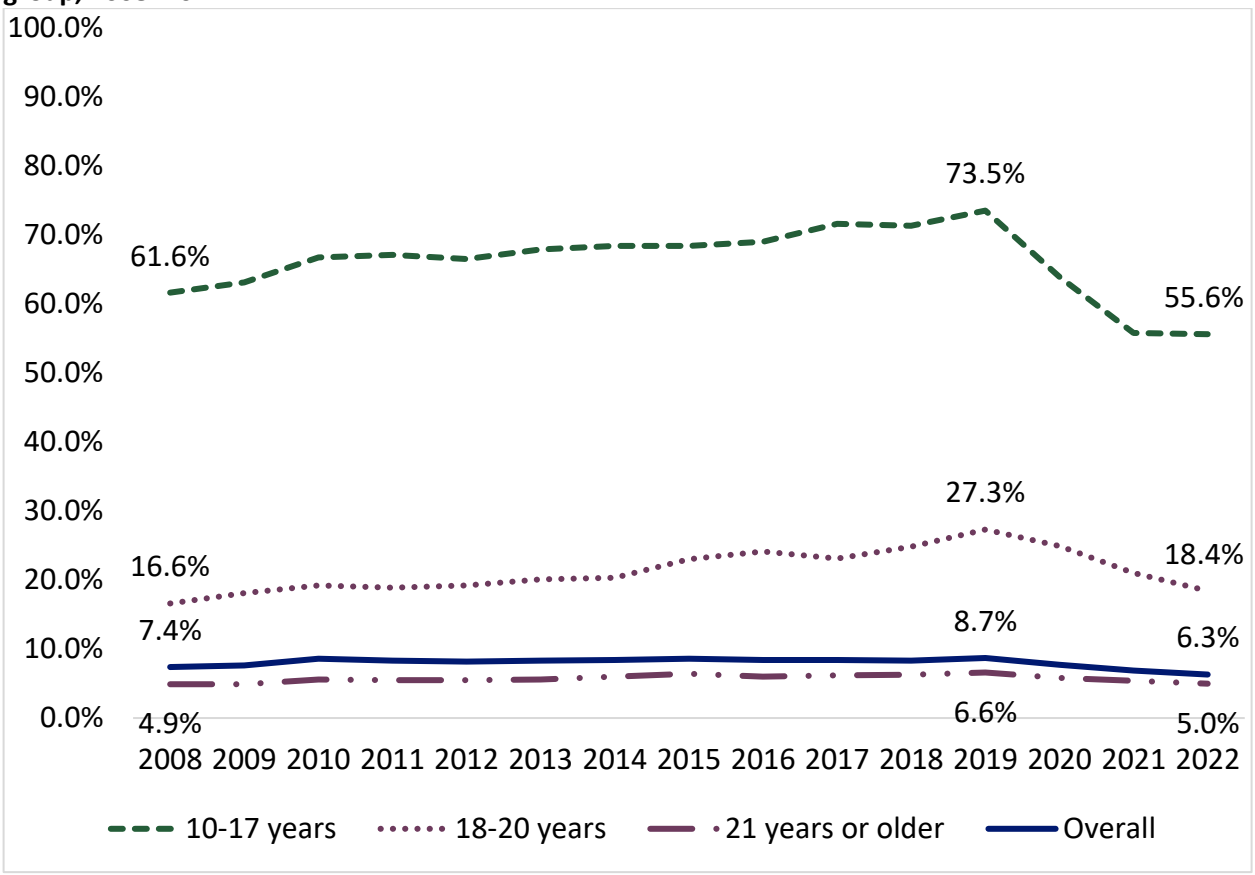
Figure 3.15 Number of treatment admissions reporting marijuana as primary substance of use, by age group, 2008–2022



Source: Colorado Department of Human Services, Behavioral Health Administration, Drug/Alcohol Coordinated Data System. Analyzed by the Division of Criminal Justice.

Overall, marijuana-related treatment admissions represented a small proportion (6.3% in 2022) of all admissions, but there was noted variation by age group. Treatment admissions for youth under the age of 18 had the highest proportion reporting marijuana as the primary drug of use compared to treatment admissions in other age groups. Marijuana was reported as the primary substance of use by 55.6% of youth under the age of 18 who were admitted for treatment in 2022 (Figure 3.16). This contrasts with 18.4% of 18- to 20-year-olds and 5% of adults 21 years and older. In all age groups, the proportion of treatment admissions reporting marijuana as the primary drug of use dropped from 2019 to 2022.

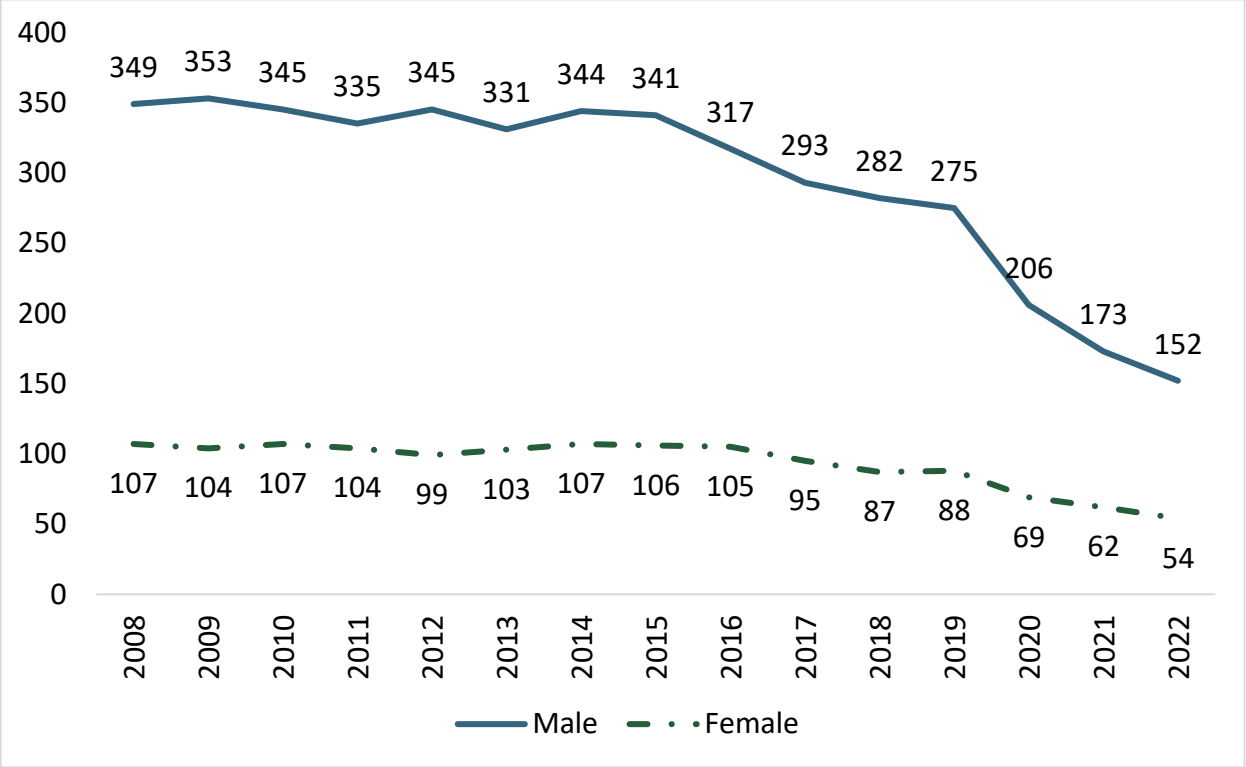
Figure 3.16 Percent of treatment admissions with marijuana reported as the primary drug of use, by age group, 2008–2022



Source: Colorado Department of Human Services, Behavioral Health Administration, Drug/Alcohol Coordinated Data System. Analyzed by the Division of Criminal Justice.

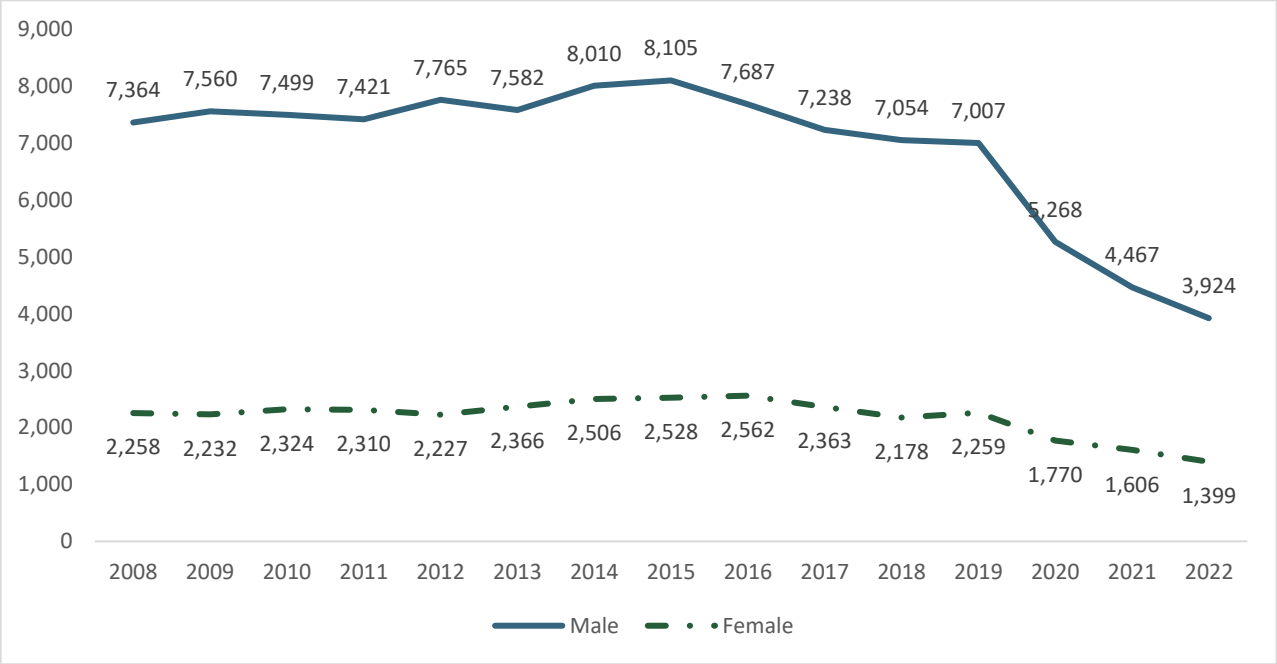
Treatment admission rates (per 100,000 population) and number of admissions with marijuana as the primary substance of use, broken out by gender, are detailed in Figures 3.17 and 3.18. (For purposes of comparability across gender, rates are presented.) Since 2008, males have had a roughly three-fold higher marijuana-related treatment admissions rate compared to females each year. The treatment admission rate decreased 44% for males, from 275 in 2019 to 152 admissions per 100,000 population in 2022 (Figure 3.17). The admission rate decreased 38% for females, from 88 admissions per 100,000 in 2019 to 54 in 2022. As shown in Figure 3.18, treatment admissions for men ranged from 7,007 to 8,105 from 2008 to 2019 and declined to only 3,924 admissions in 2022. In females, admissions ranged from 2,178 to 2,562 in 2008 to 2019 and then dropped to 1,399 admissions in 2022.

Figure 3.17 Treatment admission rate (per 100,000 population in each gender) for those reporting marijuana as primary substance of use, by gender, 2008–2022



Source: Colorado Department of Human Services, Behavioral Health Administration, Drug/Alcohol Coordinated Data System. Analyzed by the Division of Criminal Justice.

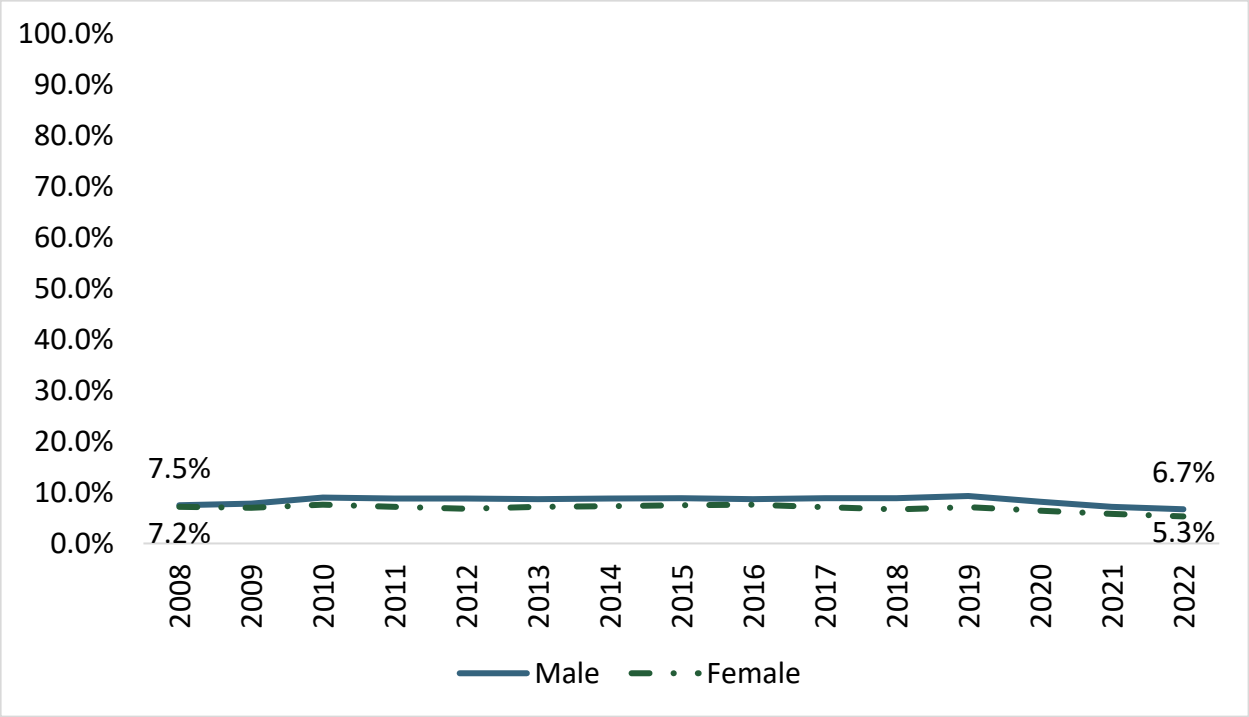
Figure 3.18 Number of treatment admissions reporting marijuana as primary substance of use, by gender, 2008–2022



Source: Colorado Department of Human Services, Behavioral Health Administration, Drug/Alcohol Coordinated Data System. Analyzed by the Division of Criminal Justice. Overall totals may not equal the sum of males and females due to missing data.

There were very few differences in the proportion of marijuana-related treatment admissions by gender. Marijuana was reported as the primary substance of use in 6.7% of males admitted for treatment in 2022 (Figure 3.19), and 5.3% of females in 2022.

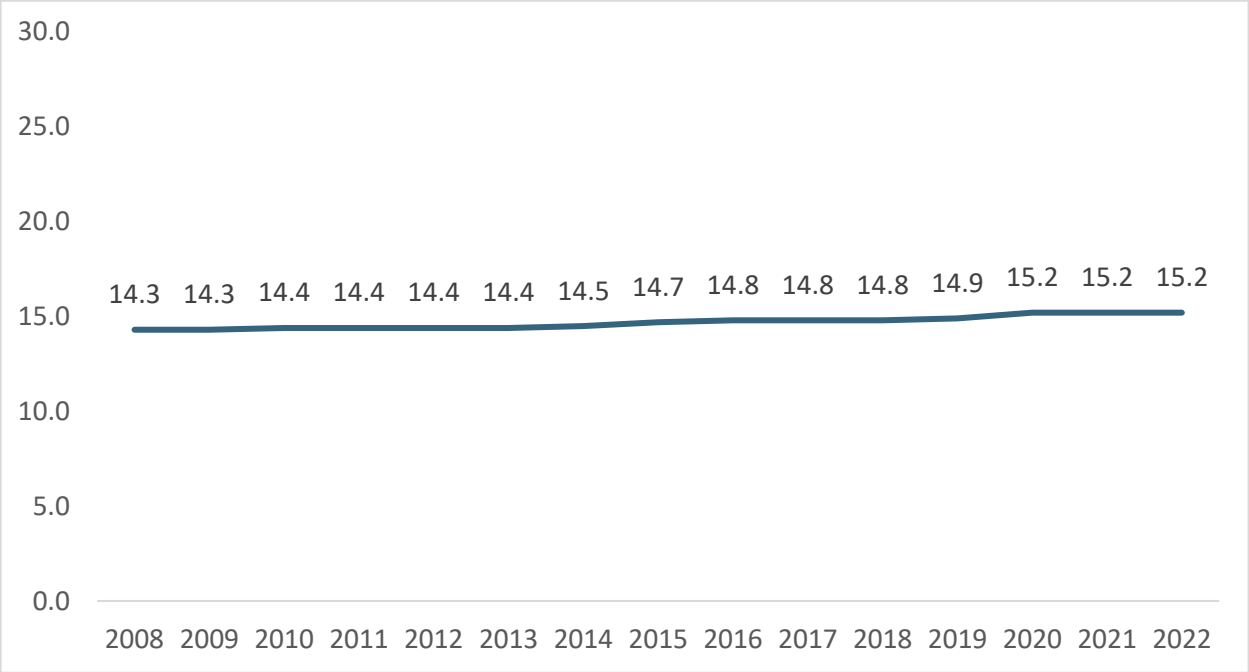
Figure 3.19 Percent of treatment admissions with marijuana reported as the primary substance of use, by gender, 2008–2022



Source: Colorado Department of Human Services, Behavioral Health Administration, Drug/Alcohol Coordinated Data System. Analyzed by the Division of Criminal Justice.

The average age at first use for those seeking treatment for marijuana as a substance of use increased gradually, from 14.3 years to 15.2 years (Figure 3.20) during the period 2008–2022.

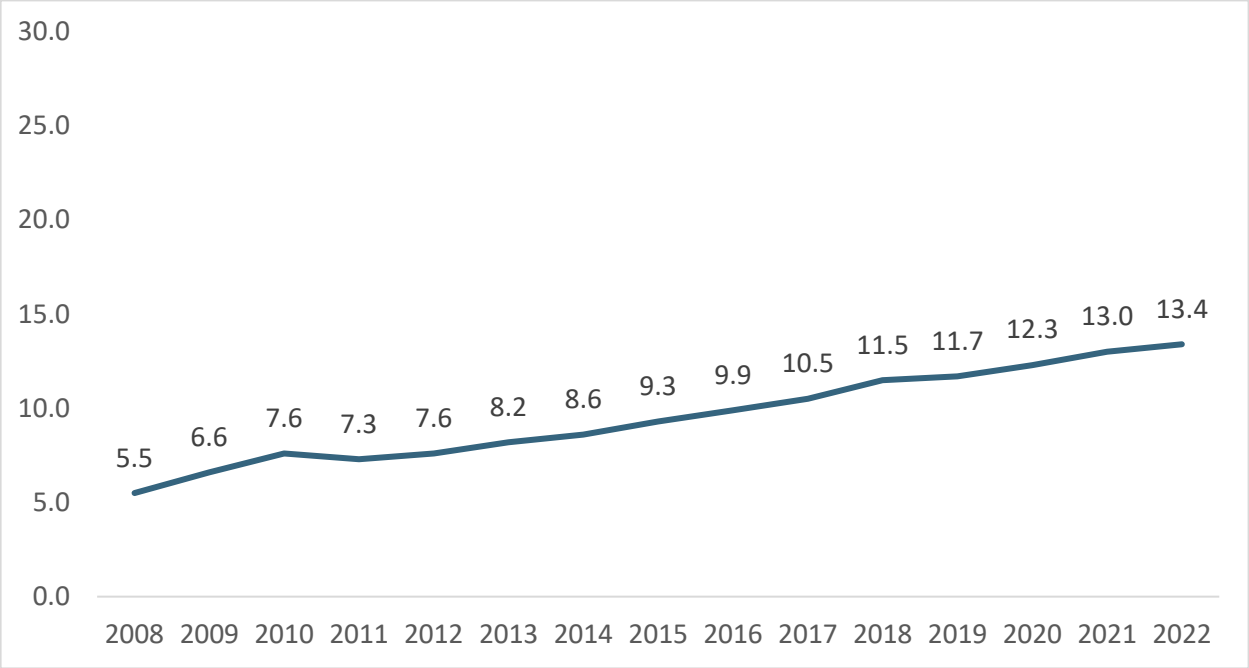
Figure 3.20 Age at first use of marijuana, 2008–2022



Source: Colorado Department of Human Services, Behavioral Health Administration, Drug/Alcohol Coordinated Data System. Analyzed by the Division of Criminal Justice.

DACODS collects information on frequency of substance use in the 30 days prior to treatment, and this self-reported figure has been steadily rising from 2008-2022 (Figure 3.21). The average frequency of past 30-day marijuana use in 2012 was 7.6 days, which increased to 13.4 days by 2022.

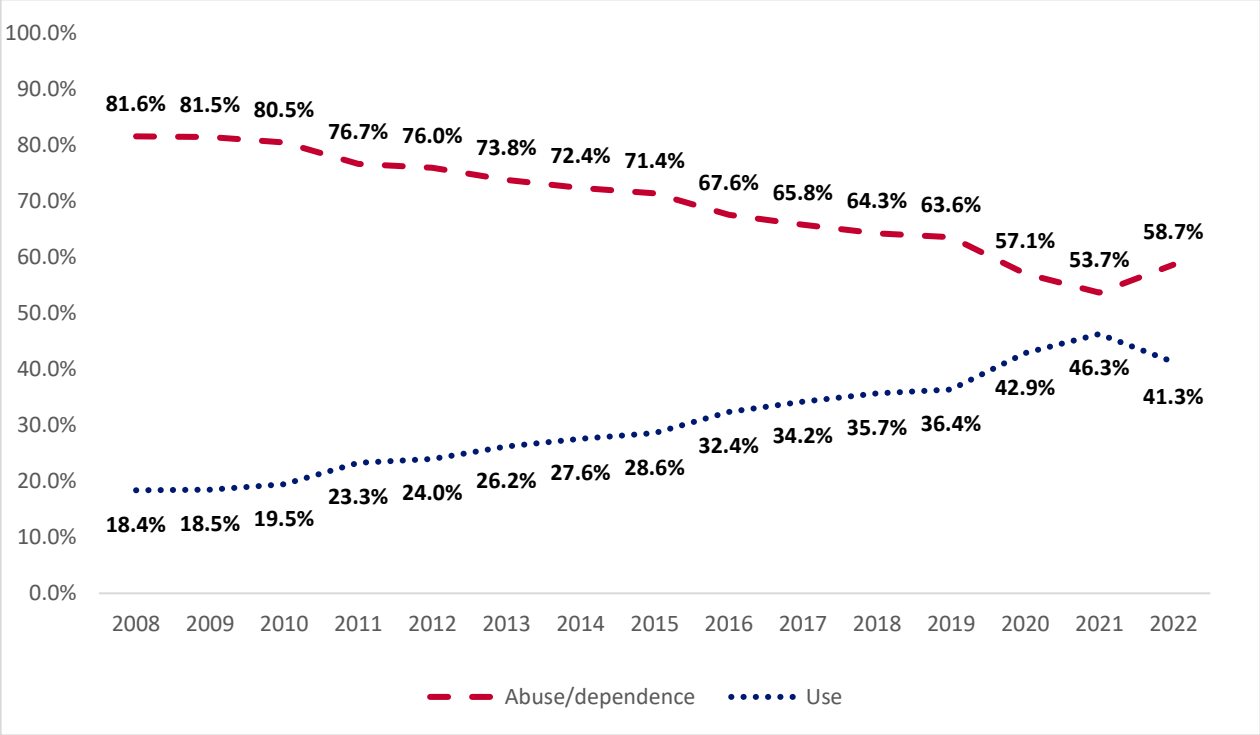
Figure 3.21 Average number of days marijuana used past 30-days among clients reporting marijuana as primary substance of use, 2008–2019



Source: Colorado Department of Human Services, Behavioral Health Administration, Drug/Alcohol Coordinated Data System. Analyzed by the Division of Criminal Justice.

The trend in the clinical impression of the severity of marijuana use is presented in Figure 3.22; treatment admissions where the impression was "Unknown" were excluded. In 2022, 48.6% of treatment admissions had an unknown clinical impression (n = 2,587), and this level of data incompleteness is typical of DACODS data. Among treatment admissions with complete information, the clinical impression of 'use' increased from 24.0% of admissions in 2012 to 41.3% in 2022. The percentage reporting 'abuse or dependence' dropped from 76.0% in 2012 to 58.7% in 2022. From 2021 to 2022, there was an increase in abuse/dependence clinical impressions and corresponding decrease in use impressions. It is difficult to draw any conclusions from this data due to the significant level of data incompleteness.

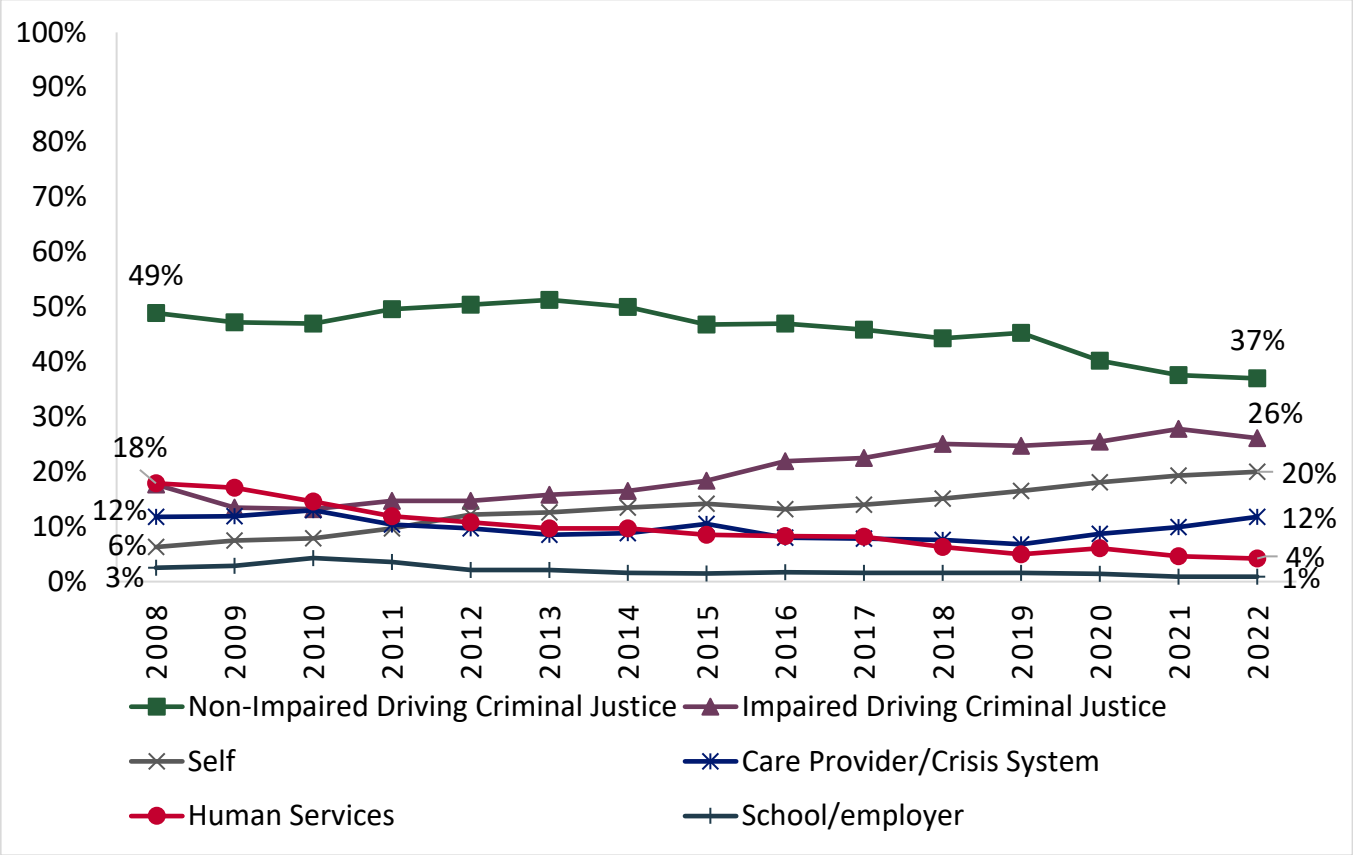
Figure 3.22 Clinical impression of the severity of marijuana use, abuse, or dependence, 2008–2022



Source: Colorado Department of Human Services, Behavioral Health Administration, Drug/Alcohol Coordinated Data System. Analyzed by the Division of Criminal Justice.
Note: These percentages do not include admissions where the clinical impression was missing, which ranged from 40-45% each year.

Information on the referral source for marijuana-related treatment admissions is presented in Figures 3.23. Referrals from the criminal justice system were the most common throughout 2008–2022 and encompassed 66% of all treatment admissions on average. In 2022, 37% being referred by the criminal justice system/drug court and 26% referred for DUI treatment following a conviction. Since 2012, the proportion of DUI criminal justice referrals increased from 15% to 26% in 2022, while treatment admission referrals for non-DUI offenses decreased (50% in 2012 to 37% in 2022). Self-referrals for marijuana treatment increased from 6% in 2008 to 20% in 2022.

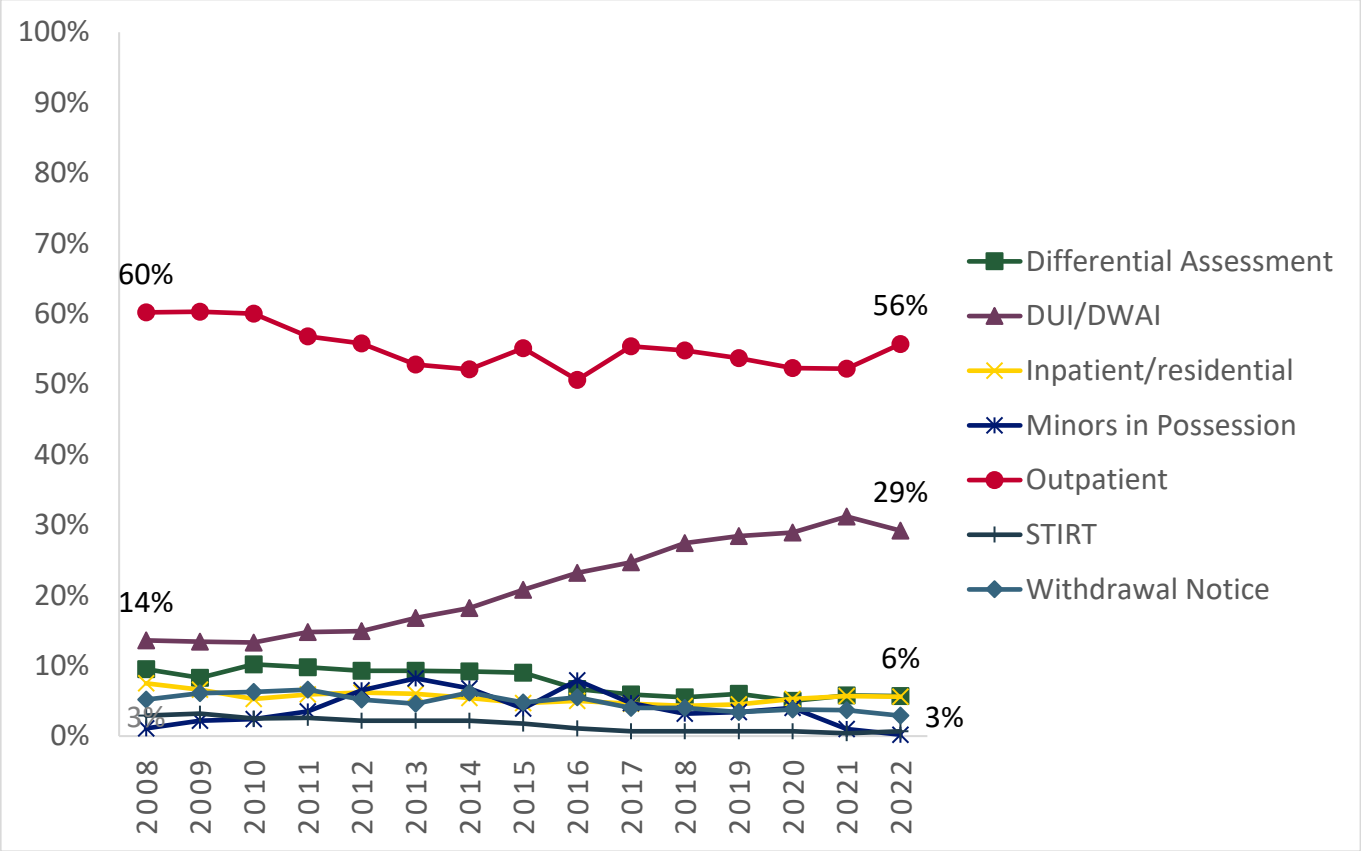
Figure 3.23 Referral sources for marijuana treatment, 2008–2022



Source: Colorado Department of Human Services, Behavioral Health Administration, Drug/Alcohol Coordinated Data System. Analyzed by the Division of Criminal Justice.

Substance use treatment modalities in Colorado vary in terms of intensity, and the breakdown of treatment categories for marijuana-related treatment admissions from 2008-2022 are shown in Figure 3.24. The most common admission category across the measurement period was outpatient treatment (Figure 3.24), with 55% of admissions occurring in this category. The second most common category was for impaired driving (DUI/DWAI), where there has been a significant increase over the past five years, from 15% of admissions in 2012 to 29% in 2022.

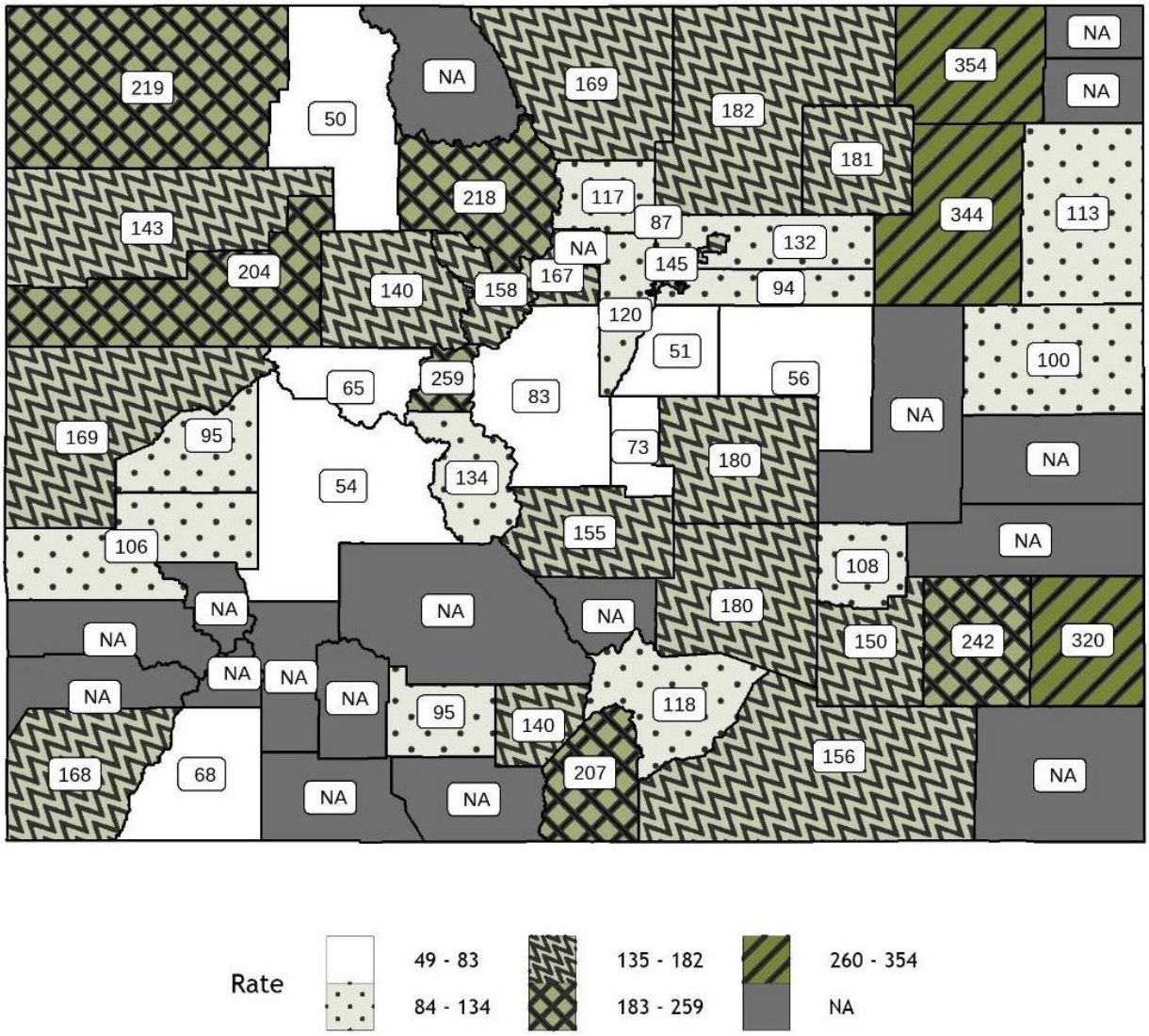
Figure 3.24 Treatment modality for marijuana treatment admissions, 2008-–2022



Source: Colorado Department of Human Services, Behavioral Health Administration, Drug/Alcohol Coordinated Data System. Analyzed by the Division of Criminal Justice.
Note: STIRT is Strategic Intensive Remediation Treatment.

A geographic breakdown of treatment admissions in the period 2018-2022 per 100,000 population of those ages 10 and over is presented in Figure 3.25. We aggregated the treatment admissions rates by county to maintain client confidentiality; despite this accommodation, we were unable to report rates for 18 counties in Colorado due to small counts. Counties with the highest treatment rates include Logan (354), Washington, (344), Prowers (320), and Lake (259). Of the larger counties, Weld County had the highest marijuana-related treatment admissions rate (182) but was closely followed by Pueblo and El Paso counties (180).

Figure 3.25 Treatment rates (per 100,000 population ages 10 and over) for marijuana as substance of use, by county, 2018-2022



Source: Colorado Department of Human Services, Behavioral Health Administration, Drug/Alcohol Coordinated Data System; Colorado Department of Local Affairs, State Office of Demography. Analyzed by the Division of Criminal Justice.
Note: Counties with no treatment rates noted did not meet the suppression criteria of 30 treatment admissions for marijuana as the primary substance of use. A five-year aggregate was used in an attempt to minimize the number of counties suppressed for not meeting these criteria. These data suppression criteria are in place to maintain client confidentiality in areas with smaller populations.

Suicide Rate Trends

The trend in the overall suicide rate and information on toxicology results from coroners is presented in Table 3.1. In 2021, the most recent year for which data is available, the age-adjusted suicide rate was 22.6 deaths per 100,000 residents. The percentage of positive marijuana tests in these decedents increased from 11.8% in 2012 to 23.3% in 2021. There was no clear trend in the percentage of deaths by suicide testing positive for alcohol or opiates.

The variable "Marijuana Present" could indicate toxicology tests were positive for Delta-9 THC, 11-OH-THC, or THC-COOH, so this factor alone is not indicative of intoxication or impairment at time of death, nor can it be interpreted as causal. It is possible that other substances (including alcohol) were present in addition to marijuana, which makes it difficult to conclusively state marijuana played a role in the death.

Table 3.1 Suicides in Colorado, by age-adjusted rate and select toxicology results, 2006-2021

	N suicides	Age-adjusted rate	% Tested	N Tested	% Marijuana present	% Alcohol present	% Opiates present
2006	711	14.8	82.30%	585	7.5%	35.2%	9.7%
2007	807	16.5	95.00%	767	9.1%	35.6%	16.0%
2008	799	15.9	97.10%	776	7.5%	35.4%	14.2%
2009	919	18.2	76.80%	706	7.1%	35.0%	14.2%
2010	850	16.4	96.20%	818	8.6%	32.8%	13.6%
2011	884	16.9	91.10%	805	7.7%	35.0%	13.5%
2012	1,021	19.0	71.40%	729	11.8%	33.2%	17.3%
2013	996	18.3	76.70%	764	13.7%	34.0%	17.9%
2014	1,063	19.5	76.90%	817	14.9%	40.1%	21.5%
2015	1,066	19.0	76.60%	817	19.1%	36.5%	18.7%
2016	1,140	19.9	75.40%	860	22.0%	36.3%	19.0%
2017	1,145	19.7	77.60%	888	22.6%	37.3%	20.7%
2018	1,246	21.2	75.20%	937	23.3%	40.6%	15.2%
2019	1,292	21.9	85.50%	1,105	23.0%	38.3%	15.7%
2020	1,275	21.6	83.50%	1,065	21.8%	40.8%	17.3%
2021	1,352	22.6	80.00%	1,081	23.3%	39.6%	15.8%

Source: Colorado Department of Public Health and Environment, Colorado Violent Death Reporting System.
Note: Data obtained from Suicide in Colorado data dashboard. For additional information on data definitions please visit Colorado Suicide Data Dashboard: Data Definitions and Functionality.

In sum, we have observed noted changes in marijuana-related behaviors and outcomes since legalization. Overall, adult use has increased significantly from 2014 to 2021, and it is now estimated in 2021 that about one in five adults (19.0%) in Colorado used marijuana in the past month. These increases have occurred in both men and women, in adults aged 26 and over, in Hispanics, and in Non-Hispanic Whites. Frequency of use has also shown signs of increasing, and in 2021 over half (55.2%) of all adults who use marijuana in the past month reported using daily/near daily. For the health outcomes data including poison center calls, hospitalizations and ED visits, and treatment admissions, Colorado has data from the pre-legalization period. However, there are some limitations in being able to deduce trends before and after legalization due to social desirability bias, where individuals may have been less willing to disclose marijuana use in the pre-legalization period when seeking care, and in the case of hospital records, the transition to ICD-10 CM makes comparisons before and after 2015 difficult. Colorado has seen an increase in the number of calls to poison centers related to marijuana exposures with the dramatic rise in calls relating to exposures in children under the age of five. Looking at trends in ED visits and hospitalizations since 2016, which was the first full year of ICD-10 CM coding, ED visit and hospitalization rates have decreased. Treatment admissions where marijuana was identified as the primary substance involved have been stable from 2013 to 2019 but started to fall from 2020 to 2022.

SECTION FOUR
IMPACT ON YOUTH

Overview

This section focuses on the impact of marijuana legalization on youth under the age of 18. The topics include youth use, diversion of marijuana to youth, youth arrests, comprehensive school information, drug-endangered children,[63] and other potential impacts.

Information regarding youth marijuana use was obtained from surveys that ask students about drug use and other risky behavior. The Healthy Kids Colorado Survey (HKCS) is a biennial survey administered to high school and middle school youth by the Colorado Department of Public Health and Environment (CDPHE). The 2021 HKCS surveyed more than 52,000 high and middle school students.

The public safety impacts are examined by using official offense and arrest data from the Colorado Bureau of Investigation, court filings data, and drug testing information from the State Division of Probation Services in the Judicial Branch.

Information about schools was gathered from discipline data made available by the Colorado Department of Education. These data include trends on suspensions, expulsions, and law enforcement referrals for drugs. The data system in place from 2004–2016 did not capture whether marijuana was the specific drug that led to the discipline, as it was grouped with all other drugs. In the 2016–2017 school year, marijuana was reported separately as a reason for school discipline.[64] However, since the most commonly used illicit drug in the youth population is marijuana, changes in drug discipline trends can logically be linked to changes in marijuana use. Discussions with school administrators and the 2016–2017 analysis results support this assumption.

The impact of retail marijuana on drug-endangered children is difficult to answer. The term “drug-endangered children” has not been defined by the legislature, and identifying relevant data is problematic. The CDPHE’s Pregnancy Risk Assessment Monitoring System (PRAMS) is a surveillance system designed to identify and monitor behaviors and experiences of women before, during, and after pregnancy. Information about marijuana use before, during, and after pregnancy is collected by surveying a sample of women who have recently given birth.

Reports in prior years have included prevalence estimates on youth substance use from National Survey on Drug Use and Health (NSDUH), but the state-level results for 2019-2020 have not been released to the public. The survey underwent significant alterations in 2020, and the 2020 estimates were not deemed comparable enough to be aggregated with the 2019 results.[65] In addition, prior years had also included survey data about marijuana storage practices among adults who had children that were obtained from the Child Health Survey. This survey has been discontinued, and this report does not include any findings from it.

[63] Senate Bill 2013-283, which mandated this report, included drug-endangered children in the list of topics to study.
[64] The 2015–2016 school year was the first in which marijuana was recorded as a discipline reason, but it was not reported for the full year.
[65] Substance Abuse Mental Health Services Administration, (n/d).

Youth Use Survey Data

The CDPHE's Healthy Kids Colorado Survey (HKCS) collects health information biennially (every odd year) from thousands of Colorado public high school and middle school students.[66] Surveys are completed by students from a random sample of selected schools and randomly selected classrooms within those schools. School administrators, parents and students all provide consent to participate in HKCS. The results presented in this report are weighted to represent student enrollment in all Colorado public high schools (2009 - 2021) and public middle schools (2013 - 2021). The HKCS and other representative population-based surveys employ statistical weights to account for the fact that information is obtained from a sample and used to represent the larger population. The weights account for sampling design, school and student nonparticipation and nonresponse, and overall adjustments in grade, sex, and ethnicity that match the sample and the population.

A total of 52,799 randomly selected students from 109 randomly selected schools participated in the 2021 HKCS. The sample includes 45,363 students in 88 public high schools and 7,436 students in 21 public middle schools (Table 4.1). Prior to 2019, HKCS was administered via paper and pencil survey, but in 2019, schools were given the choice to participate in an online version of the survey. In 2021, the survey administration migrated entirely online. Typically, marijuana indicators have been very stable before and after the legalization of marijuana, but there were noted changes in the 2021 results, which might be attributed to the changes in use patterns, changes in survey methodology or to changes in the social environment due to the COVID-19 pandemic. Continued monitoring will provide additional context.

Table 4.1. Participant information for Healthy Kids Colorado Survey (HKCS)

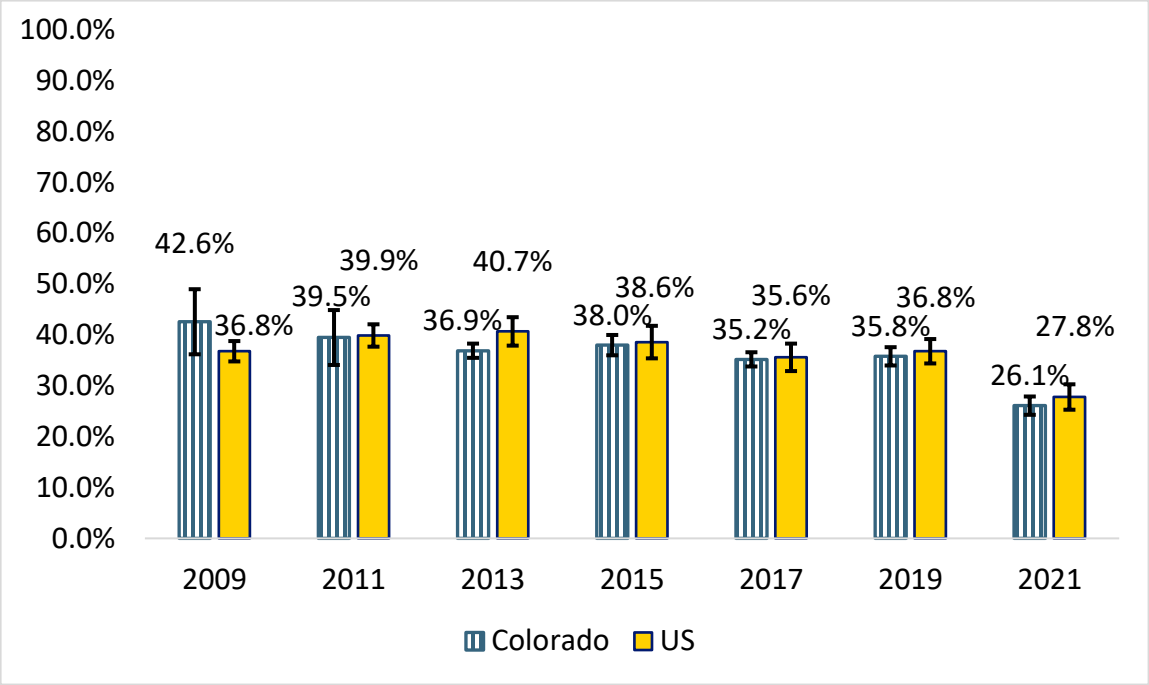
Year	High School N Responses	Middle School[a] N Responses
2009	1,511	NA
2011	1,523	NA
2013	25,197	14,187
2015	15,970	997
2017	47,146	6,704
2019	46,537	6,983
2021	45,363	7,436

Source: Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey Technical Documentation.
[a]: The middle school survey was not conducted prior to 2013.

In 2021, the proportion of Colorado high school students reporting ever using marijuana in their lifetime dropped to 27.8% from 35.8% in 2019. Prior to this significant decrease, lifetime reported use had been stable from 2009-2019 and ranged from 35.8% to 42.6% (Figure 4.2). This decline occurred in the aftermath of the COVID-19 pandemic, and this pattern may be indicative of the major disruptions in the lives of high school students as opposed to a long-term trend. Further, Figure 4.2 shows there was a similar decline in the national results, and throughout the entire period, there was no statistically significant difference between Colorado student responses compared to national data.

[66] More detailed information about the Healthy Kids Colorado Survey can be accessed at https://cdphe.colorado.gov/hkcs. HKCS is Colorado's version of the national Youth Risk Behavioral Survey (YRBS), a biennial survey overseen by the Centers for Disease Control and Prevention. More information about the YRBS is on their website.

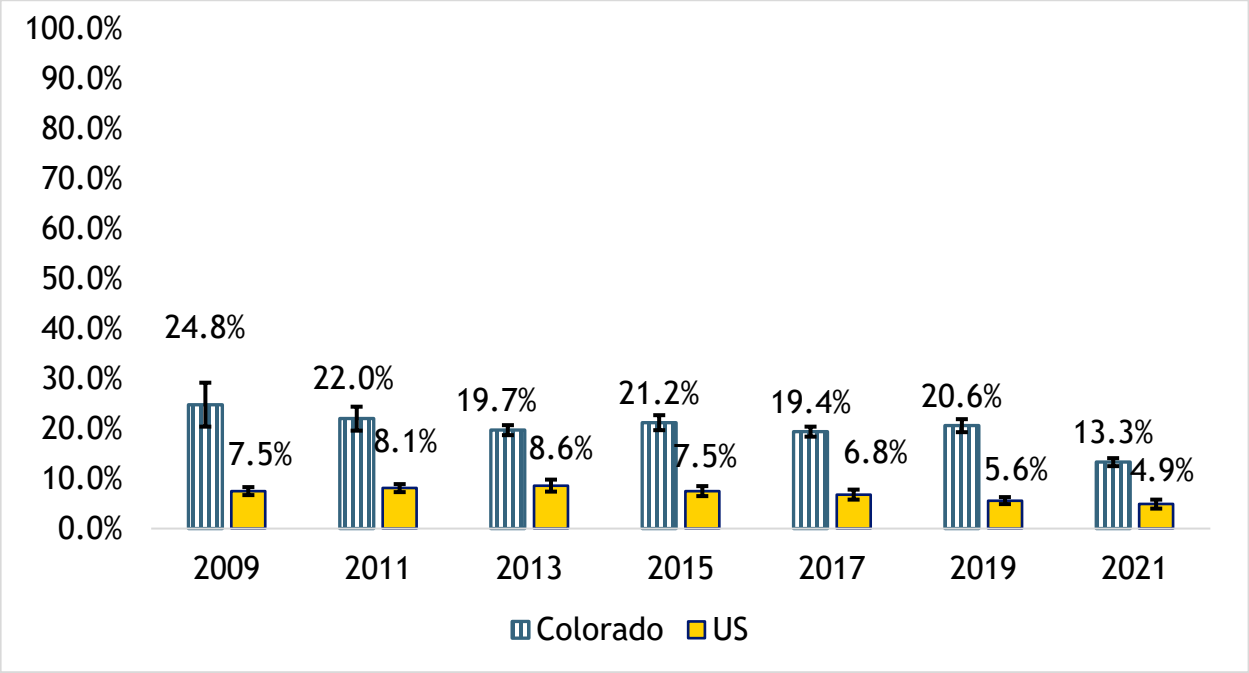
Figure 4.1. High school students' lifetime marijuana use, Colorado and Nation, 2009 to 2021: HKCS & YRBS



Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey; Centers for Disease Control and Prevention (2023). Youth Risk Behavior Surveillance System.

The percentage of high school students who reported past 30-day use of marijuana declined significantly from 2013 (19.7%) to 2021 (13.3%), as seen in Figure 4.2. Current use among high school students was stable from 2009 to 2019 and ranged from 19.4%-24.8%. Unlike lifetime use where there was no difference in the rates between Colorado and nation, national rates were comparatively lower from 2009-2021. Middle school students had a lower use rate of past 30-day use in 2021 (3.0%) compared to 2019 (5.2%), but these rates were not significantly different (data not shown).

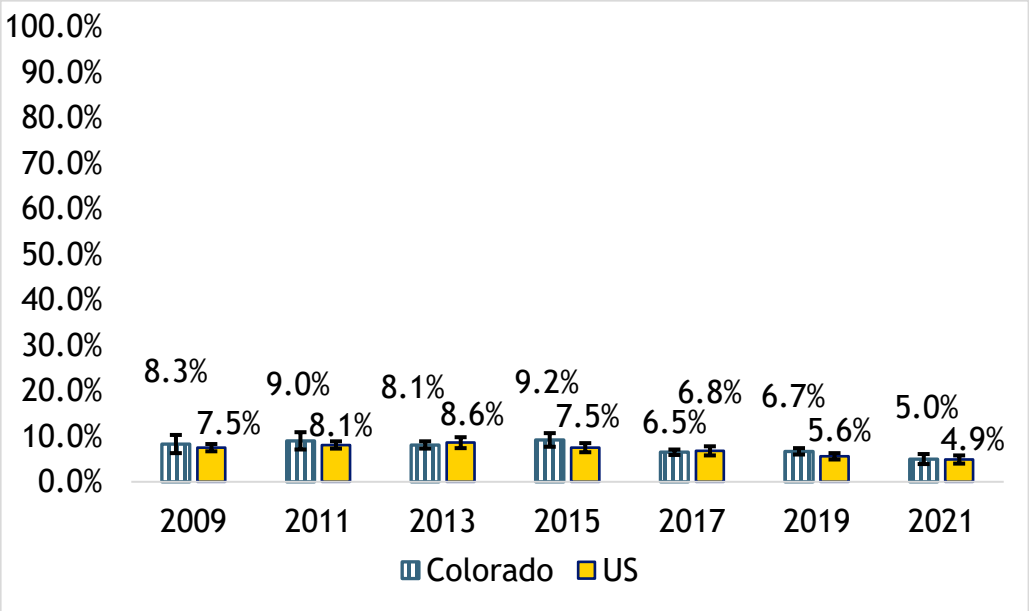
Figure 4.2 High school students' past 30-days marijuana use, Colorado and Nation, 2009 to 2021: HKCS &YRBS



Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey; Centers for Disease Control and Prevention (2023). Youth Risk Behavior Surveillance System.

The proportion of students trying marijuana before the age of 13 dropped from 8.1% in 2013 to 5.0% in 2021 (Figure 4.3). These rates were not statistically different from the national data.

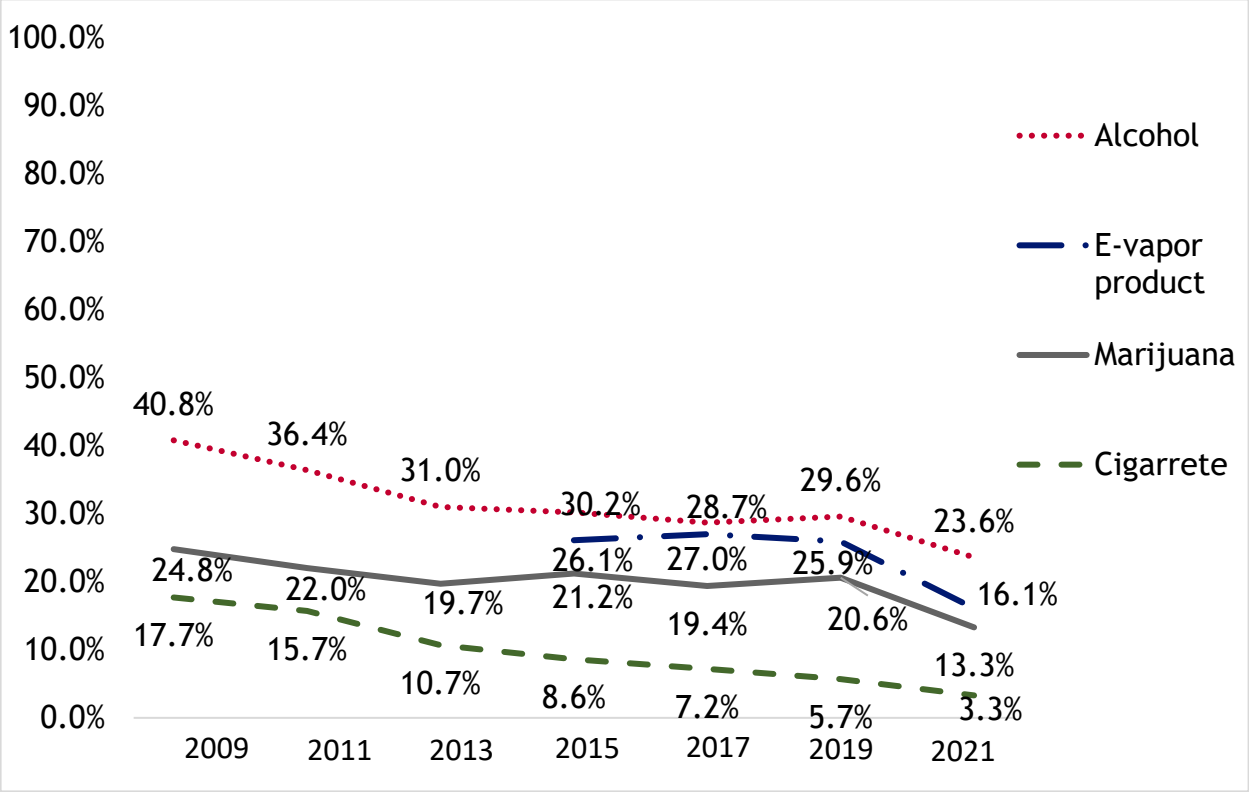
Figure 4.3. High school students' marijuana use before 13 years old, Colorado and Nation, 2009 to 2021: HKCS & YRBS



Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey; Centers for Disease Control and Prevention (2023). Youth Risk Behavior Surveillance System.

Prevalence trends for the three most commonly used substances by high school students are presented in Figure 4.4. From 2019-2021, estimates of past-month use of alcohol, marijuana, E-vapor products and cigarettes among high school students significantly declined. In 2021, alcohol remained the most common substance reported with 23.6%, followed by E-vapor tobacco use estimated at 16.1%, marijuana at 13.3% and cigarette use at 3.3%. These declines in past-month use of substances might reflect temporary changes to the environment and other pandemic-related disruptions; more long-term data is needed to contextualize this pattern. Prior to the pandemic, marijuana use was static from 2009 to 2019, while alcohol and cigarette use dropped significantly from 2009 to 2013, but then stabilized.

Figure 4.4. High school students' past 30-day substance use, 2009 to 2021: HKCS



Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey.
Note: See Appendix C Table 1 for confidence interval statistics.

The demographic characteristics of students reporting past 30-day marijuana use in 2021 are presented in Table 4.2. Males (12.5%) and females (13.7%) reported similar past 30-day use, but those who identified as genderqueer/nonbinary had a significantly higher percentage of past-30-day use compared to cisgendered students. Grade level is directly related to use; on average, each grade level increase coincided with an estimated 4 percentage point rise in the prevalence rate.

In 2021, there were some differences in the prevalence of past-month use by race/ethnicity as shown in Table 4.2. High schoolers who identified as East/Southwest Asian (3.8%) and South Asian (4.5%) had significantly lower rates of past-30 day use compared to the state as whole. In contrast, the estimate for high school students who identified as American Indian/Alaska Native (18.3%) and multi-racial (15.9%) was significantly higher than the state estimate. For the other estimates for use rates by race/ethnicity, they were either comparable to state rate, or had wide confidence intervals, meaning that the estimates were not as reliable.

There were observed disparities by sexual orientation in 2021. High school students who identified as bisexual (24.3%) and gay/lesbian (17.2%) had higher use compared to the overall state rate. Those who identified as asexual had lower use compared to the overall rate (7.5%).

Table 4.2 High school students' past 30-day marijuana use, by demographic characteristics, 2021

Demographic category	Percent	Lower 95% CL	Upper 95% CL
Total	13.3	12.5	14.1
Gender: Male	12.5	11.5	12.5
Female	13.7	12.3	15.1
Genderqueer/Nonbinary	16.5	13.9	19.2
Gender Identity: Cisgender	13.5	12.7	14.3
Transgender	15.0	12.0	17.9
Not Sure	15.4	12.9	18.0
Grade: 9th	7.3	5.8	8.8
10th	12.0	11.4	12.7
11th	15.5	13.7	17.3
12th	19.5	17.4	21.5
Race/ethnicity: White	13.6	12.7	14.5
Hispanic/Latinx	12.4	11.1	13.7
Black/African American	14.9	8.4	21.5
East/Southeast Asian	3.8	1.6	6.1
South Asian	4.5	2.0	7.1
American Indian/Alaska Native	18.3	13.9	22.6
Native Hawaiian/Other Pacific Islander	10.1	2.5	17.6
Middle Eastern/North African/Arab	13.3	5.9	20.6
Multi-racial	15.9	14.9	16.9
Other	11.3	7.4	15.2
Sexual orientation: Heterosexual	11.7	11.0	12.5
Bisexual	24.3	22.1	26.6
Gay/Lesbian	17.2	14.9	19.5
Asexual	7.5	4.5	10.5
Other	14.7	12.5	16.9
Not Sure	14.2	11.3	17.1

Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey.

The demographic breakdown of middle school students' past 30-day marijuana use is presented in Table 4.3. Overall, there were fewer significantly different contrasts between demographic groups in use estimates in middle school compared to high school students. Five of the estimates for specific demographic groups could not be estimated due to low response rates and concerns about reliability.

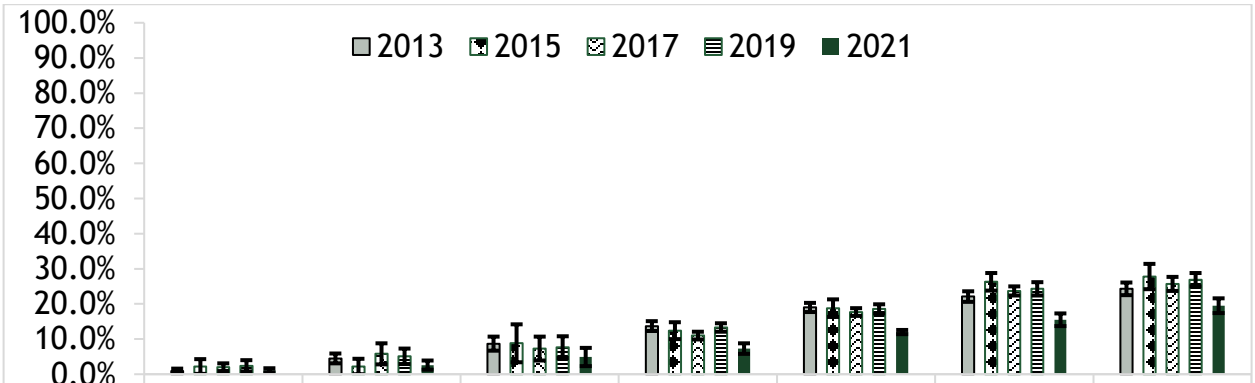
Table 4.3 Middle school students' past 30-day marijuana use, by demographic characteristics, 2021

Demographic category	Percent	Lower 95% CL	Upper 95% CL
Total	3.0	1.6	4.3
Gender: Male	2.4	1.1	3.7
Female	3.2	1.5	5.0
Genderqueer/Nonbinary	5.1	1.8	8.4
Gender Identity: Cisgender	3.0	1.6	4.5
Transgender	9.5	2.7	16.3
Not Sure	2.9	0.1	5.8
Grade: 6th	1.1	0.5	1.6
7th	2.6	1.3	3.8
8th	4.9	2.3	7.6
Race/ethnicity: White	1.8	1.1	2.4
Hispanic/Latinx	4.2	1.4	7.0
Black/African American	6.0	2.0	10.1
East/Southeast Asian	NA	NA	NA
South Asian	NA	NA	NA
American Indian/Alaska Native	6.9	0.2	13.7
Native Hawaiian/Other Pacific Islander	NA	NA	NA
Middle Eastern/North African/Arab	NA	NA	NA
Multi-racial	4.6	2.0	7.2
Other	3.4	1.1	5.6
Sexual orientation: Heterosexual	2.6	1.3	3.9
Bisexual	5.0	0.6	9.4
Gay/Lesbian	8.3	3.6	13.6
Asexual	NA	NA	NA
Other	3.0	0.9	5.2
Not Sure	3.7	1.3	6.2

Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2023) Healthy Kids Colorado Survey.
Note: Estimates for certain demographic groups could not be calculated due to small numbers and concerns about the reliability of the estimates.

Prior to the pandemic, the trend of past 30-day marijuana use by grade level is presented in Figure 4.5. No significant changes occurred within any grade between 2013 and 2019. In 2021, all high school grades had significantly lower estimates compared to 2019's levels. Students in the 11th grade reported the largest drop in past-month use from 2019 to 2021 (24.3% to 15.5%). Again, these declines might be more related to the changes in the environment and further monitoring of substance use trends is needed.

Figure 4.5 High school and middle school students' past 30-day marijuana use, by grade level, 2013 to 2021: HKCS

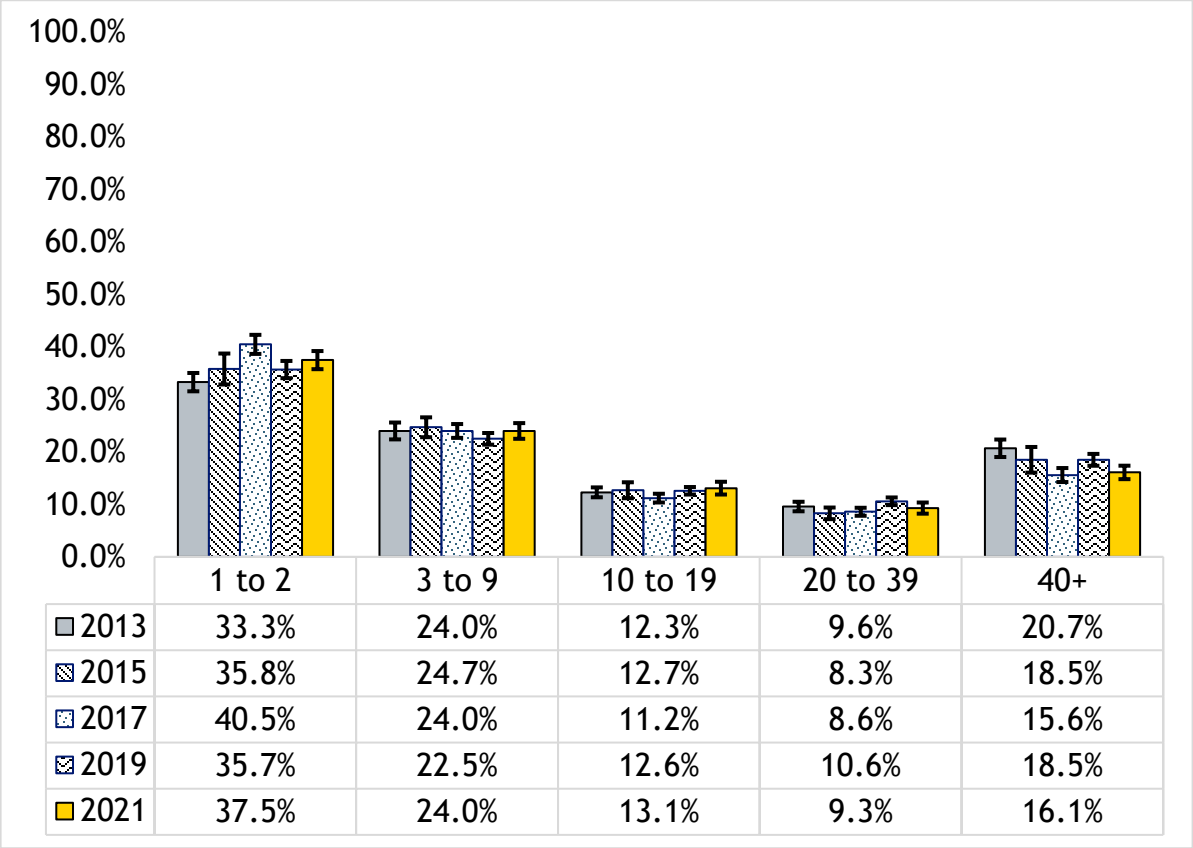


	6th	7th	8th	9th	10th	11th	12th
2013	0.9%	4.5%	8.7%	13.7%	19.0%	22.1%	24.3%
2015	2.2%	2.2%	8.8%	12.4%	18.8%	26.3%	27.8%
2017	2.0%	5.8%	7.3%	11.0%	17.7%	23.7%	25.7%
2019	2.4%	5.1%	7.7%	13.3%	18.6%	24.3%	26.9%
2021	1.1%	2.6%	4.9%	7.3%	12.0%	15.5%	19.5%

Source: Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey Data Tables and Reports.

In HKCS, high school students also reported on the number of times they used marijuana in the past month, and these prevalences are presented in Figure 4.6. In 2021, among all high school students, 37.5% reported using one to two times, 24.0% reported using three to nine times, 13.1% reported using 10 to 19 times, 9.3% reported using 20 to 39 times, and 16.1% reported using 40 or more times. There were no significant changes in the frequency of use estimates among high school students between 2019 to 2021, unlike some of the other marijuana use measures. There were two statistically significant changes in frequency of use from 2013 to 2021; students reporting one to two days per month rose while those reporting 40 or more uses per month decreased.

Figure 4.6 High school students' marijuana use frequency in past 30 days, among students who report past 30-day marijuana use, 2013 to 2021: HKCS



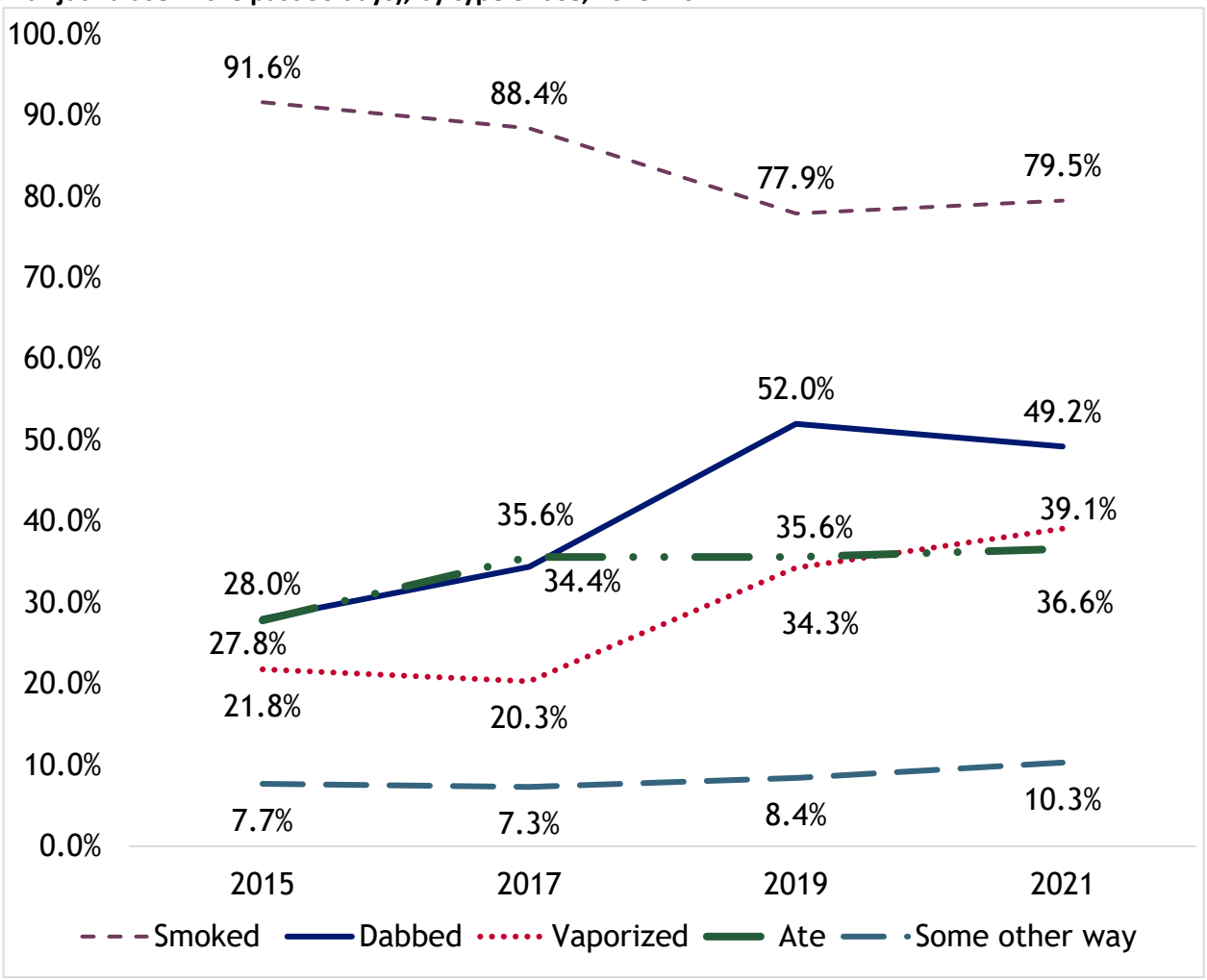
	1 to 2	3 to 9	10 to 19	20 to 39	40+
2013	33.3%	24.0%	12.3%	9.6%	20.7%
2015	35.8%	24.7%	12.7%	8.3%	18.5%
2017	40.5%	24.0%	11.2%	8.6%	15.6%
2019	35.7%	22.5%	12.6%	10.6%	18.5%
2021	37.5%	24.0%	13.1%	9.3%	16.1%

Source: Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey Data Tables and Reports.

The most common method of marijuana use (Figure 4.7), reported by high school students who used marijuana in the past 30-days in 2021, was smoking (79.5%), followed by dabbing[67] (49.2%), and eating (35.6%). The percent of high school students who use marijuana reporting dabbing marijuana in the past 30-days increased significantly from 2017 (20.3%) to 2019 (52.0%); this increase was maintained in 2021. In contrast, the percent reporting smoking decreased significantly from 2017 (88.4%) to 2019 (77.9%).

[67] Dabbing is a method of use in which a high THC concentrate (25%-90% THC) is placed on a small metal "nail," heated up to a very high temperature, and then inhaled through a glass device known as a "dab rig."

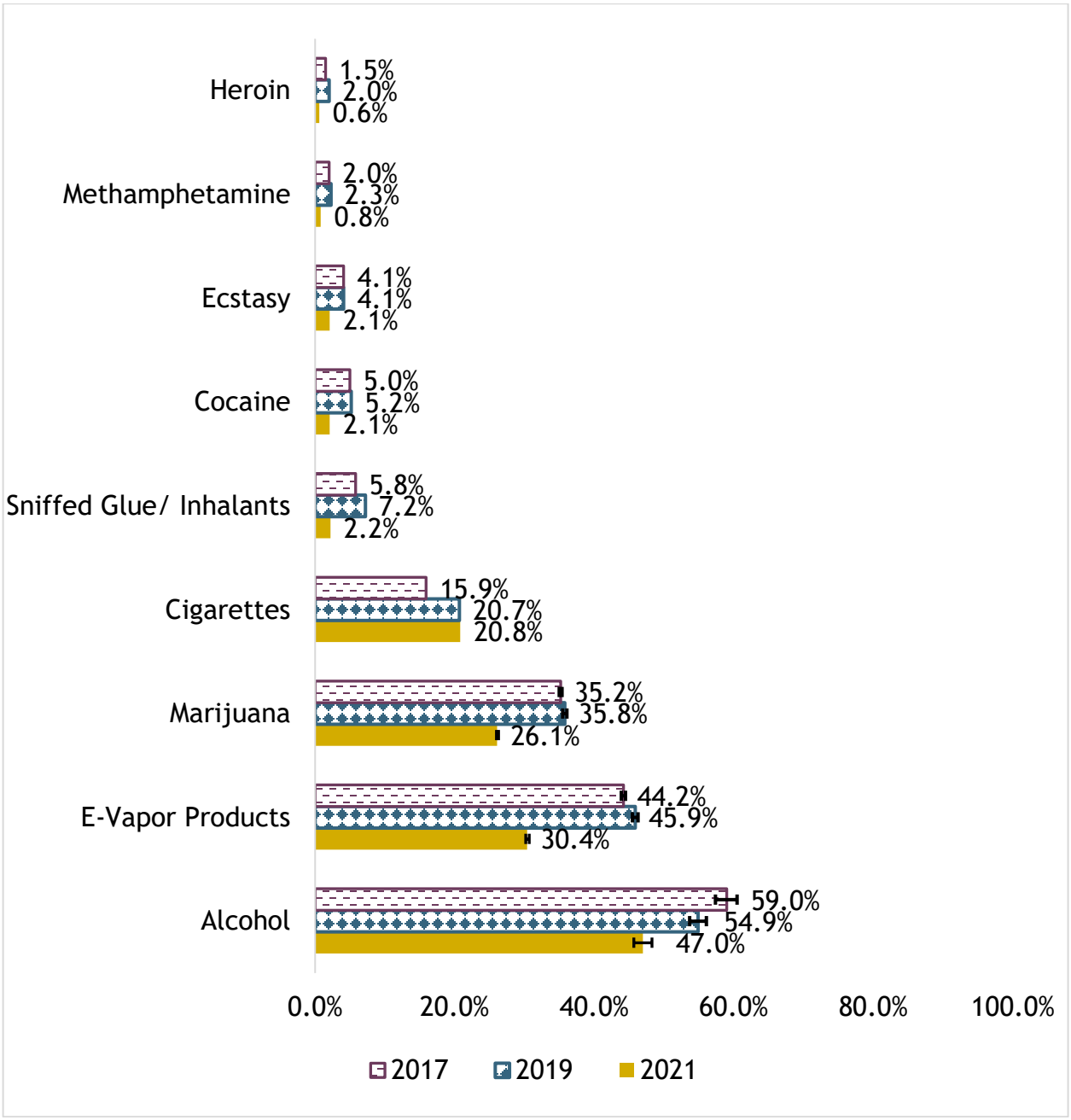
Figure 4.7 High school students' reported methods of marijuana use (among students that reported marijuana use in the past 30 days), by type of use, 2015–2021



Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2020). Healthy Kids Colorado Survey.
Note: A student can report more than one method of use. See Appendix C for confidence interval statistics.

Figure 4.8 below shows the prevalence of self-reported lifetime use of marijuana, alongside other substances. Fewer high school students in Colorado reported every using alcohol, methamphetamine, ecstasy, cocaine, inhalants, marijuana E-vapor products and alcohol in 2021 compared to 2019, with the largest percentage decline occurring in E-vapor products. In 2021, alcohol was the most common substance high school students reported using at any point in their lives at 47%, followed by E-vapor products at 30%, and marijuana at 26% (Figure 4.8).

Figure 4.8 High school students' reported use in lifetime of various substances, by substance type, 2017 to 2021: HKCS



Source: Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey Data Tables and Reports.
Note: Student can report more than one method of use and E-vapor product use does not include marijuana products. See Appendix C for confidence interval statistics.

Colorado has 21 Health Statistics Regions (HSRs). Large counties constitute a single HSR, while smaller counties are grouped together. This grouping allows estimates to be produced for areas with small student populations. It should be noted that six HSRs were not able to be estimated and that many HSRs have large confidence intervals for their estimates due to small sample sizes; these regional results should be interpreted with caution (See Table 4.4 and Appendix C).

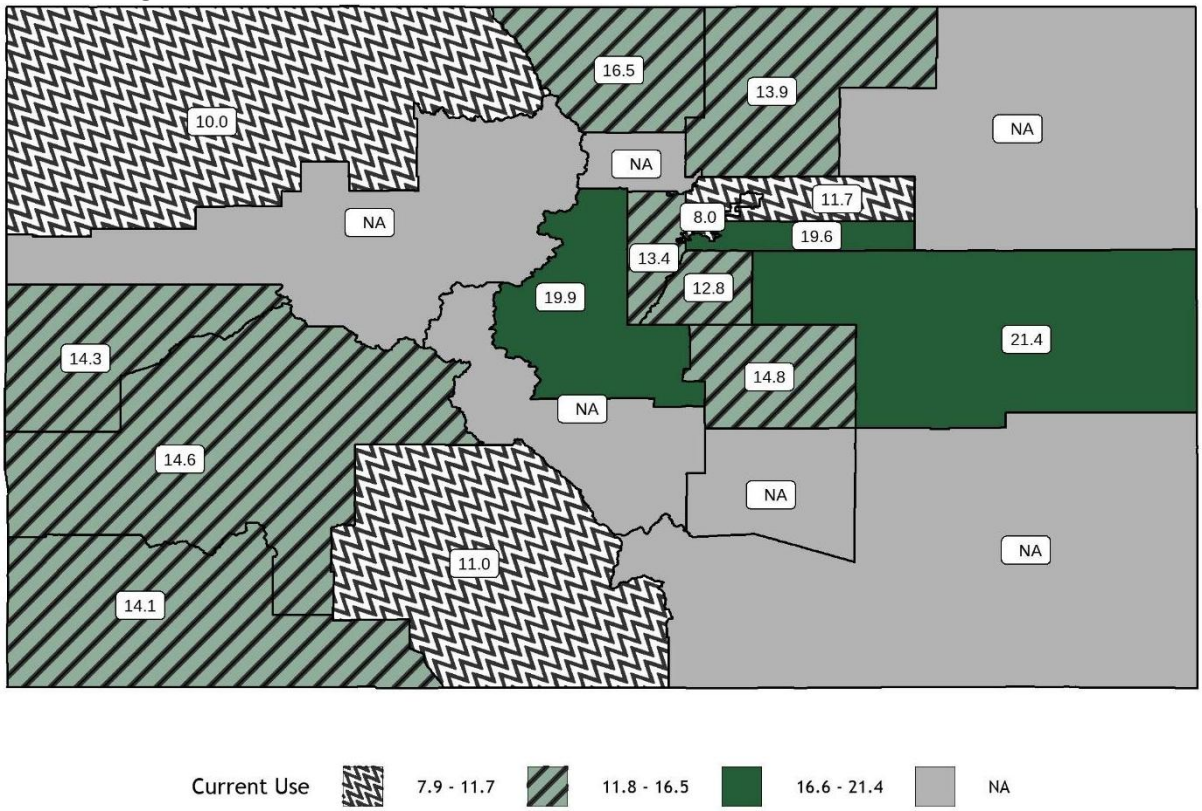
Health Statistics Region 17 (Clear Creek, Gilpin, Park and Teller) reported the highest rate of past-30 day use among high school students in 2021 with a rate of 21.4%, and they have had stable use rates from 2013 to 2021 (see Table 4.4 and Appendix C). Many regions did have statistically significant declines between 2019 to 2021, and these regions were: 7 (Pueblo), 16 (Boulder and Broomfield), 11 (Jackson, Moffat, Rio Blanco and Routt), 21 (Jefferson), 15 (Arapahoe), 6 (Alamosa, Conejos, Costilla, Mineral, Rio Grande and Saguache), 20 (Denver), 3 (Douglas) and 13 (Chaffee, Custer, Fremont and Lake). Region 20 (Denver) had the largest decline (14.5 percentage points) from 2019 to 2021, with only 10% of high school students reporting using in the past 30-days. Aggregate regional rates of past 30-day use of marijuana for 2017 to 2021 are shown in Figure 4.9. The region with the highest rate of use was Region 5 (Cheyenne, Elbert, Kit Carson, Lincoln) with 21.4% of students reporting using in the past 30-days. Region 20 (Denver) had the lowest with 8.0% of students reporting past 30-day use.

Table 4.4 High school students' reporting marijuana use in the past 30-days, by health statistics region, 2013-2021: HKCS

Region	2013 %	2015 %	2017 %	2019 %	2021 %
Colorado	19.7	21.2	19.4	20.6	13.3
1 (Logan, Morgan, Phillips, Sedgwick, Washington, Yuma)	11.4	11.8	16.3	15.8	NA
2 (Larimer)	16.9	17.6	19.6	17.4	14.6
3 (Douglas)	13.2	NA	13.5	13.3	10.0
4 (El Paso)	14.8	NA	22.2	21.5	NA
5 (Cheyenne, Elbert, Kit Carson, Lincoln)	9.4	9.7	16.2	8.7	NA
6 (Baca, Bent, Crowley, Huerfano, Kiowa, Las Animas, Otero and Prowers)	17.6	20.1	20.6	22.5	11.7
7 (Pueblo)	32.1	30.1	26.8	27	19.6
8 (Alamosa, Conejos, Costilla, Mineral, Rio Grande, Saguache)	23.1	19.7	19.6	22.5	NA
9 (Archuleta, Dolores, La Plata, Montezuma, San Juan)	24.6	26.2	24.9	24.7	19.9
10 (Delta, Gunnison, Hinsdale, Montrose, Ouray, San Miguel)	26.7	17.5	25.3	22.1	13.9
11 (Jackson, Moffat, Rio Blanco, Routt)	14.3	19.7	19.5	18.2	14.3
12 (Eagle, Garfield, Grand, Pitkin, Summit)	19.7	24.5	20.8	21.1	16.5
13 (Chaffee, Custer, Fremont, Lake)	22.9	23.5	22.1	18.7	8.0
14 (Adams)	22.8	20.6	NA	18	13.4
15 (Arapahoe)	20.6	20.2	18.3	23.1	12.8
16 (Boulder, Broomfield)	20.3	24.1	22.2	22.6	14.8
17 (Clear Creek, Gilpin, Park, Teller)	25.1	20.8	21.1	21.4	21.4
18 (Weld)	18.6	NA	18	20.9	NA
19 (Mesa)	17.2	21.2	19.7	19.1	NA
20 (Denver)	26.6	26.1	20.9	25.5	11.0
21 (Jefferson)	NA	NA	NA	19.5	14.1

Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2020). Healthy Kids Colorado Survey.
Note: See Appendix C for confidence interval statistics.

Figure 4.9 Percentage of high school students' reporting marijuana use in the past 30-days, by health statistics region, 2017 to 2021: HKCS

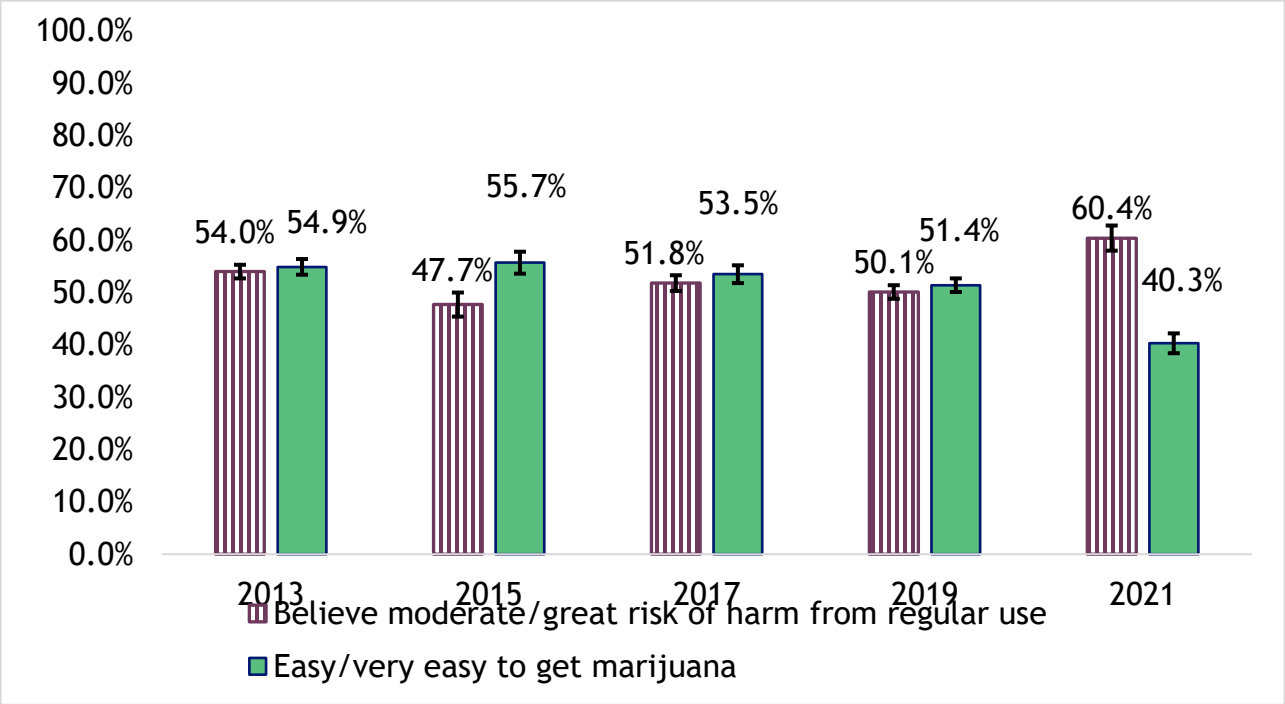


Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2023), Healthy Kids Colorado Survey.

The HKCS asks about various student opinions and behaviors concerning marijuana (Figures 4.10 to 4.19). These indicators have great value because attitudes toward marijuana are associated with marijuana use consumption.[68] Since 2013, there has been a significant rise in high school students' perception of the risk marijuana use poses. In 2021, 60.4% of high school students believed there was a moderate/great risk of harm from using marijuana regularly[69], which represented a six-percentage point rise from 2013's rate (Figure 4.10). The perception of risk decreases with age, from 84.9% of 6th graders reporting a perception of moderate/great risk (Figure 4.11) compared to 53.0% of 12th graders (Figure 4.12). This perception of harm indicator increased in all grade levels from 2019 to 2021 for students in grades 8th through 12th.

The percent of high school students reporting that it would be easy/very easy to obtain marijuana in 2021 (40.3%) did change significantly from 2013 (54.9%) (Figure 4.10). Perceptions of the ease of access increased by grade level with 7.1% of 6th grade students reporting that it would be sort of/very easy to get marijuana, and 53.1% of 12th grade students expressing this belief in 2021 (Figure 4.13).

Figure 4.10 High school students' perception of harm from and ease of access to marijuana, 2013 to 2021: HKCS

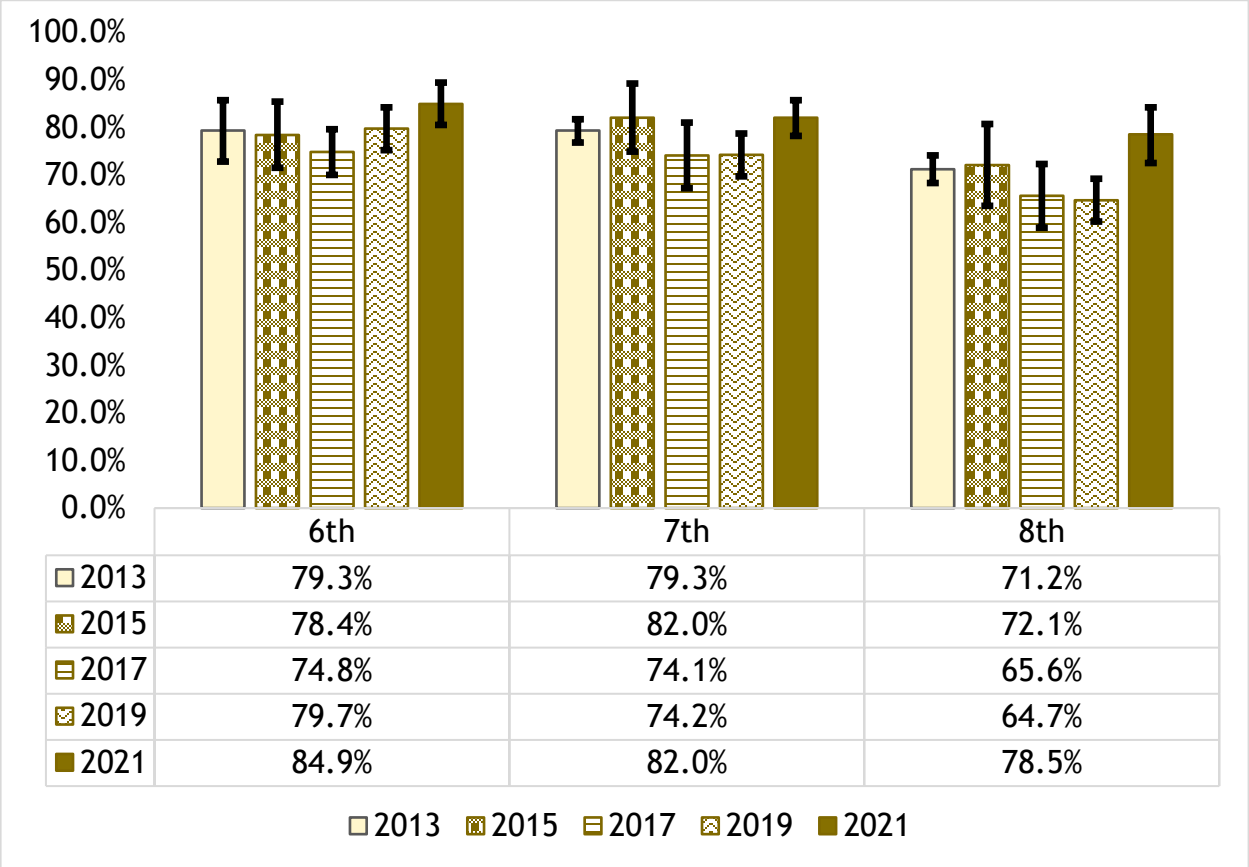


Source: Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey Data Tables and Reports.

[68] Ito, T. A., Henry, E. A., Cordova, K. A., & Bryan, A. D. (2015). Testing an expanded theory of planned behavior model to explain marijuana use among emerging adults in a promarijuana community. *Psychology of Addictive Behaviors, 29*(3), 576–589.

[69] The frequency implied by the term "use marijuana regularly" is not explicitly defined in the survey.

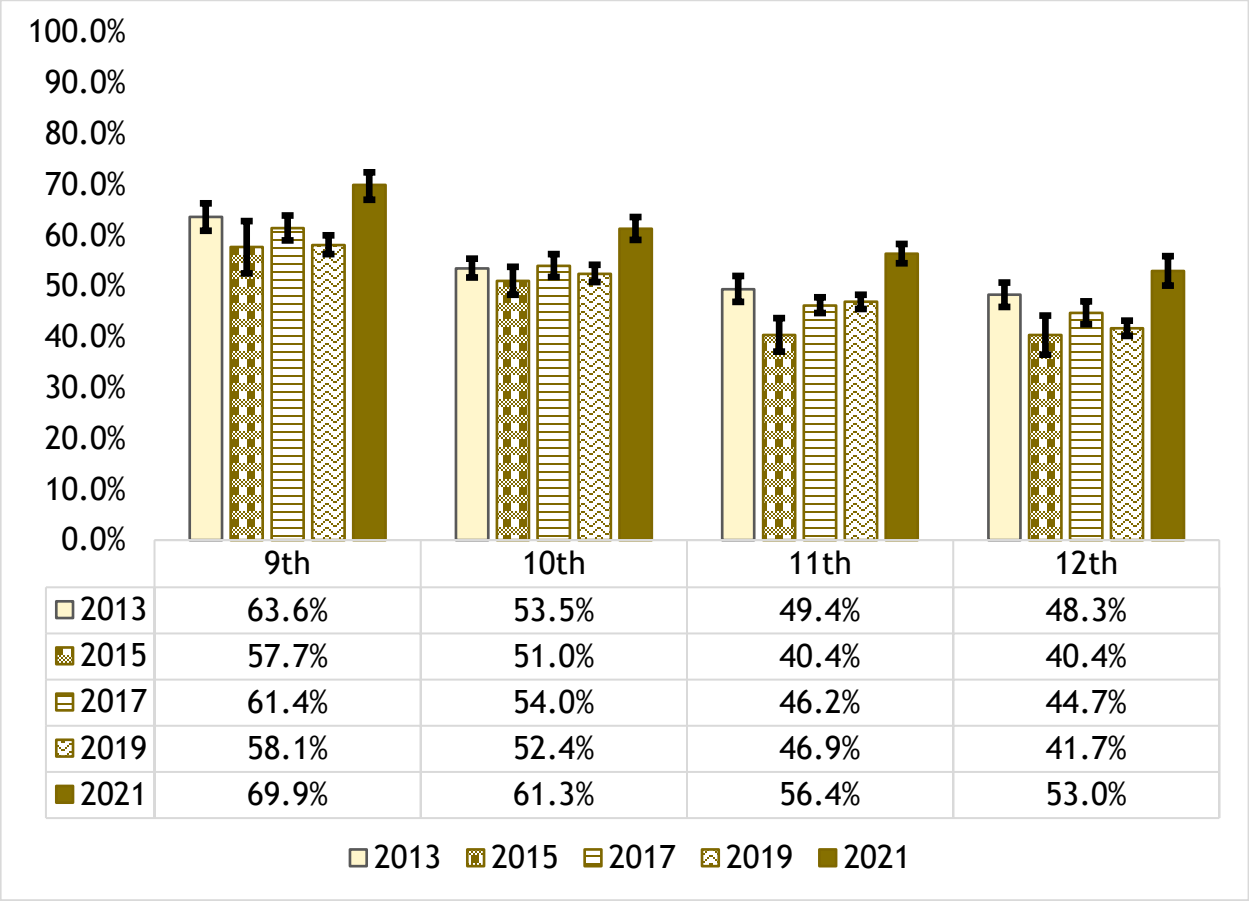
Figure 4.11 Middle School Students' opinion regarding moderate/great risk of regular marijuana use, by grade level, 2013 to 2021



	6th	7th	8th
2013	79.3%	79.3%	71.2%
2015	78.4%	82.0%	72.1%
2017	74.8%	74.1%	65.6%
2019	79.7%	74.2%	64.7%
2021	84.9%	82.0%	78.5%

Source: Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey Data Tables and Reports.

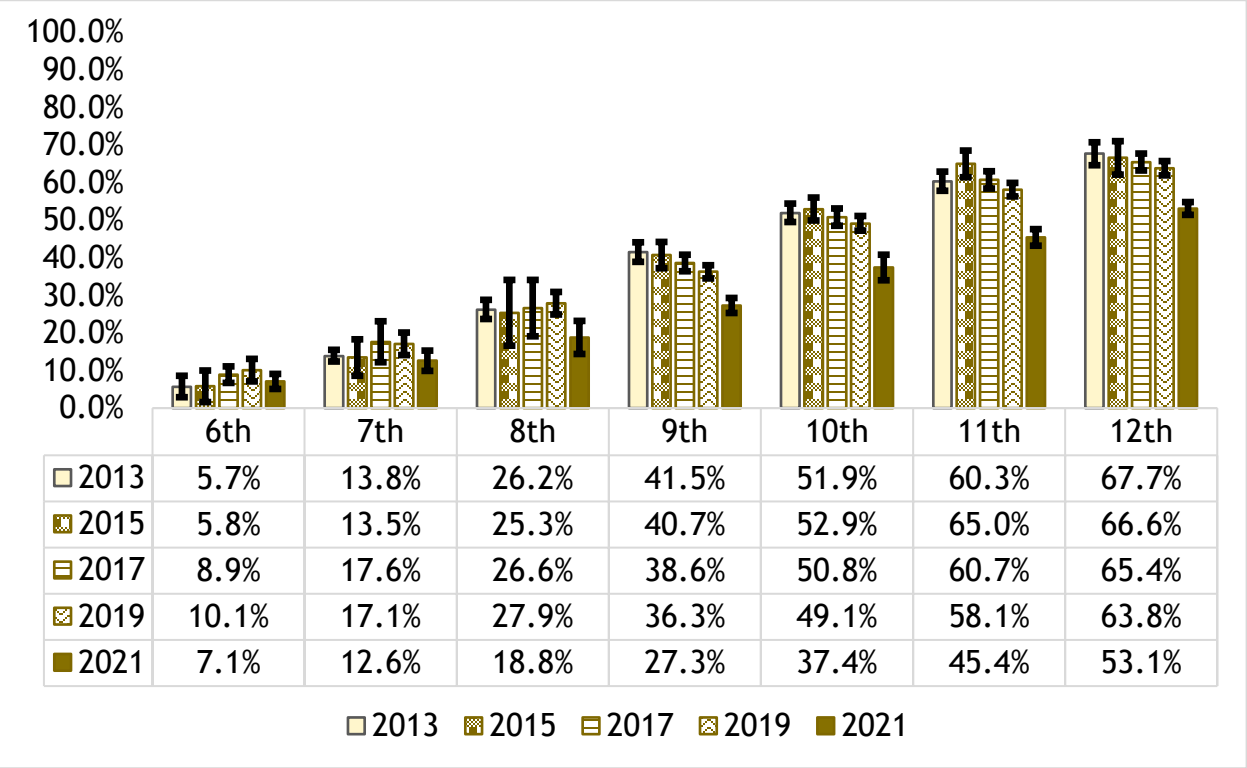
Figure 4.12 High School Students' opinion regarding moderate/great risk of regular marijuana use, by grade level, 2013 to 2021: HKCS



	9th	10th	11th	12th
2013	63.6%	53.5%	49.4%	48.3%
2015	57.7%	51.0%	40.4%	40.4%
2017	61.4%	54.0%	46.2%	44.7%
2019	58.1%	52.4%	46.9%	41.7%
2021	69.9%	61.3%	56.4%	53.0%

Source: Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey Data Tables and Reports.

Figure 4.13 High school students' opinion regarding marijuana being easy/very easy to get, by grade level, 2013 to 2021: HKCS

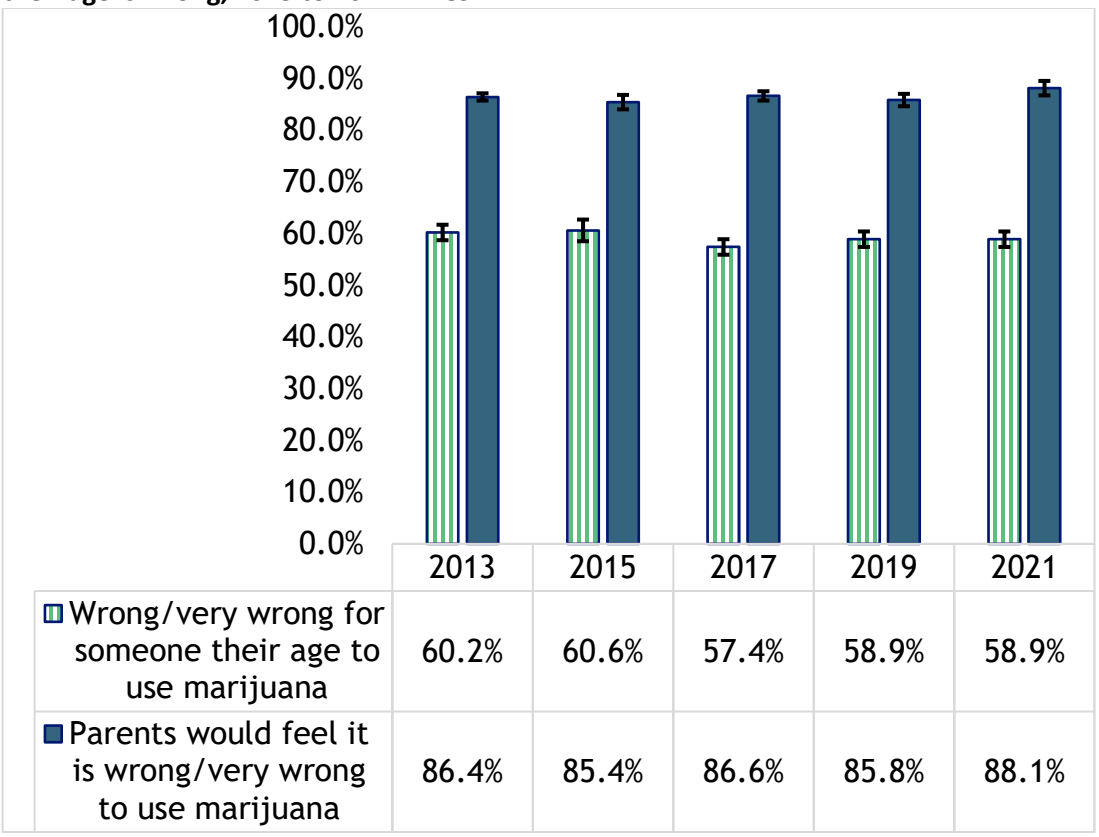


	6th	7th	8th	9th	10th	11th	12th
2013	5.7%	13.8%	26.2%	41.5%	51.9%	60.3%	67.7%
2015	5.8%	13.5%	25.3%	40.7%	52.9%	65.0%	66.6%
2017	8.9%	17.6%	26.6%	38.6%	50.8%	60.7%	65.4%
2019	10.1%	17.1%	27.9%	36.3%	49.1%	58.1%	63.8%
2021	7.1%	12.6%	18.8%	27.3%	37.4%	45.4%	53.1%

Source: Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey Data Tables and Reports.

HKCS also assesses perceptions of the morality of marijuana use, which were more static compared to the perceived riskiness and ease of access indicators. Student perceptions about the wrongness of marijuana use among high school students and whether their parents would feel it is wrong to use marijuana remained stable from 2013 to 2021. In 2021, 58.9% of high school students reported that it was wrong to use marijuana and 88.1% indicated that they believed their parents viewed marijuana use as wrong (Figure 4.15). However, the percentage of students who thought that marijuana use was wrong decreased by grade level, with 95.4% of 6th grade students believing use is wrong/very wrong, and 51.4% of 12th grade students expressing this opinion in 2021.

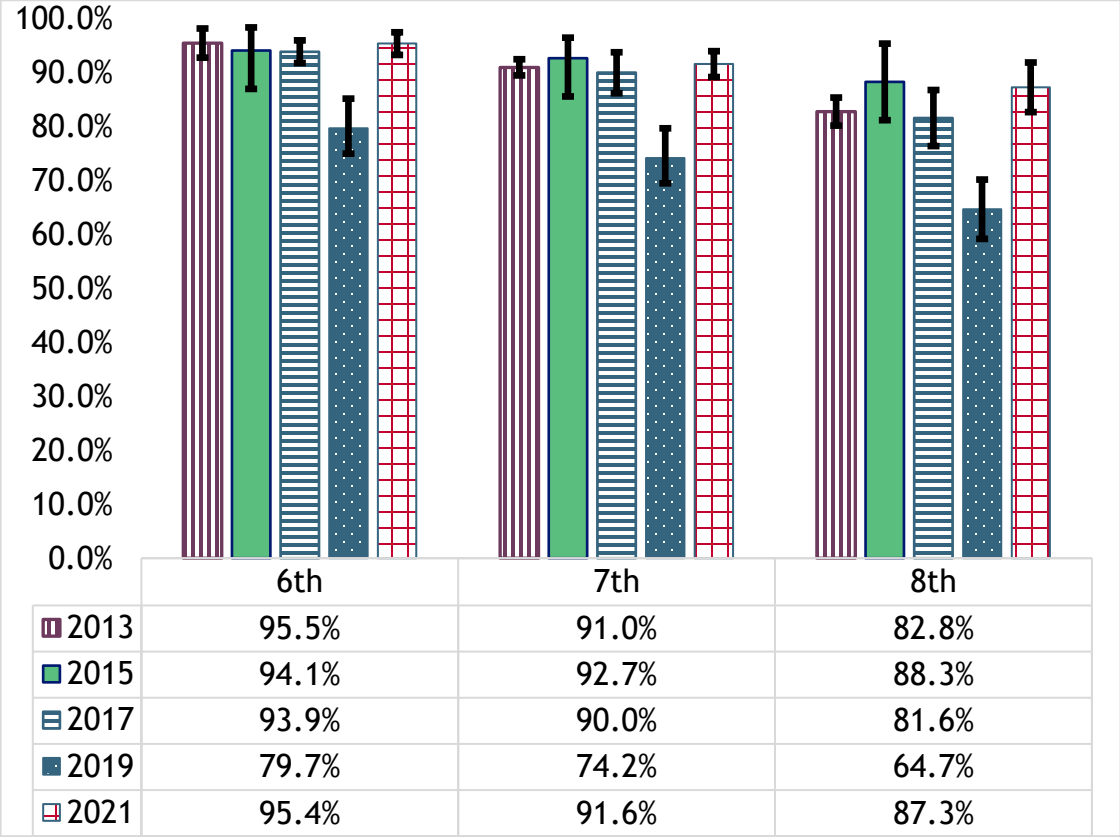
Figure 4.14 High school students' perception of parents' and their own belief that marijuana use by someone their age is wrong, 2013 to 2021: HKCS



	2013	2015	2017	2019	2021
Wrong/very wrong for someone their age to use marijuana	60.2%	60.6%	57.4%	58.9%	58.9%
Parents would feel it is wrong/very wrong to use marijuana	86.4%	85.4%	86.6%	85.8%	88.1%

Source: Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey Data Tables and Reports.

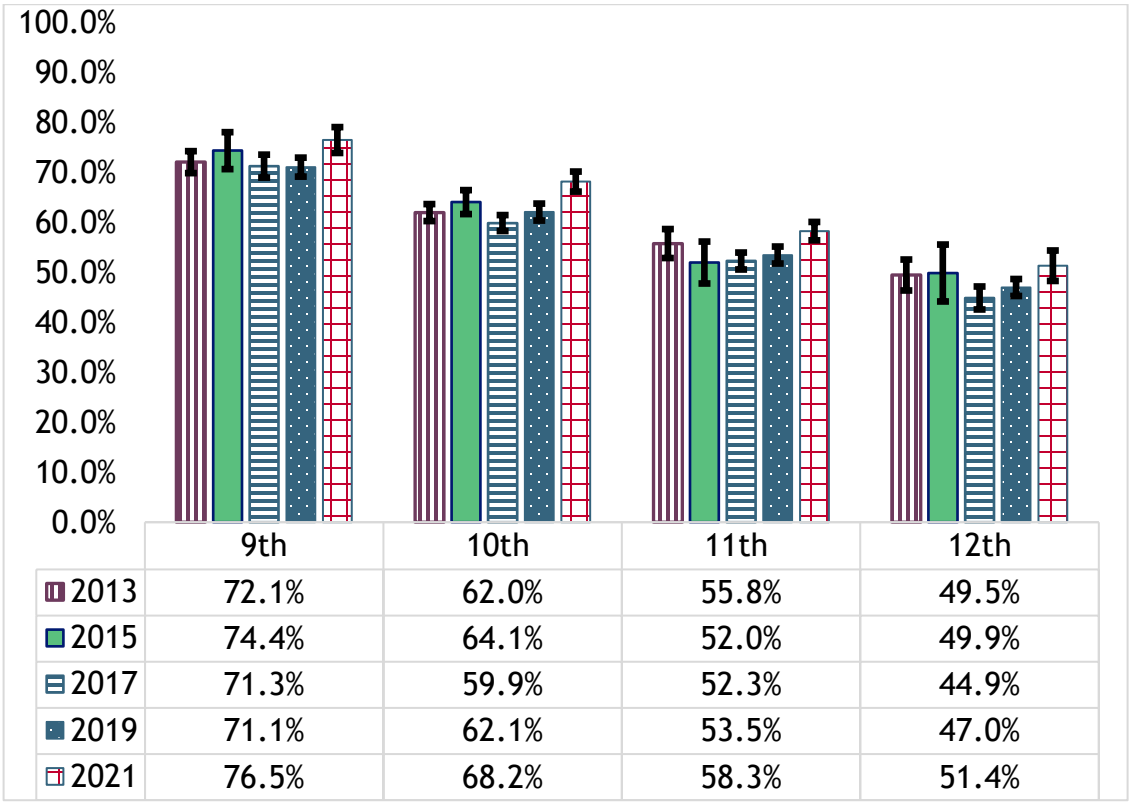
Figure 4.15 Middle school students' opinion regarding whether marijuana use is wrong, by grade level, 2013 to 2021: HKCS



	6th	7th	8th
2013	95.5%	91.0%	82.8%
2015	94.1%	92.7%	88.3%
2017	93.9%	90.0%	81.6%
2019	79.7%	74.2%	64.7%
2021	95.4%	91.6%	87.3%

Source: Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey Data Tables and Reports.

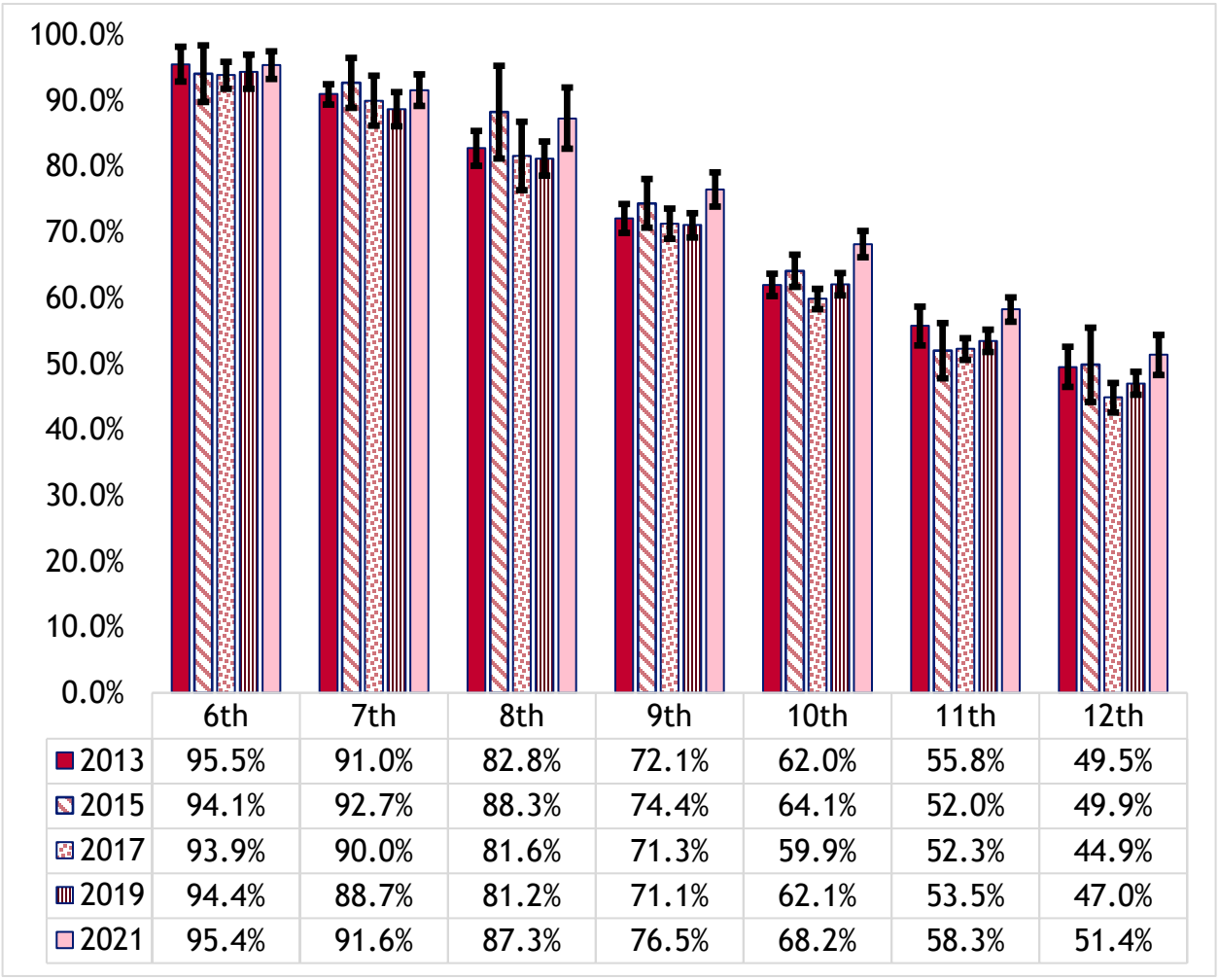
Figure 4.16 High school students' opinion regarding whether marijuana use is wrong, by grade level, 2013 to 2021: HKCS



	9th	10th	11th	12th
2013	72.1%	62.0%	55.8%	49.5%
2015	74.4%	64.1%	52.0%	49.9%
2017	71.3%	59.9%	52.3%	44.9%
2019	71.1%	62.1%	53.5%	47.0%
2021	76.5%	68.2%	58.3%	51.4%

Source: Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey Data Tables and Reports.

Figure 4.17 Students' opinion regarding whether parents believe marijuana use is wrong, by grade level, 2013 to 2021: HKCS



	6th	7th	8th	9th	10th	11th	12th
2013	95.5%	91.0%	82.8%	72.1%	62.0%	55.8%	49.5%
2015	94.1%	92.7%	88.3%	74.4%	64.1%	52.0%	49.9%
2017	93.9%	90.0%	81.6%	71.3%	59.9%	52.3%	44.9%
2019	94.4%	88.7%	81.2%	71.1%	62.1%	53.5%	47.0%
2021	95.4%	91.6%	87.3%	76.5%	68.2%	58.3%	51.4%

Source: Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey Data Tables and Reports.

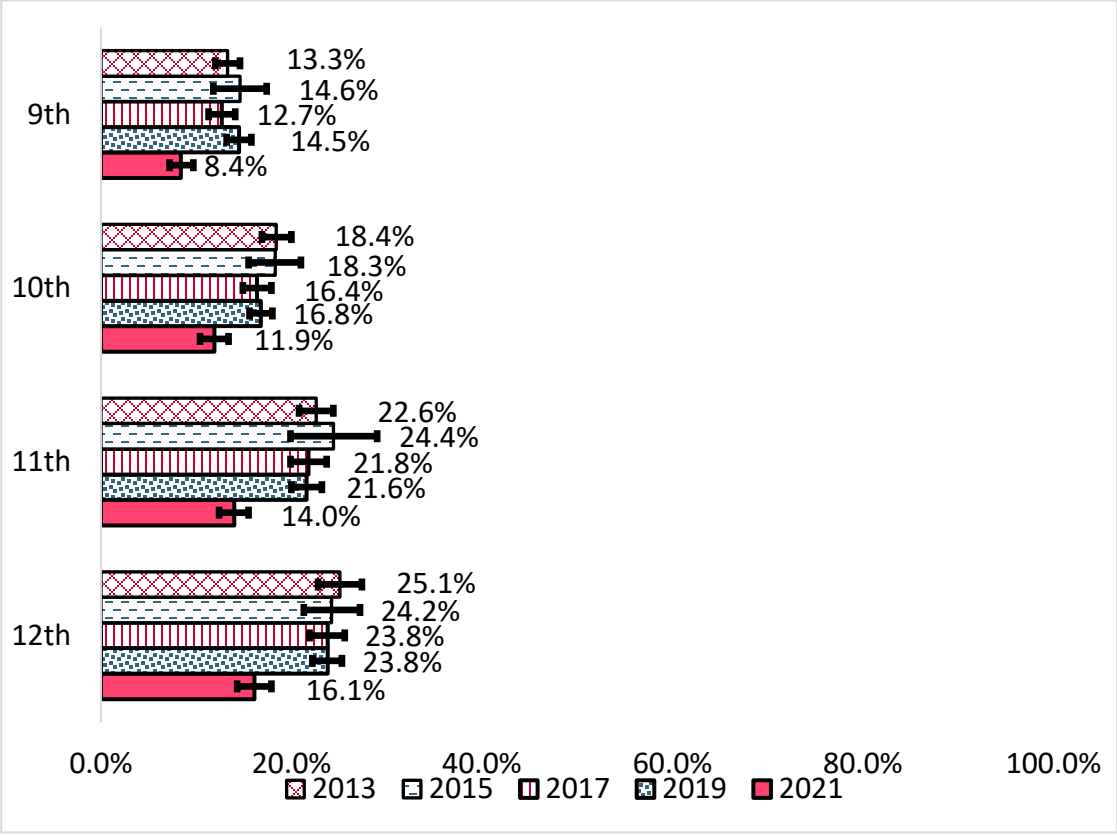
Two questions about driving were asked of high school students: whether they rode in a car with someone who had been using marijuana and if they drove while using marijuana in the past 30 days (Table 4.5). From 2013 to 2021, there was a significant decrease in the percentage of students who reported riding with someone who had been using (12.5% in 2021) and those who had been driving after using (5.5% in 2021). Grade-level trends for the driving questions are presented in Figures 4.18 and 4.19.

Table 4.5 Driving after using or riding with someone who has used marijuana in the past 30 days, 2013-2021: HKCS

Year	% Rode in a car driven by someone who had been using marijuana	% Rode Lower CI	% Rode Upper CI	% Drove after using marijuana	% Drove Lower CI	% Drove Upper CI
2013	19.7%	18.6%	20.8%	10.9%	10.0%	11.8%
2015	20.4%	18.4%	22.5%	10.4%	9.0%	11.8%
2017	18.6%	17.4%	19.7%	9.0%	8.2%	9.7%
2019	19.1%	18.1%	20.1%	11.2%	10.5%	11.9%
2021	12.5%	11.6%	13.4%	5.5%	5.0%	6.0%

Source: Colorado Department of Public Health and Environment (2023). Healthy Kids Colorado Survey Data Tables and Reports.

Figure 4.18 High school students reporting riding in a car driven by someone who had been using marijuana, by grade level, 2013 to 2021: HKCS



Source: Colorado Department of Public Health and Environment (2020), Healthy Kids Colorado Survey, at https://www.colorado.gov/pacific/cdphe/healthy-kids-colorado-survey-data-tables-and-reports.

Figure 4.19 Eleventh and 12th grade students reporting driving a vehicle when they had been using marijuana, by grade level, 2013 to 2021: HKCS

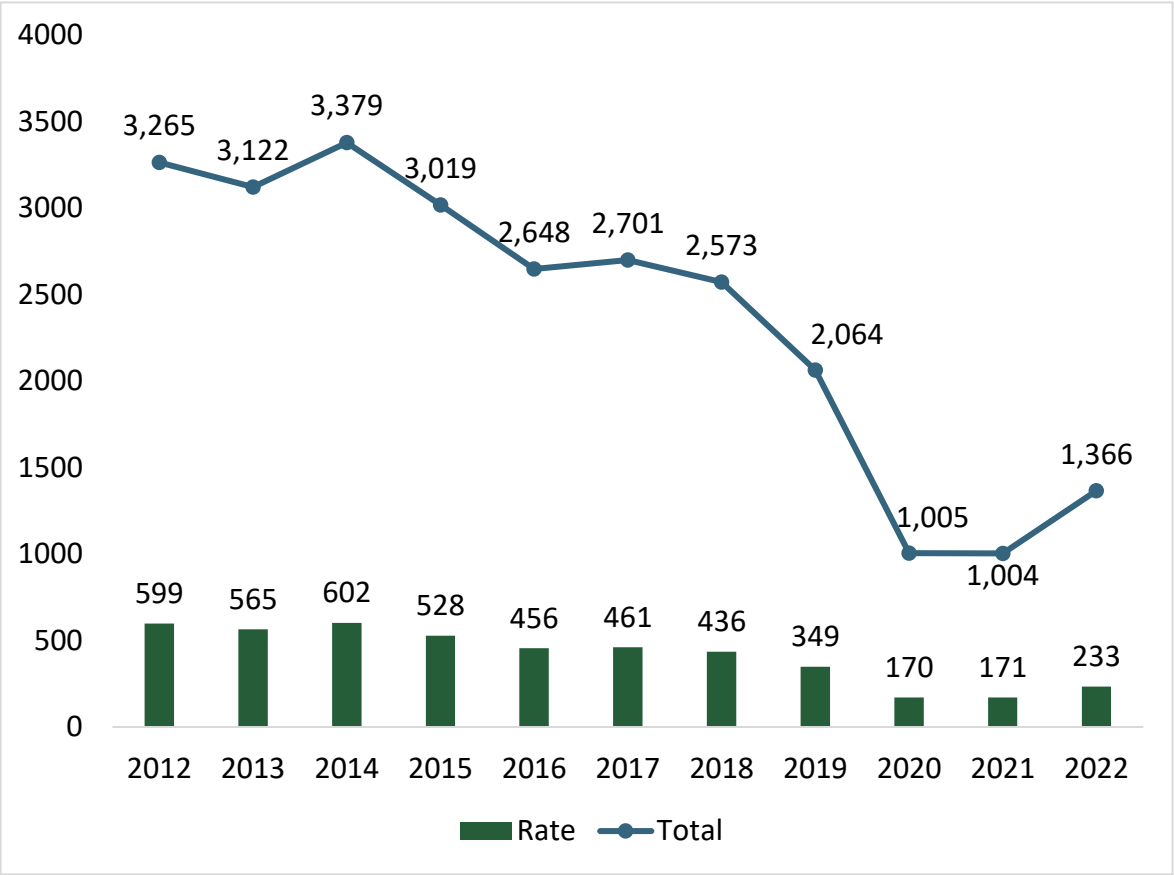
Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey, at https://www.colorado.gov/pacific/cdphe/healthy-kids-colorado-survey-data-tables-and-reports

Criminal Justice Involvement

Arrest Trends

As highlighted in Section 2, youth aged 18 and under bear a higher burden of marijuana-related arrests compared to adults; trends which will be explored in greater detail here. Arrests from 2021 to 2022 increased by 36%, and in 2022, 1,366 youth were arrested for a marijuana-related offense, which equates to a rate of 233 arrests per 100,000 residents. (Figure 4.20). Despite this increase, arrests in 2022 were still far below the number of arrests seen in 2012 (n = 3,265).

Figure 4.20 Juvenile marijuana arrests and arrest rates per 100,000, 2012 to 2022



Source: Colorado Bureau of Investigation, National Incident-Based Reporting System.
Note: The rates for total arrests and rates by drug crime type were calculated based on the population 10-17 years old.

There were observed disparities by race/ethnicity in the juvenile arrest data, which either grew or switched direction. In 2012, NH Black juveniles had an arrest rate that was 1.08 times higher than the rate for NH Whites (727 vs. 667 arrests per 100,000), but by 2022, NH Blacks had a 1.73 times higher arrest rate compared to NH Whites (399 vs. 233 arrests per 100,000), as seen in Table 4.6. In Hispanic juveniles, arrest rates were 0.73 times lower compared to NH Whites in 2012 (489 vs. 667 arrests per 100,000), but by 2022, Hispanics had a rate 1.17 times higher (269 vs. 230 arrests per 100,000).

Table 4.6 Juvenile marijuana arrests and rates (per 100,000 population) by race/ethnicity, 2012–2022

Year	N	NH White N	Hispanic N	NH Black N	NH Other N	Rate	NH White Rate	Hispanic Rate	NH Black Rate	NH Other Rate
2012	3,265	2,214	786	211	54	599	667	489	727	230
2013	3,122	2,018	803	262	39	565	605	486	889	161
2014	3,379	2,011	992	324	52	602	597	585	1,081	209
2015	3,019	1,835	886	266	32	528	539	507	867	124
2016	2,648	1,631	755	224	38	456	474	422	716	144
2017	2,701	1,721	749	184	47	461	498	412	581	174
2018	2,573	1,578	759	195	41	436	456	411	608	148
2019	2,064	1,220	674	138	32	349	352	364	429	116
2020	1,005	640	286	70	9	170	193	153	288	19
2021	1,004	549	364	67	24	171	167	196	278	51
2022	1,366	757	499	96	14	233	230	269	399	29

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System; Colorado State Office of Demography.
Note: The rates for total arrests and rates by drug crime type were calculated based on the population 10-17 years old. The rates for race/ethnicity and gender were calculated on the population of 10-17 year olds in those respective groups. "H" and "NH" refer to Hispanic and Non-Hispanic.

In 2022, 863 juvenile males and 503 juvenile females were arrested for a marijuana-related offense, which equates to arrest rates per 100,000 of 288 in males and 176 in females (Table 4.7). Throughout 2012 to 2022, males have had higher arrests and rates compared to females, but there was a disproportionate decline in arrest rates in males (-68%) compared to females (-35%) during this time period.

Table 4.7 Juvenile marijuana arrests and rates (per 100,000 population) by gender, 2012-2022

Year	Male N	Female N	Male Rate	Female Rate
2012	2,546	719	913	270
2013	2,389	733	846	271
2014	2,494	885	871	322
2015	2,227	792	763	283
2016	1,910	738	644	260
2017	1,944	757	649	264
2018	1,720	853	570	295
2019	1,426	638	472	221
2020	713	292	236	101
2021	601	403	200	141
2022	863	503	288	176

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System; Colorado State Office of Demography.
Note: The rates for total arrests and rates by drug crime type were calculated based on the population 10-17 years old.

In 2022, 973 juvenile marijuana-related arrests had to do with a possession offense, which amounted to 71% of all arrests (Table 4.8). The second most frequent category of marijuana-related offenses was "unspecified."

Table 4.8 Juvenile marijuana arrests and rates (per 100,000) for sales, smuggling (SM), possession (PO), production (PD) and unspecified (UN) offenses, 2012-2022

Year	Sales N	PO N	PD N	UN N	Sales Rate	PO Rate	PD Rate	UN Rate
2012	41	2,856	5	361	8	524	1	66
2013	44	2,710	4	363	8	491	1	66
2014	52	3,091	3	233	9	551	1	42
2015	30	2,788	2	199	5	488	0	35
2016	39	2,461	4	144	7	424	1	25
2017	40	2,442	4	215	7	417	1	37
2018	24	2,255	4	289	4	382	1	49
2019	11	1,709	1	343	2	289	0	58
2020	23	773	0	209	4	131	0	35
2021	7	701	0	296	1	120	0	51
2022	10	973	1	382	2	166	0	65

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System; Colorado State Office of Demography.
Note: The rates for total arrests and rates by drug crime type were calculated based on the population 10-17 years old. There was one smuggling arrest reported for the 11 year time period and it is not included in this table.

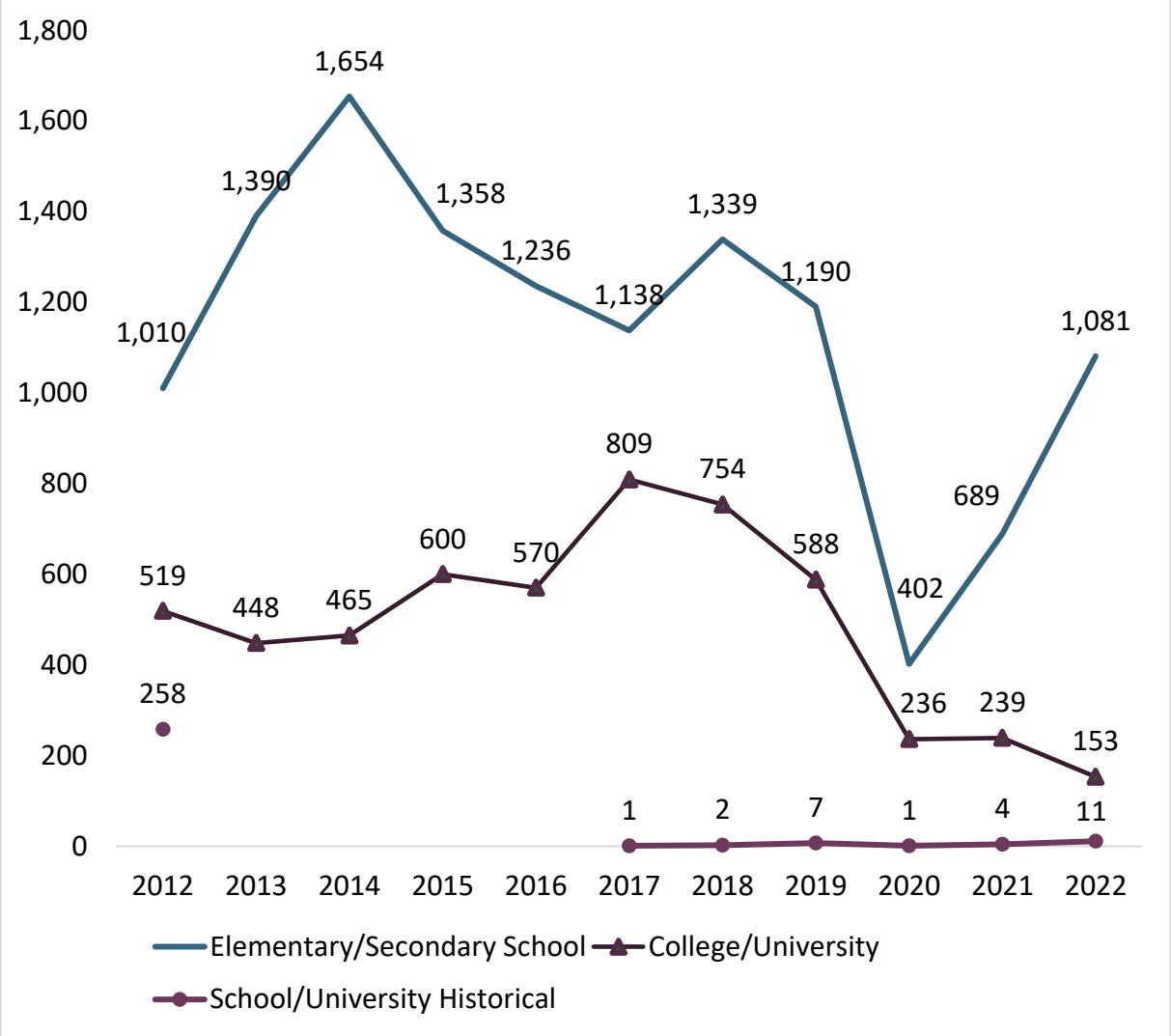
School Data

Offense Trends

The National Incident-Based Reporting System (NIBRS) captures information on the place where an offense was reported to have occurred. There are 57 categories, which include locations such as public transportation,

bars, convenience stores, homes, parks, parking lots, primary/secondary schools, colleges, etc. The number of offenses in elementary/secondary schools increased 64% from 2012 to 2014, but has since decreased (Figure 4.21). From 2019 to 2020 in particular, offenses that occurred in elementary/secondary schools dropped by 66%, dipping to 402 (Figure 4.21). In 2022, the pandemic-era drop has since rebounded, and there were 1,081 recorded arrests that took place in elementary/secondary schools. The number of offenses reported on college and university campuses was relatively stable from 2012 through 2016, but jumped in 2017. From 2019 to 2020, arrests on colleges and universities dropped by 60%, and continued to fall since then. In 2022, there were 153 arrests in that location.

Figure 4.21 Marijuana offenses in Colorado schools, 2012–2022



Source: Colorado Bureau of Investigation, National Incident-Based Reporting System.
Note: Prior to 2012 school/university was a single location code. There were 258 offenses in 2012 using this more generic location code; in later years, a few records were entered in. In 2017, this code began appearing again.

Law Enforcement Contacts with Students

Colorado Revised Statute 22-32-146(5) mandates that local law enforcement agencies annually report specific information to the Division of Criminal Justice (DCJ) concerning every incident that resulted in a student's arrest, summons or ticket during the previous academic year for an offense that occurred at a public

elementary school, middle or junior high school, or high school; in a school vehicle; or at a school activity or sanctioned event.[70]

Table 4.9 presents the most common reasons for law enforcement contact among those agencies that reported to DCJ. Marijuana-related contacts were the most prevalent contact type. The 839 contacts for marijuana account for 18% of all contacts reported in the 2021 to 2022 school year (4,550). The vast majority of these contacts resulted in a summons (86%) rather than an arrest (2%) (Figure 4.22). In contrast, 40% of weapons-related contacts resulted in arrests of students.

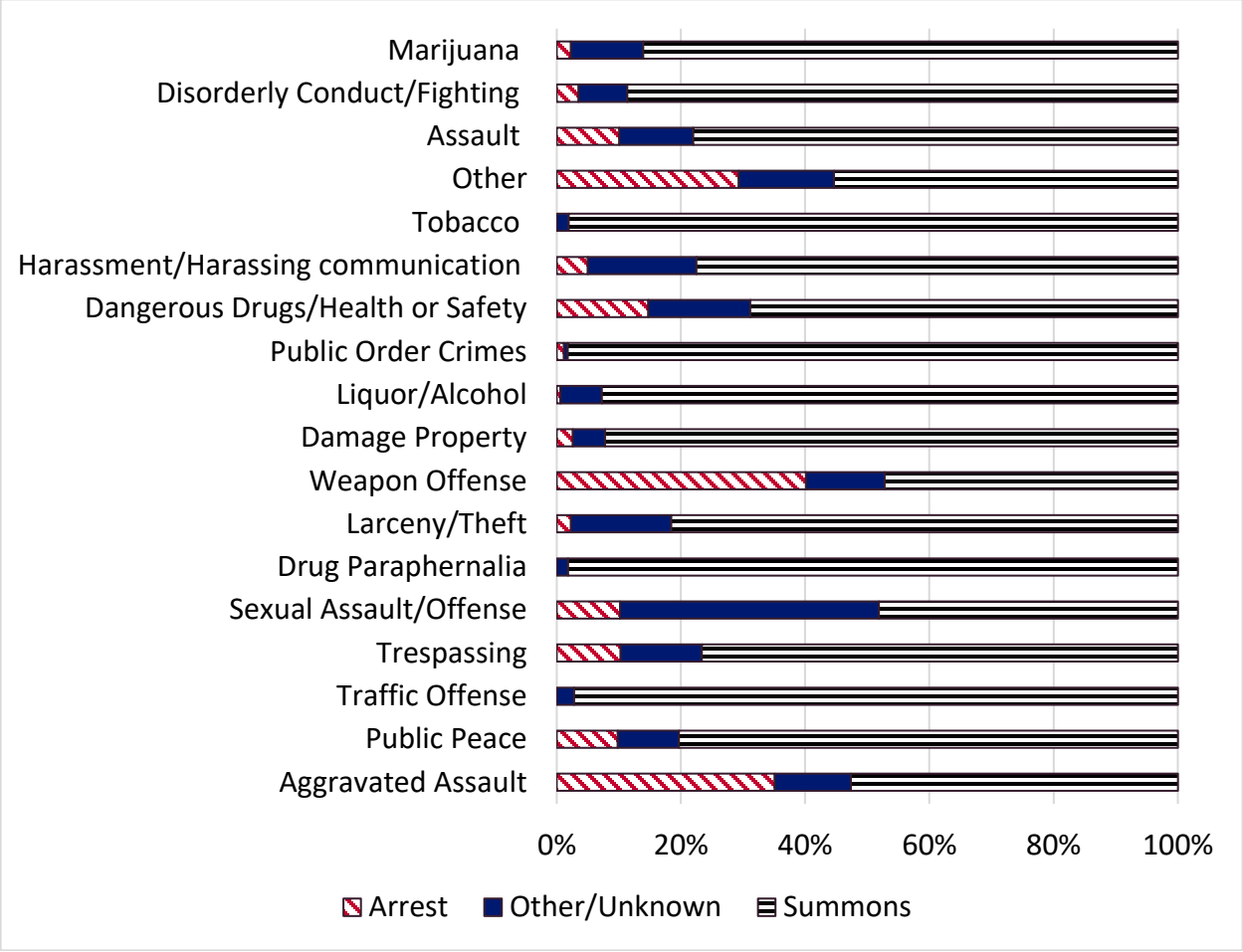
Table 4.9 Law enforcement contacts with students by contact reason, August 2021 to June 2022

Contact Reason	N	%
Marijuana	839	18.4%
Disorderly Conduct/Fighting	764	16.8%
Assault	723	15.9%
Other	307	6.7%
Tobacco	259	5.7%
Harassment/Harassing communication	200	4.4%
Dangerous Drugs/Health or Safety	183	4.0%
Public Order Crimes	170	3.7%
Liquor/Alcohol	165	3.6%
Damage Property	154	3.4%
Weapon Offense	142	3.1%
Larceny/Theft	130	2.9%
Drug Paraphernalia	110	2.4%
Sexual Assault/Offense	108	2.4%
Trespassing	107	2.4%
Traffic Offense	71	1.6%
Public Peace	61	1.3%
Aggravated Assault	57	1.3%
Total	4,550	100%

Source. Colorado Division of Criminal Justice (2023). Law Enforcement Contacts with Students, Academic Year 2021 to 2022.

[70]: For additional information: Colorado Department of Public Safety, ORS: Criminal Justice Contacts with Students-School, Division of Criminal Justice. [dashboard] (n.d.).

Figure 4.22 Law enforcement contacts with students, by contact reason and type, August 2021 to June 2022

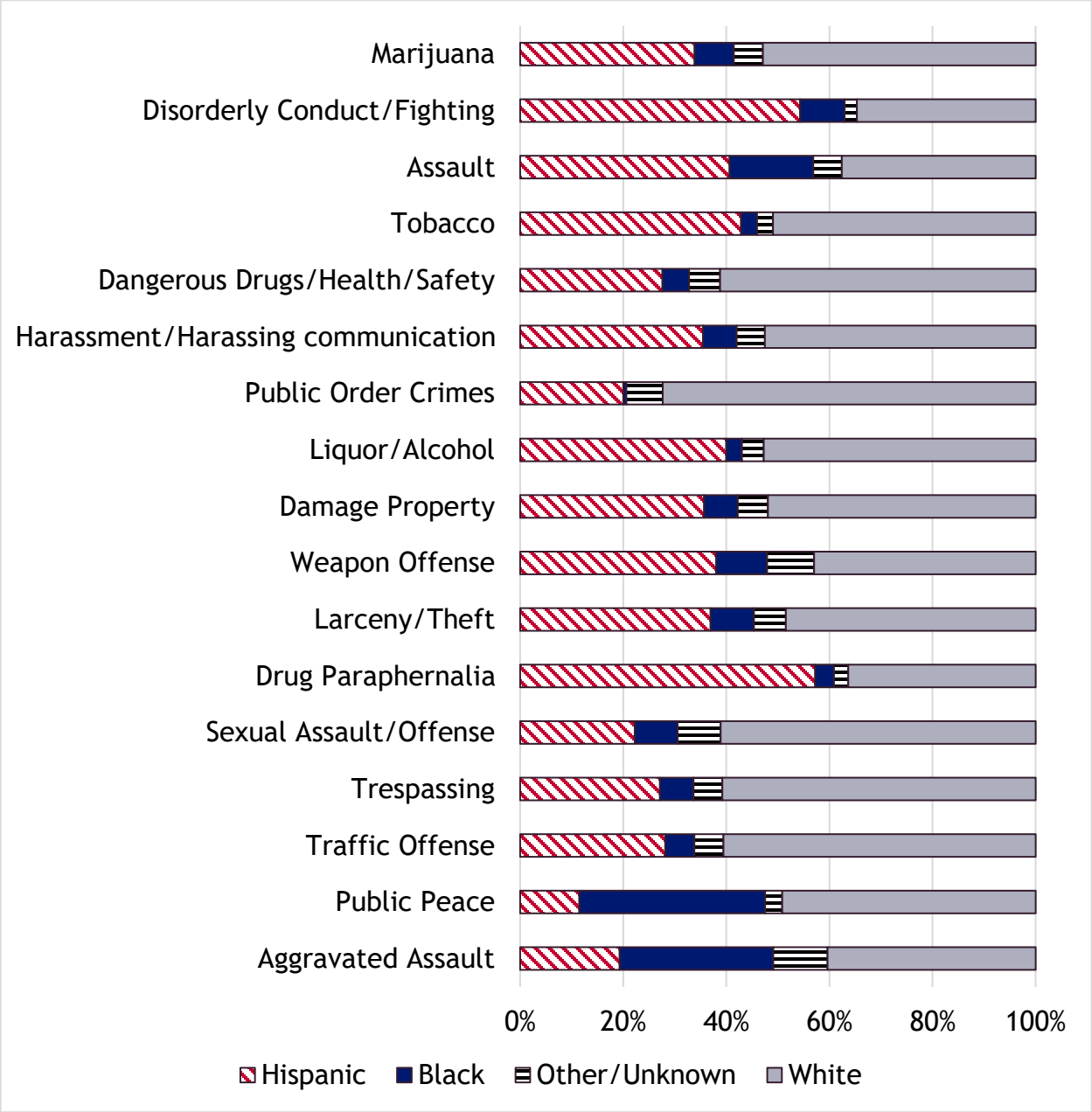


Source. Colorado Division of Criminal Justice (2023). Law Enforcement Contacts with Students, Academic Year 2021 to 2022.

Figure 4.23 shows the type of law enforcement contact by race/ethnicity. In 2021, there were 444 law enforcement contacts with White students (53%), 284 with Hispanic students (34%), 60 with Black students (8%), and 47 with students of other races (5%). Colorado school population is very similarly distributed; however, only 5% of students in Colorado were reported as Black.[71]

[71] Colorado Department of Public Safety, ORS: Criminal Justice Contacts with Students-School, Division of Criminal Justice. [dashboard] (n.d.).

Figure 4.23 Law enforcement contacts with students, by contact reason and race/ethnicity, August 2021 to June 2022



Source. Colorado Division of Criminal Justice (2023). Law Enforcement Contacts with Students, Academic Year 2021 to 2022.

School Discipline Data Trends

Many educators, law enforcement officials, school counselors, and others who work with juveniles have been concerned that marijuana legalization could lead to an increase in school discipline for drug-related activity. School discipline, including suspension or expulsion, can disrupt academic achievement, increase the

probability of future involvement in the justice system, and normalize punitive social control early in a student's life.[72]

The Colorado Department of Education reports disciplinary data on suspensions, expulsions, and law enforcement referrals for each school year.[73] A number of reasons for discipline are reported, including drugs, alcohol, tobacco, serious assault, minor assault, robbery, other felonies, disobedience, detrimental behavior, destruction of property, and other violations. The drug category covers all drugs and does not break out marijuana separately. However, since marijuana is currently the most commonly used illicit drug in elementary and secondary schools (tobacco and alcohol are tracked in separate categories), changes in trends are likely to be related to changes in use and possession of marijuana on school grounds or changes to school response or reporting of illicit drug use. In 2015, legislation was passed instructing the Department of Education to begin collecting discipline data about marijuana separately from other drugs. The first full year of marijuana-specific data became available for the 2016–2017 school year.

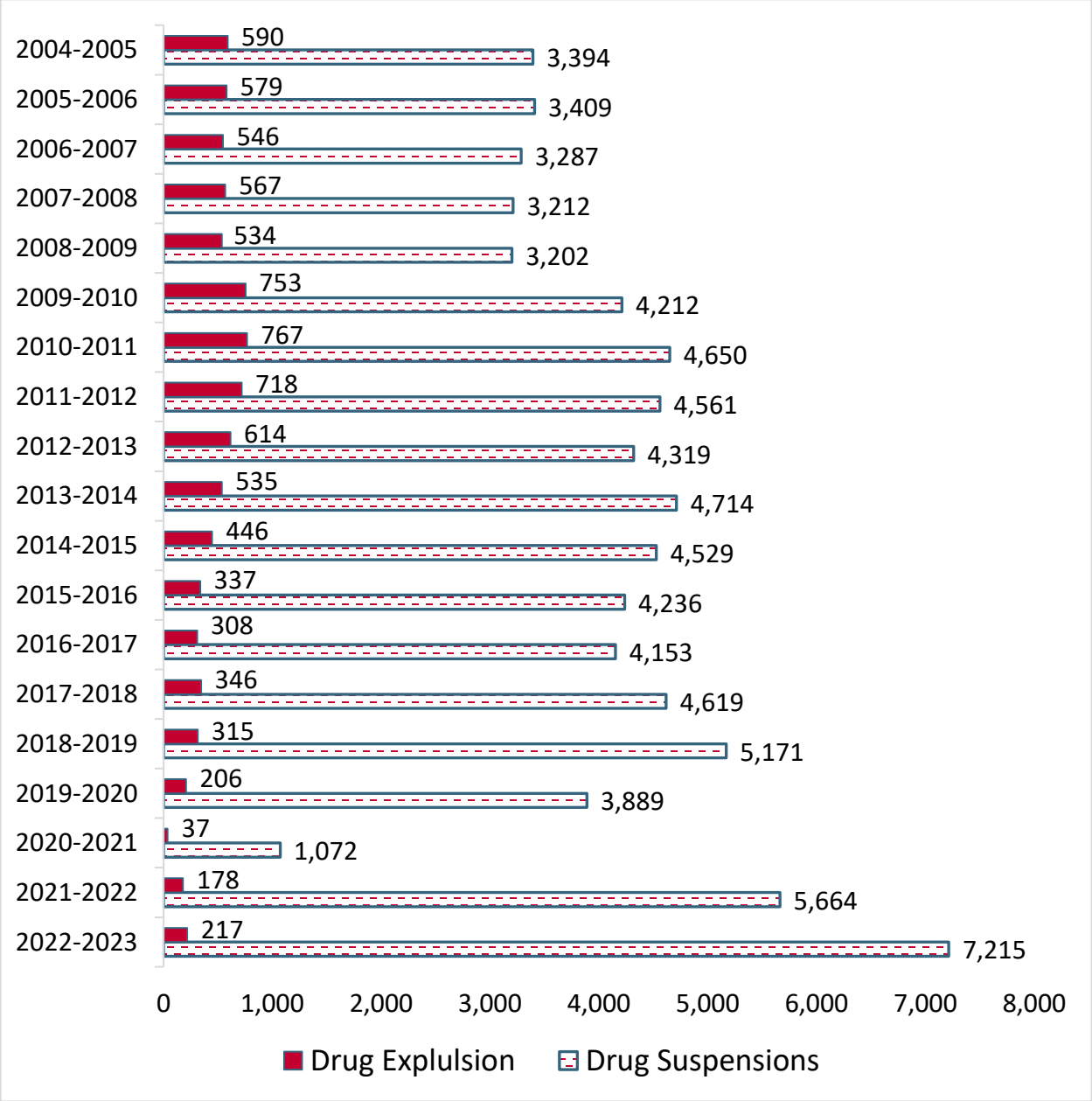
Prior to the 2012 school year, legislation (Senate Bill 12-046 and House Bill 12-1345) modified some zero-tolerance policies that had resulted in what some considered "unnecessary expulsions, suspensions, and law enforcement referrals."[74] This change in the law should be taken into account when examining disciplinary trends.

Data regarding suspensions, expulsions, and law enforcement referrals are publicly available at the Colorado Department of Education's website. These raw numbers were transformed into rates per 100,000 students to take the increased number of students into account. Specifically, in the 2008–2009 school year, 818,443 students were enrolled in Colorado schools and, by 2022-2023, that number increased to 913,223, but has since dropped to 886,517.[75] A student may be involved in more than one disciplinary incident, so these rates do not equate to the percentage of students receiving disciplinary action in a given year.

The number of suspensions and expulsions for drugs remained stable from the period 2009-2010 and 2018-2019 (Figure 4.24). The number dropped in 2020 because there were fewer students present in school during the latter part of the school year due to the COVID-19 pandemic. However, suspensions rose in 2018-2019 to 5,664 and peaked in the 2022-2023 school year at 7,215. Expulsions in the 2022-2023 school year rebounded to pre-pandemic levels at 217.

[72] Ramey, D. (2016). The influence of early school punishment and therapy/medication on social control experiences during young adulthood, *Criminology*, *Online Early publication*.
[73] Colorado Department of Education, Suspension and expulsion statistics.
[74] Colorado School Safety Resource Center, Discipline in Schools.
[75] Colorado Department of Education, Pupil Membership.

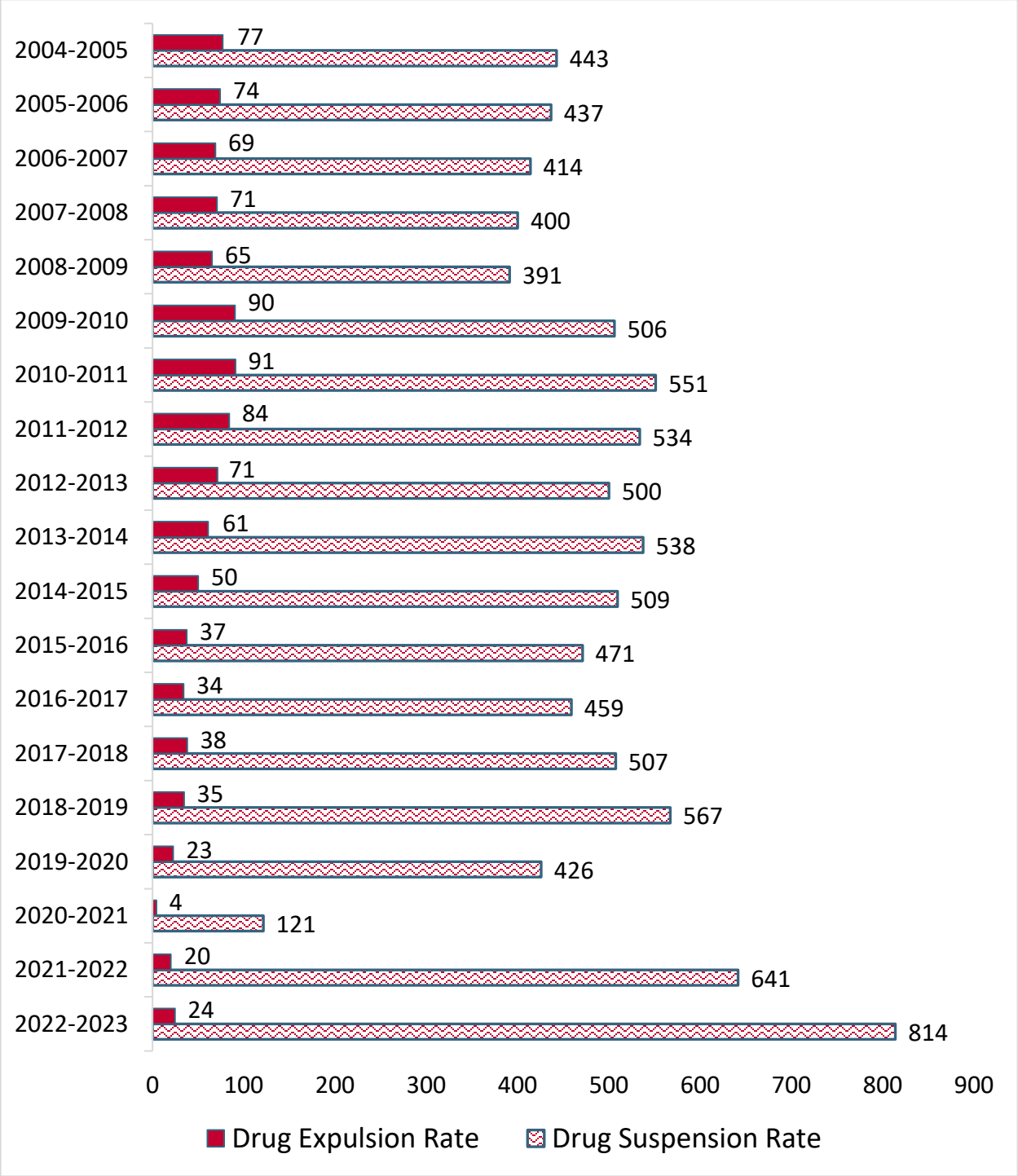
Figure 4.24 Number of drug suspensions and expulsions in Colorado public schools, 2004 to 2023



Source: Colorado Department of Education, Suspension/Expulsion Statistics.

Between the 2012-2013 and 2022-2023 school years, drug expulsions decreased overall by 66%, while suspensions increased by 63%. The reform of zero-tolerance policies coincided with the legalization of marijuana, making it difficult to assess the contribution of each change on the decline in expulsions. The pandemic disrupted trends in both suspensions and expulsions. The expulsion rate has rebounded from the pandemic-era low, and in 2022-2023, there were 24 expulsions per 100,000 students. The drug suspension rate (per 100,000 pupils) ranged from 426 to 561 from the 2010-2011 to the 2019-2020 school years (Figure 4.25). The drug expulsion rate decreased significantly from the 2010-2011 school year (90 per 100,000 pupils) to the 2018-2019 school year (35 per 100,000 pupils) and was at its lowest recorded level in 2019-2020. However, suspension rates have more than rebounded from the pandemic-era lows, and from 2022-2023, the rate totaled 814 suspensions per 100,000 pupils.

Figure 4.25 Drug suspension and expulsion rates (per 100,000 students), 2004 to 2023

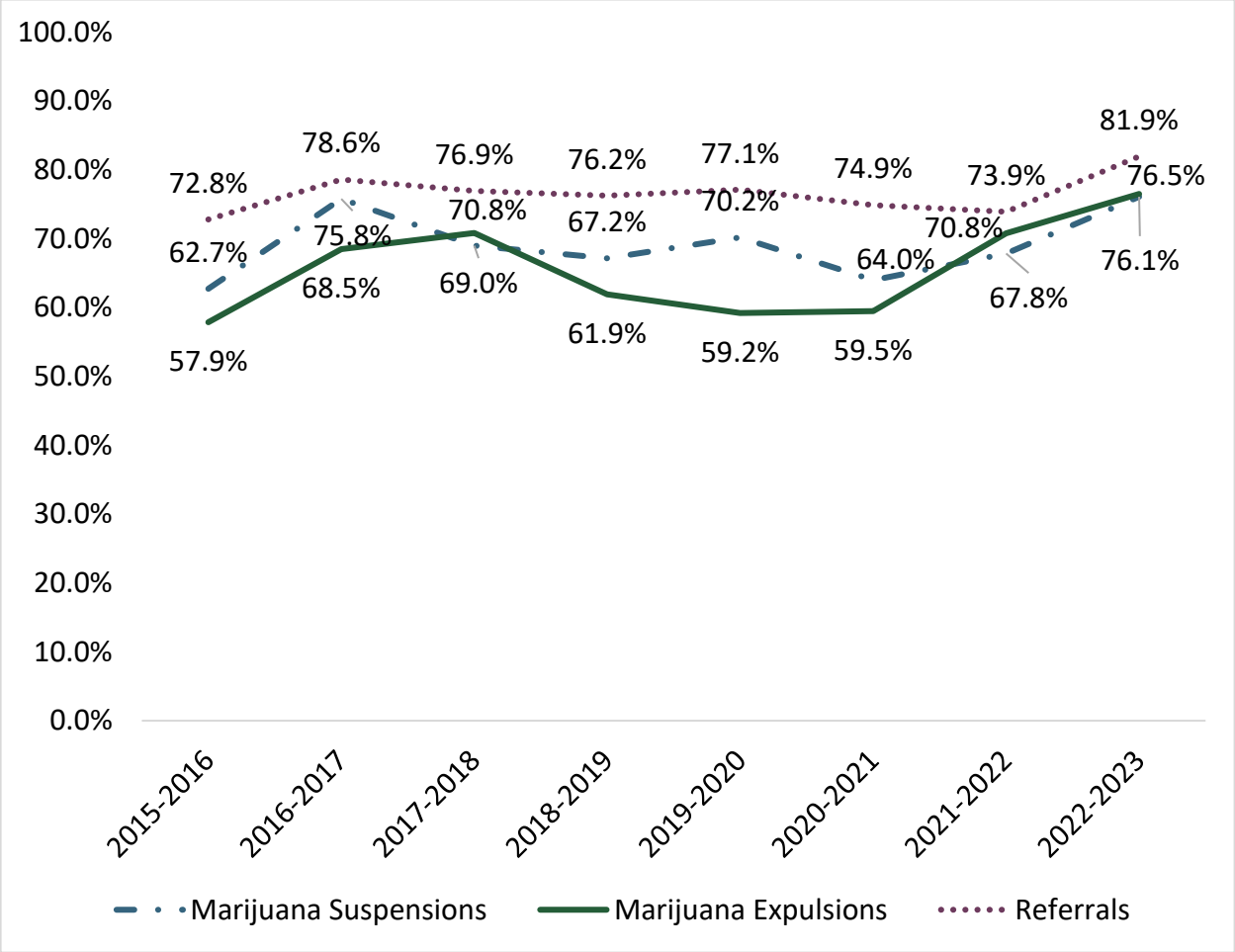


Source: Colorado Department of Education, Suspension/Expulsion Statistics.

The 2016-2017 school year was the first full year of reporting marijuana separately from other drugs as a disciplinary reason. In 2022-2023, there were 5,490 suspensions, 166 expulsions and 649 referrals to law enforcement for marijuana. These levels correspond to a 74% increase in suspensions, a 21% decline in expulsions and a 24% drop in referrals to law enforcement compared to the 2016-2017 school year. Figure 4.26 presents information on disciplinary incidents for both marijuana and other drugs, and in more recent years, a larger proportion of drug-related expulsions and referrals to law enforcement involved marijuana. In

the 2022 to 2023 school year, marijuana accounted for about 76% of all drug suspensions, 77% of drug expulsions, and 82% of law enforcement referrals for drugs (Figure 4.26). In contrast, in the 2015 to 2016 school year, 63% of suspensions, 58% of expulsions and 73% of law enforcement referrals involved marijuana.

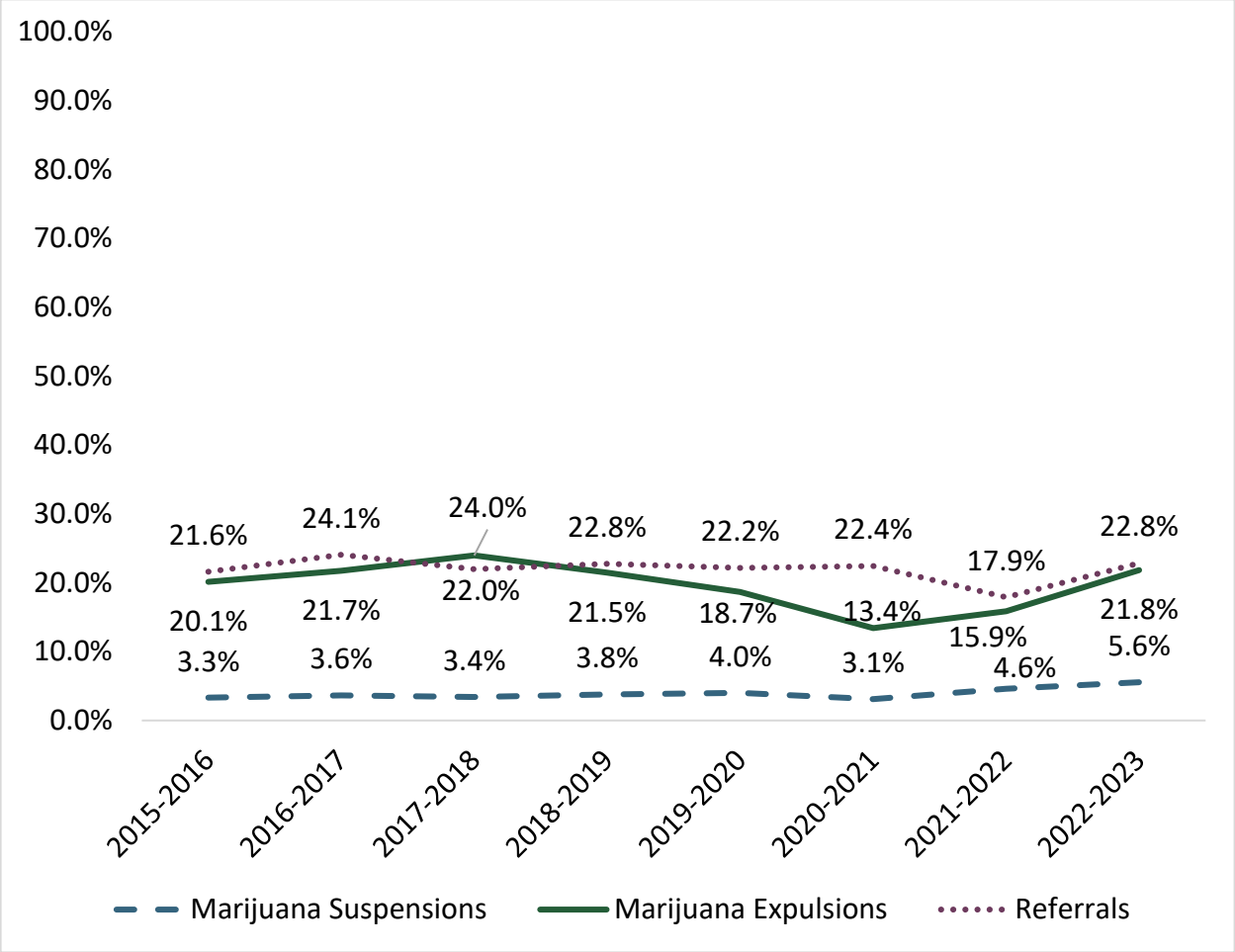
Figure 4.26 Percent of all drug disciplinary incidents for marijuana, 2015 to 2023



Source: Colorado Department of Education, Suspension/Expulsion Statistics.

In the context of all disciplinary incidents, marijuana was involved in 6% of all suspensions, 22% of all expulsions, and 23% of all law enforcement referrals in the 2022-23 school year (Figure 4.27). The proportion of disciplinary incidents related to marijuana violations were fairly stable from 2015 to 2023.

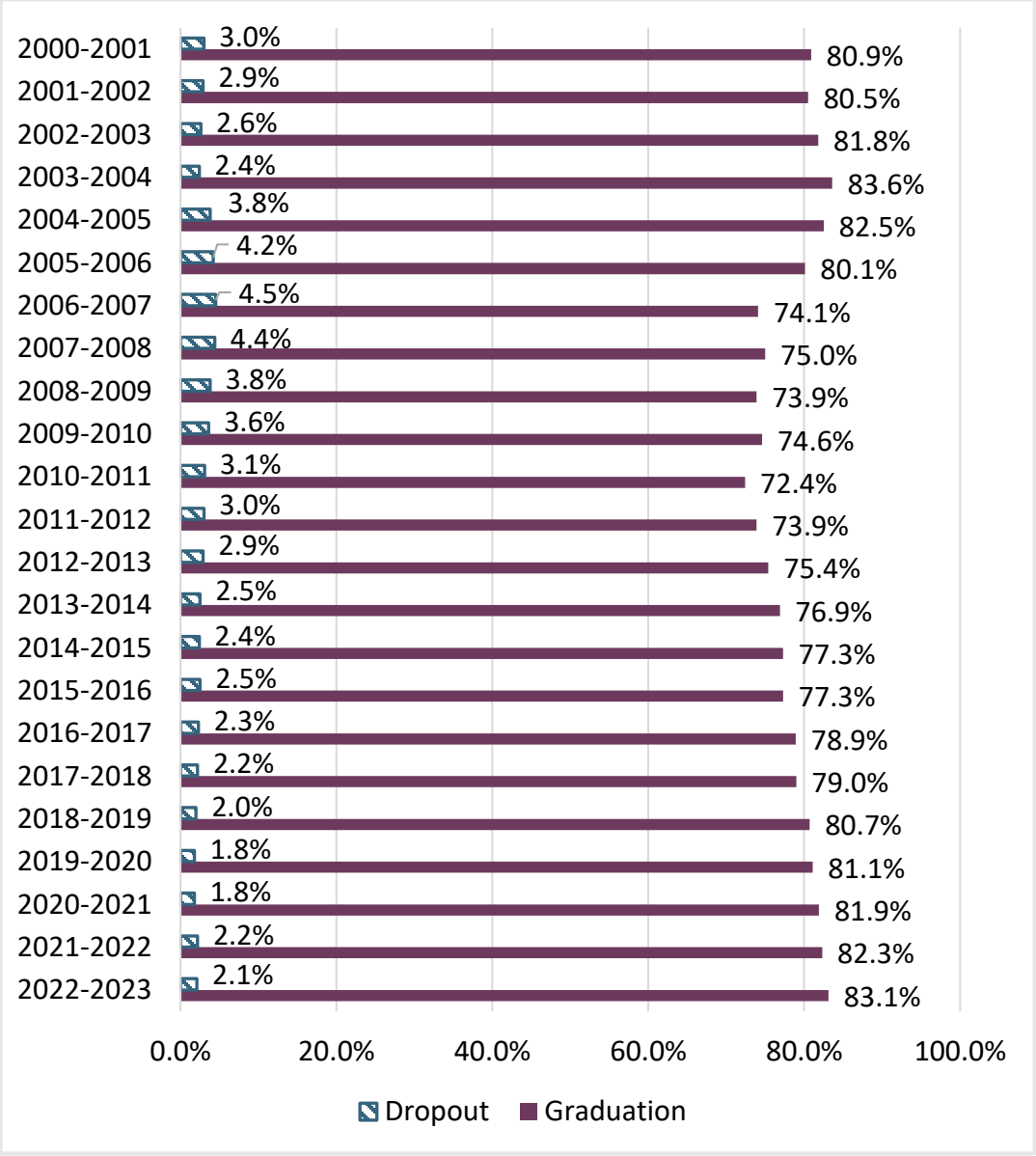
Figure 4.27 Percent of disciplinary incidents for marijuana compared to other reasons, 2015 to 2023



Source: Colorado Department of Education, Suspension/Expulsion Statistics.

Many education stakeholders also expressed a fear that school dropout rates would increase, and graduation rates would decrease after legalization. This is not reflected in the data presented in Figure 4.28. Drop-out rates from 2012 to 2023 have been stable, ranging from 2% to 3%. During this same time period, graduation rates have improved, going from 75% in the 2012 to 2013 school year to 83% in the 2022 to 2023 school year.

Figure 4.28 Colorado graduation and dropout rates, 2000 to 2023



Source: Colorado Department of Education, Graduation and Dropout Statistics

In sum, reported expulsions and referrals to law enforcement have not increased since legalization. It should be noted that recent declines in rates of suspension and expulsion, and fewer referrals to law enforcement, are likely associated with school reform efforts mandated in Senate Bill 12-046 and House Bill 12-1345. Drug and marijuana-related suspensions have increased in recent years. This trend does not seem to align with the decline in self-reported use of marijuana in students. From the school discipline data, we cannot determine whether the number of students incurring marijuana-related suspensions has increased, or the same number of students are facing more incidents.

Probation Testing Data

Colorado's Probation Departments conduct drug tests on juvenile probationers. The frequency of testing is determined by assessment, court orders, and other case-related information. Table 4.10 presents information on the percentage of juvenile probationers who tested positive for THC. In 2021, the percentage of the 10- to

14-year-old group testing positive for THC one or 2 times has remained relatively stable, at about 20%, while the percentage testing positive 3 or more times rose from 16% to 25% from 2012 to 2021. In 2021, there were 471 fewer 10-14 year olds on probation (-72%) compared to 2012, and the overall population decline makes these changes more difficult to interpret. The percentage of 15- to 17-year-olds testing positive "one or two times" or at "three or more times" were both estimated at 27% in 2021. There is currently no link between probationer drug testing results and probation status, so it remains unknown if changes in drug use patterns affect probation violations.

Table 4.10 Juvenile probationer test results for THC, 2012 to 2021

Year	N 10-14 year-olds testing	% 10-14 year-olds with 0 positive results	% 10-14 year-olds testing positive 1-2 times	% 10-14 year-olds testing positive 3+ times	N 15-17 year-olds testing	% 15-17 year-olds with 0 positive results	% 15-17 year-olds testing positive 1-2 times	% 15-17 year-olds testing positive 3+ times
2012	652	66%	19%	16%	3,377	50%	27%	23%
2013	492	60%	20%	20%	2,599	51%	24%	25%
2014	520	54%	25%	20%	2,776	48%	25%	27%
2015	493	58%	22%	20%	2,643	47%	25%	28%
2016	453	51%	29%	20%	2,523	46%	26%	28%
2017	388	56%	20%	23%	2,324	44%	26%	30%
2018	349	52%	23%	24%	2,219	44%	25%	31%
2019	354	53%	23%	23%	2,121	44%	25%	31%
2020	265	52%	29%	19%	1,596	43%	30%	27%
2021	181	54%	20%	25%	1,359	46%	27%	27%

Source: Colorado Division of Probation Services.

Drug-Endangered Children

Senate Bill 13-283 requires that information be collected on the impact of marijuana legalization on drug-endangered children. There is no agreement on the definition of that term and so no formal definition exists. The Colorado Department of Human Services does not have a method to track whether a child welfare case was prompted by any specific drug. Likewise, it is not possible to identify whether an arrest or court filing for child abuse/child endangerment has marijuana as a causal or contributing factor. This creates a significant gap in the information available on the topic.

In an attempt to address the General Assembly's concern about drug-endangered children, two sources of information were used to study the issue. Historically, a statewide survey of parents about their marijuana use and product storage at home (CDPHE's Child Health Survey) was included in this report, but the Child Health Survey was discontinued in 2019. As a replacement, this section will refer to poison center data included in Section 3. The Pregnancy Risk Assessment Monitoring System results are also included in this report.

Poison Center Data

RMPDS data presented in Section 3, highlights some of the growing concerns about intentional and unintentional marijuana exposures in children. As shown in Figure 3.12, there were 49 calls to poison centers concerning incidents in youths under the age of 20, with 15 of those calls occurring in children aged five and

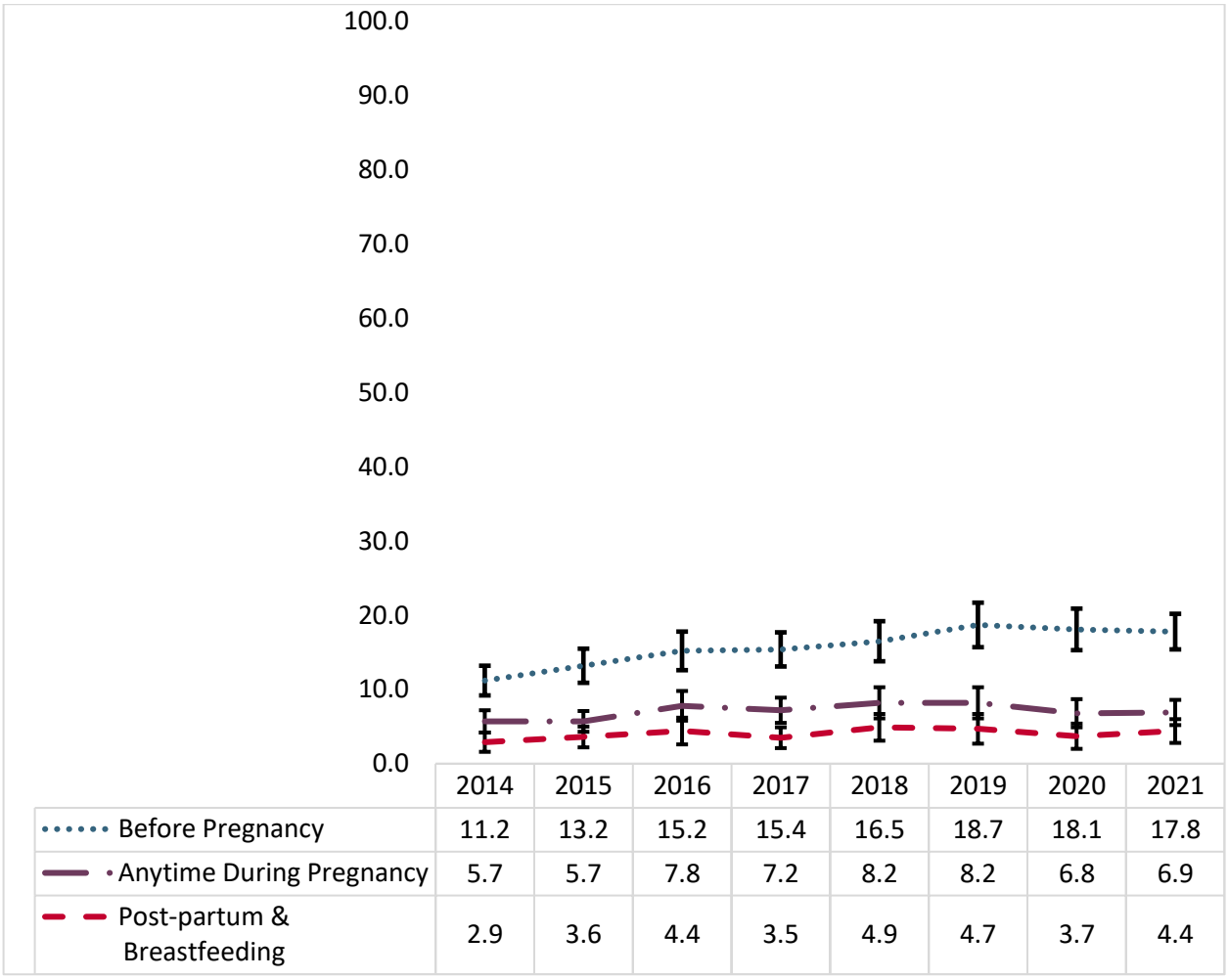
under, or 14% of total calls. By 2021, there were 237 calls for youths under the age of 20 with 151 calls occurring in youths aged five and under. Calls involving children under the age of five accounted for 49% of the total calls related to marijuana exposures. These trends suggest that very young children are having more frequent incidents ingesting marijuana since legalization; however, poison center calls alone do not provide an accurate measure of the number of children exposed.

Parental Use Trends

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a surveillance system designed to identify and monitor behaviors and experiences of women before, during and after pregnancy. Information is collected by CDPHE by surveying a sample of women who have recently given birth. PRAMS has used a combination of two data collection approaches: statewide mailings of the surveys, and a telephone follow-up with women who do not return the survey by mail. The 2023 survey added an option for participants to complete the survey online; however, these results have not been publicly released and will be included in future reports. Beginning in 2014, CDPHE added specific marijuana questions to PRAMS, including use prior to pregnancy, use during pregnancy, and use while breastfeeding.

In 2021, most people who gave birth did not report using marijuana before pregnancy, during, or in conjunction with breastfeeding (Figure 4.29). In the years since 2018, there has been a significant increase in the percentage of people who reported use before pregnancy compared to the first year of legalization in 2014. The proportion of women reporting use before pregnancy in 2021 (17.8%), during pregnancy (6.9%), or postpartum and currently breastfeeding (4.4%) was not significantly different from the 2017 or 2018 survey results.

Figure 4.29 Marijuana use before pregnancy, during pregnancy, postpartum, and postpartum breastfeeding, 2014–2021



	2014	2015	2016	2017	2018	2019	2020	2021
Before Pregnancy	11.2	13.2	15.2	15.4	16.5	18.7	18.1	17.8
Anytime During Pregnancy	5.7	5.7	7.8	7.2	8.2	8.2	6.8	6.9
Post-partum & Breastfeeding	2.9	3.6	4.4	3.5	4.9	4.7	3.7	4.4

Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment, Marijuana use during pregnancy and breastfeeding in Colorado.

In sum, there have been varied impacts of marijuana legalization on youth. Survey data reflect that the proportion of students ever using marijuana or using marijuana in the past-month were stable between 2005 and 2019 but significantly declined in 2021. Juvenile arrest rates dropped overall since legalization, but racial disparities between NH Whites and NH Black youth and NH Whites and Hispanics increased, highlighting the uneven burden of criminal justice system involvement. Marijuana and drug-related expulsions declined significantly since legalization, which was also due in part to disciplinary policy reforms across the state. Marijuana-related suspensions peaked in the 2022 to 2023 school year and should be monitored further to confirm whether this a short- or long-term impact of the pandemic. Additionally, marijuana was the most common reason for law enforcement contact with students in 2021, but it is noteworthy that graduation rates continued to increase through the 2022-2023 academic year and dropout rates have remained stable since 2012-2013. While more people who gave birth reported using marijuana prior to conception, the prevalence of using marijuana during and after pregnancy remained stable since legalization.

SECTION FIVE
ADDITIONAL INFORMATION

Licensing and Revenue

The Marijuana Enforcement Division[76] (MED) is tasked with licensing and regulating the medical and retail marijuana industries in Colorado. The Division implements legislation, develops rules, conducts background investigations, issues business licenses, and enforces compliance mandates in order to maintain a robust regulatory structure. MED promotes transparency and clarity for all stakeholders by utilizing a highly collaborative process through which it develops industry regulations and furthers its primary mission of ensuring public safety.

Licensees Statewide

As seen in Table 5.1, the total number of marijuana business licenses issued increased sharply for the first two years after legalization, up 36% from 2014 (2,249) to 2017 (3,051). In 2023, the total number of licensed premises was 2,580, which represents a decline of 15 % from 2017's peak level of 3,051 (Table 5.1). This contraction started in the medical market in 2018, while the retail market had increased in size until 2022. From 2022 to 2023, the number of licensed premises in the retail market dropped by 10%.

As of 2023, 113 jurisdictions allow for marijuana licenses to be issued within their borders (Table 5.2). There are 83 cities and 30 counties that allow marijuana businesses to operate. The most common type of license allowed is medical/retail (89), followed by medical only (11), and retail only (11). There is one county that only allows for sales with retail deliveries, which is labeled as "Limited Retail," and one city that only allows for combined medical and retail premises only, which is labeled as "Medical/Limited Retail."

The geographic distribution of license types is presented in Figures 5.1-5.7. Denver (994), El Paso (292), and Pueblo (276) are the counties with the most licensed premises. There is significant variation in license types throughout the different counties, which reflects differing policies regarding allowed business types in their jurisdictions. Full tables of the retail license types (Table 5.3) and medical marijuana license types (Table 5.4) by county also highlight the frequencies of each license type by county.

[76] Additional information on the MED can be obtained on their website.

Table 5.1 Licensed marijuana premises, by license type, 2014-2023

License Type	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total licensed premises	2,249	2,592	2,934	3,051	2,973	2,727	2,778	3,011	2,951	2,580
Medical (M)	1,416	1,469	1,584	1,531	1,396	1,155	1,140	1,179	1,084	896
Centers/Stores (M)	505	516	528	506	473	442	431	422	398	354
Cultivations (M)	748	751	788	759	673	469	463	482	426	315
Delivery (M)	0	0	0	0	0	0	6	17	17	13
Hospitality (M)	0	0	0	0	0	0	0	0	0	0
Operator (M)	0	0	0	5	6	8	7	8	7	8
Product manufacturers (M)	163	202	524	254	239	219	216	227	213	189
Research & Development Cultivations (M)	0	0	0	0	0	0	1	1	1	1
Testing facilities (M)	0	0	14	12	11	12	10	9	9	7
Transporter (M)	0	0	0	8	8	5	6	13	13	9
Retail (R)	833	1,123	1,350	1,520	1,577	1,572	1,638	1,832	1,867	1,684
Cultivations (R)	397	514	633	720	735	684	712	788	789	630
Delivery (R)	0	0	0	0	0	0	0	42	46	36
Hospitality (R)	0	0	0	0	0	0	3	2	9	12
Operator (R)	0	0	0	6	9	10	9	15	13	12
Product manufacturers (R)	98	168	244	279	282	288	288	298	295	272
Research & Development Cultivations (R)	0	0	0	0	0	0	0	0	0	0
Stores (R)	322	424	459	509	549	572	603	646	668	689
Testing facilities (R)	16	17	14	12	11	13	11	10	10	7
Transporter (R)	0	0	0	10	10	5	12	31	37	26

Source: Colorado Department of Revenue, Marijuana Enforcement Division (MED) Annual Updates, (2014-2019); and MED Licensee Information.

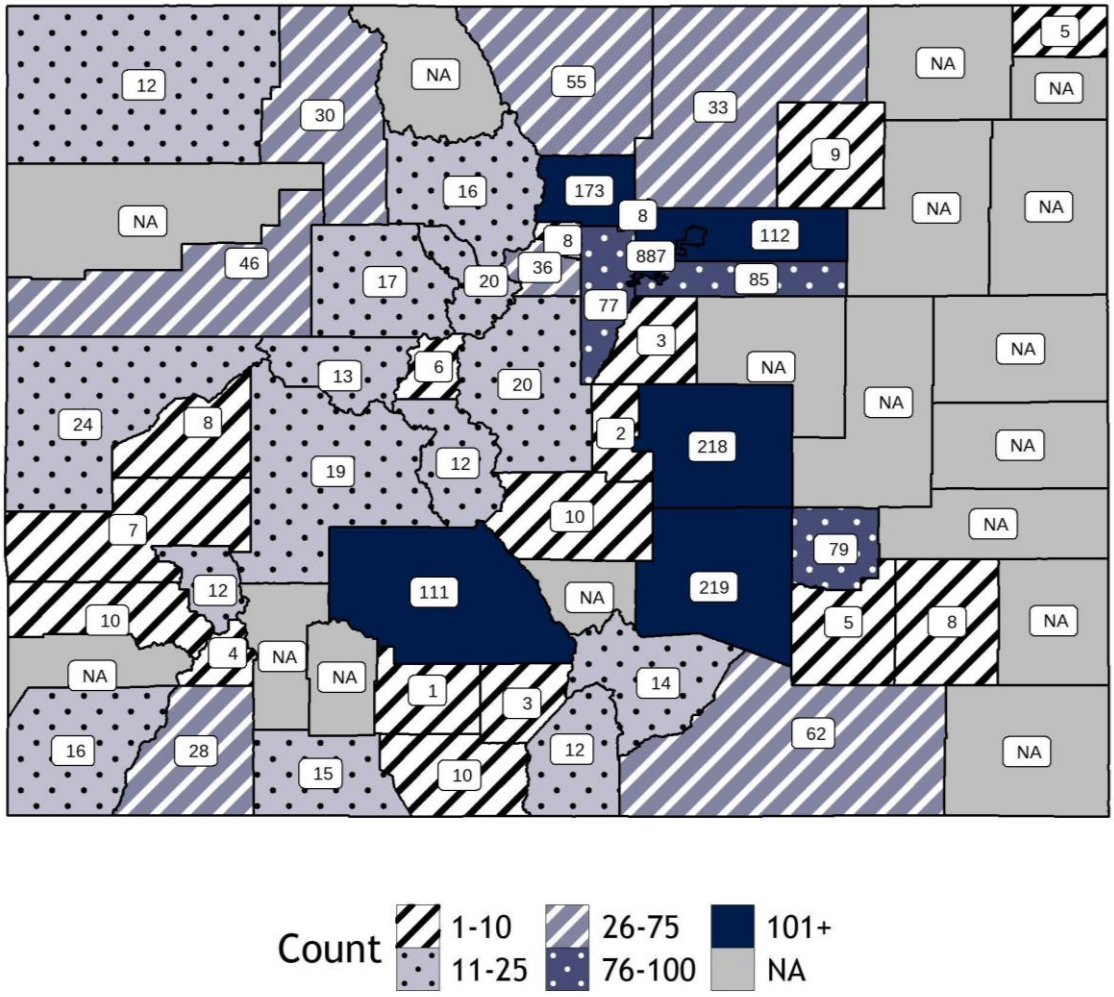
Note: For additional information, see MED's site on the different marijuana business license types and archived lists.

Table 5.2 Marijuana license types allowed, by jurisdiction type, 2019

License Type	City	County	Total
Medical/Retail	68	21	89
Medical/Limited Retail	1	0	1
Retail Only	8	3	11
Limited Retail	0	1	1
Medical Only	6	5	11
Total	83	30	113

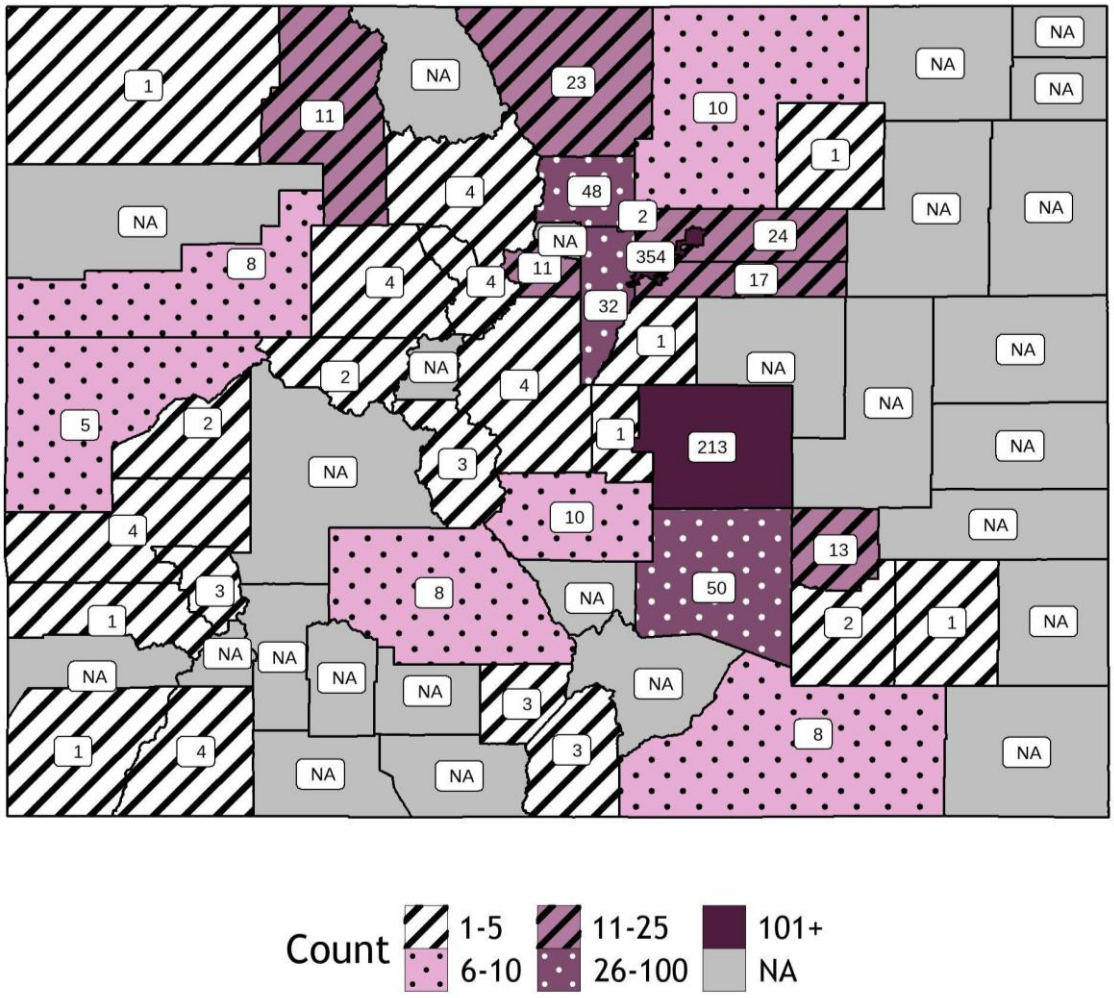
Source: Colorado Department of Revenue, Marijuana Enforcement Division.

Figure 5.1 Marijuana licenses by county, December 2023



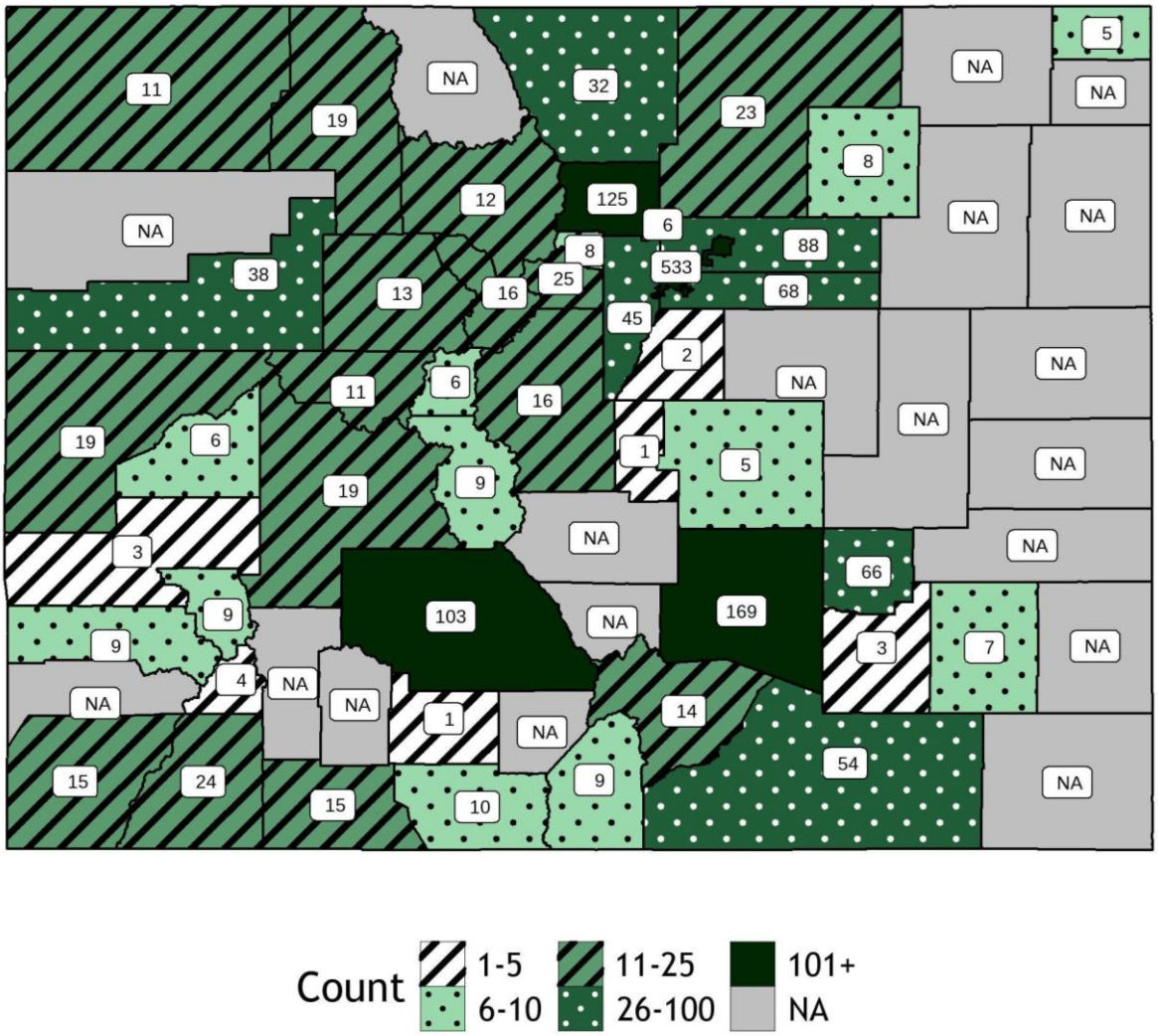
Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities.
Note: For up-to-date licensee information, you can also go to MED's dashboard.

Figure 5.2 Medical marijuana licenses by county, December 2023



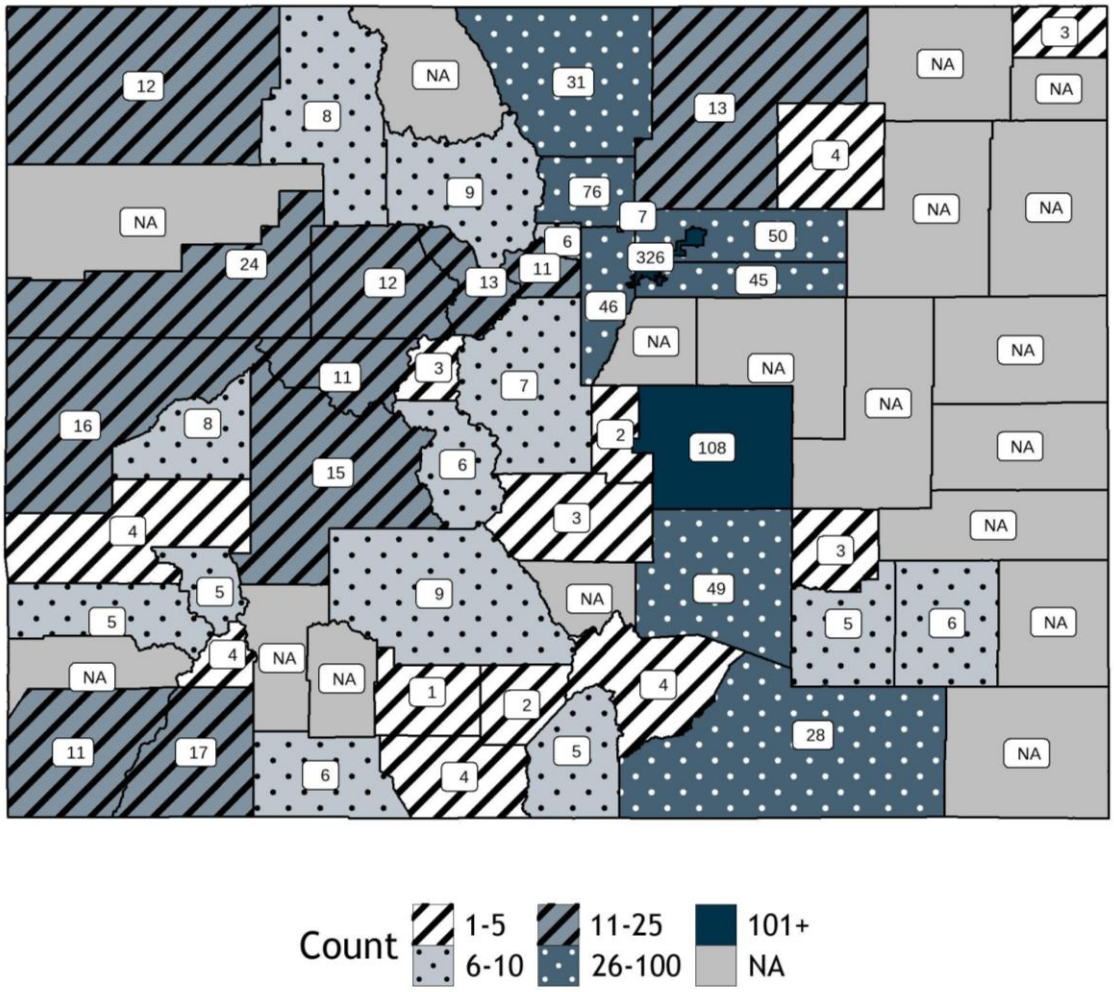
Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities.
Note: For up-to-date licensee information, you can also go to MED's dashboard.

Figure 5.3 Retail marijuana licenses by county, December 2023



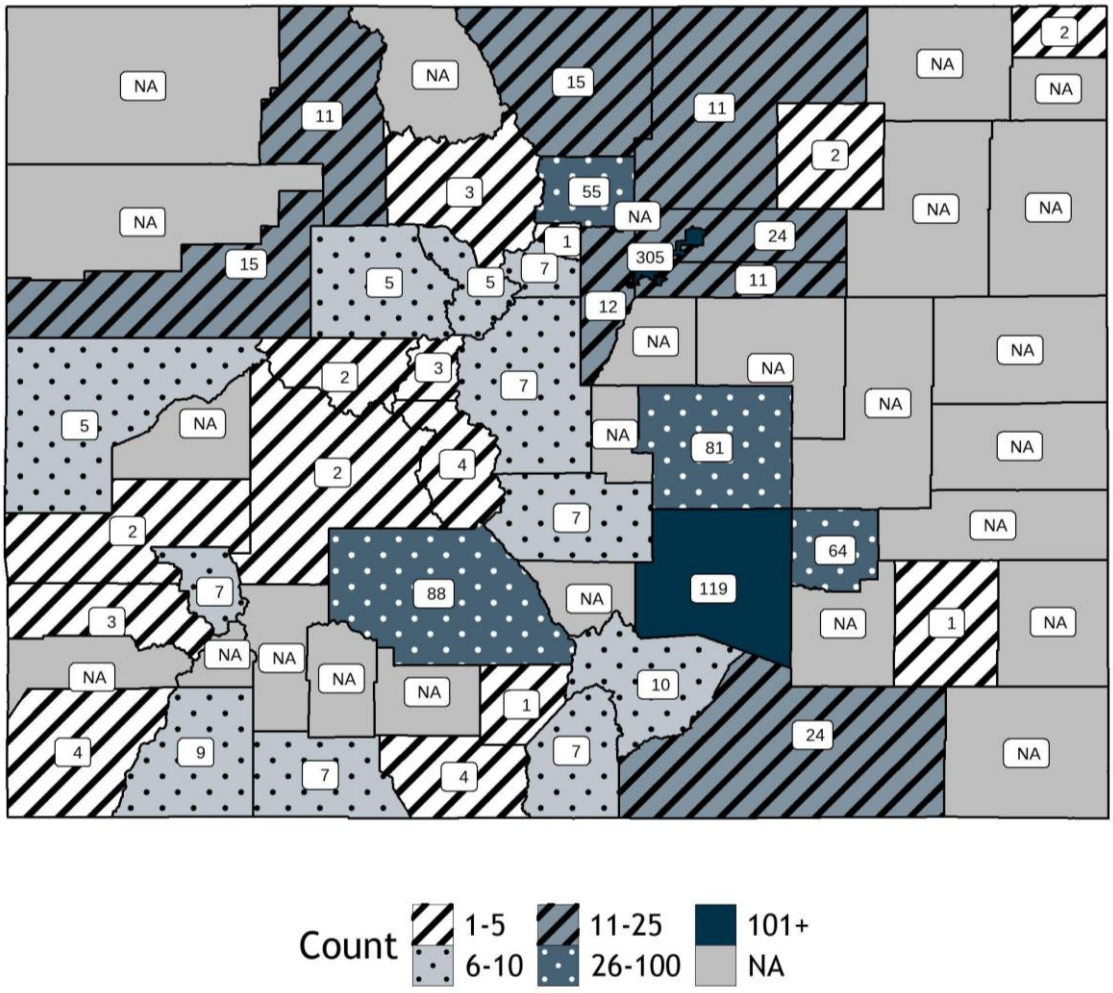
Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities.
Note: For up-to-date licensee information, you can also go to MED's dashboard.

Figure 5.4 Store licenses by county December 2023



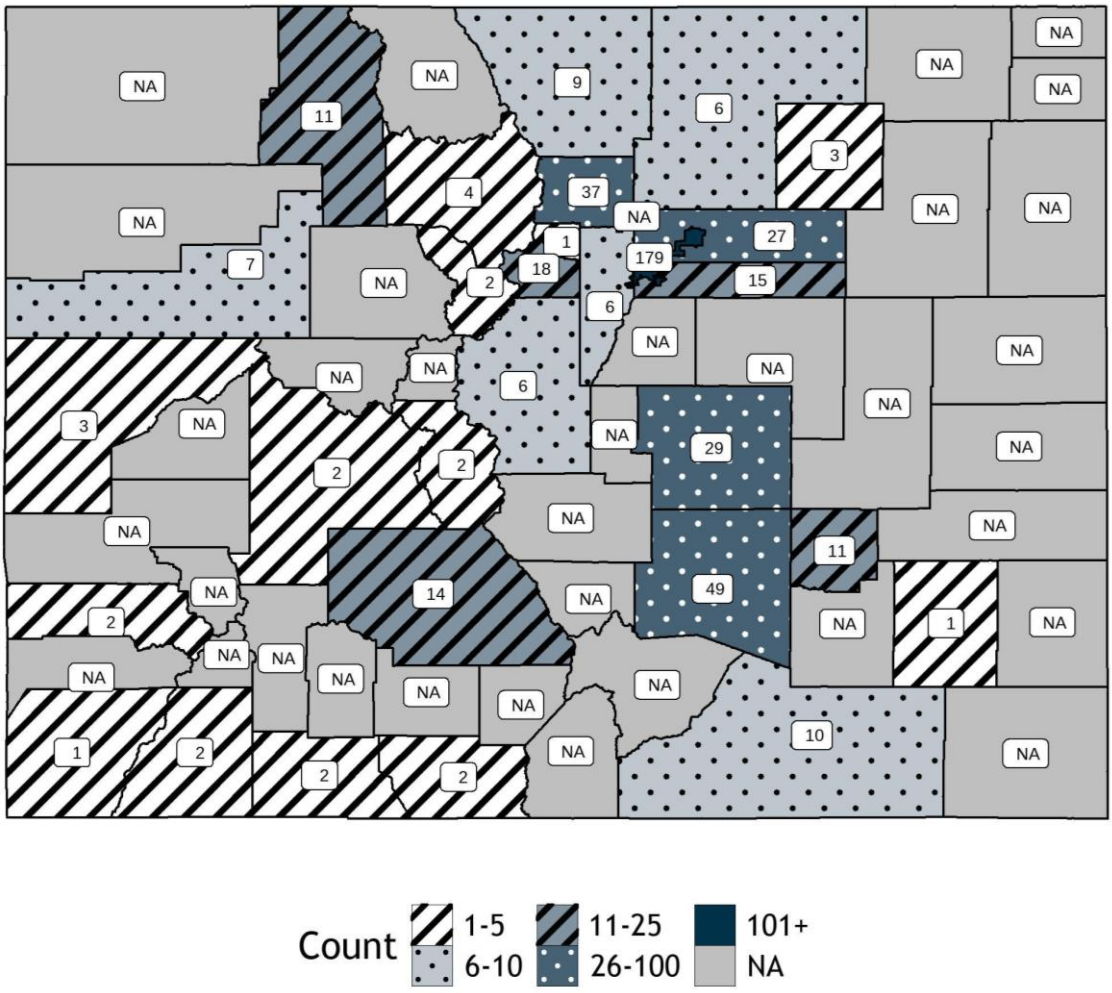
Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities.
Note: An entity that has both a retail and a medical license were counted twice. For up-to-date licensee information, you can also go to MED's dashboard.

Figure 5.5 Cultivation licenses by county, December 2023



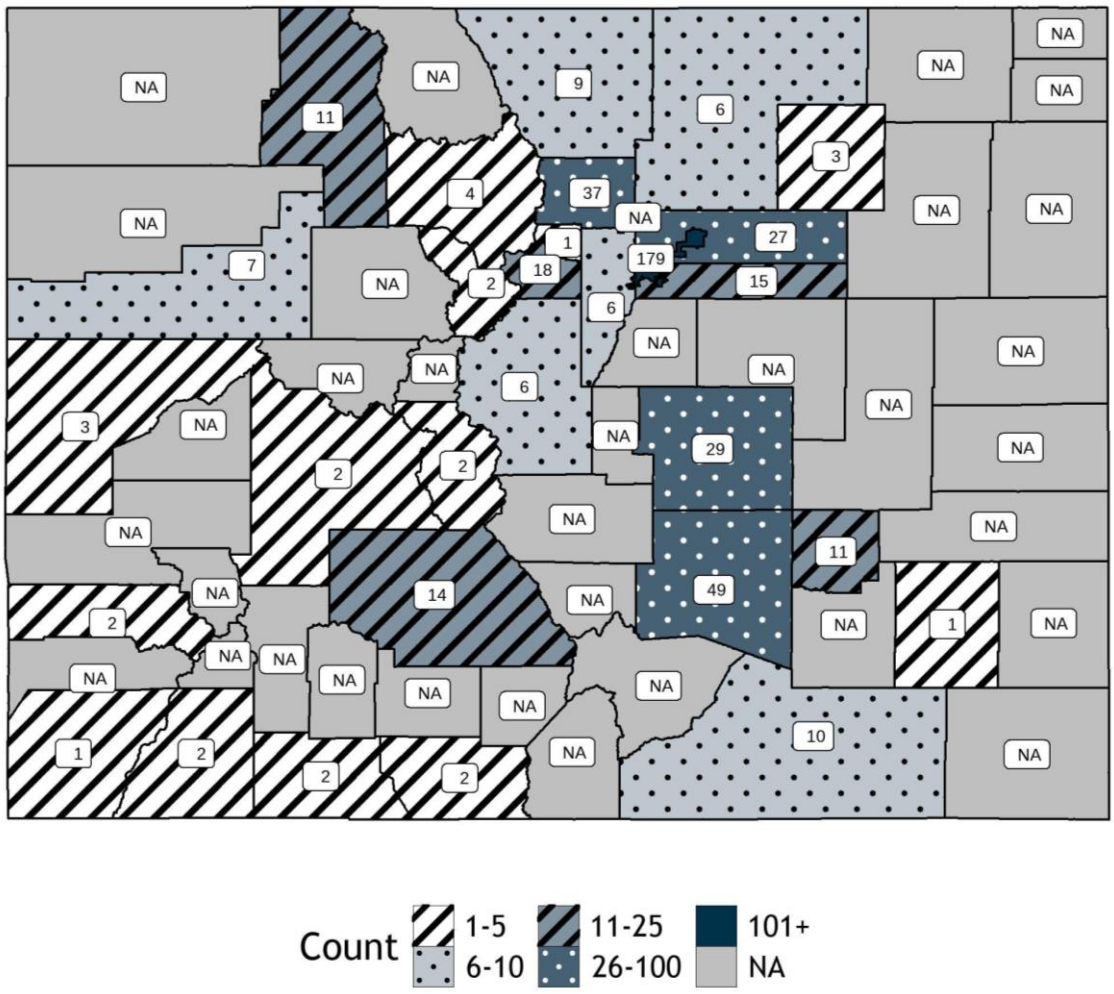
Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities.
Note: An entity that has both a retail and a medical license were counted twice. For up-to-date licensee information, you can also go to MED's dashboard.

Figure 5.6 Product manufacture licenses by county, December 2023



Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities.
Note: An entity that has both a retail and a medical license were counted twice. For up-to-date licensee information, you can also go to MED's dashboard.

Figure 5.7 Other licenses by county, December 2023



Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities.
Notes: These license types included in this map include: delivery, hospitality, operator, testing facilities, transporters. An entity that has both a retail and a medical license were counted twice. For up-to-date licensee information, you can also go to MED's dashboard.

Table 5.3 Medical licenses types including cultivations (CULT), delivery, operator, product manufacturing (PM), research development (RD), stores, testing facilities (TF) and transporter by county, December 2023

County	Total	CULT	Delivery	Operator	PM	RD	Stores	TF	Transporter
Adams	24	7	1	1	7	0	7	0	1
Alamosa	3	1	0	0	0	0	2	0	0
Arapahoe	17	2	0	2	6	0	7	0	0
Archuleta	0	0	0	0	0	0	0	0	0
Baca	0	0	0	0	0	0	0	0	0
Bent	1	0	0	0	0	0	1	0	0
Boulder	48	13	3	1	14	0	17	0	0
Broomfield	2	0	0	0	0	0	2	0	0
Chaffee	3	1	0	0	1	0	1	0	0
Cheyenne	0	0	0	0	0	0	0	0	0
Clear Creek	11	2	0	0	8	0	1	0	0
Conejos	0	0	0	0	0	0	0	0	0
Costilla	3	2	0	0	0	0	1	0	0
Crowley	13	10	0	0	3	0	0	0	0
Custer	0	0	0	0	0	0	0	0	0
Delta	2	0	0	0	0	0	2	0	0
Denver	354	127	8	2	77	1	128	5	6
Dolores	0	0	0	0	0	0	0	0	0
Douglas	1	0	0	1	0	0	0	0	0
Eagle	4	1	0	0	0	0	3	0	0
El Paso	213	80	0	0	29	0	104	0	0
Elbert	0	0	0	0	0	0	0	0	0
Fremont	10	7	0	0	0	0	3	0	0
Garfield	8	4	0	0	1	0	3	0	0
Gilpin	0	0	0	0	0	0	0	0	0
Grand	4	1	0	0	2	0	1	0	0
Gunnison	0	0	0	0	0	0	0	0	0
Hinsdale	0	0	0	0	0	0	0	0	0
Huerfano	0	0	0	0	0	0	0	0	0
Jackson	0	0	0	0	0	0	0	0	0
Jefferson	32	6	1	0	3	0	19	1	2
Kiowa	0	0	0	0	0	0	0	0	0
Kit Carson	0	0	0	0	0	0	0	0	0
La Plata	4	1	0	0	0	0	3	0	0
Lake	0	0	0	0	0	0	0	0	0
Larimer	23	6	0	0	2	0	15	0	0
Las Animas	8	3	0	0	3	0	2	0	0
Lincoln	0	0	0	0	0	0	0	0	0
Logan	0	0	0	0	0	0	0	0	0
Mesa	5	2	0	0	1	0	2	0	0
Mineral	0	0	0	0	0	0	0	0	0
Moffat	1	0	0	0	0	0	1	0	0

County	Total	CULT	Delivery	Operator	PM	RD	Stores	TF	Transporter
Montezuma	1	0	0	0	0	0	1	0	0
Montrose	4	2	0	0	0	0	2	0	0
Morgan	1	0	0	0	1	0	0	0	0
Otero	2	0	0	0	0	0	2	0	0
Ouray	3	3	0	0	0	0	0	0	0
Park	4	1	0	0	2	0	1	0	0
Phillips	0	0	0	0	0	0	0	0	0
Pitkin	2	1	0	0	0	0	1	0	0
Prowers	0	0	0	0	0	0	0	0	0
Pueblo	50	19	0	0	19	0	11	1	0
Rio Blanco	0	0	0	0	0	0	0	0	0
Rio Grande	0	0	0	0	0	0	0	0	0
Routt	11	3	0	0	5	0	3	0	0
Saguache	8	5	0	0	2	0	1	0	0
San Juan	0	0	0	0	0	0	0	0	0
San Miguel	1	0	0	0	1	0	0	0	0
Sedgwick	0	0	0	0	0	0	0	0	0
Summit	4	1	0	0	0	0	3	0	0
Teller	1	0	0	0	0	0	1	0	0
Washington	0	0	0	0	0	0	0	0	0
Weld	10	4	0	1	2	0	3	0	0
Yuma	0	0	0	0	0	0	0	0	0

Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities.
Note: For up-to-date licensee information, you can also go to MED's dashboard.

Table 5.4 Retail licenses types including cultivations (CULT), delivery, hospitality (HOSP), operator, product manufacturing (PM), stores, testing facilities (TF) and transporter by county, December 2023

County	Total	CULT	Delivery	HOSP	Operator	PM	Stores	TF	Transporter
Adams	88	17	2	2	1	20	43	0	3
Alamosa	0	0	0	0	0	0	0	0	0
Arapahoe	68	9	8	0	1	9	38	0	3
Archuleta	15	7	0	0	0	2	6	0	0
Baca	0	0	0	0	0	0	0	0	0
Bent	7	1	0	0	0	1	5	0	0
Boulder	125	42	0	0	1	23	59	0	0
Broomfield	6	0	1	0	0	0	5	0	0
Chaffee	9	3	0	0	0	1	5	0	0
Cheyenne	0	0	0	0	0	0	0	0	0
Clear Creek	25	5	0	0	0	10	10	0	0
Conejos	10	4	0	0	0	2	4	0	0
Costilla	9	5	0	0	0	0	4	0	0
Crowley	66	54	0	0	0	8	3	0	1
Custer	0	0	0	0	0	0	0	0	0
Delta	6	0	0	0	0	0	6	0	0
Denver	533	178	23	9	5	102	198	5	13
Dolores	0	0	0	0	0	0	0	0	0
Douglas	2	0	0	0	1	0	0	0	1
Eagle	13	4	0	0	0	0	9	0	0
El Paso	5	1	0	0	0	0	4	0	0
Elbert	0	0	0	0	0	0	0	0	0
Fremont	0	0	0	0	0	0	0	0	0
Garfield	38	11	0	0	0	6	21	0	0
Gilpin	8	1	0	0	0	1	6	0	0
Grand	12	2	0	0	0	2	8	0	0
Gunnison	19	2	0	0	0	2	15	0	0
Hinsdale	0	0	0	0	0	0	0	0	0
Huerfano	14	10	0	0	0	0	4	0	0
Jackson	0	0	0	0	0	0	0	0	0
Jefferson	45	6	2	1	1	3	27	1	4
Kiowa	0	0	0	0	0	0	0	0	0
Kit Carson	0	0	0	0	0	0	0	0	0
La Plata	24	8	0	0	0	2	14	0	0
Lake	6	3	0	0	0	0	3	0	0
Larimer	32	9	0	0	0	7	16	0	0
Las Animas	54	21	0	0	0	7	26	0	0
Lincoln	0	0	0	0	0	0	0	0	0
Logan	0	0	0	0	0	0	0	0	0
Mesa	19	3	0	0	0	2	14	0	0
Mineral	0	0	0	0	0	0	0	0	0
Moffat	11	0	0	0	0	0	11	0	0

County	Total	CULT	Delivery	HOSP	Operator	PM	Stores	TF	Transporter
Montezuma	15	4	0	0	0	1	10	0	0
Montrose	3	0	0	0	1	0	2	0	0
Morgan	8	2	0	0	0	2	4	0	0
Otero	3	0	0	0	0	0	3	0	0
Ouray	9	4	0	0	0	0	5	0	0
Park	16	6	0	0	0	4	6	0	0
Phillips	0	0	0	0	0	0	0	0	0
Pitkin	11	1	0	0	0	0	10	0	0
Prowers	0	0	0	0	0	0	0	0	0
Pueblo	169	100	0	0	0	30	38	1	0
Rio Blanco	0	0	0	0	0	0	0	0	0
Rio Grande	1	0	0	0	0	0	1	0	0
Routt	19	8	0	0	0	6	5	0	0
Saguache	103	83	0	0	0	12	8	0	0
San Juan	4	0	0	0	0	0	4	0	0
San Miguel	9	3	0	0	0	1	5	0	0
Sedgwick	5	2	0	0	0	0	3	0	0
Summit	16	4	0	0	0	2	10	0	0
Teller	1	0	0	0	0	0	1	0	0
Washington	0	0	0	0	0	0	0	0	0
Weld	23	7	0	0	1	4	10	0	1
Yuma	0	0	0	0	0	0	0	0	0

Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities.
Note: For up-to-date licensee information, you can also go to MED's dashboard.

Tax Revenue and Sales

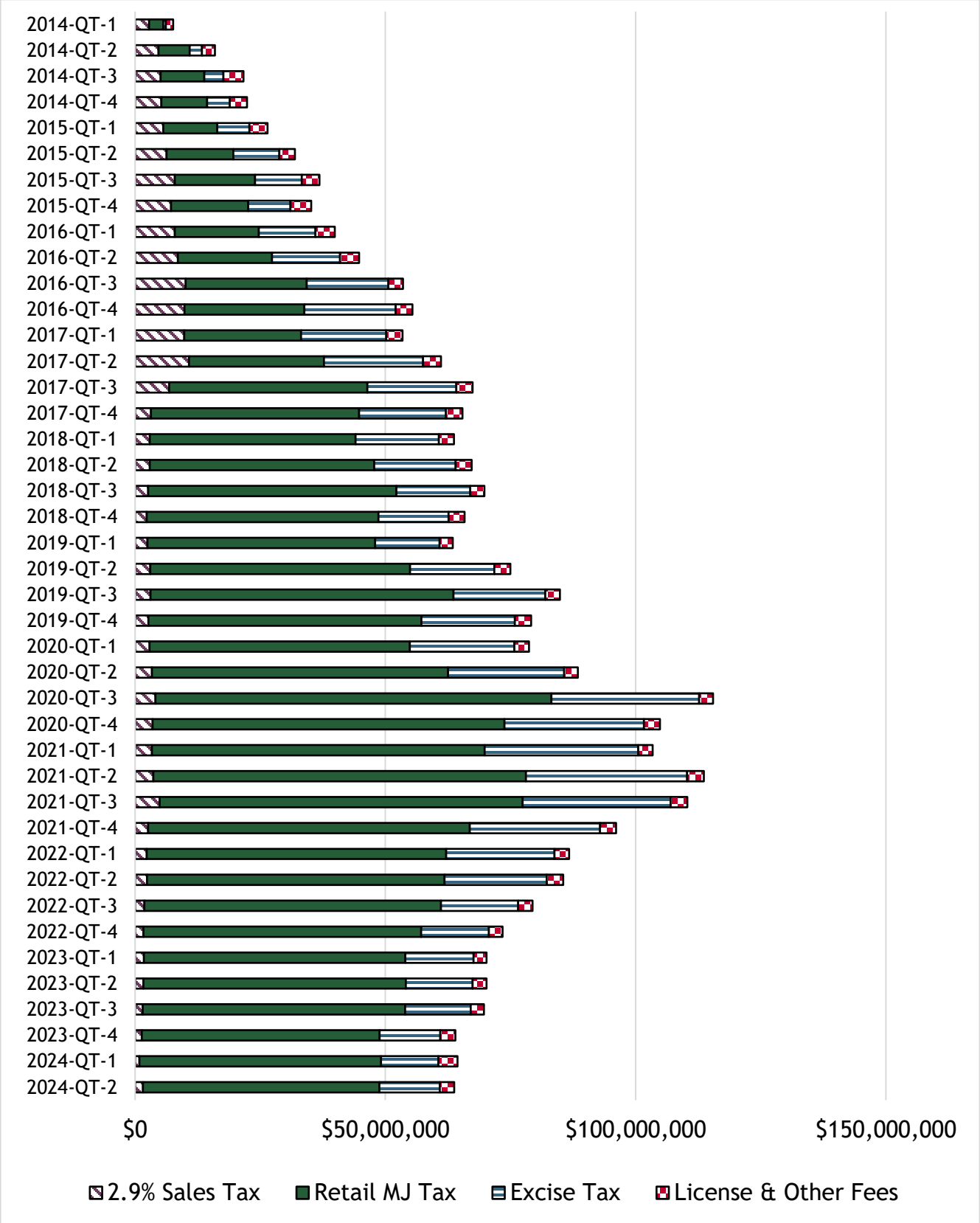
The total tax revenue data also highlights the growth and decline of marijuana commerce in Colorado. From the calendar years 2014 to 2021, the total marijuana tax revenue grew by more than six-fold, going from $67,594,325 up to $423,486,053 (Table 5.5). This revenue increase was driven by the sales taxes, excise taxes, licenses, and fees for retail marijuana. After the peak year in 2021, revenue dropped by close to $100 million in 2022, or 23%. In 2023, tax revenue continued to fall and was reported at $274,121,044. Figure 5.8 shows the changes in tax revenue by the type of revenue and by calendar year quarter. The highest grossing quarter was 2020 third quarter with total revenues reaching $115,451,766.

Table 5.5 Annual and average monthly taxes, licenses, and fees, 2014-2021

Year	Total Sales & Excise Taxes	Total Licenses & Fees	Total Revenue	Mean Sales & Excise Taxes	Mean Licenses & Fees	Mean Revenue
2014	$56,102,639	$11,491,688	$67,594,327	$56,102,639	$1,044,699	$6,144,939
2015	$116,003,360	$14,407,811	$130,411,171	$116,003,360	$1,200,651	$10,867,598
2016	$179,619,617	$13,985,195	$193,604,812	$179,619,617	$1,165,433	$16,133,734
2017	$234,014,747	$13,353,727	$247,368,474	$234,014,747	$1,112,811	$20,614,040
2018	$254,295,129	$12,234,510	$266,529,639	$254,295,129	$1,019,542	$22,210,803
2019	$290,389,957	$12,068,468	$302,458,425	$290,389,957	$1,005,706	$25,204,869
2020	$375,885,988	$11,594,122	$387,480,110	$375,885,988	$966,177	$32,290,009
2021	$410,688,334	$12,797,719	$423,486,053	$410,688,334	$1,066,477	$35,290,504
2022	$313,241,651	$11,862,035	$325,103,686	$313,241,651	$988,503	$27,091,974
2023	$263,047,053	$11,073,991	$274,121,044	$263,047,053	$922,833	$22,843,420

Source: Colorado Department of Revenue, Marijuana Enforcement Division (2022). Marijuana Tax Data.

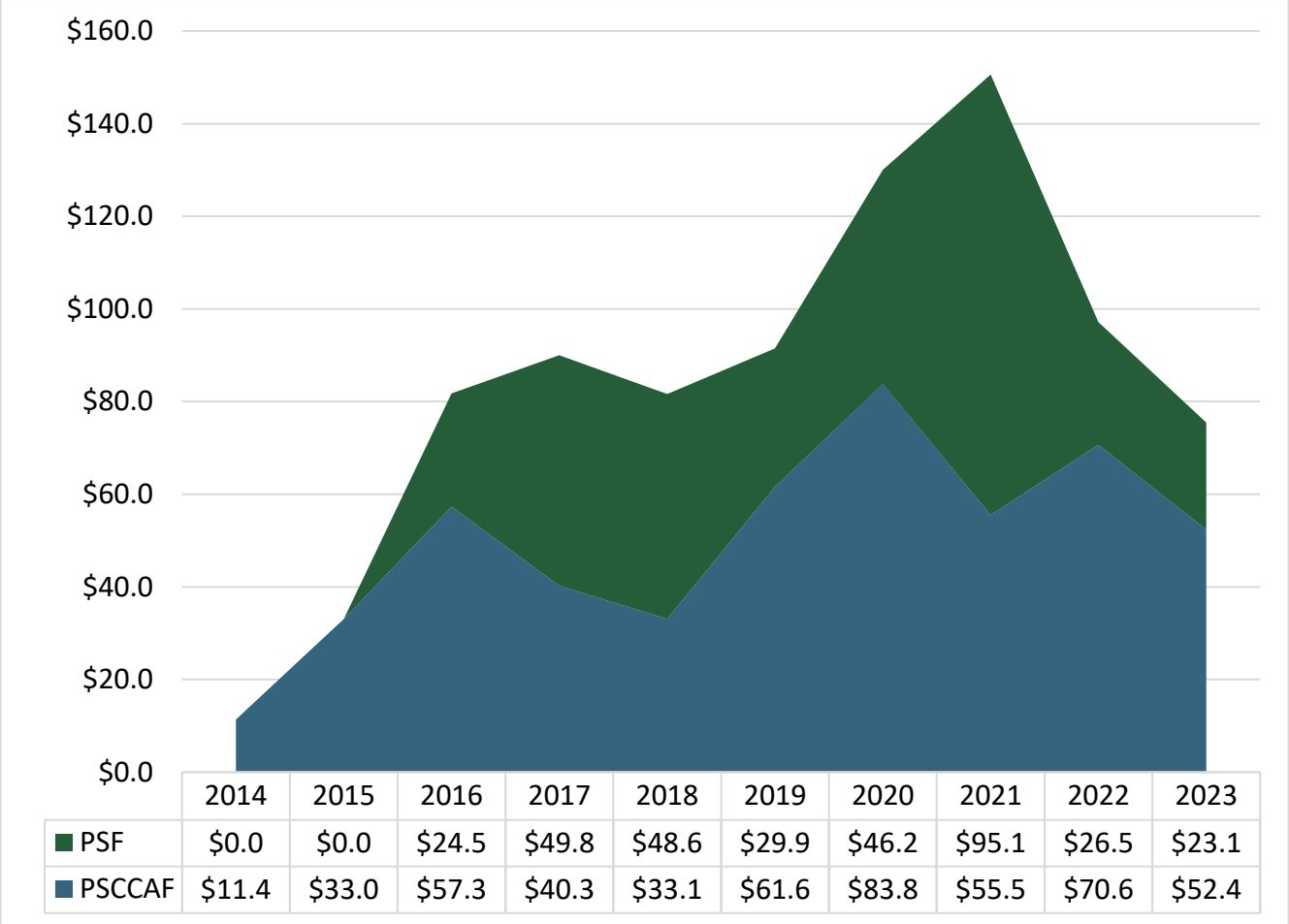
Figure 5.8 Quarterly taxes and fees, by type, CY 2014-2024



Source: Colorado Department of Revenue, Marijuana Enforcement Division, Marijuana Tax Reports.
Note: For a complete table with the tax revenues, see Appendix E.

The excise tax revenue collected to fund the Public School Capital Construction Assistance Fund (PSCCAF) reached $52 million in calendar year 2023, with an additional $23 million sent to the Public School Fund (PSF). Similar to marijuana sales, 2021 had the highest funding levels for schools, with taxes generating $95 million for the PSF and $56 million for PSCCAF. Between 2014 and 2023, marijuana sales and excise taxes have contributed $855 million dollars directly to school construction or other public school needs (Figure 5.9).

Figure 5.9 Transfer of marijuana excise and retail taxes to the Public School Capital Construction Assistance Fund (PSCCAF) and Public School Fund (PSF) in millions, CY 2014-2024



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
PSF	$0.0	$0.0	$24.5	$49.8	$48.6	$29.9	$46.2	$95.1	$26.5	$23.1
PSCCAF	$11.4	$33.0	$57.3	$40.3	$33.1	$61.6	$83.8	$55.5	$70.6	$52.4

Source: Colorado Department of Revenue, Marijuana Enforcement Division (2022). Marijuana Tax Reports.
Note: Amendment 64 calls for the transfer of the first $40 million every year in retail marijuana excise taxes to the PSCCAF, which is one funding source for the Building Excellent Schools Today (BEST) fund. Anything additional was transferred to the general public school fund for the rest of that fiscal year. In 2018 a law was passed that allowed for more taxes to be transferred to the PSCCAF.

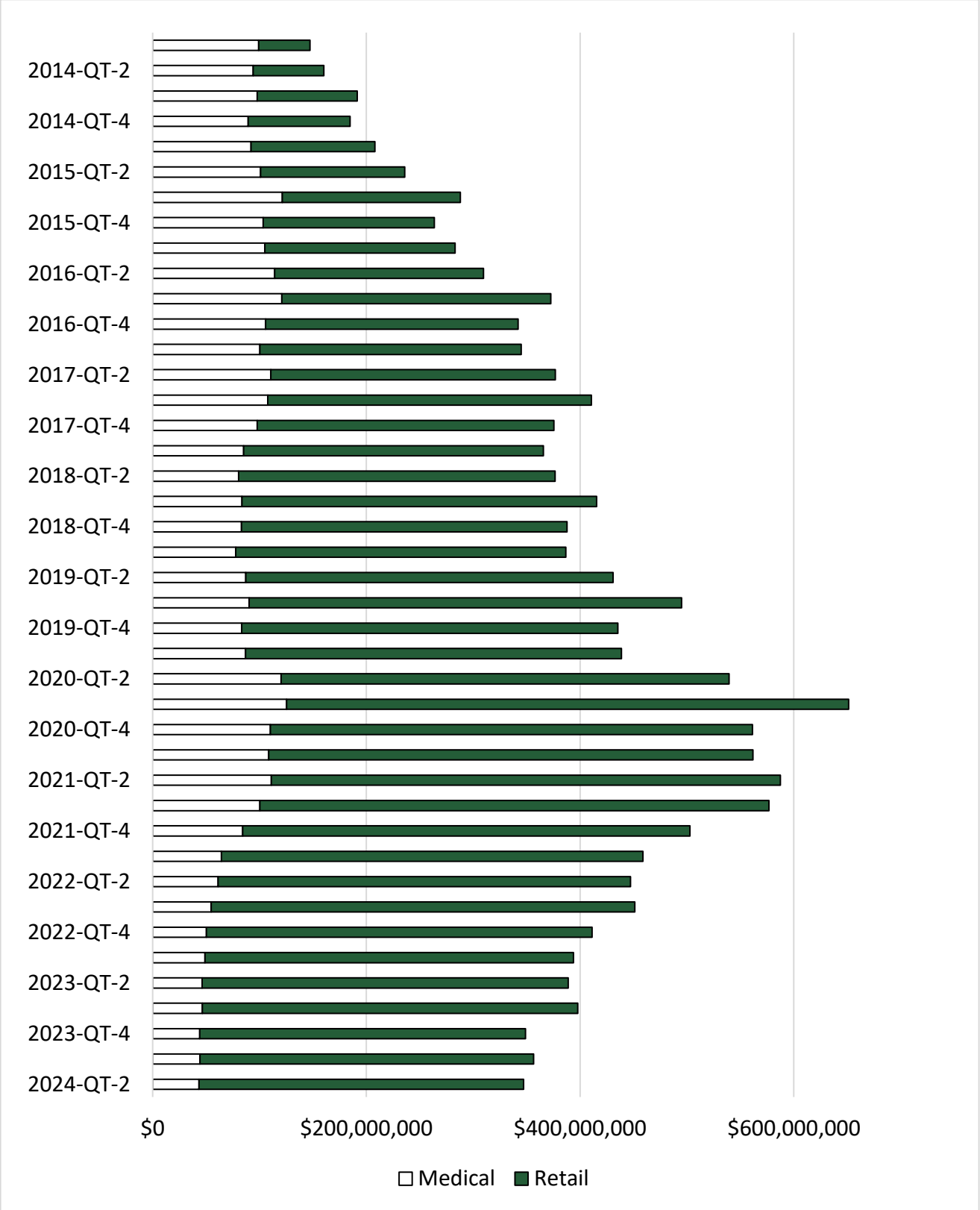
Sales data also show the boom and decline of the retail and medical markets. Sales of medical marijuana products have peaked at 16%, from $380 million in 2014 to $442 million in 2020; in comparison, retail markets grew six-fold from 2014 to the peak year of 2021, reaching $2.2 billion (Table 5.6). Sales have dropped off in both markets, and by 2023, medical sales totaled $186 million and retail sales totaled $1.3 billion. The mean monthly sales totals in both markets amounted to $127 million, down $58 million from 2021. The quarterly sales totals for both the retail and medical markets is shown in Figure 5.10.

Table 5.6 Annual and mean monthly sales of marijuana products, CY 2014-2024

Year	Medical Sales Total	Retail Sales Total	Total Sales	Mean Medical	Mean Retail	Mean Total
2014	$380,284,040	$303,239,699	$683,523,739	$31,690,337	$25,269,975	$56,960,312
2015	$418,054,912	$577,536,343	$995,591,255	$34,837,909	$48,128,029	$82,965,938
2016	$445,616,062	$861,587,411	$1,307,203,473	$37,134,672	$71,798,951	$108,933,623
2017	$416,516,782	$1,091,185,437	$1,507,702,219	$34,709,732	$90,932,120	$125,641,852
2018	$332,173,492	$1,213,517,589	$1,545,691,081	$27,681,124	$101,126,466	$128,807,590
2019	$338,488,190	$1,409,502,438	$1,747,990,628	$28,207,349	$117,458,537	$145,665,886
2020	$442,539,368	$1,748,552,311	$2,191,091,679	$36,878,281	$145,712,693	$182,590,973
2021	$404,410,531	$1,824,584,022	$2,228,994,553	$33,700,878	$152,048,669	$185,749,546
2022	$230,824,588	$1,537,864,249	$1,768,688,837	$19,235,382	$128,155,354	$147,390,736
2023	$185,752,351	$1,343,572,203	$1,529,324,554	$15,479,363	$111,964,350	$127,443,713

Source: Colorado Department of Revenue, Marijuana Enforcement Division (2022), Marijuana Sales Reports.
Notes: Medical marijuana sales (gross sales minus wholesale) and sales of accessories/other products that do not contain medical marijuana. Retail marijuana sales (gross sales minus wholesale) and does not include sales of accessories/other products that do not contain retail marijuana.

Figure 5.10 Quarterly marijuana sales, by type, 2014-2024



Source: Colorado Department of Revenue, Marijuana Enforcement Division (2022), Marijuana Sales Reports.
Note: Medical marijuana sales (gross sales minus wholesale) and sales of accessories/other products that do not contain medical marijuana. Retail marijuana sales (gross sales minus wholesale) and does not include sales of accessories/other products that do not contain retail marijuana.

MED also tracks the number of marijuana plants cultivated, and the ten-year trends differed by the market type. As seen in Table 5.7, the number of plants in the retail market began to eclipse the number of plants produced for the medical market, starting in 2015, and by 2021, the retail market peaked at 1,057,878 plants cultivated. This increase from 2014-2021 represented an increase of 389%. However, by 2023, the number of plants in the retail market dropped to 750,372. In contrast, the medical market was more stable from 2014 to 2023, and peaked in 2021 with 371,522 plants cultivated. In 2023, the number of plants had shrunk to 163,582, which was only 54% of the total plants cultivated in 2014.

Table 5.7 Average plants cultivated, by year, 2014-2023

Year	Medical	Retail
2014	302,793	216,802
2015	327,960	346,921
2016	350,206	525,225
2017	305,063	669,044
2018	253,894	722,532
2019	319,374	758,539
2020	340,901	916,920
2021	371,522	1,057,848
2022	244,483	961,142
2023	163,582	750,372

Source: Colorado Department of Revenue, Marijuana Enforcement Division
Note: Data for years 2014-2019 were obtained from the Annual Updates & data from 2020 on was obtained from the Data Dashboard and was analyzed by the Colorado Department of Public Safety.

Medical Marijuana Cardholders

Colorado Department of Public Health and Environment Process

The Medical Marijuana Registry is administered by the Colorado Department of Public Health and Environment (CDPHE) pursuant to CRS 25-1.5-106. To apply for a medical marijuana registry card, a person must be a Colorado resident with a valid Social Security number, be receiving treatment for a qualifying debilitating medical condition, and be examined in-person by a doctor with whom the person has a bona fide physician-patient relationship. The doctor must recommend the use of marijuana for the patient's condition and specify the number of plants required to alleviate the symptoms of the condition. Those who are 18 to 20 years of age and minors have additional requirements to apply, including a signed parental consent form (minors only), two separate physician recommendations and six-month follow-up visit documentation (18-20 years).

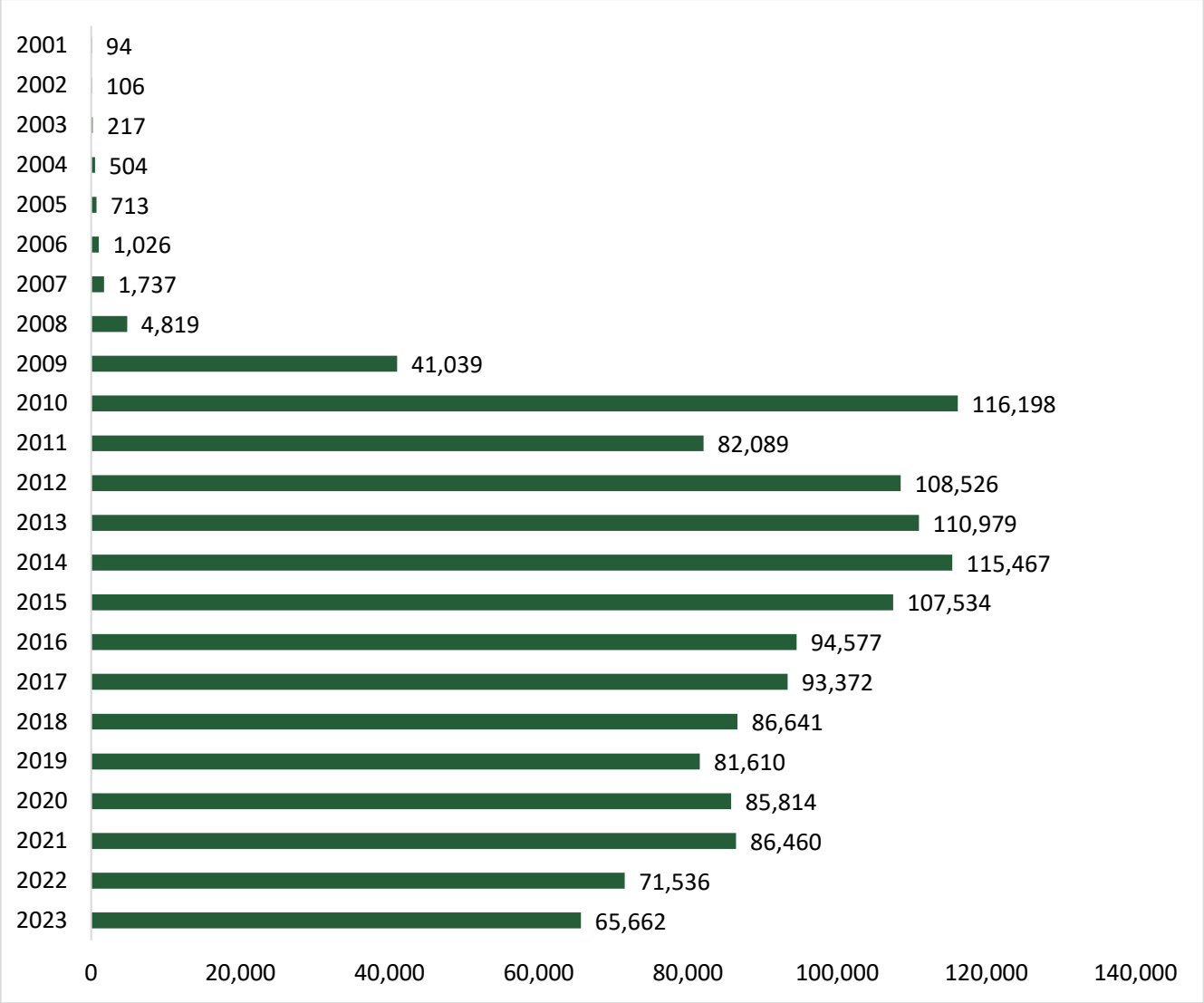
Cardholders can choose to grow their own marijuana plants or designate a caregiver to grow the plants for them. The commercial dispensary market can act as the caregiver and can service the number of patients allowed by the Marijuana Enforcement Division.[77] Cardholders also have the choice of designating a private person as caregiver.

[77] The Marijuana Enforcement Division licenses each dispensary to grow a certain number of plants based on the number of patients registered and their recommended plant count.

Trend Data

The number of medical marijuana cardholders began to increase in 2009, after the commercialization of the caregiver market was allowed (Figure 5.11). From 2008 to 2010, 111,379 cardholders were added to the registry. The number of cardholders peaked in 2010 at 116,198 and has since decreased 26% by 2020 (85,814). By 2023, the number of registered medical marijuana cardholders dropped to 65,662, which was 56% of the total number of cardholders in the peak year of 2010.

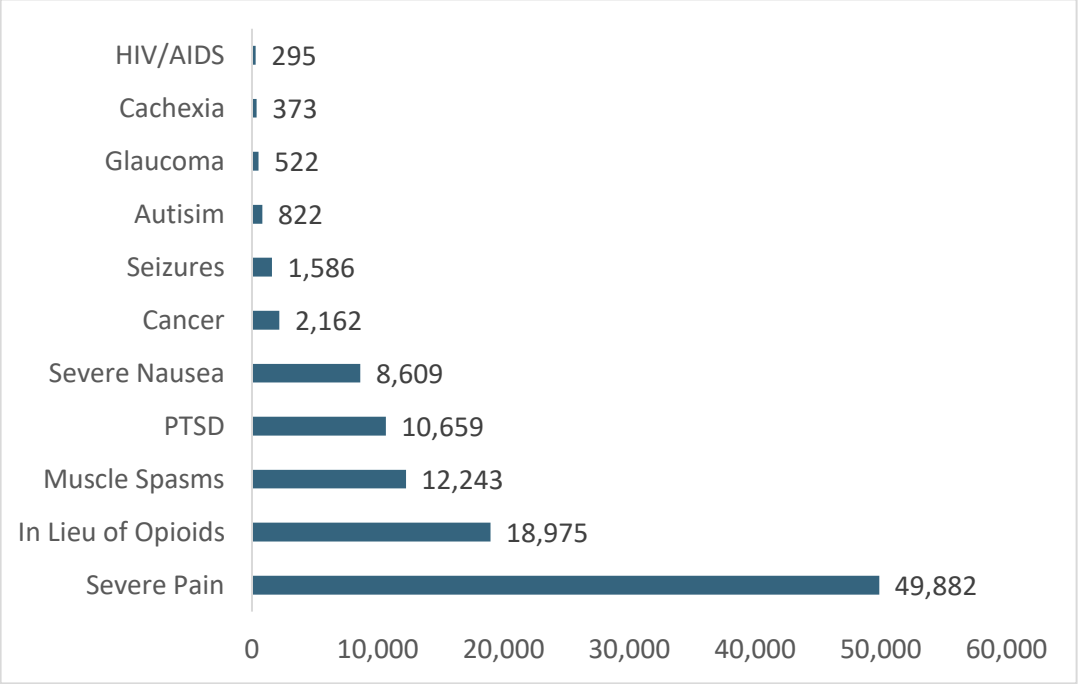
Figure 5.11 Number of medical marijuana cardholders, December 2001-2023



Source: Medical Marijuana Registry, Colorado Department of Public Health and Environment (2022). Medical marijuana statistics and data.

Figure 5.12 shows the frequency of medical conditions that medical marijuana cardholders reported in December 2023. The most frequent one was severe pain (n = 49,882) with the second being conditions for which opioids had been prescribed (n = 18,975).

Figure 5.12 Frequency of medical conditions for medical marijuana cardholders, December 2023



Source: Colorado Department of Public Health and Environment, Medical Marijuana Statistics and Data.

As seen in Table 5.8, at least one out of a hundred adults aged 21 to 70 adults had a medical marijuana card. Among these groups, adults aged 31 to 40 years old had the highest number of registered medical marijuana cardholders (n = 17,168) and the highest rate (n = 1,949 per 100,000 residents).

Table 5.8 Number of medical marijuana cardholders and population rate per 100,000 residents by age group, December 2023

Age Group	Number	Population Rate per 100,000
0-10	59	8.1
11-17	96	18.4
18-20	1,033	430.7
21-30	12,601	1,512.1
31-40	17,168	1,948.6
41-50	12,715	1,732.4
51-60	8,831	1,274.7
61-70	9,047	1,388.8
71+	4,072	732.6

Source: Colorado Department of Public Health and Environment, Medical Marijuana Statistics and Data.

Overall Crime in Colorado

Table 5.9 shows property and violent crime incidents and rates per 100,000 from 2008 to 2023, and this duration includes the legalization of retail marijuana. Both property and violent crime rates were stable from 2008 to 2019. However, crime rates began increasing in 2020 and peaked in 2021 for property crimes with law enforcement reporting 236,142 property crimes and in 2022 for 32,544 violent crimes. These numbers translated to rates of 4,064 property crimes in 2021 and 557 violent crimes per 100,000 residents in 2022. In

2023, both property crimes and violent crimes saw declines of 15% from 2021's level and 5% from 2022's. These crime trends do not reflect the change in legalization status.

Table 5.9 Offenses and offense rates per 100,000 residents in Colorado, by offense type, 2008–2023

Year	Property N	Violent N	Property Rates	Violent Rates
2008	132,212	16,062	2,639	321
2009	131,141	16,608	2,580	327
2010	132,623	16,676	2,570	323
2011	131,800	16,278	2,575	318
2012	136,483	15,719	2,630	303
2013	138,275	16,056	2,622	305
2014	133,927	16,355	2,503	306
2015	141,634	17,450	2,602	321
2016	149,713	18,787	2,695	338
2017	152,032	20,901	2,707	372
2018	152,163	22,624	2,672	397
2019	149,189	21,938	2,591	381
2020	206,788	27,735	3,575	479
2021	236,142	31,240	4,064	538
2022	219,885	32,544	3,766	557
2023	205,494	31,039	3,519	532

Note: Violent crime includes murder/non-negligent manslaughter, rape, robbery, and aggravated assault. Property crime includes burglary, larceny/theft, motor vehicle theft, and arson. Two additional offenses were added into the category of rape in 2013.
Source: Colorado Bureau of Investigation, Colorado Crime Statistics; Analyzed by Colorado Division of Criminal Justice.

In sum, the information presented in this section shows the rise in the marijuana industry, the dominance of the retail market, and the beginnings of a decline in 2023, reflected in lower medical marijuana cardholders, licensees, tax revenue and sales, from peak levels. Even with the slump in the market, in 2023, the marijuana industry in Colorado was comprised of 2,580 licensed premises (+14% from 2014), which generated $274.1 million in tax revenue (+306% from 2014), and $1.53 billion in sales (+120% from 2014). In addition, approximately $855 million in tax revenue from 2014 to 2023 has been allocated for school construction and other public school needs. Finally, crime rates have risen in recent years in Colorado, but Colorado did not see an increase in property or violent crime rates as a result of legalization.

APPENDIX A:
MARIJUANA ARRESTS

Appendix A, Table 1. Marijuana arrests, by county, 2012-2022

County	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Adams	2,415	1,026	878	812	747	841	759	469	238	313	295
Alamosa	2	6	12	22	15	23	28	22	2	6	7
Arapahoe	1,478	702	819	711	692	592	517	324	194	150	185
Archuleta	17	3	6	19	12	6	12	14	6	8	6
Baca	17	8	1	1	2	NA	NA	2	NA	1	1
Bent	NA	1	NA	1	NA	NA	NA	1	NA	NA	NA
Boulder	724	439	364	410	481	695	614	392	270	96	106
Broomfield	299	133	132	93	121	116	122	116	36	45	40
Chaffee	47	14	17	13	20	10	17	2	5	5	3
Cheyenne	2	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Clear Creek	45	8	7	10	2	1	5	2	6	NA	NA
Conejos	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Costilla	NA	NA	1	NA	NA	NA	NA	NA	NA	NA	NA
Crowley	NA	NA	NA	1	NA	4	7	5	NA	3	2
Custer	1	1	3	4	2	2	6	11	5	5	NA
Delta	16	16	9	3	24	22	32	24	24	12	15
Denver	1,605	903	852	1,139	624	284	334	160	93	89	71
Dolores	NA	1	1	NA	NA	4	2	1	NA	NA	NA
Douglas	537	333	218	258	273	414	300	286	209	137	127
Eagle	290	138	100	124	100	90	80	45	20	27	39
El Paso	868	539	611	509	562	479	542	459	279	159	211
Elbert	17	19	17	7	4	13	7	11	6	8	3
Fremont	45	12	5	12	9	28	15	12	15	5	9
Garfield	168	50	44	83	76	128	131	128	80	44	61
Gilpin	100	7	4	6	3	7	15	13	6	3	3
Grand	14	2	4	NA	3	NA	NA	NA	4	7	NA
Gunnison	37	29	32	49	33	44	54	37	18	7	16
Hinsdale	NA	NA	NA	NA	2	NA	NA	1	NA	NA	NA
Huerfano	13	NA	4	6	9	1	4	7	NA	NA	NA
Jackson	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jefferson	1,554	805	970	897	886	903	683	370	335	286	395
Kiowa	1	3	NA	NA	NA	NA	NA	NA	1	NA	1
Kit Carson	19	14	4	17	13	16	4	4	NA	1	6
La Plata	55	53	81	65	69	80	59	11	11	35	24
Lake	27	3	3	NA	2	1	NA	1	NA	NA	1
Larimer	927	479	463	432	529	471	467	476	281	249	183
Las Animas	7	5	1	1	NA	4	12	6	1	2	7
Lincoln	1	NA	NA	1	1	7	2	NA	2	NA	NA
Logan	41	3	29	34	17	12	31	8	4	4	11
Mesa	664	433	456	411	347	460	333	264	127	132	188
Mineral	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Moffat	104	22	20	29	47	30	19	10	9	3	4
Montezuma	74	6	14	6	10	10	15	28	7	9	7
Montrose	134	51	46	39	33	28	36	30	22	15	25

County	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Morgan	52	19	34	12	18	24	19	10	7	NA	17
Otero	22	3	6	14	5	8	3	5	6	3	10
Ouray	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA
Park	10	1	4	2	3	NA	5	2	3	NA	NA
Phillips	2	1	NA	1	2	1	6	3	NA	NA	NA
Pitkin	7	NA	10	7	4	3	1	1	NA	3	NA
Prowers	91	34	38	3	7	2	19	9	7	14	10
Pueblo	27	26	26	22	47	38	40	49	4	6	13
Rio Blanco	26	4	18	11	3	2	1	1	NA	NA	NA
Rio Grande	28	5	2	11	6	8	19	12	7	6	3
Routt	92	36	61	47	47	46	42	36	12	15	16
Saguache	11	NA	2	2	NA	11	NA	NA	1	2	2
San Juan	NA	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
San Miguel	NA	NA	NA	NA	4	NA	2	3	1	5	1
Sedgwick	1	3	1	NA	NA	NA	NA	NA	NA	NA	NA
Summit	65	5	6	22	20	6	10	1	2	5	3
Teller	56	47	34	25	32	25	63	32	30	22	16
Washington	20	2	1	1	2	NA	NA	NA	2	NA	4
Weld	505	338	330	271	270	230	267	215	115	109	119
Yuma	2	4	NA	NA	NA	NA	1	6	7	1	NA
Unspecified	1,260	271	323	322	262	253	208	153	213	151	89
Total	14,644	7,068	7,128	6,998	6,502	6,483	5,970	4,290	2,733	2,208	2,355

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System, analyzed by the Division of Criminal Justice.

Note: Denver's 2012-2013 numbers were replaced with data from the Denver Police Department Data Analysis Unit, as reported, as reported in Reed (2021), *Impacts of Marijuana Legalization in Colorado: a report pursuant to C.R.S. 24-33.4-516*. Colorado Department of Public Safety. Since county is determined based on the law enforcement agency's location there are some statewide agencies, such as the Colorado State Patrol, that cannot be assigned to a specific county.

Appendix A, Table 2. Marijuana arrest rates per 100,000 residents aged 10 and older, by county, 2012-2022

County	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Adams	626	260	216	195	176	195	173	105	53	69	65
Alamosa	15	45	90	163	110	167	201	157	14	42	49
Arapahoe	288	134	153	130	125	105	91	56	34	26	32
Archuleta	156	27	54	170	104	50	97	110	49	64	48
Baca	516	248	32	32	65	NA	NA	64	NA	33	33
Bent	NA	19	NA	19	NA	NA	NA	19	NA	NA	NA
Boulder	267	159	130	143	166	238	208	132	90	32	35
Broomfield	589	255	246	164	207	192	197	184	54	66	59
Chaffee	284	84	101	77	115	56	93	11	28	27	16
Cheyenne	124	62	NA	NA	NA	NA	NA	NA	NA	NA	NA
Clear Creek	547	98	85	119	23	11	57	23	70	NA	NA
Conejos	29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Costilla	NA	NA	31	NA	NA	NA	NA	NA	NA	NA	NA
Crowley	NA	NA	NA	19	NA	74	127	89	NA	53	35
Custer	25	25	74	97	47	44	131	234	114	107	NA
Delta	59	59	34	11	88	80	115	85	85	42	52
Denver	291	160	146	190	102	46	53	25	15	14	11
Dolores	NA	56	58	NA	NA	218	108	54	NA	NA	NA
Douglas	212	127	80	92	95	139	98	91	66	42	39
Eagle	643	301	215	263	208	186	164	92	41	55	79
El Paso	156	95	107	87	94	79	87	73	44	25	33
Elbert	82	90	78	31	18	56	30	46	25	33	12
Fremont	105	28	12	28	21	64	34	28	33	11	20
Garfield	348	103	90	167	150	250	252	244	148	81	112
Gilpin	2,050	141	77	115	56	128	270	228	112	55	55
Grand	110	16	31	NA	22	NA	NA	NA	28	49	NA
Gunnison	268	207	225	338	223	290	349	234	118	45	102
Hinsdale	NA	NA	NA	NA	282	NA	NA	132	NA	NA	NA
Huerfano	218	NA	68	103	150	17	64	112	NA	NA	NA
Jackson	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jefferson	321	164	195	178	174	176	132	71	64	55	76
Kiowa	79	241	NA	NA	NA	NA	NA	NA	78	NA	78
Kit Carson	268	194	57	237	194	256	64	64	NA	16	99
La Plata	118	112	168	133	139	160	116	22	22	68	47
Lake	437	48	48	NA	30	15	NA	14	NA	NA	15
Larimer	338	171	162	146	176	154	150	150	87	76	56
Las Animas	53	39	8	8	NA	31	92	46	8	15	53
Lincoln	21	NA	NA	20	20	143	40	NA	40	NA	NA
Logan	209	15	147	172	86	61	158	41	21	21	57
Mesa	516	337	354	317	264	345	246	193	92	94	134
Mineral	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Moffat	926	196	181	262	416	266	167	87	78	26	35
Montezuma	332	27	63	27	44	44	65	121	31	39	30
Montrose	376	143	129	109	91	76	96	79	57	39	64
Morgan	217	79	143	50	75	100	78	40	28	NA	69
Otero	137	19	38	88	32	50	19	31	37	18	61
Ouray	NA	NA	96	NA	NA	NA	NA	NA	NA	NA	NA
Park	69	7	27	13	19	NA	29	12	19	NA	NA

County	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Phillips	52	26	NA	27	54	27	161	80	NA	NA	NA
Pitkin	44	NA	61	42	24	18	6	6	NA	19	NA
Prowers	865	325	369	29	69	20	184	86	68	136	97
Pueblo	19	19	18	15	32	26	27	33	3	4	9
Rio Blanco	447	69	317	197	54	36	18	18	NA	NA	NA
Rio Grande	274	50	20	112	61	81	194	122	69	60	30
Routt	445	171	284	216	213	204	184	156	54	66	70
Saguache	200	NA	37	37	NA	188	NA	NA	18	34	34
San Juan	NA	158	NA	NA	NA	NA	NA	NA	NA	NA	NA
San Miguel	NA	NA	NA	NA	56	NA	27	41	14	68	14
Sedgwick	47	144	48	NA	NA	NA	NA	NA	NA	NA	NA
Summit	255	19	22	80	71	21	35	3	7	18	11
Teller	265	222	160	118	146	111	275	138	133	96	70
Washington	497	49	25	24	48	NA	NA	NA	46	NA	92
Weld	226	148	141	111	107	88	99	77	40	37	41
Yuma	23	47	NA	NA	NA	NA	12	70	82	12	NA
Total	293	145	153	147	134	131	119	84	53	43	46

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System; Colorado State Demography Office. Analyzed by the Division of Criminal Justice.

Note: Denver's 2012-2013 arrest numerators were replaced with data from the Denver Police Department Data Analysis Unit, as reported, as reported in Reed (2021), *Impacts of Marijuana Legalization in Colorado: a report pursuant to C.R.S. 24-33.4-516*. Colorado Department of Public Safety. There is no rate for 'unspecified county' because it is not possible to assign a population value.

Appendix A, Table 3, Marijuana arrests, by county and arrest type, 2012-2022

County & Arrest Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Adams - Sell	42	19	17	8	8	9	8	2	4	7	9
Adams - Smuggle	0	0	0	0	0	0	8	2	3	1	0
Adams - Possession	2,079	866	725	656	610	627	468	277	119	139	136
Adams - Producing	39	15	6	8	21	21	20	13	17	1	5
Adams - Unspecified	255	126	130	140	108	184	255	175	95	165	145
Adams - Total	2,415	1,026	878	812	747	841	759	469	238	313	295
Alamosa - Sell	0	0	0	0	0	0	2	0	0	0	0
Alamosa - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Alamosa - Possession	2	6	9	21	4	12	18	18	2	3	3
Alamosa - Producing	0	0	0	0	0	0	0	0	0	0	0
Alamosa - Unspecified	0	0	3	1	11	11	8	4	0	3	4
Alamosa - Total	2	6	12	22	15	23	28	22	2	6	7
Arapahoe - Sell	24	17	19	22	13	7	14	5	4	8	6
Arapahoe - Smuggle	0	0	0	0	3	0	1	0	0	0	0
Arapahoe - Possession	1,375	609	669	571	537	450	446	261	145	107	157
Arapahoe - Producing	65	67	122	104	128	121	42	47	34	24	9
Arapahoe - Unspecified	14	9	9	14	11	14	14	11	11	11	13
Arapahoe - Total	1,478	702	819	711	692	592	517	324	194	150	185
Archuleta - Sell	0	0	0	0	2	0	0	0	0	0	0
Archuleta - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Archuleta - Possession	17	3	6	18	8	2	11	8	4	8	4
Archuleta - Producing	0	0	0	0	0	0	0	3	1	0	0
Archuleta - Unspecified	0	0	0	1	2	4	1	3	1	0	2
Archuleta - Total	17	3	6	19	12	6	12	14	6	8	6
Baca - Sell	2	0	1	0	2	0	0	2	0	0	0

County & Arrest Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Baca - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Baca - Possession	15	7	0	1	0	0	0	0	0	0	1
Baca - Production	0	0	0	0	0	0	0	0	0	0	0
Baca - Unspecified	0	1	0	0	0	0	0	0	0	1	0
Baca - Total	17	8	1	1	2	0	0	2	0	1	1
Bent - Sell	0	0	0	0	0	0	0	0	0	0	0
Bent - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Bent - Possession	0	1	0	1	0	0	0	1	0	0	0
Bent - Production	0	0	0	0	0	0	0	0	0	0	0
Bent - Unspecified	0	0	0	0	0	0	0	0	0	0	0
Bent - Total	0	1	0	1	0	0	0	1	0	0	0
Boulder - Sell	8	1	17	5	11	4	10	6	11	2	6
Boulder - Smuggle	0	0	0	0	0	1	0	0	0	0	0
Boulder - Possession	668	379	303	347	409	610	556	355	233	68	60
Boulder - Producing	1	1	0	7	2	2	8	2	1	2	4
Boulder - Unspecified	47	58	44	51	59	78	40	29	25	24	36
Boulder - Total	724	439	364	410	481	695	614	392	270	96	106
Broomfield - Sell	7	8	0	2	1	0	0	2	1	0	0
Broomfield - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Broomfield - Possession	290	123	130	75	108	108	108	99	31	26	36
Broomfield - Producing	0	0	2	0	1	0	0	0	0	0	0
Broomfield - Unspecified	2	2	0	16	11	8	14	15	4	19	4
Broomfield - Total	299	133	132	93	121	116	122	116	36	45	40
Chaffee - Sell	2	0	0	1	0	2	0	0	0	0	0
Chaffee - Smuggle	0	0	0	0	0	0	1	0	0	0	0
Chaffee - Possession	45	14	17	9	18	8	16	2	4	5	0
Chaffee - Producing	0	0	0	0	0	0	0	0	0	0	0

County & Arrest Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Chaffee - Unspecified	0	0	0	3	2	0	0	0	1	0	3
Chaffee - Total	47	14	17	13	20	10	17	2	5	5	3
Cheyenne - Sell	0	0	0	0	0	0	0	0	0	0	0
Cheyenne - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Cheyenne - Possession	2	1	0	0	0	0	0	0	0	0	0
Cheyenne - Producing	0	0	0	0	0	0	0	0	0	0	0
Cheyenne - Unspecified	0	0	0	0	0	0	0	0	0	0	0
Cheyenne - Total	2	1	0	0	0	0	0	0	0	0	0
Clear Creek - Sell	1	0	0	0	0	0	0	0	0	0	0
Clear Creek - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Clear Creek - Possession	40	7	6	10	2	1	4	2	0	0	0
Clear Creek - Producing	1	0	0	0	0	0	0	0	0	0	0
Clear Creek - Unspecified	3	1	1	0	0	0	1	0	6	0	0
Clear Creek - Total	45	8	7	10	2	1	5	2	6	0	0
Conejos - Sell	0	0	0	0	0	0	0	0	0	0	0
Conejos - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Conejos - Possession	2	0	0	0	0	0	0	0	0	0	0
Conejos - Producing	0	0	0	0	0	0	0	0	0	0	0
Conejos - Unspecified	0	0	0	0	0	0	0	0	0	0	0
Conejos - Total	2	0	0	0	0	0	0	0	0	0	0
Costilla - Sell	0	0	1	0	0	0	0	0	0	0	0
Costilla - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Costilla - Possession	0	0	0	0	0	0	0	0	0	0	0
Costilla - Producing	0	0	0	0	0	0	0	0	0	0	0

County & Arrest Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Costilla - Unspecified	0	0	0	0	0	0	0	0	0	0	0
Costilla - Total	0	0	1	0	0	0	0	0	0	0	0
Crowley - Sell	0	0	0	0	0	1	1	0	0	0	1
Crowley - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Crowley - Possession	0	0	0	1	0	2	1	2	0	3	1
Crowley - Producing	0	0	0	0	0	0	5	3	0	0	0
Crowley - Unspecified	0	0	0	0	0	1	0	0	0	0	0
Crowley - Total	0	0	0	1	0	4	7	5	0	3	2
Custer - Sell	0	0	0	0	0	0	0	0	0	0	0
Custer - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Custer - Possession	1	1	0	0	0	1	1	2	0	0	0
Custer - Producing	0	0	2	1	1	0	0	0	1	0	0
Custer - Unspecified	0	0	1	3	1	1	5	9	4	5	0
Custer - Total	1	1	3	4	2	2	6	11	5	5	0
Delta - Sell	0	0	0	0	0	0	0	0	7	0	0
Delta - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Delta - Possession	15	12	8	2	22	15	18	13	8	12	13
Delta - Production	0	0	1	0	0	0	8	6	0	0	0
Delta - Unspecified	1	4	0	1	2	7	6	5	9	0	2
Delta - Total	16	16	9	3	24	22	32	24	24	12	15
Denver - Sell	10	46	71	58	74	98	76	46	41	39	28
Denver - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Denver - Possession	1,587	667	750	1,049	496	115	176	64	34	20	16
Denver - Producing	1	6	14	16	42	56	70	43	17	12	4
Denver - Unspecified	8	184	17	16	12	15	12	7	1	18	23
Denver - Total	1,606	903	852	1,139	624	284	334	160	93	89	71

County & Arrest Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Dolores - Sell	0	0	0	0	0	1	0	0	0	0	0
Dolores - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Dolores - Possession	0	1	1	0	0	0	0	0	0	0	0
Dolores - Producing	0	0	0	0	0	0	2	1	0	0	0
Dolores - Unspecified	0	0	0	0	0	3	0	0	0	0	0
Dolores - Total	0	1	1	0	0	4	2	1	0	0	0
Douglas - Sell	4	1	2	1	6	1	2	3	2	4	0
Douglas - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Douglas - Possession	524	274	214	256	257	381	280	263	185	116	101
Douglas - Producing	0	0	0	0	2	9	4	0	1	0	1
Douglas - Unspecified	9	58	2	1	8	23	14	20	21	17	25
Douglas - Total	537	333	218	258	273	414	300	286	209	137	127
Eagle - Sell	7	3	0	1	1	1	1	1	0	3	0
Eagle - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Eagle - Possession	243	75	63	103	80	83	74	42	16	24	38
Eagle - Producing	2	1	0	1	0	0	0	0	0	0	0
Eagle - Unspecified	38	59	37	19	19	6	5	2	4	0	1
Eagle - Total	290	138	100	124	100	90	80	45	20	27	39
El Paso - Sell	32	23	28	24	32	29	49	32	68	27	54
El Paso - Smuggle	4	1	0	1	0	0	0	0	0	0	0
El Paso - Possession	670	427	493	455	499	411	455	396	177	114	139
El Paso - Producing	20	4	2	3	3	7	37	25	28	11	7
El Paso - Unspecified	142	84	88	26	28	32	1	6	6	7	11
El Paso - Total	868	539	611	509	562	479	542	459	279	159	211
Elbert - Sell	0	0	1	0	0	2	0	1	0	0	0
Elbert - Smuggle	0	0	0	0	0	0	0	0	0	0	0

County & Arrest Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Elbert - Possession	17	19	16	6	4	10	7	7	6	6	3
Elbert - Producing	0	0	0	1	0	1	0	2	0	0	0
Elbert - Unspecified	0	0	0	0	0	0	0	1	0	2	0
Elbert - Total	17	19	17	7	4	13	7	11	6	8	3
Fremont - Sell	1	0	0	2	0	0	0	0	0	0	0
Fremont - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Fremont - Possession	31	11	4	3	1	0	0	1	0	2	3
Fremont - Producing	0	0	1	1	2	1	0	0	1	0	0
Fremont - Unspecified	13	1	0	6	6	27	15	11	14	3	6
Fremont - Total	45	12	5	12	9	28	15	12	15	5	9
Garfield - Sell	1	2	3	0	1	0	1	0	0	0	1
Garfield - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Garfield - Possession	154	42	31	75	53	82	95	67	52	20	49
Garfield - Producing	0	0	0	0	0	0	0	0	0	0	0
Garfield - Unspecified	13	6	10	8	22	46	35	61	28	24	11
Garfield - Total	168	50	44	83	76	128	131	128	80	44	61
Gilpin - Sell	0	0	0	0	0	0	0	0	0	0	0
Gilpin - Smuggle	1	0	0	0	0	0	0	0	0	0	0
Gilpin - Possession	95	5	4	5	2	5	10	12	6	3	3
Gilpin - Producing	2	2	0	1	0	0	0	0	0	0	0
Gilpin - Unspecified	2	0	0	0	1	2	5	1	0	0	0
Gilpin - Total	100	7	4	6	3	7	15	13	6	3	3
Grand - Sell	1	0	0	0	0	0	0	0	0	1	0
Grand - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Grand - Possession	13	2	4	0	2	0	0	0	4	4	0
Grand - Producing	0	0	0	0	0	0	0	0	0	0	0

County & Arrest Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Grand - Unspecified	0	0	0	0	1	0	0	0	0	2	0
Grand - Total	14	2	4	0	3	0	0	0	4	7	0
Gunnison - Sell	0	0	2	0	0	4	0	1	0	0	0
Gunnison - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Gunnison - Possession	37	24	26	47	29	31	47	34	14	5	13
Gunnison - Producing	0	2	1	2	0	1	1	0	3	0	0
Gunnison - Unspecified	0	3	3	0	4	8	6	2	1	2	3
Gunnison - Total	37	29	32	49	33	44	54	37	18	7	16
Hinsdale - Sell	0	0	0	0	0	0	0	0	0	0	0
Hinsdale - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Hinsdale - Possession	0	0	0	0	2	0	0	1	0	0	0
Hinsdale - Producing	0	0	0	0	0	0	0	0	0	0	0
Hinsdale - Unspecified	0	0	0	0	0	0	0	0	0	0	0
Hinsdale - Total	0	0	0	0	2	0	0	1	0	0	0
Huerfano - Sell	0	0	0	0	0	0	0	0	0	0	0
Huerfano - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Huerfano - Possession	13	0	2	5	3	0	4	6	0	0	0
Huerfano - Producing	0	0	2	1	6	1	0	0	0	0	0
Huerfano - Unspecified	0	0	0	0	0	0	0	1	0	0	0
Huerfano - Total	13	0	4	6	9	1	4	7	0	0	0
Jefferson - Sell	9	7	11	7	8	8	6	3	1	0	0
Jefferson - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Jefferson - Possession	1,330	660	856	802	817	827	603	301	103	87	105
Jefferson - Producing	6	4	9	15	11	8	10	0	1	0	0
Jefferson - Unspecified	209	134	94	73	50	60	64	66	230	199	290
Jefferson - Total	1,554	805	970	897	886	903	683	370	335	286	395

County & Arrest Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Kiowa - Sell	0	0	0	0	0	0	0	0	0	0	0
Kiowa - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Kiowa - Possession	1	3	0	0	0	0	0	0	0	0	1
Kiowa - Producing	0	0	0	0	0	0	0	0	0	0	0
Kiowa - Unspecified	0	0	0	0	0	0	0	0	1	0	0
Kiowa - Total	1	3	0	0	0	0	0	0	1	0	1
Kit Carson - Sell	1	3	0	0	2	1	1	0	0	0	0
Kit Carson - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Kit Carson - Possession	18	11	4	16	10	11	3	1	0	0	2
Kit Carson - Producing	0	0	0	0	0	3	0	3	0	0	1
Kit Carson - Unspecified	0	0	0	1	1	1	0	0	0	1	3
Kit Carson - Total	19	14	4	17	13	16	4	4	0	1	6
La Plata - Sell	0	0	0	0	0	0	0	0	0	0	1
La Plata - Smuggle	0	0	0	0	0	0	0	0	0	0	0
La Plata - Possession	54	53	81	40	54	41	27	7	7	24	19
La Plata - Producing	0	0	0	0	0	0	0	0	0	1	0
La Plata - Unspecified	1	0	0	25	15	39	32	4	4	10	4
La Plata - Total	55	53	81	65	69	80	59	11	11	35	24
Lake - Sell	1	1	0	0	0	0	0	0	0	0	0
Lake - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Lake - Possession	23	2	1	0	1	1	0	1	0	0	1
Lake - Producing	3	0	1	0	0	0	0	0	0	0	0
Lake - Unspecified	0	0	1	0	1	0	0	0	0	0	0
Lake - Total	27	3	3	0	2	1	0	1	0	0	1
Larimer - Sell	10	11	15	9	17	7	6	4	7	13	10
Larimer - Smuggle	0	0	0	0	1	0	0	0	1	0	0
Larimer - Possession	521	282	281	302	383	355	354	376	226	212	158

County & Arrest Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Larimer - Producing	5	1	5	7	12	13	11	5	1	6	0
Larimer - Unspecified	391	185	162	114	116	96	96	91	46	18	15
Larimer - Total	927	479	463	432	529	471	467	476	281	249	183
Las Animas - Sell	0	3	0	0	0	0	0	0	0	0	2
Las Animas - 0	0	0	0	0	0	0	0	0	0	0	0
Las Animas - Possession	7	2	1	0	0	4	12	6	0	1	2
Las Animas - 0	0	0	0	0	0	0	0	0	1	1	3
Las Animas - Unspecified	0	0	0	1	0	0	0	0	0	0	0
Las Animas - Total	7	5	1	1	0	4	12	6	1	2	7
Lincoln - Sell	0	0	0	0	0	0	0	0	0	0	0
Lincoln - Smuggle	0	0	0	1	1	0	0	0	0	0	0
Lincoln - Possession	1	0	0	0	0	0	1	0	2	0	0
Lincoln - Producing	0	0	0	0	0	7	0	0	0	0	0
Lincoln - Unspecified	0	0	0	0	0	0	1	0	0	0	0
Lincoln - Total	1	0	0	1	1	7	2	0	2	0	0
Logan - Sell	1	1	0	0	0	0	4	2	0	0	0
Logan - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Logan - Possession	39	2	28	34	17	9	25	5	3	4	11
Logan - Producing	0	0	0	0	0	1	0	0	0	0	0
Logan - Unspecified	1	0	1	0	0	2	2	1	1	0	0
Logan - Total	41	3	29	34	17	12	31	8	4	4	11
Mesa - Sell	14	20	17	11	20	42	22	16	11	3	7
Mesa - Smuggle	0	1	0	0	0	0	0	1	0	0	0
Mesa - Possession	577	327	350	292	247	257	192	118	78	76	96
Mesa - Producing	3	4	3	10	11	11	10	3	1	4	3
Mesa - Unspecified	70	81	86	98	69	150	109	126	37	49	82

County & Arrest Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Mesa - Total	664	433	456	411	347	460	333	264	127	132	188
Moffat - Sell	3	0	1	0	2	1	0	0	1	0	1
Moffat - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Moffat - Possession	95	22	19	29	45	29	19	9	3	2	2
Moffat - Producing	4	0	0	0	0	0	0	0	0	0	1
Moffat - Unspecified	2	0	0	0	0	0	0	1	5	1	0
Moffat - Total	104	22	20	29	47	30	19	10	9	3	4
Montezuma - Sell	0	0	1	0	0	1	0	4	0	0	0
Montezuma - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Montezuma - Possession	60	6	11	6	10	7	9	12	3	2	5
Montezuma - Producing	0	0	0	0	0	0	0	1	1	1	0
Montezuma - Unspecified	14	0	2	0	0	2	6	11	3	6	2
Montezuma - Total	74	6	14	6	10	10	15	28	7	9	7
Montrose - Sell	1	1	0	0	1	0	0	0	0	0	2
Montrose - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Montrose - Possession	131	49	45	37	31	28	31	30	15	13	22
Montrose - Producing	1	0	0	1	0	0	3	0	5	0	0
Montrose - Unspecified	1	1	1	1	1	0	2	0	2	2	1
Montrose - Total	134	51	46	39	33	28	36	30	22	15	25
Morgan - Sell	1	1	0	0	0	1	0	0	0	0	0
Morgan - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Morgan - Possession	50	18	32	9	17	22	18	10	7	0	17
Morgan - Producing	0	0	0	0	1	0	0	0	0	0	0
Morgan - Unspecified	1	0	2	3	0	1	1	0	0	0	0
Morgan - Total	52	19	34	12	18	24	19	10	7	0	17

County & Arrest Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Otero - Sell	0	0	1	0	0	0	0	0	1	0	0
Otero - Smuggle	0	0	0	0	0	1	0	1	0	0	0
Otero - Possession	15	3	5	14	4	6	3	4	5	3	10
Otero - Producing	1	0	0	0	1	1	0	0	0	0	0
Otero - Unspecified	6	0	0	0	0	0	0	0	0	0	0
Otero - Total	22	3	6	14	5	8	3	5	6	3	10
Ouray - Sell	0	0	0	0	0	0	0	0	0	0	0
Ouray - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Ouray - Possession	0	0	4	0	0	0	0	0	0	0	0
Ouray - Producing	0	0	0	0	0	0	0	0	0	0	0
Ouray - Unspecified	0	0	0	0	0	0	0	0	0	0	0
Ouray - Total	0	0	4	0	0	0	0	0	0	0	0
Park - Sell	1	0	0	0	1	0	0	0	0	0	0
Park - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Park - Possession	7	1	4	0	0	0	5	1	3	0	0
Park - Producing	1	0	0	2	2	0	0	1	0	0	0
Park - Unspecified	1	0	0	0	0	0	0	0	0	0	0
Park - Total	10	1	4	2	3	0	5	2	3	0	0
Phillips - Sell	0	0	0	0	0	0	0	0	0	0	0
Phillips - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Phillips - Possession	2	1	0	1	2	1	6	3	0	0	0
Phillips - Producing	0	0	0	0	0	0	0	0	0	0	0
Phillips - Unspecified	0	0	0	0	0	0	0	0	0	0	0
Phillips - Total	2	1	0	1	2	1	6	3	0	0	0
Pitkin - Sell	0	0	0	2	0	0	0	0	0	0	0
Pitkin - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Pitkin - Possession	7	0	9	5	4	3	1	1	0	2	0

County & Arrest Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Pitkin - Producing	0	0	0	0	0	0	0	0	0	0	0
Pitkin - Unspecified	0	0	1	0	0	0	0	0	0	1	0
Pitkin - Total	7	0	10	7	4	3	1	1	0	3	0
Prowers - Sell	0	2	2	1	1	0	1	0	0	0	1
Prowers - Smuggle	0	0	0	0	1	0	0	0	0	0	0
Prowers - Possession	90	30	35	2	3	2	18	9	7	14	9
Prowers - Producing	0	0	0	0	2	0	0	0	0	0	0
Prowers - Unspecified	1	2	1	0	0	0	0	0	0	0	0
Prowers - Total	91	34	38	3	7	2	19	9	7	14	10
Pueblo - Sell	0	1	0	0	1	0	0	0	0	0	1
Pueblo - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Pueblo - Possession	11	9	14	18	40	34	35	38	3	4	10
Pueblo - Producing	0	0	0	0	0	0	0	8	0	0	0
Pueblo - Unspecified	16	16	12	4	6	4	5	3	1	2	2
Pueblo - Total	27	26	26	22	47	38	40	49	4	6	13
Rio Blanco - Sell	0	0	0	0	0	0	0	0	0	0	0
Rio Blanco - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Rio Blanco - Possession	26	4	18	11	3	2	1	1	0	0	0
Rio Blanco - Producing	0	0	0	0	0	0	0	0	0	0	0
Rio Blanco - Unspecified	0	0	0	0	0	0	0	0	0	0	0
Rio Blanco - Total	26	4	18	11	3	2	1	1	0	0	0
Rio Grande - Sell	0	1	0	1	0	0	0	0	1	1	0
Rio Grande - Smuggle	0	1	0	0	0	0	0	0	0	0	0
Rio Grande - Possession	27	3	2	10	6	8	15	11	6	4	2
Rio Grande - Producing	0	0	0	0	0	0	2	1	0	0	0

County & Arrest Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Rio Grande - Unspecified	1	0	0	0	0	0	2	0	0	1	1
Rio Grande - Total	28	5	2	11	6	8	19	12	7	6	3
Routt - Sell	1	0	0	1	0	0	0	0	0	1	0
Routt - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Routt - Possession	88	26	46	35	46	43	40	32	11	13	16
Routt - Producing	0	0	0	3	0	0	0	0	0	0	0
Routt - Unspecified	3	10	15	8	1	3	2	4	1	1	0
Routt - Total	92	36	61	47	47	46	42	36	12	15	16
Saguache - Sell	0	0	0	0	0	0	0	0	0	0	0
Saguache - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Saguache - Possession	11	0	2	2	0	4	0	0	1	2	2
Saguache - Producing	0	0	0	0	0	0	0	0	0	0	0
Saguache - Unspecified	0	0	0	0	0	7	0	0	0	0	0
Saguache - Total	11	0	2	2	0	11	0	0	1	2	2
San Juan - Sell	0	1	0	0	0	0	0	0	0	0	0
San Juan - Smuggle	0	0	0	0	0	0	0	0	0	0	0
San Juan - Possession	0	0	0	0	0	0	0	0	0	0	0
San Juan - Producing	0	0	0	0	0	0	0	0	0	0	0
San Juan - Unspecified	0	0	0	0	0	0	0	0	0	0	0
San Juan - Total	0	1	0	0	0	0	0	0	0	0	0
San Miguel - Sell	0	0	0	0	0	0	0	0	0	0	0
San Miguel - Smuggle	0	0	0	0	0	0	0	0	0	0	0
San Miguel - Possession	0	0	0	0	0	0	2	3	1	5	1
San Miguel - Producing	0	0	0	0	4	0	0	0	0	0	0
San Miguel - Unspecified	0	0	0	0	0	0	0	0	0	0	0
San Miguel - Total	0	0	0	0	4	0	2	3	1	5	1
Sedgwick - Sell	0	0	0	0	0	0	0	0	0	0	0

County & Arrest Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Sedgwick - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Sedgwick - Possession	1	3	0	0	0	0	0	0	0	0	0
Sedgwick - Producing	0	0	1	0	0	0	0	0	0	0	0
Sedgwick - Unspecified	0	0	0	0	0	0	0	0	0	0	0
Sedgwick - Total	1	3	1	0	0	0	0	0	0	0	0
Summit - Sell	0	0	0	0	0	0	0	0	0	0	0
Summit - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Summit - Possession	63	5	2	14	12	5	5	0	1	0	2
Summit - Producing	0	0	0	0	0	0	0	0	0	0	0
Summit - Unspecified	2	0	4	8	8	1	5	1	1	5	1
Summit - Total	65	5	6	22	20	6	10	1	2	5	3
Teller - Sell	0	0	2	3	5	4	2	1	0	0	2
Teller - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Teller - Possession	52	45	26	18	26	20	37	20	17	15	10
Teller - Producing	1	0	0	0	1	0	14	3	5	0	0
Teller - Unspecified	3	2	6	4	0	1	10	8	8	7	4
Teller - Total	56	47	34	25	32	25	63	32	30	22	16
Washington - Sell	0	0	0	0	0	0	0	0	0	0	0
Washington - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Washington - Possession	20	2	0	1	2	0	0	0	2	0	4
Washington - Producing	0	0	0	0	0	0	0	0	0	0	0
Washington - Unspecified	0	0	1	0	0	0	0	0	0	0	0
Washington - Total	20	2	1	1	2	0	0	0	2	0	4
Weld - Sell	11	16	11	4	7	16	22	1	2	1	6
Weld - Smuggle	0	0	0	0	1	1	3	0	0	0	1
Weld - Possession	485	313	316	257	244	201	223	197	102	94	91

County & Arrest Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Weld - Producing	7	4	2	6	3	9	11	8	1	0	3
Weld - Unspecified	2	5	1	4	15	3	8	9	10	14	18
Weld - Total	505	338	330	271	270	230	267	215	115	109	119
Yuma - Sell	0	0	0	0	0	0	0	0	0	0	0
Yuma - Smuggle	0	0	0	0	0	0	0	0	0	0	0
Yuma - Possession	2	4	0	0	0	0	1	0	5	1	0
Yuma - Producing	0	0	0	0	0	0	0	6	0	0	0
Yuma - Unspecified	0	0	0	0	0	0	0	0	2	0	0
Yuma - Total	2	4	0	0	0	0	1	6	7	1	0
Unspecified county - Sell	22	10	6	11	5	9	4	1	9	6	3
Unspecified county - Smuggle	1	2	0	2	1	0	0	0	0	0	1
Unspecified county - Possession	1,140	238	289	303	246	239	202	136	191	143	80
Unspecified county - Producing	2	0	2	2	0	1	0	1	0	0	1
Unspecified county - Unspecified	95	21	26	4	10	4	2	15	13	2	4
Unspecified county - Total	1,260	271	323	322	262	253	208	153	213	151	89

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System, analyzed by the Division of Criminal Justice.

Note: Since county is determined based on the law enforcement agency's location there are some statewide agencies, such as the Colorado State Patrol, that cannot be assigned to a specific county. Denver's 2012-2013 arrest numerators were replaced with data from the Denver Police Department Data Analysis Unit, as reported, as reported in Reed (2021), *Impacts of Marijuana Legalization in Colorado: a report pursuant to C.R.S. 24-33.4-516*. Colorado Department of Public Safety

Appendix A, Table 4, Marijuana arrests by law enforcement agency, 2012-2022

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Acet (All Crimes Enforcement Team)	NA	NA	NA	NA	NA	1	1	1	NA	NA	NA
Adams County SO	753	289	169	175	119	119	101	40	18	30	22
Adams State College	NA	6	12	17	14	9	17	15	2	NA	2
Aims Community College PD	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alamosa County SO	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alamosa PD	NA	NA	NA	5	1	14	11	7	NA	6	5
Arapahoe Community College	1	1	1	1	1	NA	NA	1	NA	NA	NA
Arapahoe County SO	77	39	50	23	39	58	37	10	13	5	16
Archuleta County SO	1	NA	NA	1	4	4	1	6	3	NA	NA
Arvada PD	486	235	264	293	220	219	173	149	91	89	99
Aspen PD	7	NA	10	3	NA	2	1	NA	NA	3	NA
Ault PD	2	NA	4	3	3	NA	NA	1	1	NA	NA
Auraria Department of Public Safety	5	NA	NA	7	6	7	1	1	1	7	11
Aurora PD	729	397	510	430	451	362	291	220	102	108	127
Avon PD	60	7	25	22	7	21	7	9	13	5	8
Baca County SO	4	3	NA	1	NA	NA	NA	1	NA	NA	1
Basalt PD	7	4	1	3	NA	NA	NA	NA	NA	NA	NA
Bayfield PD	NA	NA	NA	3	3	3	7	1	NA	2	2
Bent County SO	NA	1	NA	1	NA	NA	NA	1	NA	NA	NA
Berthoud PD	5	5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Black Hawk PD	69	NA	1	2	NA	2	1	NA	NA	NA	3
Boulder County SO	NA	NA	NA	51	58	72	55	55	30	32	24
Boulder PD	142	80	77	46	38	19	22	7	5	10	13
Bow Mar PD	NA	NA	NA	NA	NA	1	NA	NA	NA	NA	NA
Breckenridge PD	1	NA	4	16	13	4	5	1	1	3	2
Brighton PD	210	125	169	186	136	183	108	63	50	52	41
Broomfield PD	299	133	132	93	121	116	122	116	36	45	40
Brush PD	10	2	NA	2	7	4	4	NA	NA	NA	NA
Buena Vista PD	1	2	2	11	6	6	10	1	3	4	3
Burlington PD	8	6	1	3	7	5	3	NA	NA	NA	2
Calhan Police Department	NA	NA	NA	NA	NA	NA	NA	NA	1	NA	NA

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Campo PD	13	5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Canon City PD	26	8	4	6	NA	23	14	8	14	NA	1
Carbondale PD	NA	1	NA	NA	7	8	15	13	4	NA	5
Castle Rock PD	114	63	38	67	64	107	64	29	15	12	14
Cedaredge PD	NA	NA	NA	1	NA	NA	NA	NA	NA	NA	NA
Centennial PD	78	32	34	15	30	20	39	7	15	8	4
Center PD	4	NA	1	2	NA	11	NA	NA	1	2	2
Central City PD	NA	4	2	NA	NA	NA	NA	NA	NA	NA	NA
Chaffee County SO	19	3	3	2	7	2	5	NA	NA	1	NA
Cherry Hills Village PD	NA	4	NA	3	NA	NA	NA	NA	NA	NA	NA
Cheyenne County SO	2	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Clear Creek County SO	32	5	6	7	2	1	2	NA	NA	NA	NA
Collbran Marshal's Office	NA	NA	NA	NA	NA	NA	NA	NA	6	NA	NA
Colorado Bureau of Investigation	NA	NA	NA	NA	NA	NA	NA	11	NA	NA	NA
Colorado Mental Health Institute - Pueblo	NA	NA	1	NA	NA	1	NA	NA	NA	NA	NA
Colorado School of Mines Department of Public Safety	7	6	7	2	8	18	8	1	NA	6	1
Colorado Springs PD	433	251	322	356	461	318	348	300	205	88	107
Colorado State Patrol	1,260	271	323	320	262	252	207	152	213	151	89
Colorado State University Department of Public Safety - Fort Collins	83	60	43	42	71	46	33	16	4	13	3
Commerce City PD	201	149	104	79	64	55	96	61	27	43	31
Conejos County SO	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cortez PD	8	1	3	1	1	6	9	15	3	6	5
Costilla County SO	NA	NA	1	NA	NA	NA	NA	NA	NA	NA	NA
Craig PD	86	21	18	21	35	24	14	9	8	2	3
Crested Butte PD	2	4	5	4	6	10	12	3	3	NA	3
Cripple Creek PD	14	8	5	5	3	2	9	11	1	2	NA

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Crowley County SO	NA	NA	NA	1	NA	4	7	5	NA	3	2
Custer County SO	1	1	3	4	2	2	6	11	5	5	NA
Dacono PD	4	NA	1	NA	1	4	3	6	4	NA	NA
De Beque PD	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Del Norte PD	9	NA	NA	5	1	1	NA	NA	NA	1	NA
Delta County SO	NA	2	NA	NA	4	NA	6	1	2	1	1
Delta PD	14	11	4	1	18	19	23	12	8	10	12
Delta/Montrose Drug Task Force	1	NA	1	NA	NA	NA	NA	8	13	NA	NA
Denver PD	173	472	851	1,130	618	277	332	148	92	82	60
Dillon PD	NA	NA	NA	1	1	1	NA	NA	NA	1	NA
Division of Gaming Enforcement - Central City	NA	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dolores County SO	NA	1	1	NA	NA	4	2	1	NA	NA	NA
Douglas County SO	234	164	121	119	148	214	167	191	131	108	92
Durango PD	22	9	7	36	31	57	45	6	10	19	5
Eagle County SO	87	58	31	19	30	7	21	22	1	13	3
Eagle PD	17	3	7	4	8	21	20	4	3	NA	NA
Eaton PD	2	5	NA	1	2	4	1	1	NA	NA	NA
Edgewater PD	6	5	NA	10	8	29	11	14	6	17	27
El Paso County SO	154	124	116	25	35	42	104	94	47	43	64
Elbert County SO	8	2	1	7	4	13	3	3	1	3	NA
Elizabeth PD	9	17	16	NA	NA	NA	4	6	5	5	3
Empire PD	2	2	NA	NA	NA	NA	NA	NA	NA	NA	NA
Englewood PD	252	94	96	102	85	84	70	54	33	15	9
Erie PD	26	22	43	23	37	22	46	31	22	19	19
Estes Park PD	18	2	4	2	5	2	NA	NA	1	2	NA
Evans PD	59	33	28	18	8	17	20	25	11	3	10
Fairplay PD	NA	NA	NA	NA	NA	NA	1	NA	1	NA	NA
Federal Heights PD	83	14	4	20	27	30	25	20	2	3	6
Firestone PD	7	15	8	13	19	14	4	9	8	7	1
Florence PD	12	3	NA	NA	2	NA	NA	NA	NA	3	2
Fort Collins PD	285	180	201	181	253	225	204	177	88	107	63
Fort Lewis College PD	33	42	67	26	34	20	6	4	1	NA	2
Fort Lupton PD	47	3	10	11	3	5	16	NA	12	18	21
Fort Morgan PD	34	17	27	8	10	20	15	10	7	NA	17
Fountain PD	153	92	72	62	32	96	78	53	20	13	20

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Fowler PD	1	NA	NA	NA	4	1	NA	NA	NA	NA	NA
Fraser/Winter Park PD	NA	NA	NA	NA	1	NA	NA	NA	1	2	NA
Frederick PD	17	8	16	16	10	13	2	NA	NA	NA	NA
Fremont County SO	7	1	1	6	7	5	1	4	1	2	6
Frisco PD	15	NA	NA	NA	NA	NA	1	NA	NA	NA	NA
Fruita PD	27	41	38	29	15	10	21	37	11	3	7
Garden City PD	1	1	3	1	2	NA	NA	NA	1	2	7
Garfield County SO	15	9	4	14	19	38	37	14	15	20	20
Georgetown PD	NA	1	NA	2	NA	NA	NA	NA	6	NA	NA
Gilpin County SO	31	2	1	4	3	5	14	13	6	3	NA
Glendale PD	7	2	NA	3	2	NA	1	NA	1	NA	2
Glenwood Springs PD	139	29	28	33	25	25	19	59	7	7	18
Golden PD	78	41	50	43	29	37	15	28	7	6	20
Granby PD	14	2	4	NA	2	NA	NA	NA	1	3	NA
Grand County SO	NA	NA	NA	NA	NA	NA	NA	NA	2	2	NA
Grand Junction PD	527	319	317	301	287	354	232	157	81	86	115
Greeley PD	250	177	141	107	94	81	99	62	22	16	21
Greenwood Village PD	131	49	31	52	31	25	19	9	14	NA	1
Gunnison County SO	NA	1	3	1	NA	5	1	5	NA	NA	NA
Gunnison PD	32	24	16	42	25	28	41	29	15	7	13
Gypsum PD	NA	NA	3	14	3	3	3	1	1	4	9
Haxtun PD	NA	NA	4	NA	NA	2	NA	NA	NA	NA	NA
Hayden PD	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	NA
Hinsdale County SO	NA	NA	NA	NA	2	NA	NA	1	NA	NA	NA
Holyoke PD	2	1	NA	1	2	NA	4	3	NA	NA	NA
Hotchkiss PD	1	1	4	1	2	3	3	3	1	1	2
Hudson PD	2	NA	4	NA	NA	NA	NA	NA	NA	1	1
Huerfano County SO	1	NA	1	1	6	1	4	7	NA	NA	NA
Hugo Marshals Office	NA	NA	NA	1	1	NA	NA	NA	2	NA	NA
Idaho Springs PD	11	NA	1	1	NA	NA	3	2	NA	NA	NA
Ignacio PD	NA	NA	NA	NA	NA	NA	1	NA	NA	NA	NA
Jefferson County SO	431	222	204	219	201	220	186	119	88	76	94
Johnstown PD	9	1	NA	NA	8	15	20	19	14	10	11
Keenesburg PD	NA	1	NA	2	NA	NA	NA	NA	NA	10	1
Kersey PD	NA	6	2	4	NA	1	NA	NA	NA	NA	NA

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Kiowa County SO	1	3	NA	NA	NA	NA	NA	NA	1	NA	1
Kit Carson County SO	11	8	3	14	6	11	1	4	NA	1	4
La Junta PD	20	3	6	14	1	6	3	3	6	3	10
La Plata County SO	NA	2	7	NA	1	NA	NA	NA	NA	NA	NA
Lafayette PD	125	26	36	15	32	26	26	31	9	6	16
Lake County SO	10	NA	1	NA	NA	1	NA	NA	NA	NA	NA
Lakeside PD	13	NA	1	3	1	2	NA	1	NA	NA	NA
Lakewood PD	411	233	348	254	360	316	243	44	118	87	130
Lamar PD	71	28	28	2	NA	2	18	8	7	13	9
Larimer County SO	255	78	74	56	58	59	86	27	25	20	20
Las Animas County SO	NA	NA	NA	NA	NA	NA	NA	3	1	1	7
LaSalle PD	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	3
Leadville PD	17	3	2	NA	2	NA	NA	1	NA	NA	1
Lincoln County SO	1	NA	NA	NA	NA	7	2	NA	NA	NA	NA
Littleton PD	167	62	65	51	40	32	39	16	7	13	24
Lochbuie PD	NA	2	1	8	NA	1	NA	NA	NA	NA	NA
Log Lane Village PD	NA	NA	NA	1	NA	NA	NA	NA	NA	NA	NA
Logan County SO	37	2	13	5	6	5	22	6	2	3	2
Lone Tree PD	93	13	5	17	12	23	24	28	22	8	8
Longmont PD	77	50	79	83	82	60	56	33	19	14	30
Louisville PD	NA	1	10	11	28	42	18	11	5	4	13
Loveland PD	281	154	140	151	136	139	142	253	162	107	97
Mancos PD	NA	NA	NA	1	NA	1	NA	NA	NA	NA	NA
Manitou Springs PD	67	43	68	53	24	4	NA	NA	2	10	8
Mead PD	3	8	12	13	16	4	NA	13	2	2	NA
Meeker PD	4	NA	1	NA	NA	NA	NA	NA	NA	NA	NA
Mesa County SO	110	68	89	72	40	75	69	64	19	33	41
Milliken PD	NA	3	10	5	7	8	4	2	1	2	NA
Minturn PD	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Moffat County SO	18	1	2	8	12	6	5	1	1	1	1
Monte Vista PD	19	3	2	6	5	7	17	9	7	5	2
Montezuma County SO	66	5	11	4	9	3	6	13	4	3	2
Montrose County SO	25	13	11	6	11	3	3	3	6	NA	NA
Montrose PD	109	38	35	33	22	25	33	27	16	15	25
Monument PD	17	5	1	2	5	11	NA	NA	NA	4	6

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Morgan County SO	8	NA	7	1	1	NA	NA	NA	NA	NA	NA
Morrison PD	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mountain View PD	1	NA	1	NA	1	3	4	1	NA	NA	NA
Mountain Village PD	NA	NA	NA	NA	NA	NA	1	NA	NA	NA	NA
Mt Crested Butte PD	3	NA	8	2	2	1	NA	NA	NA	NA	NA
Nederland PD	NA	NA	NA	NA	1	NA	3	1	NA	NA	NA
New Castle PD	NA	NA	NA	NA	NA	NA	1	6	NA	NA	NA
Northglenn PD	219	103	110	91	76	67	74	35	32	30	37
Oak Creek PD	NA	NA	NA	NA	NA	1	1	4	NA	NA	NA
Otero County SO	1	NA	NA	NA	NA	1	NA	2	NA	NA	NA
Ouray PD	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA
Pagosa Springs PD	16	3	6	18	8	2	11	8	3	8	6
Palisade PD	NA	NA	12	9	5	21	11	6	10	10	25
Palmer Lake Marshal	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Paonia PD	NA	2	NA	NA	NA	NA	NA	NA	NA	NA	NA
Parachute PD	13	2	10	25	14	8	11	NA	4	NA	NA
Park County SO	10	1	4	2	3	NA	4	2	2	NA	NA
Parker PD	96	93	54	55	49	70	45	38	41	9	13
Phillips County SO	NA	NA	NA	NA	NA	1	2	NA	NA	NA	NA
Pikes Peak Community College PD	5	NA	1	NA	1	NA	1	NA	NA	NA	NA
Pitkin County SO	NA	NA	NA	4	4	1	NA	1	NA	NA	NA
Platteville PD	NA	NA	NA	NA	1	NA	3	NA	1	NA	1
Prowers County SO	20	6	10	1	7	NA	1	1	NA	1	1
Pueblo County SO	1	21	19	21	43	36	36	41	3	4	12
Pueblo PD	26	5	6	1	4	1	4	8	1	2	1
Rangely PD	4	3	17	8	3	1	1	1	NA	NA	NA
Red Rocks PD	11	NA	3	3	2	1	2	NA	NA	NA	NA
Rifle PD	NA	9	2	10	10	44	36	29	46	17	18
Rio Blanco County SO	18	1	NA	3	NA	1	NA	NA	NA	NA	NA
Rio Grande County SO	NA	2	NA	NA	NA	NA	2	3	NA	NA	NA
Routt County SO	10	NA	1	6	1	2	2	1	4	1	5
Saguache County SO	7	NA	1	NA	NA	NA	NA	NA	NA	NA	NA

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Salida PD	27	9	12	NA	7	2	2	1	2	NA	NA
San Juan County SO	NA	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
San Miguel County SO	NA	NA	NA	NA	4	NA	NA	1	1	4	1
Sedgwick County SO	1	3	1	NA	NA	NA	NA	NA	NA	NA	NA
Severance PD	2	NA	1	NA	3	2	2	4	1	1	4
Sheridan PD	36	22	32	31	13	10	21	7	9	1	2
Silt PD	1	NA	NA	1	1	5	12	7	4	NA	NA
Silverthorne PD	6	NA	1	3	5	1	1	NA	NA	NA	1
Simla PD	NA	NA	NA	NA	NA	NA	NA	2	NA	NA	NA
South Fork Police Department	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1
Southern Ute Tribal Police Department	NA	NA	NA	NA	NA	NA	NA	NA	NA	14	14
Southwest Drug Task Force	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	1
Springfield PD	NA	NA	1	NA	2	NA	NA	1	NA	1	NA
Steamboat Springs PD	82	36	56	41	46	41	39	31	8	13	11
Sterling PD	4	1	16	29	11	7	9	2	2	1	9
Summit County SO	43	5	1	2	1	NA	3	NA	1	1	NA
Teller County SO	18	2	6	5	1	2	26	7	6	3	5
Telluride PD	NA	NA	NA	NA	NA	NA	1	2	NA	1	NA
Thornton PD	440	171	160	144	202	272	238	164	84	126	132
Timnath PD	NA	NA	1	NA	6	NA	2	3	1	NA	NA
Trinidad PD	7	5	1	1	NA	4	12	3	NA	1	NA
University of Colorado PD - Boulder	380	282	162	204	242	476	434	254	202	30	10
University of Colorado PD - Colorado Springs	38	24	31	11	4	8	11	12	4	1	6
University of Colorado PD - Denver/Anschutz Medical Campus	8	NA	1	2	NA	NA	1	NA	NA	NA	NA
University of Northern Colorado Department of Public Safety - Greeley	NA	13	16	16	22	9	19	25	7	8	6

Agency	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Vail PD	118	66	33	62	52	38	29	9	2	5	19
Walsenburg PD	12	NA	3	5	3	NA	NA	NA	NA	NA	NA
Washington County SO	20	2	1	1	2	NA	NA	NA	2	NA	4
Weld County SO	39	21	26	27	33	26	26	17	8	5	3
Westminster PD	509	175	162	117	123	115	117	86	25	29	26
Wheat Ridge PD	108	63	92	70	56	58	41	13	25	5	24
Windsor PD	29	19	4	3	1	4	2	NA	NA	5	10
Woodland Park PD	24	37	23	15	28	21	28	14	23	17	11
Wray PD	NA	NA	NA	NA	NA	NA	NA	1	NA	NA	NA
Yuma County SO	2	NA	NA	NA	NA	NA	NA	5	7	1	NA
Yuma PD	NA	4	NA	NA	NA	NA	1	NA	NA	NA	NA
Total	13,225	6,637	7,128	6,998	6,502	6,483	5,970	4,290	2,733	2,208	2,355

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System.

Appendix A, Table 5, Marijuana arrests, by location, 2012-2022

Location	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Abandoned/ Condemned Structure	3	1	2	3	NA	2	1	NA	NA	2	1
Air/Bus/ Train Terminal	31	53	68	51	40	37	29	20	30	29	32
Amusement Park	4	3	1	2	2	1	3	1	1	1	NA
Arena/ Stadium/ Fairgrounds/ Coliseum	17	11	8	10	11	9	9	8	NA	3	8
Auto Dealership New/Used	1	NA	NA	1	1	NA	1	1	NA	NA	NA
Bank/Savings and Loan	5	1	1	NA	2	1	1	2	2	NA	1
Bar/ Nightclub	75	22	13	17	11	11	13	2	NA	2	2
Camp/ Campground	4	NA	1	4	1	3	4	2	3	1	2
Church/ Synagogue/ Temple/ Mosque	4	8	6	12	8	6	7	4	1	3	4
Commercial/Office Building	43	34	33	39	43	54	45	55	31	30	22
Community Center	NA	4	5	3	6	6	8	5	1	1	3
Construction Site	5	NA	1	1	1	1	2	NA	1	NA	NA
Convenience Store	48	27	23	29	25	24	27	26	12	5	10
Cyberspace	NA	NA	NA	NA	NA	NA	3	1	NA	1	1
Daycare Facility	NA	NA	1	NA	NA	NA	1	NA	NA	NA	NA
Department/ Discount Store	112	66	60	62	60	85	68	52	22	13	11
Dock/Wharf/ Freight/ Modal Terminal	5	4	11	11	13	10	42	103	49	38	25
Drug Store/Doctors Office/Hospital	24	8	7	7	13	18	12	7	4	2	4
Farm Facility	NA	3	NA	NA	NA	1	1	NA	1	NA	NA
Field/ Woods	151	122	72	72	49	46	50	35	20	11	15
Gambling Facility/ Casino/ Race Track	14	2	1	1	NA	3	NA	3	2	1	4
Government/ Public Building	84	44	38	46	35	54	49	45	30	15	15
Grocery/ Supermarket	48	21	24	23	16	11	14	11	6	11	1

Location	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Highway/ Road/ Alley/ Street/ Sidewalk	6,796	2,226	2,194	2,221	2,051	1,930	1,629	1,202	883	641	478
Hotel/ Motel/ Etc.	151	38	29	31	42	35	42	28	15	13	13
Industrial Site	1	NA	3	3	3	2	4	1	3	7	4
Jail/Prison/ Penitentiary/ Corrections Facility	49	27	30	29	30	31	31	32	12	16	10
Lake/ Waterway/ Beach	10	4	4	5	3	4	5	1	6	NA	NA
Liquor Store	8	1	NA	1	2	2	4	NA	1	1	NA
Military Installation	2	NA	NA	NA	NA	NA	1	NA	NA	NA	NA
Other/ Unknown	513	191	236	226	250	208	188	82	79	51	40
Park/ Playground	227	198	369	472	345	323	241	172	99	85	92
Parking/ Drop Lot/ Garage	955	388	427	416	452	384	346	245	162	124	108
Rental Storage Facility	9	6	1	2	9	6	4	4	1	3	1
Residence/Home	1,475	564	668	679	796	825	797	638	447	274	259
Rest Area	2	1	1	1	1	2	2	1	NA	2	NA
Restaurant	46	18	21	28	26	27	31	22	8	7	7
School – College /University	519	448	465	600	570	809	754	588	236	239	153
School – Elementary/ Secondary	1,010	1,390	1,654	1,358	1,236	1,138	1,339	1,190	402	689	1,081
School/ College (Historical Only)	258	NA	NA	NA	NA	1	2	7	1	4	11
Service/ Gas Station	15	8	7	9	4	8	16	10	8	3	5
Shelter – Mission/ Homeless	1	1	NA	4	2	3	1	5	4	3	1
Shopping Mall	19	15	9	11	10	7	7	5	3	2	9
Specialty Store	50	30	35	44	58	43	42	72	53	20	19
Tribal Lands	NA	NA	NA	1	1	1	1	NA	NA	7	3

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System.

APPENDIX B: BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

Appendix B, Table 1. Past 30-day adult marijuana use, by gender, 2014–2021: BRFSS

Measure/Confidence	2014	2015	2016	2017	2018	2019	2020	2021
Male Lower 95% CL	15.4%	15.1%	15.1%	18.1%	18.5%	21.3%	20.0%	20.8%
Male %	17.2%	16.9%	16.4%	19.8%	20.2%	22.9%	21.6%	22.3%
Male Upper 95% CL	19.1%	18.6%	17.7%	21.4%	21.8%	24.6%	23.1%	23.8%
Female Lower 95% CL	8.6%	8.7%	9.8%	9.8%	13.4%	13.6%	15.0%	14.5%
Female %	10.0%	10.0%	11.0%	11.2%	14.9%	15.1%	16.4%	15.8%
Female Upper 95% CL	11.4%	11.4%	12.1%	12.5%	16.5%	16.5%	17.8%	17.1%

Source: Behavioral Risk Factor Surveillance System, Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.

Appendix B, Table 2. Past 30-day adult marijuana use, by age, 2014–2021: BRFSS

Measure/Confidence	2014	2015	2016	2017	2018	2019	2020	2021
18-25 95% Lower CL	22.6%	21.2%	21.3%	24.6%	25.5%	24.5%	23.9%	28.1%
18-25	27.5%	26.1%	25.2%	29.2%	30.0%	28.8%	27.8%	32.1%
18-25 95% Upper CL	32.3%	31.0%	29.1%	33.8%	34.4%	33.1%	31.6%	36.2%
26-24 95% Lower CL	16.3%	14.7%	16.5%	22.8%	23.6%	25.8%	26.1%	28.0%
26-34	19.8%	18.3%	19.4%	26.4%	27.3%	29.4%	29.4%	31.0%
26-35 95% Upper CL	23.4%	21.9%	22.2%	30.0%	31.0%	33.1%	32.7%	34.0%
35-64 95% Lower CL	10.0%	11.1%	11.7%	11.6%	14.0%	15.9%	16.1%	15.5%
35-64	11.3%	12.4%	12.7%	12.8%	15.4%	17.3%	17.4%	16.8%
35-64 95% Upper CL	12.6%	13.6%	13.8%	14.1%	16.7%	18.7%	18.8%	18.0%
65+ 95% Lower CL	2.1%	3.5%	3.4%	4.6%	6.8%	8.0%	8.0%	6.3%
65+	3.0%	4.4%	4.2%	5.6%	8.1%	9.3%	9.3%	7.6%
65+ 95% Upper CL	3.9%	5.2%	4.9%	6.7%	9.3%	10.5%	10.6%	9.0%

Source: Behavioral Risk Factor Surveillance System, Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.

Appendix B, Table 3. Past 30-day adult marijuana use, by race/ethnicity, 2014–2021: BRFSS

Measure/Confidence	2014	2015	2016	2017	2018	2019	2020	2021
Hispanic Lower 95% CL	8.8%	8.4%	9.4%	11.8%	12.2%	11.4%	14.0%	15.6%
Hispanic	11.6%	10.9%	11.6%	14.4%	14.7%	13.6%	16.3%	18.0%
Hispanic Upper 95% CL	14.5%	13.4%	13.7%	17.0%	17.2%	15.8%	18.6%	20.4%
NH White Lower 95% CL	12.7%	12.6%	13.0%	14.8%	16.5%	18.7%	17.7%	18.4%
NH White	14.1%	13.9%	14.1%	16.1%	17.9%	20.1%	19.0%	19.6%
NH White Upper 95% CL	15.4%	15.3%	15.1%	17.3%	19.2%	21.4%	20.2%	20.8%
NH Black Lower 95% CL	11.5%	5.8%	10.8%	7.4%	13.3%	17.0%	21.5%	17.7%
NH Black	19.3%	10.6%	16.8%	13.1%	20.6%	24.9%	28.7%	23.6%
NH Black Upper 95% CL	27.1%	15.5%	22.8%	18.7%	28.0%	32.9%	35.8%	29.6%
NH Other Lower 95% CL	1.4%	4.7%	7.2%	8.4%	10.6%	9.0%	10.1%	7.8%
NH Other	5.1%	10.1%	12.0%	13.7%	16.4%	15.5%	14.6%	11.8%
NH Other Upper 95% CL	8.7%	15.5%	16.7%	19.0%	22.2%	22.0%	19.0%	15.7%
NH Multiracial Lower 95% CL	8.3%	13.5%	7.0%	12.7%	24.2%	17.7%	25.0%	17.7%
NH Multiracial	17.9%	23.2%	15.3%	21.4%	36.0%	27.8%	34.5%	26.0%
NH Multiracial Upper 95% CL	27.6%	32.8%	23.6%	30.2%	47.8%	37.9%	44.0%	34.3%

Source: Behavioral Risk Factor Surveillance System, Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.

Appendix B, Table 4. Past 30-day adult marijuana use, by sexual orientation, 2014–2021: BRFSS

Measure/Confidence	2014	2015	2016	2017	2018	2019	2020	2021
Heterosexual Lower 95% CL	11.8%	11.4%	12.4%	13.4%	15.4%	16.6%	17.3%	16.2%
Heterosexual	12.9%	12.4%	13.3%	14.5%	16.5%	17.7%	18.4%	17.2%
Heterosexual Upper 95% CL	14.1%	13.5%	14.2%	15.5%	17.6%	18.8%	19.4%	18.2%
Bisexual Lower 95% CL	14.3%	33.1%	18.2%	30.0%	37.7%	30.3%	32.8%	35.9%
Bisexual	24.6%	46.4%	26.2%	39.6%	46.9%	38.1%	40.4%	42.0%
Bisexual Upper 95% CL	34.9%	59.7%	34.3%	49.3%	56.0%	45.9%	48.1%	48.0%
Gay or Lesbian Lower 95% CL	19.4%	17.0%	9.7%	19.5%	16.9%	29.5%	16.3%	30.1%
Gay or Lesbian	30.7%	28.8%	17.5%	28.9%	26.6%	39.2%	24.1%	38.3%
Gay or Lesbian Upper 95% CL	41.9%	40.6%	25.3%	38.3%	36.2%	48.9%	31.8%	46.4%
Other Lower 95% CL	NA	NA	NA	NA	NA	16.9%	14.1%	24.6%
Other	NA	NA	NA	NA	NA	29.6%	22.9%	32.7%
Other Upper 95% CL	NA	NA	NA	NA	NA	42.2%	31.7%	40.7%

Source: Behavioral Risk Factor Surveillance System, Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.

Appendix B, Table 5. Frequency of adult marijuana use among past month users, 2014–2021: BRFSS

Measure/Confidence	2014	2015	2016	2017	2018	2019	2020	2021
Daily/Near Daily 95% Lower CL	39.6%	42.8%	43.2%	45.6%	48.0%	44.9%	44.7%	49.5%
Daily/Near Daily	44.3%	47.3%	46.8%	49.4%	51.5%	48.2%	47.9%	52.3%
Daily/Near Daily 95% Upper CL	48.9%	51.8%	50.3%	53.3%	55.1%	51.5%	51.1%	55.2%
Monthly 95% Lower CL	26.5%	22.2%	25.7%	20.9%	19.4%	17.6%	20.3%	19.5%
Monthly	30.6%	26.0%	28.9%	24.1%	22.3%	20.2%	22.9%	21.8%
Monthly 95% Upper CL	34.8%	29.8%	32.2%	27.3%	25.2%	22.8%	25.6%	24.1%
Weekly 95% Lower CL	21.1%	22.8%	21.3%	23.1%	23.0%	28.5%	26.4%	23.4%
Weekly	25.1%	26.7%	24.3%	26.4%	26.2%	31.6%	29.2%	25.9%
Weekly 95% Upper CL	29.0%	30.6%	27.2%	29.7%	29.3%	34.6%	32.0%	28.4%

Source: Behavioral Risk Factor Surveillance System, Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment. Daily/Near Daily use refers to use between 20-30 days per month; weekly refers to use between 4-19 days per month; monthly refers to use between 1-13 days per month.

Appendix B, Table 6. Method of marijuana use among adult marijuana users, 2014–2021: BRFSS

Measure/Confidence	2015	2016	2017	2018	2019	2020	2021
Smoked 95% Lower CL	79.8%	85.0%	81.7%	79.3%	73.3%	71.1%	68.9%
Smoked	82.9%	87.2%	84.3%	81.8%	76.1%	73.7%	71.5%
Smoked Upper CL	86.1%	89.3%	86.8%	84.4%	78.8%	76.3%	74.1%
Ate/Drank 95% Lower CL	31.3%	31.8%	36.7%	36.4%	39.7%	40.0%	44.0%
Ate/Drank	35.6%	35.2%	40.4%	39.9%	43.0%	43.1%	46.8%
Ate/Drank 95% Upper CL	39.9%	38.6%	44.2%	43.4%	46.3%	46.1%	49.7%
Vaporized 95% Lower CL	28.1%	19.9%	25.6%	26.1%	28.9%	19.1%	24.9%
Vaporized	32.4%	22.9%	29.1%	29.4%	32.0%	21.7%	27.5%
Vaporized 95% Upper CL	36.7%	25.9%	32.6%	32.7%	35.1%	24.3%	30.1%
Dabbed 95% Lower CL	13.7%	13.9%	17.8%	20.3%	16.9%	15.0%	18.3%
Dabbed	17.7%	16.8%	21.1%	23.5%	19.6%	17.4%	20.7%
Dabbed 95% Upper CL	21.7%	19.6%	24.4%	26.7%	22.4%	19.8%	23.1%
Other 95% Lower CL	4.9%	4.7%	5.6%	6.4%	9.7%	3.3%	3.9%
Other	7.3%	6.3%	7.5%	8.2%	11.7%	4.4%	5.0%
Other 95% Upper CL	9.8%	8.0%	9.4%	10.0%	13.7%	5.5%	6.2%

Source: Behavioral Risk Factor Surveillance System, Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.

Appendix B, Table 7 Health Statistics Regions by County

Region	County
Denver-Bounder	Adams
Denver-Boulder	Arapahoe
Denver-Boulder	Boulder
Denver-Boulder	Broomfield
Denver-Boulder	Clear Creek
Denver-Boulder	Denver
Denver-Boulder	Douglas
Denver-Boulder	Gilpin
Denver-Boulder	Jefferson
Northeast	Cheyenne
Northeast	Elbert
Northeast	Kit Carson
Northeast	Larimer
Northeast	Lincoln
Northeast	Logan
Northeast	Morgan
Northeast	Phillips
Northeast	Sedgwick
Northeast	Washington
Northeast	Yuma
Northeast	Weld
Northwest	Eagle
Northwest	Garfield
Northwest	Grand
Northwest	Jackson
Northwest	Mesa
Northwest	Moffat
Northwest	Pitkin
Northwest	Rio Blanco
Northwest	Routt
Northwest	Summit
South Central	Chaffee
South Central	Custer
South Central	El Paso
South Central	Fremont
South Central	Lake
South Central	Park
South Central	Teller
Southeast	Alamosa
Southeast	Baca
Southeast	Bent

Southeast	Conejos
Southeast	Costilla
Southeast	Crowley
Southeast	Huerfano
Southeast	Kiowa
Southeast	Las Animas
Southeast	Mineral
Southeast	Otero
Southeast	Prowers
Southeast	Pueblo
Southeast	Rio Grande
Southeast	Saguache
Southwest	Archuleta
Southwest	Delta
Southwest	Dolores
Southwest	Gunnison
Southwest	Hinsdale
Southwest	La Plata
Southwest	Montezuma
Southwest	Montrose
Southwest	Ouray
Southwest	San Juan
Southwest	San Miguel

Source: Colorado Department of Public Health and Environment. (n.d), Behavioral Risk Factor Surveillance System(BRFSS) survey details.

APPENDIX C: HEALTHY KIDS COLORADO SURVEY DATA

Appendix C, Table 1. High school students past 30-day use, by substance type, 2009-2021

Measure/Confidence Level (CL)	2009	2011	2013	2015	2017	2019	2021
Alcohol Lower 95% CL	35.8%	31.7%	29.6%	28.3%	26.7%	28.3%	21.9%
Alcohol	40.8%	36.4%	31.0%	30.2%	28.7%	29.6%	23.6%
Alcohol Upper 95% CL	46.0%	41.4%	32.4%	32.2%	29.9%	30.8%	25.4%
E-vapor product Lower 95% CL	NA	NA	NA	23.7%	25.7%	24.9%	15.5%
E-vapor product	NA	NA	NA	26.1%	27.0%	25.9%	16.1%
E-vapor product Upper 95% CL	NA	NA	NA	28.6%	28.3%	26.9%	16.8%
Marijuana Lower 95% CL	20.4%	19.6%	18.7%	19.7%	18.4%	19.3%	12.4%
Marijuana	24.8%	22.0%	19.7%	21.2%	19.4%	20.6%	13.3%
Marijuana Upper 95% CL	29.7%	24.5%	20.6%	22.7%	20.4%	21.9%	14.1%
Cigarette Lower 95% CL	13.2%	12.8%	10.0%	7.7%	6.7%	5.3%	2.9%
Cigarette	17.7%	15.7%	10.7%	8.6%	7.2%	5.7%	3.3%
Cigarette Upper 95% CL	23.2%	19.0%	11.4%	9.5%	7.6%	6.2%	3.8%

Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2023).

Appendix C, Table 2. High school students reported methods of marijuana use among students who reported using marijuana, 2015 -2021

Measure/Confidence Level (CL)	2015	2017	2019	2021
Smoked Lower 95% CL	90.3%	86.9%	76.2%	75.9%
Smoked	91.6%	88.4%	77.9%	79.5%
Smoked Upper 95% CL	93.0%	90.0%	79.6%	83.1%
Dabbed Lower 95% CL	22.5%	32.0%	49.7%	43.0%
Dabbed	28.0%	34.4%	52.0%	49.2%
Dabbed Upper 95% CL	33.5%	36.8%	54.3%	55.4%
Vaporized Lower 95% CL	18.5%	18.1%	31.9%	34.6%
Vaporized	21.8%	20.3%	34.3%	39.1%
Vaporized Upper 95% CL	25.2%	22.4%	36.7%	43.6%
Ate/Drank Lower 95% CL	25.0%	32.7%	33.8%	34.1%
Ate/Drank	27.8%	35.6%	35.6%	36.6%
Ate/Drank Upper 95% CL	30.7%	38.5%	37.4%	39.0%
Other Lower 95% CL	5.5%	6.2%	7.5%	7.9%
Other	7.7%	7.3%	8.4%	10.3%
Other Upper 95% CL	9.8%	8.3%	9.2%	12.7%

Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2023).

Appendix C, Table 3. High school students reported past 30-day marijuana use, by health statistics region, 2015 - 2021

Region	2013 %	Lower 95% CL	Upper 95% CL	2015 %	Lower 95% CL	Upper 95% CL	2017 %	Lower 95% CL	Upper 95% CL	2019 %	Lower 95% CL	Upper 95% CL	2021 %	Lower 95% CL	Upper 95% CL
Colorado	19.7	18.7	20.6	21.2	19.7	22.7	19.4	18.4	20.4	20.6	19.3	21.9	13.3	12.4	14.1
1	11.4	NA	28.9	11.8	4.8	18.8	16.3	12.9	19.6	15.8	14.2	17.3	NA	NA	NA
2	16.9	14	19.8	17.6	12.6	22.5	19.6	18.3	20.9	17.4	13.6	21.3	14.6	12.2	17.1
3	13.2	11.7	14.7	NA	NA	NA	13.5	12.1	14.8	13.3	12.5	14	10.0	8.1	11.9
4	14.8	10.4	19.2	NA	NA	NA	22.2	19.5	24.8	21.5	15.8	27.1	NA	NA	NA
5	9.4	6	12.9	9.7	1.9	17.4	16.2	11.6	20.8	8.7	4.3	13.1	NA	NA	NA
6	17.6	13.4	21.8	20.1	16.9	23.3	20.6	12.6	28.5	22.5	15.8	29.3	11.7	9.0	14.5
7	32.1	25.7	38.4	30.1	27.1	33.2	26.8	24.1	29.5	27	23.9	30.1	19.6	18.0	21.2
8	23.1	18.1	28	19.7	17	22.4	19.6	17.5	21.7	22.5	20	25.1	NA	NA	NA
9	24.6	20.9	28.3	26.2	23.3	29.1	24.9	23	26.8	24.7	23.5	25.8	19.9	16.3	23.6
10	26.7	22.3	31	17.5	12.7	22.2	25.3	22	28.6	22.1	18.9	25.3	13.9	7.6	20.3
11	14.3	7.3	21.2	19.7	17.8	21.7	19.5	18.9	20.2	18.2	16.9	19.5	14.3	13.3	15.2
12	19.7	15.5	23.9	24.5	20.1	28.9	20.8	19.4	22.3	21.1	19.2	23.1	16.5	11.6	21.5
13	22.9	21.2	24.7	23.5	20.7	26.2	22.1	18.9	25.2	18.7	13.7	23.6	8.0	5.4	10.6
14	22.8	19.7	25.9	20.6	14.3	27	NA	NA	NA	18	14.9	21	13.4	11.6	15.2
15	20.6	18.7	22.4	20.2	17.9	22.6	18.3	15.5	21.1	23.1	20.4	25.8	12.8	8.5	17.2
16	20.3	18.3	22.3	24.1	20.2	28	22.2	18.9	25.4	22.6	19.1	26.1	14.8	13.0	16.6
17	25.1	21.9	28.3	20.8	19.3	22.3	21.1	16.6	25.7	21.4	18	24.8	21.4	20.3	22.4
18	18.6	15.4	21.9	NA	NA	NA	18	16.1	19.9	20.9	19	22.8	NA	NA	NA
19	17.2	13	21.3	21.2	19	23.3	19.7	17.2	22.2	19.1	17	21.2	NA	NA	NA
20	26.6	22.5	30.8	26.1	20.5	31.8	20.9	16.9	24.8	25.5	15.8	35.3	11.0	8.0	14.1
21	NA	NA	NA	NA	NA	NA	NA	NA	NA	19.5	16.8	22.2	14.1	13.0	15.1

Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2023).

APPENDIX D:
CERTIFIED DRUG RECOGNITION EXPERTS, BY AGENCY

Appendix D, Table 1. Certified drug recognition experts, by agency, 2020

Agency	N certified
Adams County Sheriff's Office	2
Arapahoe County Sheriff's Office	3
Arvada Police Department	2
Aurora Police Department	9
Avon Police Department	2
Basalt Police Department	1
Boulder Police Department	1
Breckenridge Police Department	1
Brighton Police Department	2
Broomfield Police Department	2
Buena Vista Police Department	1
Canon City PD	1
Carbondale Police Department	2
Castle Rock Police Department	2
Clear Creek County Sheriff's Office	1
Colorado Mental Health Institute	1
Colorado Parks and Wildlife	1
Colorado Springs Police Department	8
Colorado State Patrol	60
Commerce City Police Department	2
CU Boulder Police	1
Denver Police Department	25
Douglas County Sheriff's Office	1
Eagle County Sheriff's Office	2
El Paso County Sheriff's Office	2
Englewood Police Department	3
FBI - No local PD, Formerly Loveland PD	1
Fort Collins Police Services	2
Fort Lupton Police Department	1
Fountain Police Department	3
Fraser Winter Park Police Department	1
Frederick Police Department	1
Fremont County Sheriff's Office	2
Garfield County Sheriff's Office	3
Gilpin County Sheriff's Office	1
Glenwood Springs Police Department	2
Golden Police Department	1

Appendix D, Table 1. Certified drug recognition experts, by agency, 2020

Agency	N certified
Grand Junction Police Department	1
Greeley Police Department	3
Gunnison County Sheriff's Office	1
Gunnison Police Department	1
Jefferson County Sheriff's Office	1
Lafayette Police Department	3
Lakewood Police Department	3
Larimer County Sheriff's Office	1
Littleton Police Department	1
Logan County Sheriff's Office	2
Longmont Police Department	4
Loveland Police Department	6
Montezuma County Sheriff's Office	1
Montrose Police Department	1
Northglenn Police Department	1
Oak Creek Police Department	1
Pagosa Springs Police Department	1
Parachute Police Department	1
Park County Sheriff's Office	2
Parker Police Department	4
Pitkin County Sheriff's Office	1
Pueblo County Sheriff's Office	2
Pueblo Police Department	2
Rangely Police Department	1
Rifle Police Department	1
Salida Police Department	1
Sterling Police Department	1
Thornton Police Department	6
USAFA 10 Security Forces Squadron	1
Vail Police Department	1
Weld County Sheriff's Office	1
Westminster Police Department	5
Windsor Police Department	1
Woodland Park Police Department	2
Grand total	221

Source: Colorado Department of Transportation, Drug Recognition Experts Program.

APPENDIX E: MARIJUANA TAX REVENUE

Appendix E: Table 1: Marijuana tax revenue by source and quarter

Date	2.9% Sales Tax	Retail MJ Tax	Excise Tax	License & Other Fees	Total
2014-QT-1	$2,790,638	$2,836,484	$534,933	$1,450,276	$7,612,331
2014-QT-2	$4,698,569	$6,186,869	$2,479,906	$2,604,710	$15,970,054
2014-QT-3	$5,083,537	$8,750,888	$3,832,363	$4,003,915	$21,670,703
2014-QT-4	$5,262,059	$9,118,326	$4,528,067	$3,432,787	$22,341,239
2015-QT-1	$5,602,351	$10,812,214	$6,438,041	$3,607,224	$26,459,830
2015-QT-2	$6,277,803	$13,336,370	$9,197,304	$3,111,928	$31,923,405
2015-QT-3	$7,914,769	$16,047,286	$9,332,412	$3,555,312	$36,849,779
2015-QT-4	$7,174,064	$15,420,670	$8,450,076	$4,133,347	$35,178,157
2016-QT-1	$7,922,840	$16,815,826	$11,295,800	$3,875,508	$39,909,974
2016-QT-2	$8,549,907	$18,810,741	$13,552,552	$3,849,908	$44,763,108
2016-QT-3	$10,106,747	$24,170,015	$16,323,589	$2,943,638	$53,543,989
2016-QT-4	$9,869,463	$23,953,541	$18,248,596	$3,316,141	$55,387,741
2017-QT-1	$9,808,450	$23,343,441	$17,045,012	$3,242,436	$53,439,339
2017-QT-2	$10,784,783	$26,958,255	$19,805,912	$3,545,040	$61,093,990
2017-QT-3	$6,784,331	$39,629,408	$17,768,738	$3,265,824	$67,448,301
2017-QT-4	$3,159,337	$41,581,714	$17,345,366	$3,300,427	$65,386,844
2018-QT-1	$2,943,801	$41,115,512	$16,609,302	$3,019,508	$63,688,123
2018-QT-2	$2,930,946	$44,860,197	$16,236,806	$3,215,591	$67,243,540
2018-QT-3	$2,624,985	$49,583,605	$14,759,591	$2,810,811	$69,778,992
2018-QT-4	$2,328,505	$46,294,908	$14,006,971	$3,188,600	$65,818,984
2019-QT-1	$2,450,410	$45,523,123	$12,837,265	$2,679,320	$63,490,118
2019-QT-2	$3,016,104	$51,907,762	$16,843,521	$3,195,287	$74,962,674
2019-QT-3	$3,092,672	$60,530,523	$18,329,290	$2,928,455	$84,880,940
2019-QT-4	$2,675,724	$54,526,514	$18,657,049	$3,265,406	$79,124,693
2020-QT-1	$2,905,089	$51,980,538	$20,910,373	$2,907,563	$78,703,563
2020-QT-2	$3,373,563	$59,173,699	$23,170,339	$2,757,025	$88,474,626
2020-QT-3	$4,062,073	$79,095,963	$29,534,483	$2,759,247	$115,451,766
2020-QT-4	$3,518,160	$70,277,861	$27,883,847	$3,170,287	$104,850,155
2021-QT-1	$3,368,525	$66,445,814	$30,691,227	$2,901,183	$103,406,749
2021-QT-2	$3,636,575	$74,426,107	$32,228,721	$3,337,963	$113,629,366
2021-QT-3	$4,931,222	$72,482,161	$29,592,373	$3,329,927	$110,335,683
2021-QT-4	$2,595,007	$64,264,450	$26,026,152	$3,228,646	$96,114,255
2022-QT-1	$2,309,574	$59,851,797	$21,650,100	$2,910,437	$86,721,908
2022-QT-2	$2,385,420	$59,437,959	$20,411,318	$3,300,449	$85,535,146

Date	2.9% Sales Tax	Retail MJ Tax	Excise Tax	License & Other Fees	Total
2022-QT-3	$1,838,198	$59,297,277	$15,387,483	$2,900,181	$79,423,139
2022-QT-4	$1,674,425	$55,468,892	$13,529,208	$2,750,968	$73,423,493
2023-QT-1	$1,769,381	$52,216,448	$13,625,767	$2,594,173	$70,205,769
2023-QT-2	$1,662,762	$52,413,515	$13,370,012	$2,763,060	$70,209,349
2023-QT-3	$1,523,141	$52,404,492	$13,104,299	$2,676,811	$69,708,743
2023-QT-4	$1,335,303	$47,499,983	$12,121,950	$3,039,947	$63,997,183
2024-QT-1	$858,222	$48,273,309	$11,464,391	$3,833,734	$64,429,656
2024-QT-2	$1,582,119	$47,217,859	$12,099,135	$2,838,976	$63,738,089

Source: Colorado Department of Revenue, Marijuana Enforcement Division, Marijuana Tax Reports.