Impacts of Marijuana Legalization in Colorado

A Report Pursuant to C.R.S. 24-33.4-516

July 2021

COLORADO
Division of Criminal Justice
Department of Public Safety

Colorado Department of Public Safety
Division of Criminal Justice
Office of Research and Statistics

700 Kipling St., Denver, Colorado 80215
https://ors.colorado.gov/

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Prepared by

Jack K. Reed, Statistical Analyst
Office of Research and Statistics

Stan Hilkey, Executive Director, Department of Public Safety
Joe Thome, Director, Division of Criminal Justice
Kim English, Research Director, Office of Research and Statistics

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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 seeks to establish and present the baseline measures for the metrics specified in S.B. 13-283 (C.R.S. 24-33.4-516).

The information presented here should be interpreted with caution. The majority of the data sources vary considerably in terms of what exists historically and the reliability of some sources has improved over time. Consequently, it is difficult to draw conclusions about the potential effects of marijuana legalization and commercialization on public safety, public health, or youth outcomes, and this may always be the case due to the lack of historical data. Furthermore, the measurement of available data elements can be affected by very context of marijuana legalization. For example, the decreasing social stigma regarding marijuana use could lead individuals to be more likely to report use on surveys and also to health workers in emergency departments and poison control centers, making marijuana use appear to increase when perhaps it has not. Additionally, law enforcement officials and prosecuting attorneys continue to struggle with enforcement of the complex and sometimes conflicting marijuana laws that remain. Finally, the lack of comparable Federal data across many metrics makes it difficult to compare changes in Colorado to other jurisdictions which may have not legalized marijuana. In sum, then, the lack of pre-commercialization data, the decreasing social stigma, and challenges to law enforcement combine to make it difficult to translate these preliminary findings into definitive statements of outcomes.

Recognizing the challenges involved in interpreting the data presented here, the following is a summary of findings:

Public Safety

Arrests

- The total number of marijuana arrests decreased by 68% between 2012 and 2019, from 13,225 to 4,290. Marijuana possession arrests, which make up the majority of all marijuana arrests, were cut in half (-71%). Marijuana sales arrests decreased by 56%. Arrests for marijuana production increased slightly (+3%). Marijuana arrests that were unspecified, meaning the specific reason for the arrest was not noted by law enforcement, went down by 45%.
    - The number of marijuana arrests decreased by 72% for Whites, 55% for Hispanics, and 63% for Blacks. The marijuana arrest rate for Blacks (160 per 100,000) was more than double that of Whites (76 per 100,000) in 2019. This disparity has not changed in any meaningful way since legalization.

  - Nine large Colorado counties (Adams, Arapahoe, Boulder, Douglas, El Paso, Jefferson, Larimer, Mesa, and Weld) showed a decrease in marijuana arrests, ranging between -8% (Boulder) and -67% (Adams). The average decline across these nine counties was -46%.

Court filings

- The number of marijuana-related court filings declined 55% between 2012 and 2019, from 9,925 to 4,489.
  - Filings fell by 1% for juveniles 10 to 17 years old, by 28% for young adults 18 to 20 years old, and by 67% for adults ages 21 or older.
  - The number of cases with a marijuana felony as the top marijuana charge declined initially (986 in 2012 to 418 in 2014) but has since rebounded to 806, down 18% from 2019.
  - This contrasts with the decline in misdemeanors (down 47%) and petty offenses (down 71%) between 2012 and 2019.
- 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, but has since dropped back down to 34 in 2019.
  - The types of charge associated with COCCA filings that increased was manufacturing of marijuana or marijuana products (25 to 36) while all others have shown a decline in that time period.

Traffic Safety

- The increase in law enforcement officers who are trained in recognizing drug use, from 129 in 2012 to 221 in 2020, can increase drug detection rates apart from any changes in driver behavior.
- Traffic safety data were obtained from a number of different sources. Please note that traffic safety data may be incomplete because law enforcement officers may determine that alcohol is impairing the driver, and therefore additional (time consuming and costly) drug testing may not be pursued.
- The number of DUI summonses issued by the Colorado State Patrol in which marijuana-alone or marijuana-in-combination was recorded increased by 120% between 2014 (n=684) and 2020 (n=1,508). The prevalence of marijuana alone increased from 6.3% in 2014 to 8.7% in 2020. The percentage of marijuana polydrug (marijuana and alcohol or marijuana and other drugs) as the perceived impairing substance increased from 5.7% of all DUIs in 2014 to 22.7% in 2020.

- In 2018, the most recent data available, 26,255 cases were filed in court that included a charge of driving under the influence; 16,943 of these were matched with either a breath or blood test.[1]
    - Of these, 5,032 had blood samples screened for the presence of marijuana: 3,335 cases (66.3%) had a positive cannabinoid screen and a follow-up confirmation for other cannabis analytes, and 49.6% detected Delta-9 THC at 5.0 ng/mL or above.

- According to CDOT, the number of fatalities in which a driver tested positive for Delta-9 THC at or above the 5.0 ng/mL level increased from 52 (14% of all fatalities) in 2016 to 56 in 2019 (13% of all fatalities).
    - The number of fatalities with cannabinoid-only or cannabinoid-in-combination positive drivers increased 140%, from 55 in 2013 to 132 in 2019.
    - However, note that the detection of any cannabinoid in blood is not an indicator of impairment but only indicates presence in the system. Detection of Delta-9 THC, one of the primary psychoactive metabolites of marijuana, may be an indicator of impairment.
    - A 2019 survey conducted by the Colorado Department of Public Health and Environment found that 3.5% of adults reported driving within two-to-three hours of using marijuana in the past-30 days, while 18.6% of recent marijuana users reported this behavior.

Probationers testing positive

- The proportion of 18- to 25-year-old probationers testing positive for THC increased, from 32% in 2012 to 47% in 2019. The proportion of 36 and older probationers testing positive for THC also increased, from 14% in 2012 to 27% in 2019.

Illegal cultivation on public land

- The number of plants seized on public lands has fluctuated significantly over time, from 46,662 plants in 2012, to a high of 80,826 in 2017, down to a low of 1,502 in 2018.

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 for Colorado-sourced marijuana reported to EPIC increased from 286 in 2012 to 673 in 2017, but has since gone back down to 266 in 2019.
    - The types of marijuana products seized has changed over time, with marijuana concentrates accounting for 22% of seizures and edibles accounting for another 10% in

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[1] Please see http://cdpsdocs.state.co.us/ors/docs/reports/2018-DUI_HB17-1315.pdf for more information.

2019. In 2012, both of those categories combined accounted for 10% of marijuana seizures reported to EPIC.

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.
    - In 2019, 19.0% of adults reported marijuana use in the past 30 days, compared to 13.4% in 2014, a significant increase.
        - Males have significantly higher past 30-day use (22.9%) than females (15.1%).
        - Adults 26-34 year reported the highest past 30-day usage rates (29.4%), followed by 18-25 year-olds (28.8%), 35-64 year-olds (17.3%), and those 65 years and older (9.3%).
        - The marijuana usage rates of those 65 and older has more than tripled since 2014.
        - Those reporting smoking marijuana flower decreased from 87.2% of users in 2016 to 76.1% in 2019. This compares to increases in eating/drinking (35.2% in 2016 to 43.0% in 2019, vaping (22.9% in 2016 to 32.0% in 2019), and dabbing (16.8% in 2016 to 19.6% in 2019)
- According to the National Survey on Drug Use and Health, administered by the federal Substance Abuse and Mental Health Services Administration, the prevalence rates for marijuana use in the past 30 days increased for young adults (18- to 25-years old), from 21.2% in 2005/06 (pre-commercialization) to 31.2% in 2013/14 (post-commercialization), but has stabilized at 34.4% in 2018/19. Reported 30-day marijuana use by adults ages 26 years and older increased from 5.4% in 2005/06 to 15.6% in 2018/19.

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:
    - During the era of non-commercial medical marijuana the hospitalization rate of those with marijuana-related billing codes 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. Since the complete transition to ICD-10 codes in 2016, there have been no significant changes in the hospitalization rates.

- There was a significant rate increase of marijuana-related emergency department visits during the era of medical commercialization, from 617.7 in 2011 to 1039.5 in 2014. In the period after the transition to ICD-10-CM there was an initial increase which reversed in 2019.

Poison control

- The number of calls to poison control mentioning human marijuana exposure increased over the past 10 years. There were 41 calls in 2006 and 276 in 2019. Between 2014 and 2017, the frequency of calls reporting human marijuana exposure stabilized but then increased again in 2018.

Treatment Admissions

- The overall rate of treatment admissions for those reporting marijuana as their primary substance of use has decreased from 222 admissions per 100,000 population in 2012 to 182 in 2019.
- Nearly three-quarters (73.5%) of youth (10 to 17 years-old) in treatment for substance use report marijuana as their primary substance of use.

Youth Impacts

Usage rates

- Data on youth marijuana use was available from two sources. The Healthy Kids Colorado Survey (HKCS), with 46,537 high school and 6,983 middle school students responding in 2019, and the National Survey on Drug Use and Health (NSDUH), with 447 respondents in 2018/19.
    - HKCS results indicate no significant change in past 30-day use of marijuana between 2013 (19.7%) and 2019 (20.6%). Also, in 2019, the use rates were not different from the national 30-day use rates reported by the Youth Risk Behavior Survey.[2] In 2019, 20.6% of Colorado high school students reported using marijuana in the past 30-days compared to 21.7% of high school students nationally that reported this behavior.
    - The 2019 HKCS found that marijuana use increases by grade level, with 13.3% of 9th graders, 18.6% of 10th graders, 24.3% of 11th graders, and 26.9% of 12th reporting use in the past 30-days.
    - The 2015/16 NSDUH, with many fewer respondents compared to HKCS, indicated a gradual increase in youth use from 2006/07 (8.1%) to 2013/14 (12.6%); however, the

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[2] The YRBS is the comparable survey overseen nationally by the Centers for Disease Control and Prevention.

reported use declined since then, with 9.8% reporting use in 2018/19. The NSDUH showed that youth use of marijuana in Colorado (9.8%) was above the national average (7.0%).

Arrests

- The number of juvenile marijuana arrests decreased 37%, from 3,265 in 2012 to 2,064 in 2019. The rate of juvenile marijuana arrests per 100,000 decreased 42%, from 599 in 2012 to 349 in 2019.
    - The rate of White juvenile arrests decreased 47%, from 667 per 100,000 in 2012 to 352 per 100,000 in 2019.
    - The rate of Hispanic juvenile arrests decreased 26%, from 489 per 100,000 in 2012 to 364 in 2019.
    - The rate of Black juvenile arrests decreased 41%, from 727 per 100,000 in 2012 to 429 in 2019.

School suspension/expulsion rates

- Data from the Colorado Department of Education show that that drug suspension rates increased from 391 (per 100,000 registered students) in the 2008-09 school year to 551 in 2010-11. The drug suspension rate fluctuated somewhat since then and was 426 in the 2019-20 school year. The drug expulsion rate was 65 (per 100,000 registered students) in the 2008-09 school year, increasing to 91 in 2010-11, and then decreasing to 23 by 2019-20.
    - School discipline data for 2019-20 indicated that marijuana infractions accounted for 30% of all expulsions and 34% of all law enforcement referrals in Colorado public schools. Given the arrest and fillings data, it can be assumed that these were almost all for possession.
        - 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.[3]

Drug-endangered children

- To assess drug-endangered children, as required in S.B. 13-283, data from CDPHE's Child Health Survey (targeting parents with children ages 1-14) and Pregnancy Risk Assessment Monitoring System was obtained.
    - Of parents with children ages 1–14 who responded to the survey, 14.0% reported some type of marijuana product around the house. When asked about where it was kept, 89.6% reported storing it in a location the child cannot access.

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[3] 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.

  - The proportion of women reporting use before pregnancy in 2019 (18.7%), during pregnancy (8.2%), postpartum (8.5%), or postpartum and currently breastfeeding (4.7%) was not significantly different from the 2017 or 2018 survey results.

Additional Information

- In June 2020, 2,709 licensed marijuana businesses were registered in Colorado. Nearly 60% of the licenses for marijuana businesses were concentrated in the counties of Denver (994), El Paso (292), and Pueblo (276).

- Total revenue from taxes, licenses, and fees increased from $67 million in 2014 to $387 million in 2020 (+473%). The amount of taxes transferred to the school capital construction fund and public school fund increased 264%, from $33 million in 2015 up to $120 million in 2020.

- In December 2020, there were 85,814 individuals registered as medical marijuana cardholders. The most common conditions reported were severe pain (90%), muscle spasms (36%), and severe nausea (20%).

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, Limitations and Methods

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 in Table 1.

Table 1. Data collection requirements of Senate Bill 2013-283

Statutory Category	Statutory Definition
Impacts on Public Safety	
Marijuana-Initiated Contacts by Law Enforcement	Marijuana-initiated contacts by law enforcement, broken down by judicial district and by race and ethnicity
Marijuana Criminal Arrest Data	Marijuana arrest data, including amounts of marijuana with each arrest, broken down by judicial district and by race and ethnicity
Marijuana-Related Traffic Accidents	Traffic accidents, including fatalities and serious injuries related to being under the influence of marijuana
Out-of-State Diversion	Diversion of marijuana out of Colorado
Marijuana Site Operational Crime Statistics	Crime occurring in and relating to the operation of marijuana establishments
Marijuana Transfer Using Parcel Services	Utilization of parcel services for the transfer of marijuana
Probation Data	Probation data
Outdoor Marijuana Cultivation	Outdoor marijuana cultivation facilities
Money Laundering	Money laundering relating to both licensed and unlicensed marijuana
Organized Crime	The role of organized crime in marijuana

Impacts on Youth	
Comprehensive School Data	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	Data related to drug-endangered children, specifically for marijuana
Diversion to Minors	Diversion of marijuana to persons under twenty-one years of age
Impacts on Public Health	
Data on Emergency Room Visits and Poison Control	Data on emergency room visits related to the use of marijuana and the outcomes of those visits, including information from Colorado Poison Control Center
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.
	The Department shall appoint a panel of health care professionals with expertise in cannabinoid physiology to monitor the relevant information. The panel shall provide a report by January 31, 2015, and every two years thereafter to the State Board of Health, the Department of Revenue, and the general assembly. The Department shall make the report available on its website.
	The panel shall establish criteria for studies to be reviewed, reviewing studies and other data, and making recommendations, as appropriate, for policies intended to protect consumers of marijuana or marijuana products to the general public.
	The Department may collect Colorado-specific data that reports adverse health events involving marijuana use from the all-payer claims database, hospital discharge data, and behavioral risk factors.

Source: Derived from Rebound Solutions (2014), *Marijuana data discovery and gap analysis summary report,* at https://cdpsdocs.state.co.us/ors/docs/resources/MarijuanaDataDiscoveryandGapAnalysis.pdf

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, Office of Behavioral Health
- 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 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 and Drug Center

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)[4] 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 July 2018, there were nine states plus the District of Columbia allowing for the sale of recreational marijuana in addition to medical marijuana, 22 states allowing only medical marijuana, 15 states allowing cannabidiol[5] exclusively, and four states that do not allow any legal cannabis products.[6] 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 1-3 give snapshots of state marijuana laws at three different points in time to demonstrate the evolution of legalization.

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[4] 21 U.S.C. § 811.

The 2018 federal farm bill[7] 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.

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:[8] Recreational and medical marijuana fully regulated and commercialized. Licensed retail stores opened January 1, 2014.

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[5] 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.

[6] National Conference of State Legislatures, *State Medical Marijuana Laws* (2018), http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx

[7] Agriculture Improvement Act of 2018, https://www.agriculture.senate.gov/download/farm-bill/agriculture-improvement-act-of-2018

[8] 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.[9] 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, seizures, severe nausea, 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.[10] 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 (see Appendix A), which gave guidance to U.S. Attorneys regarding prosecution for marijuana offenses. Specifically, the Ogden Memo 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." [11] The combination of the Court decision, the Board of Health's rejection of the five-patient caregiver limit, and the Ogden Memo 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.[12]

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.

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[9] Colo. Const. Art. XVIII, § 14. Additional information can be accessed at Ballotpedia, Colorado Medical Use of Marijuana, Initiative 20 (2000), https://ballotpedia.org/Colorado_Medical_Use_of_Marijuana,_Initiative_20_(2000).
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*, available at https://drive.google.com/a/state.co.us/file/d/0B8bNvcf083ydTFpkdVRwdnhTazQ/view.

[10] *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).

[11] U.S. Department of Justice (2009). Ogden memo: Investigations and prosecutions in states authorizing the medical use of marijuana, at http://www.justice.gov/sites/default/files/opa/legacy/2009/10/19/medical-marijuana.pdf.

[12] Medical Marijuana Code: C.R.S. 12-43.3-101 *et seq*. For additional information on the MED, see https://www.colorado.gov/enforcement/marijuanaenforcement.

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 Colorado voters saying no to the question of allowing limited possession and use.[13] 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.[14]

Amendment 64 allows individuals 21 years or 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 or older. It also instructed Colorado's Marijuana Enforcement Division 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.[15]

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.[16]

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.[17] 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 Memo (see Appendix B).[18] 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

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[13] Ballotpedia, Colorado Marijuana Possession, Initiative 44 (2006), available at https://ballotpedia.org/Colorado_Marijuana_Possession, Initiative_44_(2006)

[14] Ballotpedia, Colorado Marijuana Legalization Initiative, Amendment 64 (2012), https://ballotpedia.org/Colorado_Marijuana_Legalization_Initiative,_Amendment_64_(2012)

[15] Retail Marijuana Code: C.R.S. 12-43.4-101 *et seq*. at https://sbg.colorado.gov/med-ru

[16] 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,* at https://drive.google.com/file/d/0B8bNvcf083ydSlh4NWtHTjFoa2s/view

[17] A compendium of amendments, statutes, and rules is available in the *Colorado marijuana laws and regulations 2017* (2018). LexisNexis: Charlottesville, VA. This publication is updated annually to reflect changes in statutes and rules.

[18] U.S. Department of Justice (2013). *Cole memo: Guidance regarding marijuana enforcement*, at http://www.justice.gov/iso/opa/resources/3052013829132756857467.pdf

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
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.[19] 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.[20]

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.

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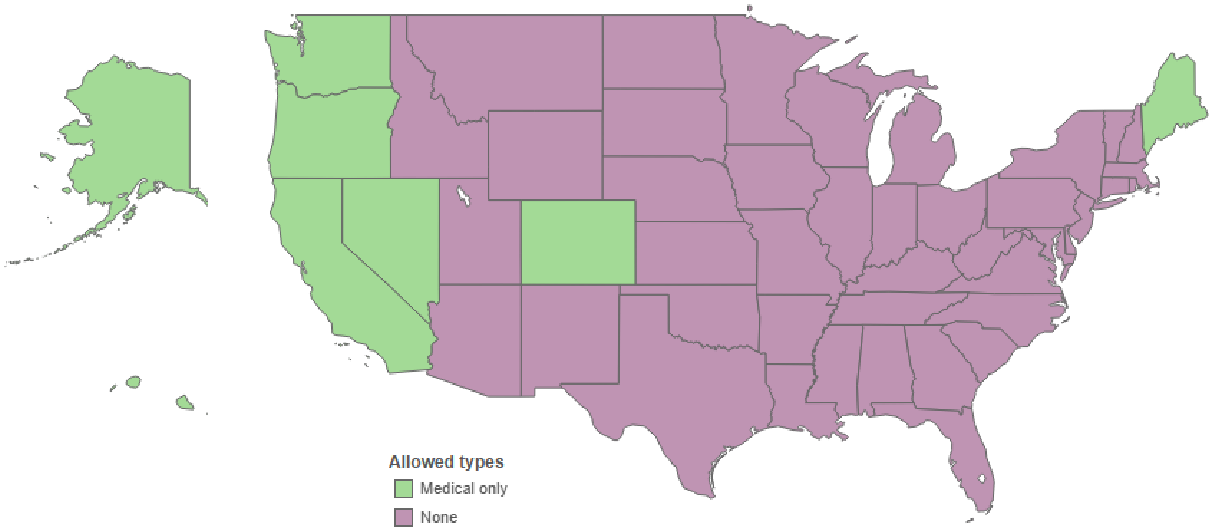
[19] U.S. Government Accountability Office (2015). *State Marijuana Legalization: DOJ Should Document its Approach to Monitoring the Effects of Legalization*, available at http://www.gao.gov/products/GAO-16-1

[20] RMHIDTA (2017). *The Legalization of Marijuana in Colorado: The Impact,* at http://www.rmhidta.org/html/FINAL%202017%20Legalization%20of%20Marijuana%20in%20Colorado%20The%20Impact.pdf

State Marijuana Legal Landscape

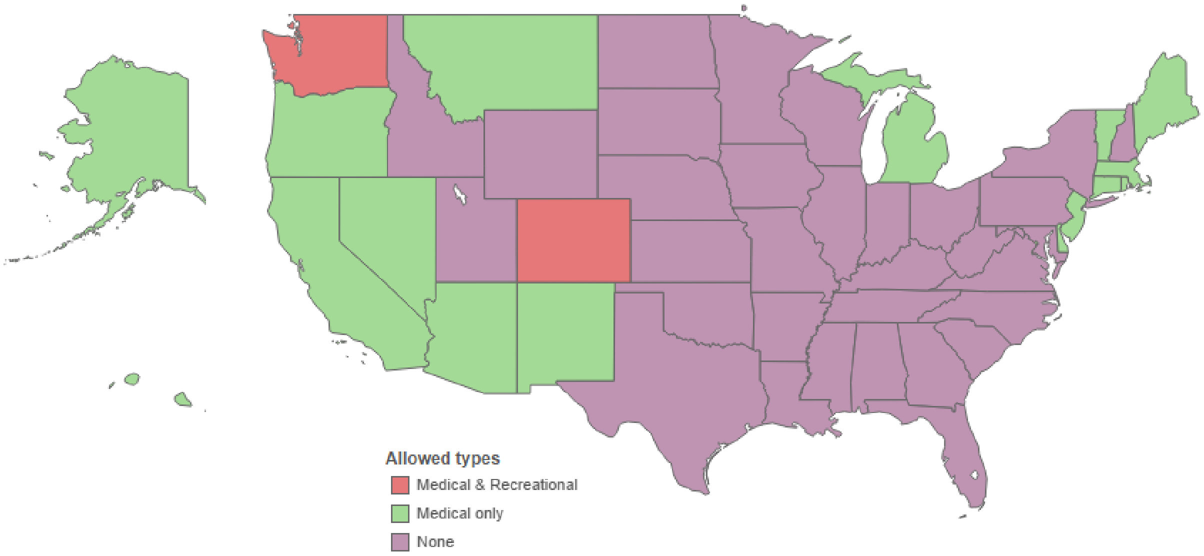
The evolution of state-level marijuana laws is presented in Figures 1-3. It is important to realize that while medical, retail, and CBD legalization are grouped in these maps they represent different approaches to legalization and the National Conference of State Legislatures source site should be consulted for additional details. In 2000, there were eight states that allowed legal medical marijuana (Figure 1). In 2012, two states allowed legal retail/recreational marijuana and 17 allowed medical marijuana (Figure 2). By the end of 2020, 16 states allowed retail/recreational marijuana, 20 allowed medical marijuana, and an additional 13 allowed cannabidiol products (Figure 3).

Figure 1. State marijuana legalization status, 2000



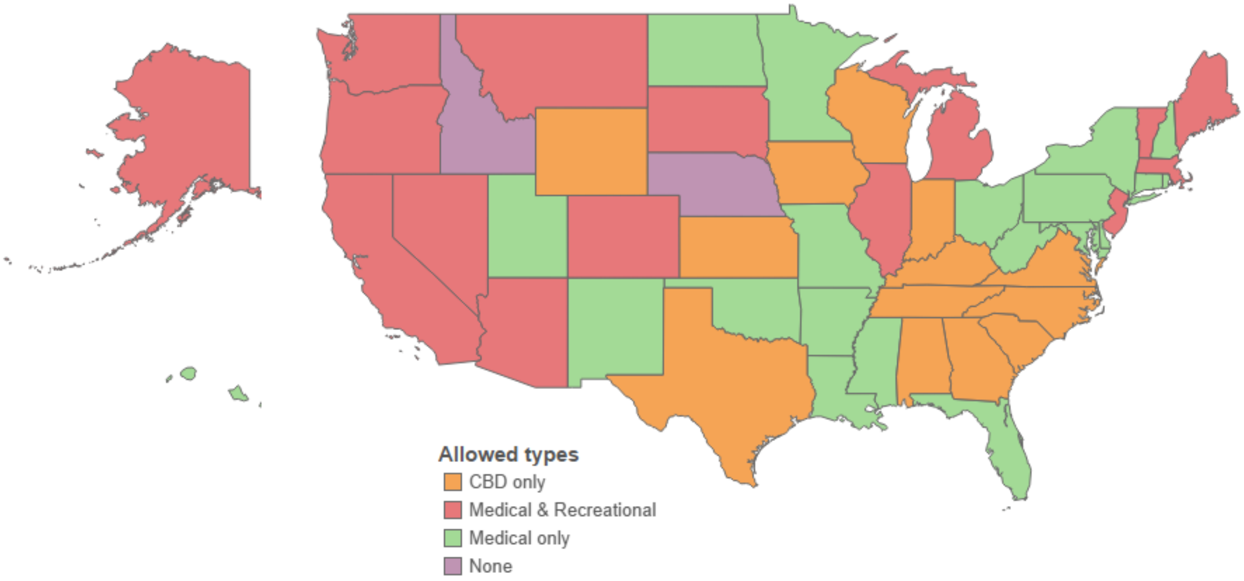
Source: National Conference of State Legislatures, at http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx

Figure 2. State marijuana legalization status, 2012


Allowed types
Medical & Recreational
Medical only
None

Source: National Conference of State Legislatures, at http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx

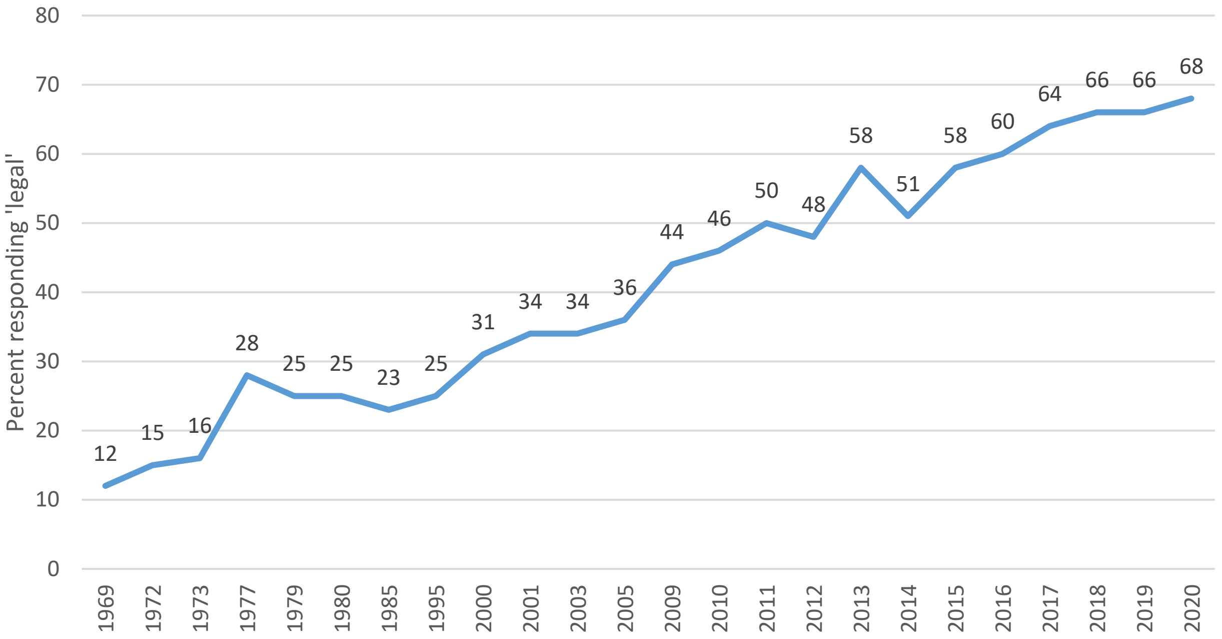
Figure 3. State marijuana legalization status, 2020


Allowed types
CBD only
Medical & Recreational
Medical only
None

Source: National Conference of State Legislatures, at http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx

The Gallup Poll has asked about people's opinion regarding marijuana legalization since 1969. The percent expressing support for legalization has increased over time, and in 2020, 68% indicated that marijuana should be legalized (Figure 4).

Figure 4. American opinion regarding marijuana legalization, 1969-2020



Note: Reflects those responding 'legal' to the question, "Do you think the use of marijuana should be made legal, or not?"

Source: Brenan, M. (2020). *Support for legal marijuana inches up to new high of 68%.* Available at https://news.gallup.com/poll/323582/support-legal-marijuana-inches-new-high.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 2013-183 (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 2013-183 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, nor is contact data (for any purpose) collected systematically by law enforcement agencies. Further, S.B. 13-283 required contact data to be disaggregated by race/ethnicity, and it is not known how a law enforcement officer would determine race/ethnicity of individuals involved in a marijuana-initiated contact. In sum, 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. The National Incident Based Reporting System (NIBRS) is part of the Federal Bureau of Investigation’s data collection system, and is managed locally by the Colorado Bureau of Investigation. NIBRS has significantly more information than the Uniform Crime Reporting (UCR) system, including information about drug type, which is not available in UCR data. Colorado became a “NIBRS compliant” state in 2012, with nearly all agencies reporting greater details on crime incidents. For this reason, information concerning Colorado arrests related to marijuana offenses is unavailable for analysis prior to 2012.

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. Additionally, with an enhanced focus on marijuana, it is possible that law enforcement agencies, becoming more aware of the issue, would increase interdiction efforts, potentially resulting in an increase in seizures which may or may not be related to an actual increase in diversion.

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,[21] 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[22]

Data on marijuana arrests and offenses for the period 2012–2019 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 Arrests

Overall

The total number of marijuana arrests decreased by 68% between 2012 and 2019, from 13,225 to 4,290 (Table 2). Marijuana possession arrests, which make up the majority of all marijuana arrests, were cut by nearly three-quarters (-71%). Marijuana sales arrests decreased by 56%, while arrests for marijuana production increased slightly (+3%). Marijuana arrests that were unspecified, meaning the specific reason for the arrest was not provided by law enforcement, went down by 459. The arrest rates per 100,000 adult population between 2012 and 2019 followed similar trends, with the possession rate down 75%, sales down 61%, and production down 9%.

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

[22] 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.

Age Group

Between 2012 and 2019, an 84% reduction in arrests occurred for those ages 21 and older for whom marijuana possession of one ounce or less is now legal (Table 2). This compares with a 65% reduction in the 18- to 20-year-old group who may legally possess only when they have a medical marijuana card. Juveniles between the ages of 10 and 17 showed a 37% decrease in the number of marijuana arrests. In 2019, juveniles accounted for nearly half (48%) of all marijuana arrests compared to 25% in 2012.

The age group with the highest arrest rate in 2019 was 18- to 20-year-olds, at 498 per 100,000 18- to 20-year-olds in the population (Table 3). This was higher than the juvenile rate (349) and 20 times higher than the rate for those 21 or older (24).

Race/Ethnicity

The decrease in the number of marijuana arrests by race/ethnicity was greatest for White arrestees (-72%) compared to Hispanics (-55%) and Blacks (-63%). The 2019 marijuana arrest rates for Whites (76 per 100,000), Hispanics (107 per 100,000), and Blacks (160 per 100,000) shows that there is still disparity by race. (Table 3). However, it should be noted that the arrest totals and rates for all races have decreased significantly post-legalization.

Gender

Between 2012 and 2019 the number of males arrested for marijuana offenses (Table 2) decreased 70% compared to a decline of 56% for females. The arrest rate for males (125 per 100,000) was nearly triple that for females (44 per 100,000) (Table 3).

Table 2. Marijuana arrests in Colorado, 2012–2019

	2012	2013	2014	2015	2016	2017	2018	2019
Total	13,225	6,637	7,128	6,998	6,502	6,483	5,970	4,290
Age group								
Under 18	3,265	3,122	3,379	3,019	2,648	2,701	2,573	2,064
18 to 20	3,392	2,304	2,278	2,124	2,098	2,173	1,971	1,194
21 or older	6,568	1,211	1,471	1,855	1,756	1,609	1,426	1,032
Gender								
Male	10,716	5,379	5,626	5,529	5,056	4,937	4,344	3,175
Female	2,509	1,258	1,502	1,469	1,446	1,546	1,626	1,115
Race/ethnicity								
White non-Hispanic	9,573	4,574	4,663	4,543	4,292	4,276	3,855	2,721
Hispanic	2,455	1,396	1,603	1,615	1,476	1,510	1,514	1,112
African-American non-Hispanic	982	552	721	681	561	496	424	365
Other non-Hispanic	215	115	141	159	173	201	177	92
Crime type								
Possession	11,360	5,404	5,962	5,974	5,416	5,113	4,683	3,265
Sales	301	224	229	174	221	249	232	133
Production	179	111	176	192	256	274	258	185
Smuggling	6	5	-	4	8	3	13	4
Unspecified	1,379	893	761	654	601	844	784	703
Arrest type								
On-view	3,326	1,340	1,216	1,213	1,437	1,462	1,323	926
Summons/citations	8,982	4,912	5,526	5,456	4,594	4,551	4,238	2,994
Warrant	917	385	386	329	471	470	409	370

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System. Analyzed by the Division of Criminal Justice.
Notes: A person can be charged with more than one drug offense. 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.

Table 3. Marijuana arrest rates in Colorado, 2012–2019

	2012	2013	2014	2015	2016	2017	2018	2019
Total	293	145	153	147	134	131	119	84
Age group								
Under 18	599	565	602	528	456	461	436	349
18 to 20	1,527	1,025	1,016	941	922	941	835	498
21 or older	176	32	38	47	43	39	34	24
Gender								
Male	476	235	241	232	208	200	173	125
Female	111	55	64	62	59	63	65	44
Race/ethnicity								
White non-Hispanic	293	138	139	133	124	122	109	76
Hispanic	283	156	175	171	152	151	147	107
African-American non-Hispanic	516	282	357	327	262	226	188	160
Other non-Hispanic	119	61	73	78	82	92	78	40
Crime type								
Possession	252	118	128	125	111	104	93	64
Sales	7	5	5	4	5	5	5	3
Production	4	2	4	4	5	6	5	4
Smuggling	0	0	0	0	0	0	0	0
Unspecified	31	19	16	14	12	17	16	14
Arrest type								
On-view	74	29	26	25	30	30	26	18
Summons/citations	199	107	118	114	95	92	84	59
Warrant	20	8	8	7	10	10	8	7

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System; Colorado State Demography Office Data, https://demography.dola.colorado.gov/data/ Analyzed by the Division of Criminal Justice.
Note: Rates are calculated using data obtained from the Colorado State Demography Office. The rates for total arrests, arrests by drug crime type, and arrest type are calculated based on the total population 10 years of age and older. Rates for specific age groups are calculated based on the population in that age group. Rates by race/ethnicity and gender are calculated based on the population 10 years of age and older in those respective race/ethnicity and gender categories.
Notes: A person can be charged with more than one drug offense. 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.

County

Nine large Colorado counties (Adams, Arapahoe, Boulder, Douglas, El Paso, Jefferson, Larimer, Mesa, and Weld) showed a decrease in marijuana arrests between 2012 and 2019, ranging between -8% (Boulder) and -67% (Adams). The average decrease in these nine counties was -43% (see Appendix C, Tables 1 and 2). Pueblo showed a 61% increase in arrests, but the number increased by 14 arrests, from 27 in 2012 to 49 in 2019. Denver's reported marijuana arrest data for 2012 and 2013 was incomplete due to separate jail arrest and citation systems. Citation and release data were not reported to the Colorado Bureau of Investigation until July 2013. Additionally, the 2014 arrest data reported by the Denver Police Department include non-criminal civil citations, which resulted in an over-reporting of marijuana arrests for that year. The county-level data in Appendix C presenting this information should be interpreted with caution. Separate data provided by the Denver Police Department's Data Analysis

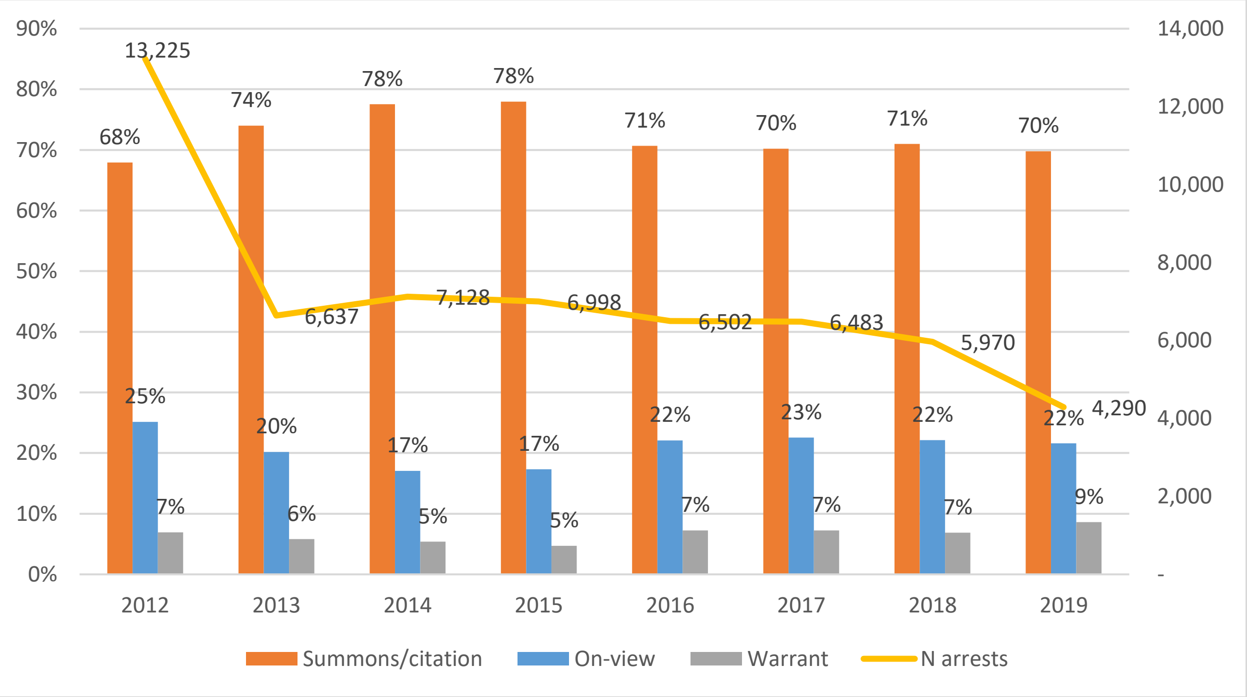
Unit indicated an 81% decrease in total marijuana arrests, from 1,605 in 2012 to 302 in 2019 (Appendix C, Table 5).

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 Figure 5, 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.

Table 4 presents detailed data on the different types of marijuana arrests by age, race/ethnicity, and gender. Juveniles under 18 were more likely to receive a summons/citation (86%) than an on-view arrest (10%) or a warrant arrest (4%). Young adults 18-20 years old were also more likely to receive a summons/citation (75%) than an on-view arrest (20%) or a warrant arrest (5%). Adults 21 years or older were more likely to get an on-view arrest (46%) than a summons/citation (32%) or warrant (22%). Whites were equally as likely to experience an on-view arrest (21%) as Hispanics (19%) but less often than Blacks (30%). Males were arrested on-view (24%) at a slightly higher rate than females (15%).

Figure 5. Marijuana arrests, by arrest type, 2012–2019



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 4. Marijuana arrests, by arrest type and demographics, 2012–2019

	2012	2013	2014	2015	2016	2017	2018	2019
Total								
N arrests	13,225	6,637	7,128	6,998	6,502	6,483	5,970	4,290
On-view	25%	20%	17%	17%	22%	23%	22%	22%
Summons/citation	68%	74%	78%	78%	71%	70%	71%	70%
Warrant	7%	6%	5%	5%	7%	7%	7%	9%
Age group								
Under 18								
N arrests	3,265	3,122	3,379	3,019	2,648	2,701	2,573	2,064
On-view	10%	11%	11%	11%	14%	13%	13%	10%
Summons/citation	86%	85%	85%	86%	82%	83%	83%	86%
Warrant	4%	4%	3%	3%	4%	4%	3%	4%
18 to 20								
N arrests	3,392	2,304	2,278	2,124	2,098	2,173	1,971	1,194
On-view	19%	21%	17%	18%	19%	19%	16%	20%
Summons/citation	76%	74%	79%	79%	75%	77%	79%	75%
Warrant	5%	5%	4%	3%	6%	5%	4%	5%
21 or older								
N arrests	6,568	1,211	1,471	1,855	1,756	1,609	1,426	1,032
On-view	36%	41%	30%	27%	38%	44%	46%	46%
Summons/citation	55%	46%	59%	64%	48%	39%	37%	32%
Warrant	9%	12%	11%	9%	14%	16%	17%	22%
Gender								
Male								
N arrests	10,716	5,379	5,626	5,529	5,056	4,937	4,344	3,175
On-view	26%	21%	18%	18%	24%	23%	24%	24%
Summons/citation	67%	73%	76%	77%	69%	69%	68%	67%
Warrant	7%	6%	6%	5%	8%	8%	7%	9%
Female								
N arrests	2,509	1,258	1,502	1,469	1,446	1,546	1,626	1,115
On-view	23%	17%	12%	15%	17%	20%	16%	15%
Summons/citation	71%	79%	84%	82%	77%	74%	78%	77%
Warrant	6%	5%	3%	3%	6%	6%	5%	8%
Race/ethnicity								
White non-Hispanic								
N arrests	9,573	4,574	4,663	4,543	4,292	4,276	3,855	2,721
On-view	24%	19%	17%	17%	18%	19%	18%	21%
Summons/citation	70%	75%	78%	79%	75%	74%	76%	72%
Warrant	7%	6%	5%	5%	7%	7%	6%	7%

	2012	2013	2014	2015	2016	2017	2018	2019
Hispanic								
N arrests	2,455	1,396	1,603	1,615	1,476	1,510	1,514	1,112
On-view	28%	22%	18%	18%	27%	25%	25%	19%
Summons/citation	63%	72%	76%	77%	64%	65%	65%	69%
Warrant	8%	6%	6%	5%	9%	10%	10%	12%
African-American								
N arrests	982	552	721	681	561	496	424	365
On-view	31%	24%	18%	20%	37%	36%	38%	30%
Summons/citation	64%	73%	77%	78%	58%	58%	56%	63%
Warrant	6%	3%	5%	3%	5%	7%	6%	7%
Other								
N arrests	215	115	141	159	173	201	177	30
On-view	27%	19%	12%	21%	31%	35%	46%	33%
Summons/citation	65%	72%	82%	73%	61%	60%	47%	52%
Warrant	9%	9%	6%	6%	8%	4%	7%	15%

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.

Offense Location

NIBRS captures information on the place an offense was reported to have occurred. There are 57 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 Table 5 and data for all places may be found in Appendix D.

Overall, the number of offenses decreased by 63%, from 12,794 in 2012 to 4,681 in 2019. The locations showing the largest drops were highway/road/street (-82%), retail site/bank/restaurant/bar (-53%), and private buildings (-59%). The locations with an increased number of offenses were college/university (+13%), elementary/secondary school (+17%), and private workplace (+113%).

Table 5. Marijuana offenses, by location type, 2012–2019

Offense location	2012	2013	2014	2015	2016	2017	2018	2019
College/University	519	448	465	600	570	809	754	588
Elementary/Secondary School	1,010	1,390	1,654	1,358	1,236	1,138	1,339	1,183
School/University historical	258	-	-	-	-	-	-	-
Highway/road/street	6,796	2,226	2,194	2,221	2,051	1,930	1,629	1,202
Public building	84	48	43	49	41	60	57	50
Public space	1,401	780	951	1,034	905	810	690	485
Private building	1,635	611	706	725	846	868	849	670
Retail site/bank/ restaurant/bar	441	211	194	226	215	222	224	206
Workplace	78	49	55	61	73	86	106	166
Other	572	225	267	261	291	248	227	124
Total	12,794	5,988	6,529	6,535	6,228	6,171	5,875	4,681

Source: Colorado Bureau of Investigation, National Incident-Based Reporting System data. Analyzed by the Division of Criminal Justice.
Note: The location type of Secondary School/University (historical) was split up into specific categories of Elementary/Secondary School and College/University partway through 2012. It is not possible to determine the specific location in the historical data and so it is presented separately here.

Marijuana Court Case Filings

The Colorado State Judicial Branch's data system[23] was queried for marijuana cases filed[24] between 2008 and 2019. 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.[25] The charges were categorized according to the text entered into the charge description field. Filing data are based on a calendar year.

The number of marijuana-related case filings declined 55% between 2012 and 2019, from 9,925 to 4,489 (Table 6).[26] The age of defendants is grouped into three categories. Between 2012 and 2019, case filings declined 13% in the 10- to 17-year-old group; in the 18- to 20-year-old group, filings declined 52%; in the 21 and older age group, filings declined 67%. Males saw a 57% drop in total marijuana cases filed while females experienced a 44% decline from 2012 to 2019.

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[23] Misdemeanor and petty offense charges from the City and County of Denver are not part of the statewide Judicial database and are therefore presented in a separate table. Felony charges from Denver are included.

[24] 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).

[25] 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.

[26] 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 6. Cases with marijuana filings, by gender and age group, 2008-2019

		Gender			Age Group		
Year	Total	Female	Male	Unknown	10-17 years old	18-20 years old	21 years or older
2008	11,761	1,968	9,757	36	1,755	3,093	6,887
2009	10,906	1,793	9,083	30	1,616	2,785	6,489
2010	10,108	1,729	8,342	37	1,640	2,451	6,003
2011	9,791	1,716	8,055	20	1,544	2,456	5,778
2012	9,925	1,786	8,114	25	1,624	2,381	5,903
2013	4,042	708	3,313	21	1,492	1,491	1,051
2014	4,618	859	3,725	34	1,532	1,578	1,505
2015	4,939	1,016	3,888	35	1,766	1,613	1,552
2016	4,919	965	3,935	19	1,497	1,622	1,792
2017	5,340	1,133	4,175	32	1,610	1,706	2,003
2018	5,219	1,224	3,977	18	1,660	1,556	1,998
2019	4,489	1,007	3,456	26	1,407	1,146	1,928

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 7. The percent of cases classified as felony increased from 10% in 2012 to 18% in 2018, while petty offenses decreased from 84% of cases in 2012 to 54% of cases in 2019. The traffic offense of possessing an open container of marijuana was implemented in 2014, and traffic cases now account for 22% of marijuana cases.

Table 7. Cases with marijuana charge, by highest marijuana law class in case, 2008-2019

	Highest marijuana charge class					Percent of cases			
Year	Felony	Misdemeanor	Petty offense	Traffic	Total	Felony	Misdemeanor	Petty offense	Traffic
2008	1,435	776	9,549	-	11,760	12%	7%	81%	0%
2009	1,412	694	8,794	-	10,900	13%	6%	81%	0%
2010	1,349	637	8,120	-	10,106	13%	6%	80%	0%
2011	1,018	627	8,143	-	9,788	10%	6%	83%	0%
2012	986	595	8,341	-	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%

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 2015 since that was the first full year the new charge was consistently used.

Between 2012 and 2019 (Table 8), total possession filings dropped 63% (9,777 to 3,576), possession with intent to distribute was unchanged (526 to 530), distribution dropped 55% (497 to 224), manufacture increased 14% (534 to 608), and conspiracy decreased 35% (176 to 114). The number of offenses for possession under the age of 21 has shown considerable variation, with the 3,071 filings in 2019 being the lowest since it was fully parsed out as a unique offense in 2015.

Table 8. Marijuana charges filed, by type of charge, 2008-2019

Year	Conspiracy	Manufacture	Distribution	Possession with Intent	Possession	Public consumption	Possession under age 21	Possession/ consumption in vehicle
2008	101	378	486	937	10,998	126		
2009	149	394	507	951	10,756	179		
2010	194	534	513	734	9,924	204		
2011	218	543	482	595	9,580	202	1	
2012	176	534	497	526	9,777	218		
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

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

The number of charges based on level is presented in Table 9. The number of felony charges has varied considerably since legalization in 2012. There was a steep drop down to 759 in 2014, followed by a gradual increase from 2014 to 2017, with a recent decrease to 2019 (1,416) back to the level of 2015. Almost three-quarters of felony marijuana charges are dismissed prior to disposition. The number of misdemeanor filings has gradually decreased since legalization, reaching a low of 416 in 2019. Approximately three-fifths of those charges are dismissed prior to disposition. The number of petty offenses followed a similar trend to felonies, with an initial drop followed by an increase, then a recent drop in 2019. Petty offenses were dismissed about three-quarters of the time. 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.

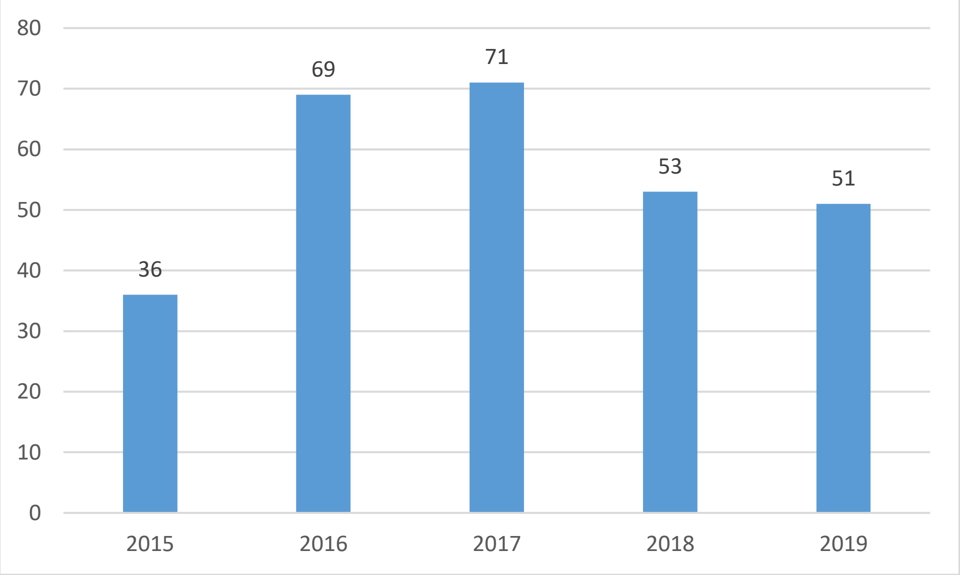
Table 9. Marijuana cases filed, by classification and percent dismissed, 2008–2019

	Felonies		Misdemeanors		Petty offenses		Traffic		Total	
	% dismissed	Total charges	% dismissed	Total charges	% dismissed	Total charges	% dismissed	Total charges	% dismissed	Total charges
2008	73.5%	2,542	32.5%	1,257	75.7%	9,248	--	--	71.1%	13,048
2009	74.9%	2,554	32.3%	1,221	78.3%	9,161	--	--	73.3%	12,939
2010	76.4%	2,374	39.0%	1,126	79.6%	8,627	--	--	75.2%	12,128
2011	75.1%	1,989	47.5%	1,011	82.4%	8,624	--	--	78.1%	11,625
2012	80.7%	1,916	50.3%	1,000	84.1%	8,831	--	--	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

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 6. There were 71 filings for hazardous manufacturing of concentrates in 2017 which dropped to 51 in 2019.

Figure 6. Case filings with charge for hazardous extraction of marijuana concentrates, 2015–2019



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 10. 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 significantly, from 15 in 2012, 119 in 2017, down to 34 in 2019. The most common types of charges associated with COCCA filings were manufacture (n=36), distribution (n=15), and conspiracy (n=14).

Table 10. Marijuana case filings associated with Colorado Organized Crime Control Act, 2008-2019

		Marijuana charges associated with COCCA case					
	N COCCA case filings	Conspiracy	Manufacture	Distribution	Possession with intent to sell	Possession	Other
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

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 crime 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.

The total number of industry-related crimes remained stable and made up a very small portion of overall crime in Denver (Table 11). The most common industry-related crime was burglary, which accounted for 58% of all industry-related crime in 2019. 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 nonindustry-related marijuana crimes was small and has come down in recent years.

Table 11. Marijuana crime in Denver, 2012–2019[27]

	2012	2013	2014	2015	2016	2017	2018	2019
Industry								
Burglary	134	102	114	117	170	82	118	121
Theft	14	14	24	26	19	18	39	30
Other property	22	22	17	20	16	19	18	24
Robbery	2	4	7	5	3	6	4	7
Other person	4	7	8	4	0	4	11	14
Drug	0	1	1	11	6	2	6	2
Other	1	4	2	3	0	8	6	10
Total	177	154	173	186	214	139	202	208
Non-industry								
Burglary	17	30	39	20	22	20	2	0
Theft	10	12	19	15	8	5	4	6
Other property	2	4	1	0	3	2	0	2
Robbery	19	20	27	23	17	15	10	4
Other person	4	10	12	11	8	8	2	8
Drug	1	1	3	1	1	1	10	1
Other	0	3	2	2	0	0	1	3
Total	53	80	103	72	59	51	29	24
Total								
Burglary	151	132	153	137	192	102	120	121
Theft	24	26	43	41	27	23	43	36
Other property	24	26	18	20	19	21	18	26
Robbery	21	24	34	28	20	21	14	11
Other person	8	17	20	15	8	12	13	22
Drug	1	2	4	12	7	3	16	3
Other	1	7	4	5	0	8	7	13
Total	230	234	276	258	273	190	231	232
Total criminal offenses in Denver	NA	NA	61,276	64,317	65,368	66,000	66,700	65,470

Source: Denver Open Data Catalog, Crime Marijuana, at https://www.denvergov.org/opendata/dataset/city-and-county-of-denver-crime-marijuana. Retrieved 12/1/2020. Denver Police Department Crime Statistics. https://www.denvergov.org/content/denvergov/en/police-department/crime-information/crime-statistics-maps/crime-statistics-archives.html

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[27] 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[28]

Detection Issues

It is difficult to gauge the scope of DUID offenses for a number of 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.[29] 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 BAC (blood alcohol content) 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."[30] After an arrest, if the officer has probable cause to believe the suspect is impaired by drugs and/or alcohol,[31] 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.[32]

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. In 2012 there were 184 peace officers statewide trained as Drug Recognition Experts (DREs) and by 2020 there were 221 active DREs. Additionally, hundreds of additional peace officers have also received training in Advanced Roadside Impaired Driving Enforcement (ARIDE).

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[28] 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.

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

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

[31] 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.

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

Figure 7. Certified Drug Recognition Experts in Colorado, 2006-2020

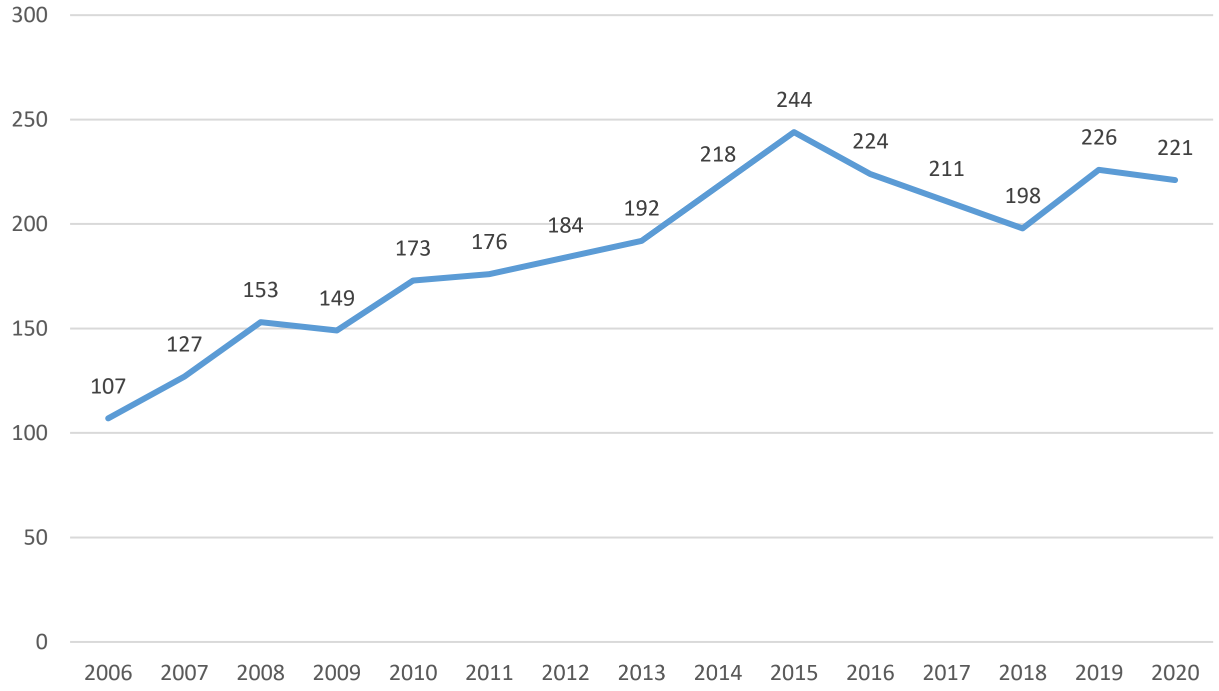

Figure 8 depicts results from a study that examined Delta-9 THC concentration, subjective high, and performance of subjects.[33] It shows that THC concentration peaks early, but the impairing effects on driving-related performance tasks and subjective high continue long after the peak concentration. This suggests that at there are performance deficits that follow the peak of THC concentration. Furthermore, high THC concentration in whole-blood does not perfectly correspond to impairment.

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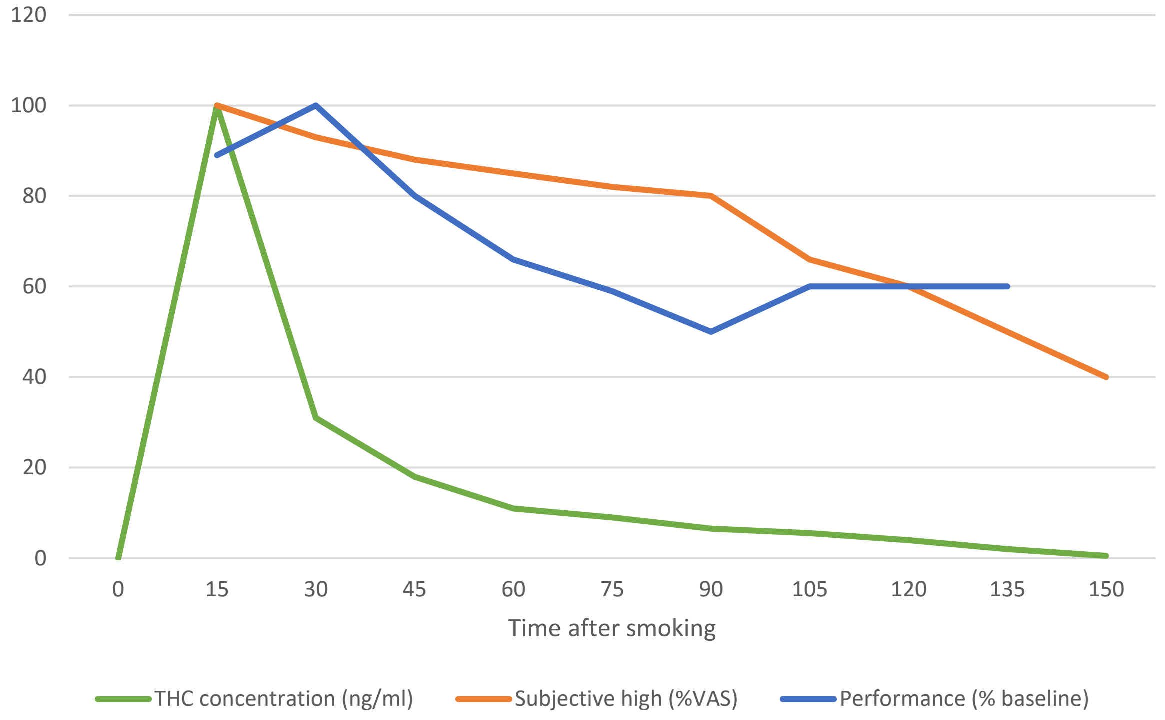
[33] Berghaus et al. 1998, Sticht and Käferstein 1998, and Robbe 1994 as cited in Compton, R. (2017, July). *Marijuana-Impaired Driving - A Report to Congress.* (DOT HS 812 440). Washington, DC: National Highway Traffic Safety Administration.

Figure 8. 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, as a result of THC being stored in fat and its ability to slowly release from the tissue.[34] 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.[35, 36] 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* report.[37] 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.

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[34] 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.

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

[36] 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.

Marijuana and Driving

The information in this section was excerpted from the study of impaired driving published pursuant to HB 17-1315, which analyzed data for 2018 and included some trend data for 2016-2018.[38] The number of cases where drivers were screened for cannabinoids increased from 3,946 (14.5% of all DUIs) in 2016 to 5,032 (19.2% of all DUIs) in 2018 (Table 12). The percent of screened cases testing positive at the initial cannabinoid screen went from 73.1% positive in 2016 to 66.3% in 2018. The cases which underwent confirmatory Delta-9 THC testing were stratified according their Delta-9 level. 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 changed from 5.9 ng/mL in 2016 to 5.2 ng/mL in 2018. The mean level of Delta-9 THC has gone from 8.7 ng/mL in 2016 to 8.2 ng/mL in 2018.

Table 12. Delta-9 THC groups for those with THC confirmation tests, 2016-2018

	2016	2017	2018
Total DUI cases filed	27,244	26,454	26,255
N cannabinoid screens	3,946	4,792	5,032
% positive for cannabinoid	2,885 (73.1%)	3,170 (66.2%)	3,335 (66.3%)
N confirmed for Delta-9	2,885	3,170	3,335
Delta 9-THC level n (%)			
None Detected	396 (13.7%)	431 (13.6%)	459 (13.8%)
Present but <1.0	90 (3.1)	63 (2.0)	88 (2.6)
1.0-4.9	1,030 (35.7)	1,069 (33.7)	1,134 (34.0)
5.0+	1,369 (47.5)	1,607 (50.7)	1,654 (49.6)
Median level (ng/mL)	5.9	5.4	5.2
Mean level (ng/mL)	8.7	8.2	8.2

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

Time to Marijuana Test

Time to blood draw by median Delta-9 THC values can be seen in Figure 9, 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 10 reflects that mean and median Delta-9 THC levels were higher when the elapsed time to blood draw was shorter, reflecting the dissipation of Delta-9 THC levels in the blood.

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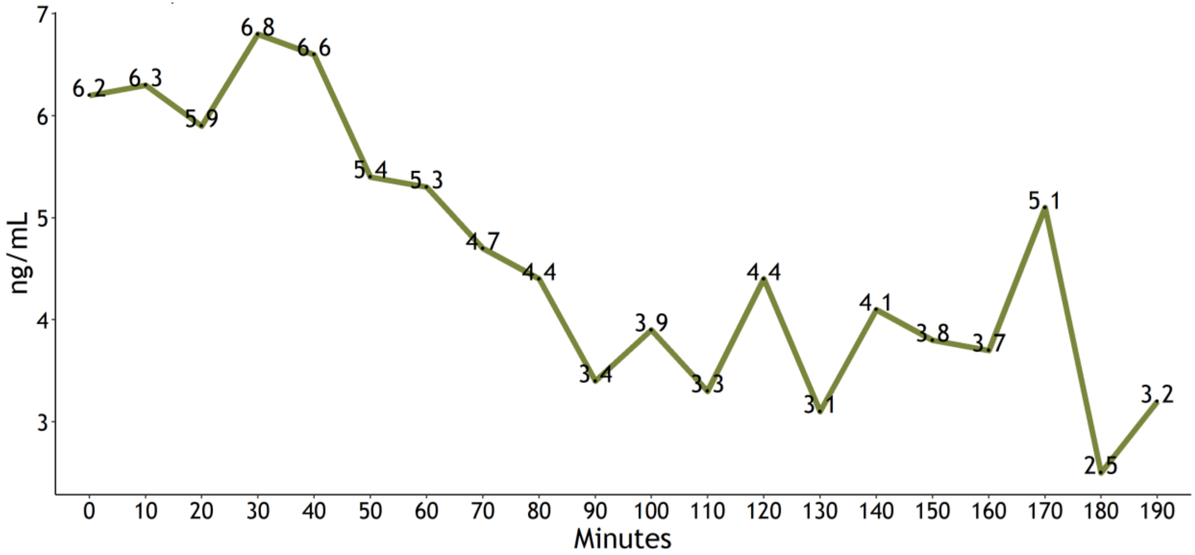
[37] Compton, R. (2017, July). Marijuana-Impaired Driving - A Report to Congress. (DOT HS 812 440). Washington, DC: National Highway Traffic Safety Administration. See https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812440-marijuana-impaired-driving-report-to-congress.pdf

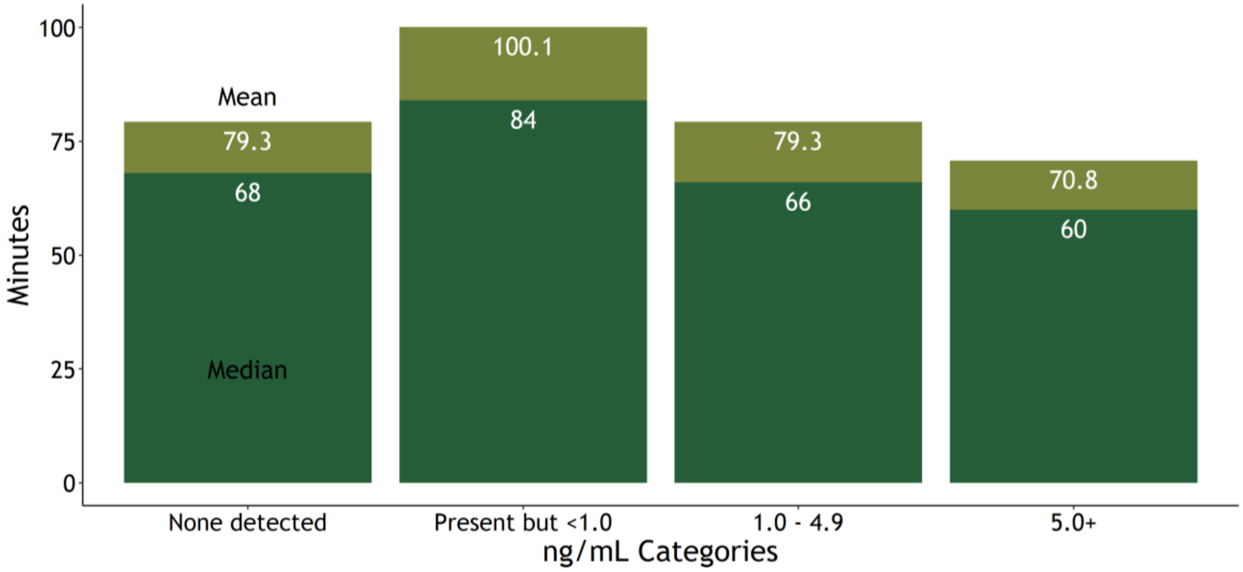
[38] Rosenthal, A. & Reed, J. (2020). *Driving under the influence of drugs and alcohol: A report pursuant to House Bill 17-1315*. Lakewood, CO: Colorado Division of Criminal Justice. Available at https://cdpsdocs.state.co.us/ORS/Docs/Reports/2020-DUI_HB17-1315.pdf

Figure 9. Median Delta-9 THC value by time to test and number of cases (2018)



Source: State Judicial Department, Denver County Court, and ChemaTox. Analyzed by the Division of Criminal Justice. Excerpted from 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

Figure 10. Mean and median Delta-9 THC value by time-to-test, 2016-2018



Source: State Judicial Department, Denver County Court, and ChemaTox, analyzed by the Division of Criminal Justice. Excerpted from 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

Alcohol and Marijuana in Combination

Table 13 shows both BAC cases, cannabinoid screens, and Delta-9 THC cases as a proportion of all DUI case filings, including case filings with no toxicology test match. The latter filings are included in Table 13 to show the frequency that cases were NOT tested when BAC is 0.08+. Specifically, 83.2% (n=10,550) of cases with BAC at 0.08+ were not further screened for cannabinoids. This contrasts with 8.5% (n=62) of those with no detectable alcohol and 48.8% (n=267) of cases with BAC < 0.05 that were not further screened for cannabinoids. Those with no BAC test and no cannabinoid screen either refused a test or were not matched during data analysis.

Table 13. BAC group, cannabinoid screen, and THC group test outcome, 2018

			Delta-9 THC Confirmation Tests					
BAC	No Cannabinoid Screen	No Cannabinoid Detected	No Delta-9 Detected	Present but <1.0	1.0 - 4.9	5.0+	Total	
No BAC test	84.1%	4.0%	1.0%	0.3%	3.2%	7.4%	100%	11,104
Not Detected	8.5%	29.2%	9.4%	2.3%	19.4%	31.2%	100%	727
< 0.05	48.8%	14.4%	5.4%	*	11.5%	20.0%	100%	521
0.05 - 0.079	83.0%	6.1%	1.4%	*	3.9%	5.6%	100%	1,224
0.08 +	83.2%	7.0%	1.8%	0.3%	4.2%	3.4%	100%	12,674
Total	80.8%	6.5%	1.7%	0.3%	4.3%	6.3%	100%	26,255

Source: State Judicial Department, Denver County Court, and ChemaTox. Analyzed by the Division of Criminal Justice. Excerpted from 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

Polydrug use

In this analysis, "drugs" are presented in three categories: alcohol, THC, and "other drug," which includes illicit drugs and prescription drugs. Of the 16,943 cases where toxicology tests were conducted for alcohol as well as other drugs, the vast majority (84.4%) of suspects were found to have one drug present, while 14.5% cases had more than one drug present (see Table 14). A very small percentage (1.0%) of toxicology results showed no drug detected -- i.e., no alcohol, THC or other drugs. Polydrug use is the detection of any amount of two or more drugs in a toxicology test. Again, please note that polydrug use is likely underrepresented because, when alcohol is obviously present, many officers do not request further drug testing due to the cost and time associated with additional testing.

Alcohol was the primary substance detected for those with one drug present, followed by marijuana and, finally, other drugs. Of those cases with only one drug present, 89.2% of cases had alcohol only present compared to 7.5% of cases with only marijuana present. However, note that not all alcohol tests had a drug screen and not all drugs are included in a drug screen.

When further examining the 2,471 cases with polydrug use, 42.0% were a combination of alcohol and marijuana and 20.5% involved marijuana and an additional drug. Another 11.1% of polydrug cases involved alcohol, marijuana, and at least one other drug. Over half (53.2%) of all polydrug records had both alcohol and Delta-9 THC present (see Table 14).

Again, these results should be interpreted cautiously because of the practice of limited drug testing when the presence of alcohol is obvious to the arresting officer.

Table 14. Presence of any drug and polydrug use, 2016-2018

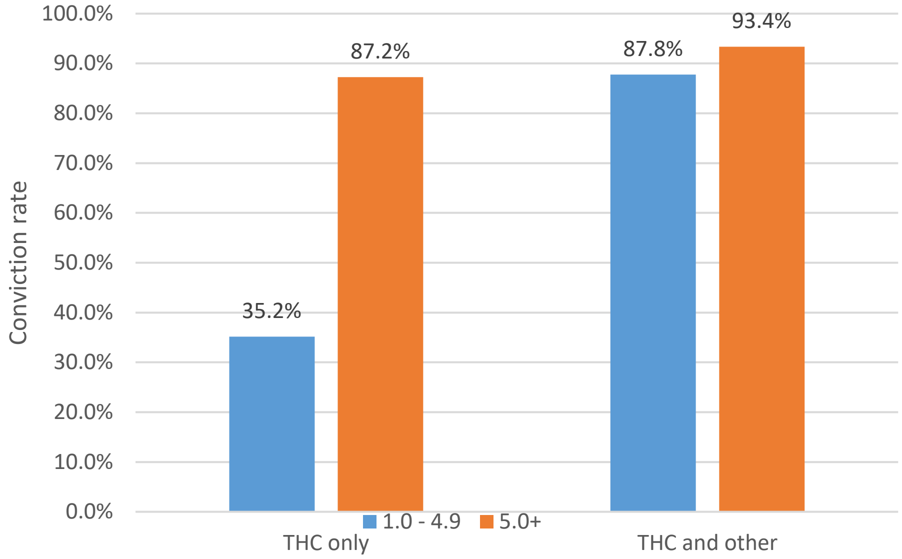
		2016	2017	2018
	Total n	**17,824**	**17,479**	**16,943**
	Drug Category n (%)			
No Drug	**None Detected**	**165 (0.9%)**	**170 (1.0%)**	**174 (1.0%)**
One Drug	Alcohol Only	14,052 (78.8)	13,449 (76.9)	12,755 (75.3)
	Delta 9-THC Only	957 (5.4)	1,083 (6.2)	1078 (6.4)
	Single Other Drug	386 (2.2)	415 (2.4)	465 (2.7)
	n	**15,395 (86.4)**	**14,947 (85.5)**	**14,298 (84.4)**
Polydrug	Alcohol and Delta 9-THC	829 (4.7)	958 (5.5)	1039 (6.1)
	Alcohol and Other	380 (2.1)	430 (2.5)	414 (2.4)
	Delta 9-THC and Other	469 (2.6)	447 (2.6)	507 (3.0)
	Alcohol, Delta 9-THC, and Other	234 (1.3)	251 (1.4)	276 (1.6)
	Polydrug Not Alcohol or Delta 9-THC	352 (2.0)	276 (1.6)	235 (1.4)
	n	**2,264 (12.7)**	**2,362 (13.6)**	**2,471 (14.5)**

Source: State Judicial Department, Denver County Court, and ChemaTox. Analyzed by the Division of Criminal Justice. Excerpted from 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

Marijuana and DUI Dispositions

Figure 11 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.

Figure 11. Conviction rate in cases with Delta-9 THC, by single/polydrug status and THC level



Source: State Judicial Department, Denver County Court, and ChemaTox. Analyzed by the Division of Criminal Justice. Excerpted from 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

Colorado State Patrol

The Colorado State Patrol (CSP) accounted for about 25% of all arrests for driving under the influence in Colorado in 2020. [39] 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 49 (7% of all sworn personnel) as of 2021. Additionally, the CSP trains all troopers in Advanced Roadside Impairment Detection Enforcement, which improves their ability to detect impairment from drugs other than alcohol or polydrug impairment that includes alcohol. These factors combine to make CSP a good agency to use as a benchmark for issues related to impaired driving in Colorado.

According to the data collected by the State Patrol, the total number of reported DUIs dropped 16% between 2014 (5,705) and 2020 (4,805) (Table 15). Summonses in which alcohol was the only substance decreased by 45% (4,820 in 2014 to 2,670 in 2020). The number of summonses in which marijuana-alone or marijuana-in-combination was recorded increased by 120% between 2014 (n=684) and 2020 (n=1,508). The prevalence of marijuana alone increased from 6.3% in 2014 to 8.7% in 2020. The percentage of marijuana polydrug (marijuana and alcohol or marijuana and other drugs) as the perceived impairing substance increased from 5.7% of all DUIs in 2014 to 22.7% in 2020.

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

Table 15. Driving under the influence citations issued by Colorado State Patrol, by perceived impairing substance, 2014–2020

	2014	2015	2016	2017	2018	2019	2020
N citations	5,705	4,898	4,605	4,858	5,168	5,245	4,805
Marijuana only	359	335	388	336	426	391	417
Marijuana & alcohol	213	210	239	217	469	455	865
Marijuana & other drugs	112	107	153	169	190	193	226
Other drugs only	201	204	245	259	536	477	627
Alcohol only	4,820	4,042	3,580	3,877	3,258	3,729	2,670
Unknown impairment	0	0	0	0	289	0	0
Marijuana-involved*	684	652	780	722	1,085	1,039	1,508
% citations							
Marijuana only	6.3%	6.8%	8.4%	6.9%	8.2%	7.5%	8.7%
Marijuana & alcohol	3.7%	4.3%	5.2%	4.5%	9.1%	8.7%	18.0%
Marijuana & other drugs	2.0%	2.2%	3.3%	3.5%	3.7%	3.7%	4.7%
Other drugs only	3.5%	4.2%	5.3%	5.3%	10.4%	9.1%	13.0%
Alcohol only	84.5%	82.5%	77.7%	79.8%	63.0%	71.1%	55.6%
Unknown impairment	--	--	--	--	5.6%	--	--
Marijuana-involved*	12.0%	13.3%	16.9%	14.9%	21.0%	19.9%	31.4%

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 2019. During that same time, clients reporting marijuana as their primary substance of use increased from 5% to 12% of DUI admissions (Table 16).

Table 16. Treatment admissions for DUI, by primary substance of use, 2008–2019

		Primary drug			Percent primary drug		
	Total DUI treatment	Marijuana	Alcohol	Any other drug	Marijuana	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%

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

Reported Driving Behavior

Driving within two- to three-hours of marijuana use is a behavior asked about on the Behavioral Risk Factor Surveillance System survey.[40] Between 2% and 4% of adults reported driving within two- to three-hours of using marijuana, and there was a statistically significant change in this behavior between 2014 and 2019 (Figure 12). Figure 13 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. Again, there was no consistent change in this finding over time.

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

Figure 12. Adults reporting driving within 2-3 hours of using marijuana, 2014–2019

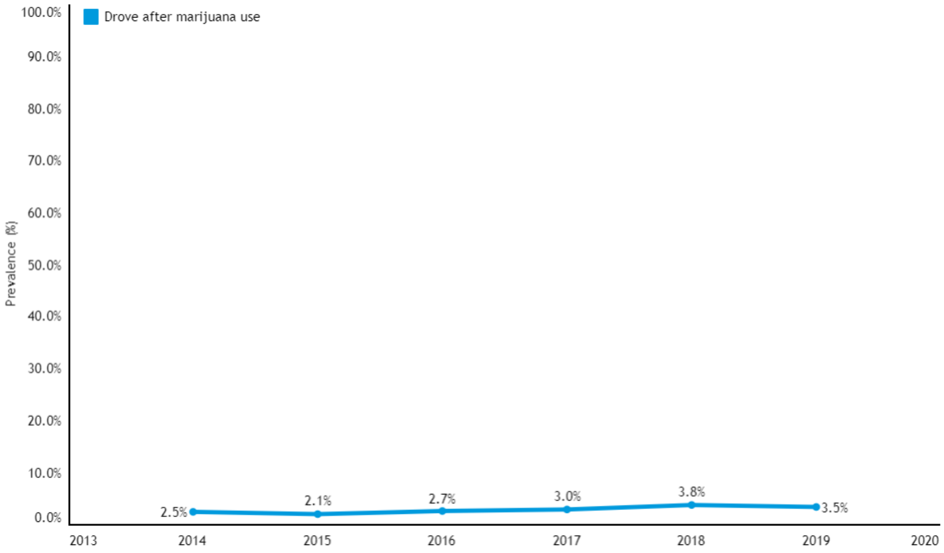

Figure Notes:
Denominator includes respondents that answered past 30 day use and missing, don't know, and refused answers are removed in prevalence calculation

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

Figure 13. Marijuana users reporting driving within 2-3 hours of using marijuana, 2014–2019

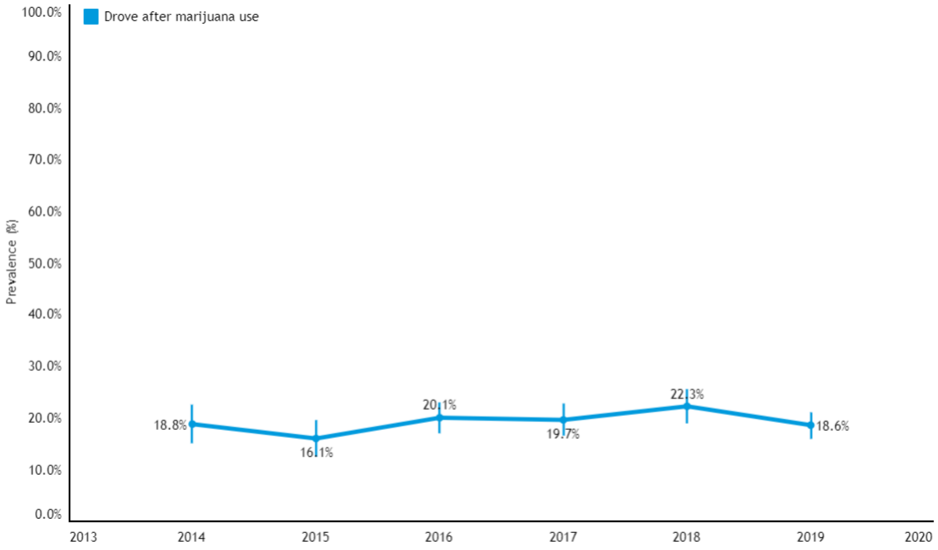

Figure Notes:
Denominator includes respondents that answered past 30 day use and missing, don't know, and refused answers are removed in prevalence calculation

Source: 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.[41] FARS includes information from toxicology testing of drivers and others involved in the crash when available. For the period of 2013-2019, the percentage of drivers tested for drugs remained consistent, at between 45% and 47%, according to information provided by CDOT. The status of the driver has an impact on testing prevalence, with 89% of deceased drivers tested compared to 16% of living drivers in 2019 (data not presented). This limits conclusions that can be drawn about the prevalence of DUID 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 data. This improvement in the completeness of Colorado's FARS data, however, makes comparisons to years prior to 2013 difficult.

The type of testing reported also precludes making any definitive statements about driver impairment. 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 THC (11-OH-THC) which dissipate quickly and inactive metabolites (THC-COOH) that are detectable in blood for longer periods of time.[42] 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.

Information regarding the number of fatalities, drivers, and crashes, and the prevalence of drug and alcohol testing, is presented in Table 17. A little less than half of drivers (45%-47%) involved in fatal crashes were tested for alcohol and/or drugs. However, in about two-thirds of crashes there was at least one driver tested.

The number and percent of fatalities where the driver was impaired at a BAC ≥ .08 is presented in Table 18. In 2019, a little over one-quarter (27%) of fatalities occurred when a driver was legally impaired by alcohol. The percent of fatalities with drivers who tested positive for Delta-9 THC at the 5 ng/mL level was 13% in 2019 (Table 19). 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.

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

[42] 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. Available at https://www.researchgate.net/publication/21817925_Blood_cannabinoids_I_absorption_of_THC_and_formation_of_11-OH-THC_and_THC-COOH_during_and_after_marijuana_smoking

Table 17. Colorado roadway fatalities' testing summary, 2013–2019

	2013	2014	2015	2016	2017	2018	2019
Fatalities	481	488	546	608	648	632	596
Fatalities with at least one driver drug tested	313	318	369	403	439	429	416
% fatalities with at least one driver drug tested	65%	65%	68%	66%	68%	68%	70%
Fatalities with at least one driver alcohol tested	345	338	391	414	448	435	428
% fatalities with at least one driver alcohol tested	72%	69%	72%	68%	69%	69%	72%
Drivers	627	684	787	880	940	890	866
Drivers drug tested	294	310	361	386	439	426	405
% drivers drug tested	47%	45%	46%	45%	47%	48%	47%
Drivers alcohol tested	337	339	397	408	455	443	422
% drivers alcohol tested	54%	50%	50%	46%	48%	50%	49%
Crashes	431	451	506	558	600	588	544
Crashes with at least one driver drug tested	274	286	334	357	396	392	370
% crashes with at least one driver drug tested	64%	63%	66%	64%	66%	67%	68%
Crashes with at least one driver alcohol tested	304	305	356	369	405	399	382
% crashes with at least one driver alcohol tested	71%	68%	70%	67%	68%	68%	70%

Source: Colorado Department of Transportation, Data Intelligence Group, Toxicology Data (2020).
Note: There is overlap in drivers tested for both alcohol and drugs.

Table 18. Colorado fatalities with drivers BAC ≥ .08, 2013–2019

	2013	2014	2015	2016	2017	2018	2019
Total fatalities	481	488	546	608	648	632	596
N fatalities driver BAC ≥ .08	142	160	151	161	171	184	164
% fatalities driver BAC ≥ .08	30%	33%	28%	27%	26%	30%	27%

Source: National Highway Traffic Safety Administration, *Traffic Safety Facts: State Alcohol-Impaired Driving Estimates; Overview of Motor Vehicle Crashes in 2019* (2020).
Note: 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. The final NHTSA estimates will not match the results from the raw toxicology data provided by CDOT and NHTSA.

Table 19. Colorado fatalities with driver's Delta-9 THC level ≥ 5ng/ml, 2016–2019

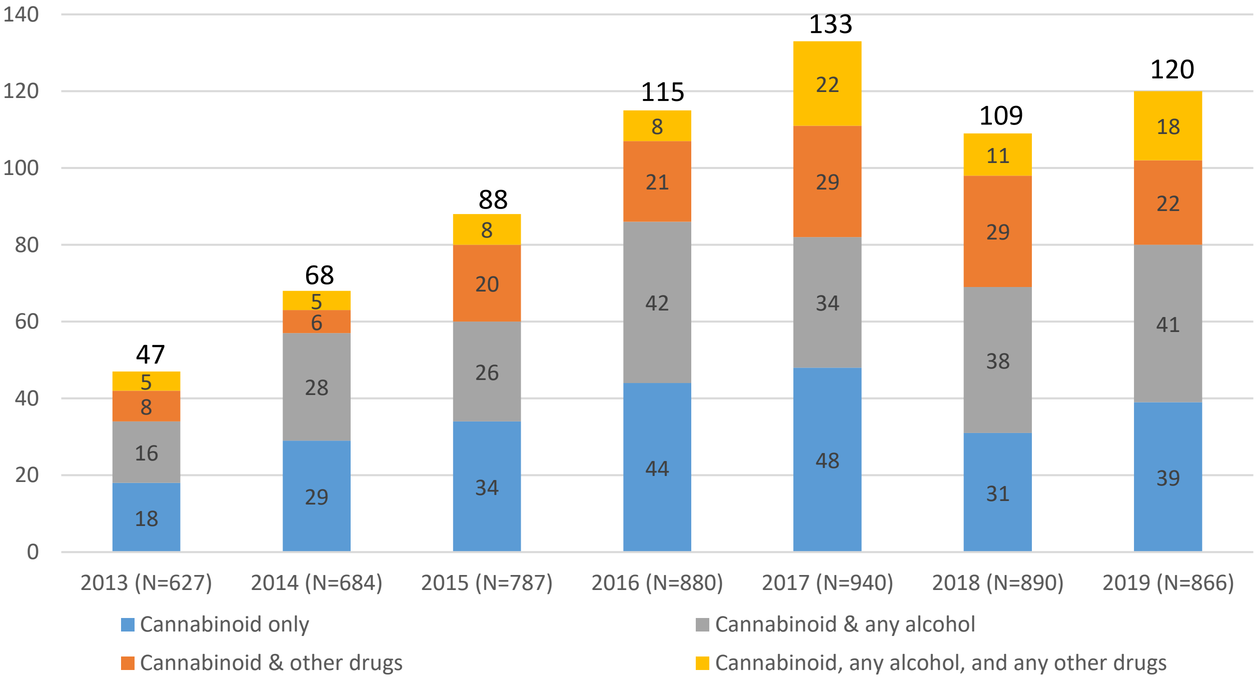
	2016	2017	2018	2019
Fatalities with at least one driver drug tested	403	439	429	416
N fatalities driver Delta-9 THC level ≥ 5ng/ml	52	35	42	56
% fatalities driver Delta-9 THC level ≥ 5ng/ml	14%	8%	10%	13%

Source: Colorado Department of Transportation, Data Intelligence Group, Toxicology Data (2020).
Note: a) Percentages are based only on fatal crashes where at least one driver in the crash was drug tested, 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."

Reporting by CDOT regarding whether a driver in a fatal crash tested positive for a cannabinoid has been consistent since 2013. 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 120 in 2019 (Figure 14). The number of drivers in fatal crashes testing positive for cannabinoid-only increased from 18 to 39 during that same period. 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 30% in 2019. However, only about half of all drivers involved in fatal crashes were tested for drugs.

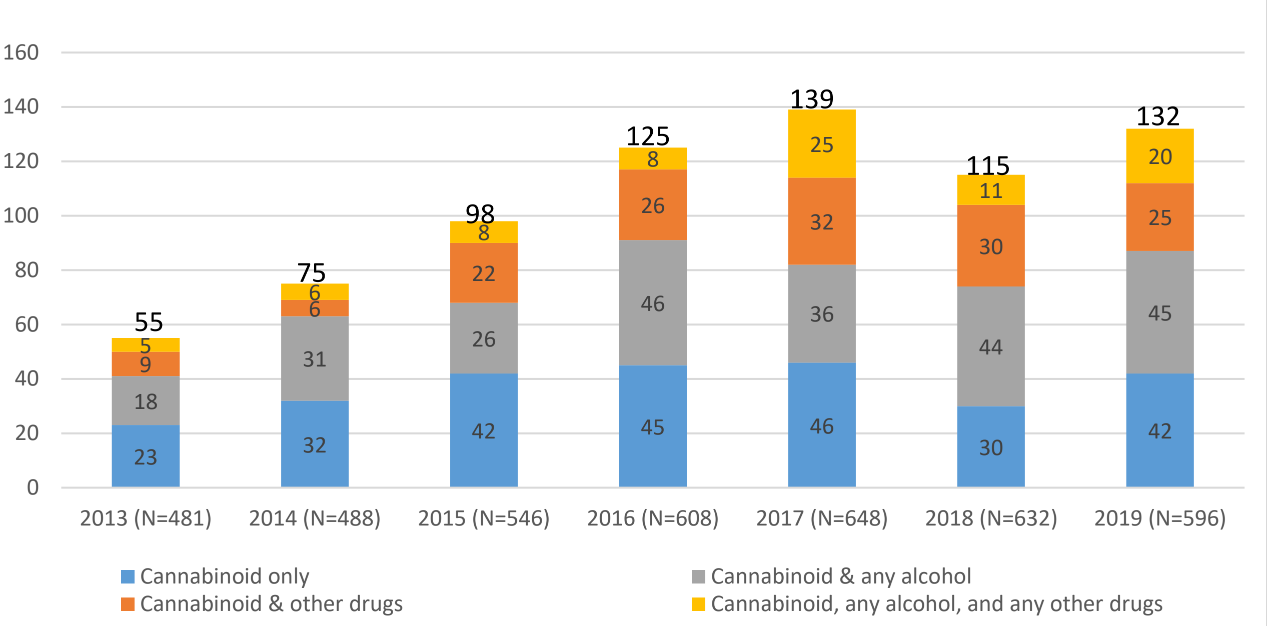
The number of fatalities in which the driver tested positive for cannabinoid-only or cannabinoid-in-combination increased from 55 in 2013 to 132 in 2019 (Figure 15). The number of fatalities in which the driver tested positive for cannabinoid-only increased from 23 in 2013 to 42 in 2019. The percentage of all fatalities with a cannabinoid positive (alone or in combination) driver increased from 18% in 2013 to 32% in 2019. Again, it should be noted that only about half of all drivers were tested for drugs.

Figure 14. Colorado drivers in fatal crashes involving cannabinoids, 2013–2019



Source: Colorado Department of Transportation, Data Intelligence Group, Toxicology Data (2020).
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.

Figure 15. Colorado fatalities involving drivers testing positive for cannabinoids, 2013–2019



Source: Colorado Department of Transportation, Data Intelligence Group, Toxicology Data (2020).
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 16 presents the 2016 through 2019 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 94 (23% of tested drivers) in 2019. However, when the drivers who test positive at the 5 ng/mL level were examined separately, there were 49 (12% of tested drivers) who tested positive at the 5 ng/mL[43] level in 2019.

The number of fatalities where a driver tested positive for *any* Delta-9 THC increased from 77 in 2016 to 106 in 2017 (Figure 17). Fatalities where the driver tested positive at or above the 5 ng/mL level increased slightly, from 52 in 2016 to 56 in 2019.

It should be noted that a recent study found that the annual changes in overall fatality rate for Colorado was similar to a group of control states pre- and post-legalization.[44]

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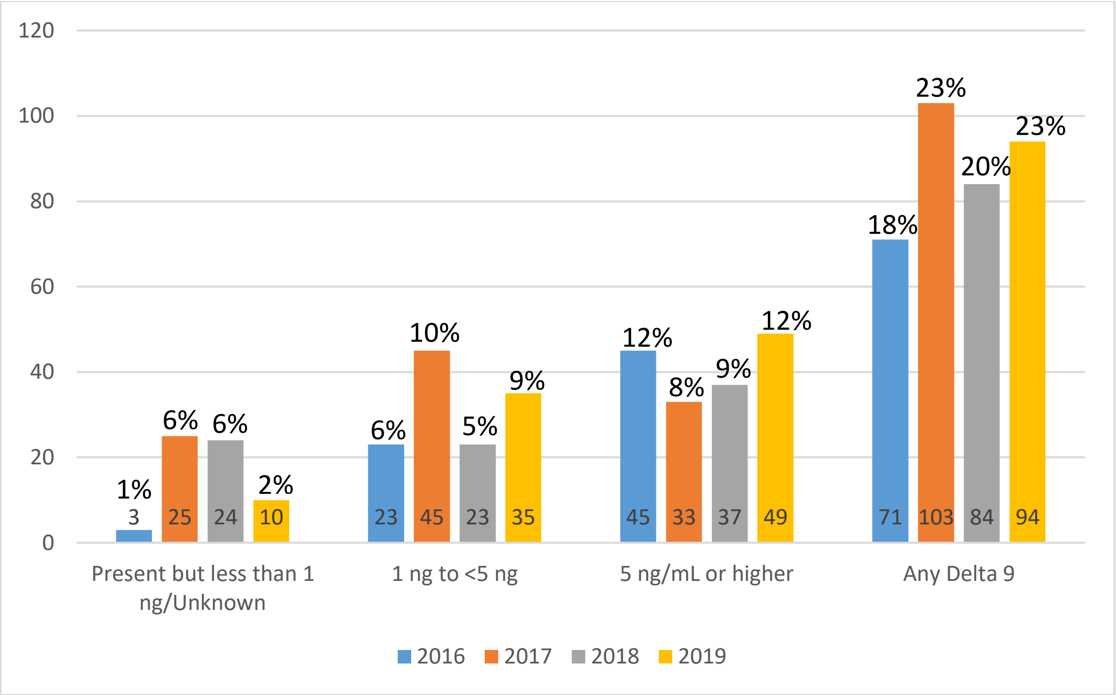
[43] Delta-9 THC level established in C.R.S. 42-4-1301 (6)(a) (IV) states "If at such time the driver's blood contained five nanograms or more of delta 9-tetrahydrocannabinol per milliliter in whole blood, as shown by analysis of the defendant's blood, such fact gives rise to a permissible inference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

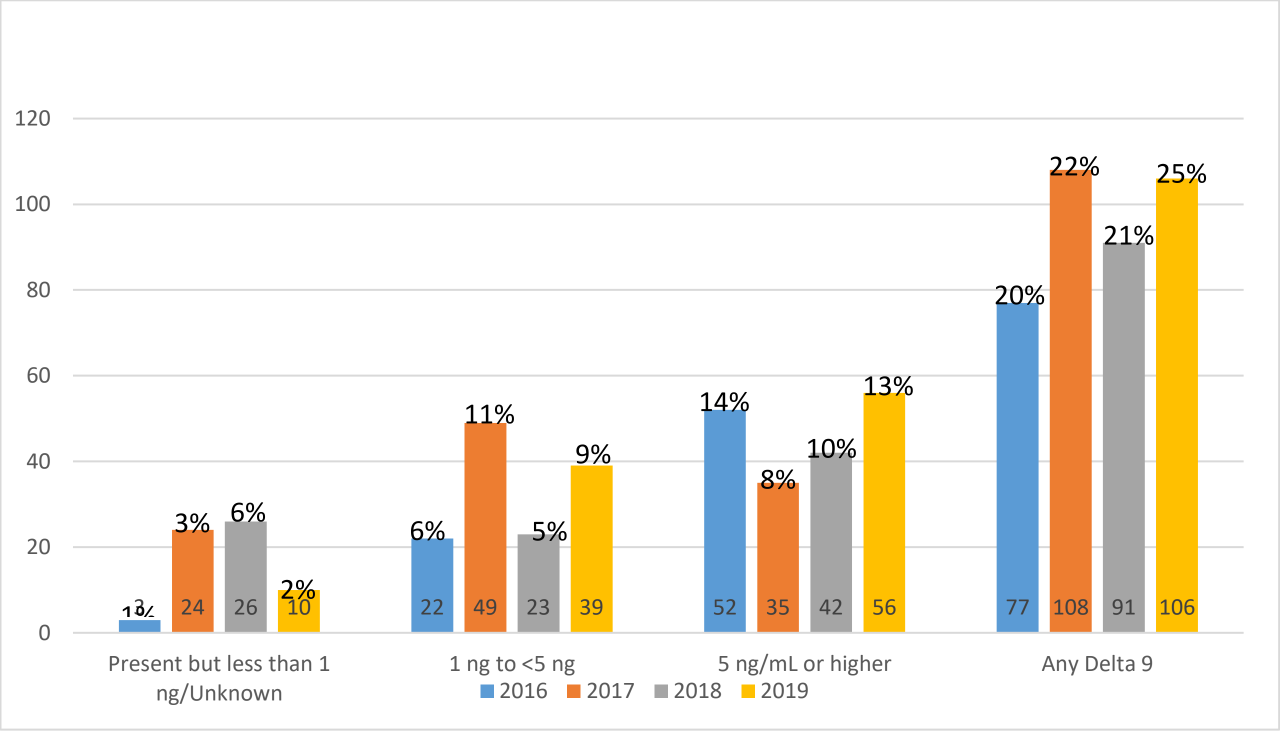
[44] Aydelotte, J. et al. (2017). Crash fatality rates after recreational marijuana legalization in Washington and Colorado. *American Journal of Public Health*, *107* (8), 1329-1331.

Figure 16. Colorado: Drug tested drivers in fatal crashes, by Delta-9 THC level, 2016–2019



Source: Colorado Department of Transportation, Data Intelligence Group, Toxicology Data (2020).
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.

Figure 17. Colorado: Percent and number of fatalities, by driver Delta-9 THC level, 2016–2019



Source: Colorado Department of Transportation, Data Intelligence Group, Toxicology Data (2020).
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.

Law Enforcement Training to Detect Impairment

Three training programs were administered in fiscal year 2016 using the Marijuana Tax Revenue Funds allocated from Senate Bill 14-215 to Peace Officer Standards and Training (POST) for law enforcement training. Training data were provided by the State of Colorado's Department of Law for the period July 1, 2014, through June 30, 2019.[45]

A Drug Recognition Expert (DRE) is a peace officer trained 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. In fiscal year 2016 training was completed by 23 DREs, 17 DRE instructors; 94 DREs attended the required update training (Table 20). As of May 2021, a total of 179 DREs were certified statewide (Figure 18), a significant increase since legalization but below the high point of 244 in 2015. Currently, the Colorado State Patrol (49) has the greatest number of DREs.

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 impairment and by promoting the use of DREs. ARIDE training is 16 hours long. In fiscal year 2019, ARIDE training was completed by 188 peace officers (Table 20).

Table 20. Law enforcement impaired driving training funded by Marijuana Cash Tax Fund

		Drug Recognition Expert					
		Operator	Instructor	Annual update	ARIDE	Sobriety checkpoint training	DUI report writing
FY 2015	N classes	3	2	2	35		
	N trained	56	17	160	562		
FY 2016	N classes	4	2	2	15	15	14
	N trained	23	17	94	136	97	
FY 2017	N classes	2		1	6		3
	N trained	16		55	143		31
FY 2018	N classes	5	1		5		
	N trained	58	13		75		
FY 2019	N classes	10	4		11		
	N trained	112	77		188		
Total	N classes	24	9	5	72	15	17
	N trained	265	124	309	1,104	97	31

Source: Colorado Attorney General's Office, Peace Officer Standards and Training.

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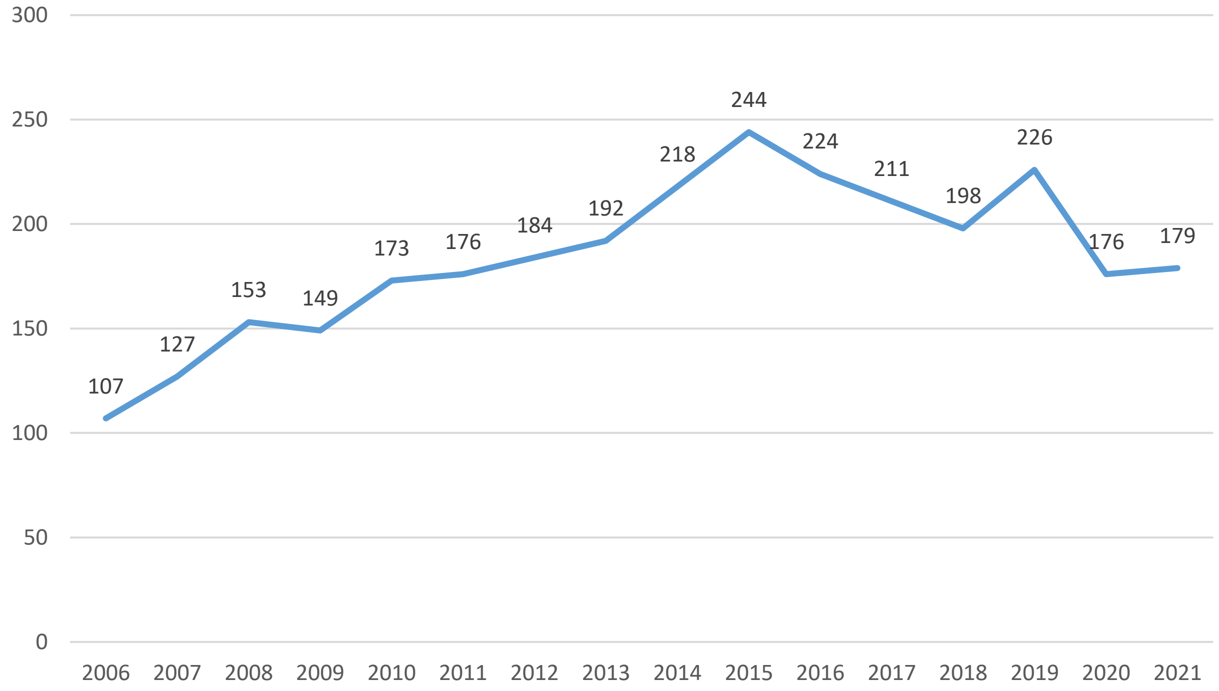
[45] For additional information on marijuana-related trainings supplied by POST, see https://www.coloradopost.gov/training/marijuana-training-law-enforcement

Figure 18. Trained Drug Recognition Experts in Colorado, 2006–2021



Source: Colorado Department of Transportation.

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 a bill was passed that gave judge's 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."[46] It is unknown if the number of probationers using medical marijuana was sufficient to effect the testing trends after 2016.

Table 21 presents information on the percentage of probationers tested who were positive for THC, categorized by the number of times they tested positive in a year. In all age groups the percentage of probationers testing positive one to two times did not change appreciably. However, the percentage testing positive three times or more doubled for those 18 to 25 years old (12% in 2012 to 27% in 2019). The percentage of probationers using three or more times tripled for the 26 to 35 age group (7% in 2012 to 21% in 2019) and for the 36 and older age group (5% in 2012 to 15% in 2019).

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

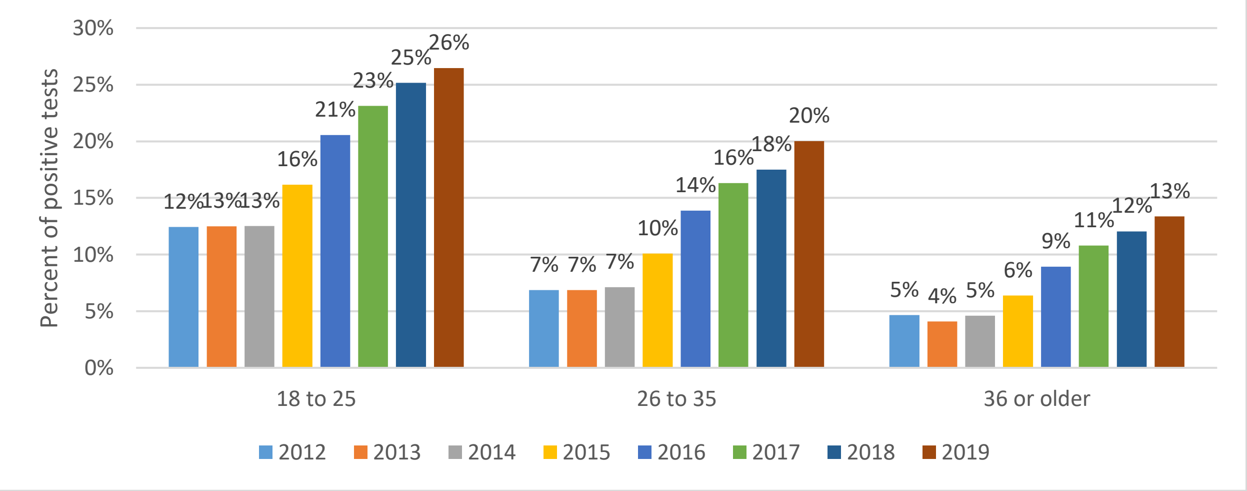
Table 21. Adult probationer drug test results for THC, by age group and number of times positive in a year, 2012-19

Age group	2012	2013	2014	2015	2016	2017	2018	2019
18 to 25 years								
N tested	17,231	15,983	18,832	17,845	16,916	16,305	15,285	14,377
0 times positive	68%	69%	66%	64%	61%	58%	55%	53%
1-2 times positive	21%	18%	18%	18%	18%	18%	19%	20%
3 times or more positive	12%	12%	16%	19%	21%	23%	26%	27%
26 to 35 years								
N tested	15,851	16,192	21,290	21,582	21,944	22,078	22,140	21,906
0 times positive	79%	81%	79%	75%	72%	69%	66%	63%
1-2 times positive	13%	12%	11%	12%	12%	13%	15%	15%
3 times or more positive	7%	8%	10%	12%	15%	18%	19%	21%
36 years or older								
N tested	16,594	17,561	23,543	24,016	23,937	24,324	25,012	25,760
0 times positive	86%	88%	86%	84%	81%	78%	76%	73%
1-2 times positive	9%	8%	8%	8%	9%	9%	11%	12%
3 times or more positive	5%	5%	7%	8%	10%	12%	14%	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.

The percent of all drug tests that were positive for THC increased across all adult age groups (Figure 19). For 18- to 25-year-olds, 12% of tests were positive in 2012 and 26% were positive in 2019. For 26- to 35-year-olds, 7% of tests were positive in 2012, which nearly tripled to 20% in 2019. The percent of drug tests for those 36 years or older also nearly tripled, from 5% in 2012 to 13% in 2019.

Figure 19. Adult probationers' drug tests positive for THC, by age group, 2012–2019



Source: Data provided by Colorado State Judicial Department. Analyzed by the Division of Criminal Justice.

Marijuana Seizures in Colorado

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.[47] 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 22 presents a trend of the quantity of marijuana seized and the number of reports. The 27,367 pounds of marijuana seized in 2019 is the highest since 2012 even though the number of seizures is the lowest. The 27,807 plants seized in 2019 is the second highest since 2012, but is a reduction from the 38,044 seized in 2018.

Table 22. Quantity of marijuana seized and number of reported seizures, by measurement type, 2012–2019

Quantity seized		2012	2013	2014	2015	2016	2017	2018	2019
Weight (lbs)	Amount	7,697	3,364	3,010	5,103	5,145	10,358	10,974	27,367
	N reports	11,762	5,183	5,077	4,623	4,614	4,889	4,622	3,600
Liquid volume (gallons)	Amount	15	1	1	60	6	41	8	12
	N reports	12	2	3	10	14	10	8	13
Dosage units	Amount	1,632	431	31,131	592	8,779	5,243	6,058	5,279
	N reports	169	50	60	90	130	199	163	220
Plants	Amount	28,284	1,228	2,840	4,000	10,076	25,255	38,044	27,807
	N reports	115	26	22	21	64	95	114	98
Not reported	Amount	NA	NA	NA	NA	NA	NA	NA	NA
	N reports	398	555	772	900	582	399	395	255

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

Colorado Bureau of Investigation, Illicit Market Marijuana Team

The Colorado Bureau of Investigation's (CBI) Illicit Market Marijuana Team (IMMT) 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. Formed in late 2018, the team is comprised of 13 investigative agents and one analyst.

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.[48]

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[47] 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.

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

In 2019, the IMMT participated in 36 cases, resulting in the dismantling of 82 illegal grow sites and 49 arrests. The team seized 25,161 plants, 5,487 pounds of processed marijuana, and 64 firearms (Table 23). The first three months of 2020 are included but will not be reflective of the final annual totals due to the timing of the outdoor marijuana growing season.

Table 23. CBI Illicit Market Marijuana Team activity

	2019	2020 (Jan-Mar)
Total cases	36	6
Arrests	49	7
Grow sites dismantled	82	26
Plants seized	25,161	5,512
Processed marijuana (lbs)	5,487	543
Oils and concentrates (lbs)		36
Firearms seized	64	16

Source: Colorado Bureau of Investigation (2020). *2019 CBI Annual Report*; 2020 data provided by CBI.
Note: The seizures reported by the BMMT will be a subset of the total seizures reported in Table 21.

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 was obtained to determine what enforcement actions have been undertaken regarding cultivation of marijuana on public lands. The number of growing operations and plants seized shows no discernible trend (Table 24). Prior to legalization, the year with the greatest activity was 2012, with 11 grow operations seized, accounting for approximately 46,622 plants. There has been significant fluctuation in the number of plants seized since 2012, from a low of 1,502 in 2018 to a high of 80,826 in 2017.

Table 24. Marijuana plants seized on public land, by agency, 2009–2019

		Plants seized			
Year	Grows seized	National Forest Service	Bureau of Land Management	National Park Service	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

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

In 2019, the most common outcomes for a federal marijuana offense on National Park Lands are a warning (170, 64%) or a federal violation notice (83, 31%) with very few (6) receiving a custodial arrest (Table 25).

Table 25. Marijuana offenses in Colorado National Parks, 2017-2019

Charge status	2017	2018	2019
Arrest/physical custody	1	6	6
Criminal complaint		1	
Federal violation notice	34	78	83
State/local citation			2
Warning	48	126	170
Unknown	2		5
Grand Total	**85**	**211**	**266**

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 provides resources to support the 128 state and local law enforcement agencies that actively participate in the program. This assistance allows for the enhancement of already aggressive eradication enforcement activities throughout the nation.

The number of outdoor plants destroyed decreased from 26,020 in 2011 to 2,630 in 2014. However, the number of outdoor plants eradicated increased in both 2015 (26,545) and 2016 (23,823) before decreasing in recent years (Table 26). The number of indoor plants seized has not shown a consistent trend but reached a recent peak in in 2018 (46,428) and 2019 (57,711). These seizure totals indicate that there is continued federal involvement in Colorado’s illicit marijuana trade. The number of recent arrests in 2018 (64) and 2019 (34) are the highest since legalization. Additionally, the number of weapons seized from 2016 to 2019 (n=228) are the most weapons seized in any recent four-year period (Table 26).

Table 26. 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

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 266 seizures reported to EPIC in 2019 (Table 26). Seizures used to be almost exclusively of marijuana flower, with that accounting for 90% of reported seizures in 2012. By 2019, 67% of seizures were for flower, 22% were for concentrates/hash, and 10% were for edibles (Table 27).

Table 27. Seizures of Colorado-sourced marijuana, by type, 2010–2019

	Marijuana type seized				
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

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

Transfer Using Parcel Services

The United States Postal Inspection Service reported the number of seizures to the Rocky Mountain High Intensity Drug Trafficking Area (RMHIDTA) organization. Table 28 presents the trend from 2010 through 2017, which indicates regular increases in both the number of parcels and amount of marijuana products seized.

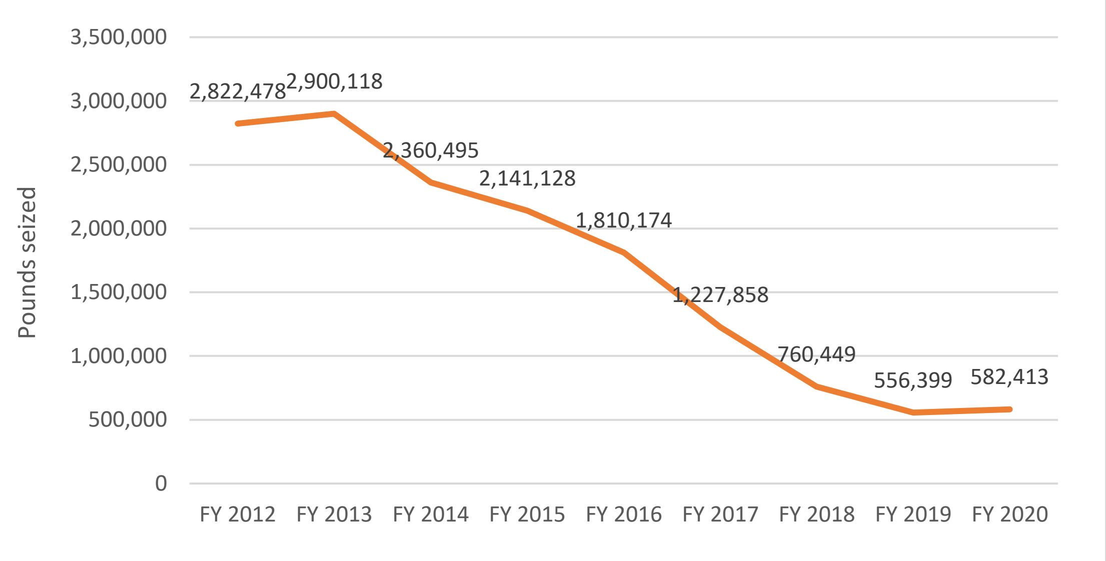
Table 28. Marijuana Seizures in Colorado by United States Postal Inspection Service, 2010–2017

Year	N parcels seized	Pounds seized
2010	15	57.2
2011	36	68.2
2012	158	262.0
2013	207	493.1
2014	320	469.9
2015	581	1247.0
2016	854	1725.5
2017	1,009	2,001.0

Source: Rocky Mountain High Intensity Drug Trafficking Area (2018). *The Legalization of Marijuana in Colorado: The Impact, Volume 5*.
Note: Data provided to RMHIDTA from the United States Postal Inspection Service (USPIS). The USPIS has not provided updated data to RMHIDTA since 2017.

Figure 20 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 79% between FY 2012 and FY 2020. This reduction in seizures has not been mirrored by the trends of other drugs, where heroin, methamphetamine, and fentanyl seizures have shown marked increases (data not presented). This reduction in marijuana importation may reflect the growth of the legal market in the United States meeting the national demand.

Figure 20. Marijuana Seizures by Customs and Border Protection, FY 2012-FY 2020



Source: U.S. Customs and Border Protection, CBP Enforcement statistics, https://www.cbp.gov/newsroom/stats/cbp-enforcement-statistics

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 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 marijuana 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 long-term 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.

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, Office of Behavioral Health, 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. In recent years, health professionals and the public have become increasingly aware of how such lifestyle factors as cigarette smoking, being overweight, sedentary lifestyle, and the nonuse of seat belts contribute to injury, illness, and death.[49]

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.

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[49] Additional information on the Colorado BRFSS can be accessed at https://marijuanahealthinfo.colorado.gov/health-data/behavioral-risk-factor-surveillance-system-brfss-data

Marijuana use remained stable from 2014 to 2016, at around 13.5%. In 2017, use significantly increased to 17.5% and continued upwards in 2019, when 19.0% of Colorado adults reported using marijuana in the past 30 days (Figure 21).

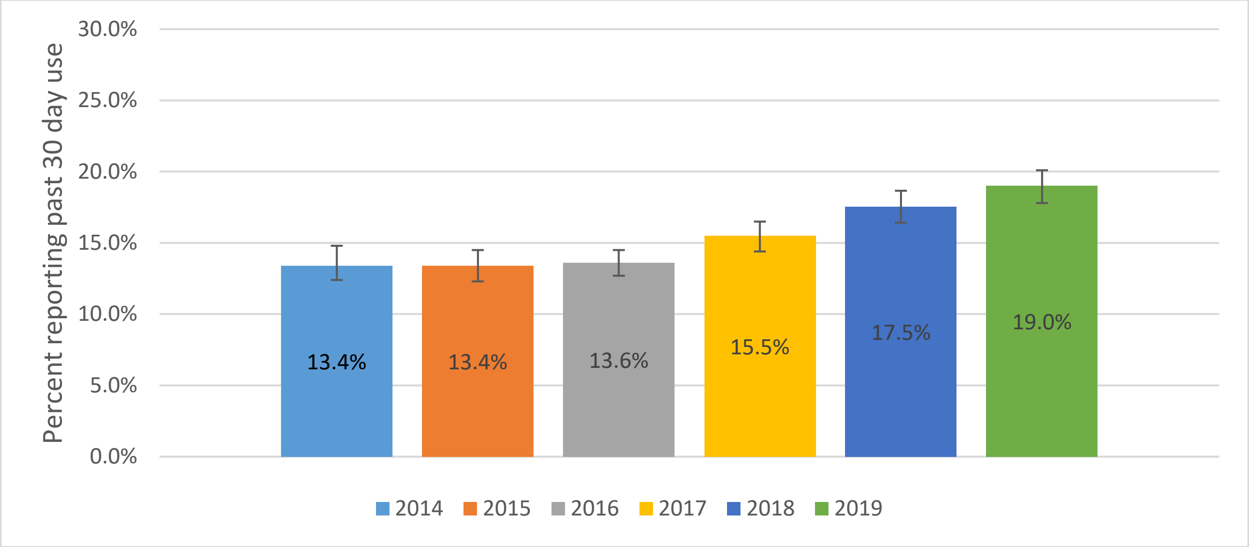
Prevalence of marijuana use differed by age, gender, race/ethnicity, and sexual orientation. In 2019, more males reported current (past 30-day) use of marijuana (22.9%) than females (15.1%). Current use for males increased significantly from 2018 (20.2%) to 2019 (22.9%), but female use remained stable (Figure 22).

Figure 23 presents trend data for past 30-day marijuana use stratified by age group. In 2019, past 30-day marijuana use among 18- to 25-year-old respondents (28.8%) was not significantly different from 26- to 34-year-olds (29.4%). However, both of those age groups reported significantly higher past 30-day use compared 35- to 64-year-olds (17.3%) and those 65 and older (9.3%). There was no significant difference in reported use for 18- to 25-year-olds or 26 to 34 -year-olds from 2017 to 2019. Reported use for those ages 35 to 64 years significantly increased from 2017 (12.8%) to 2019 (17.3%) as well as for those 65 years and older from 2017 (5.6%) to 2019 (9.3%).

Past 30-day marijuana use did not significantly differ by race/ethnicity (Figure 24). In 2019, White non-Hispanics had significantly higher marijuana prevalence rates (20.1%) than Hispanics (13.6%). There was no change in the Hispanic prevalence but the percentage of White non-Hispanics reporting past 30-day use increased significantly, from 17.9% in 2018 to 20.1% in 2019.

Sexual orientation was related to past 30-day marijuana use (Figure 25). In 2019, 37.0% of those who identified their sexual orientation as gay, lesbian, or bisexual reported use in the past 30 days compared to 17.7% for those who identified as heterosexual. From 2018 to 2019, there were no significant changes in marijuana usage prevalence for either sexual orientation category.

Figure 21. Past 30-day adult marijuana use, 2014–2019: BRFSS



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

Figure 22. Past 30-day adult marijuana use, by gender, 2014–2019: BRFSS

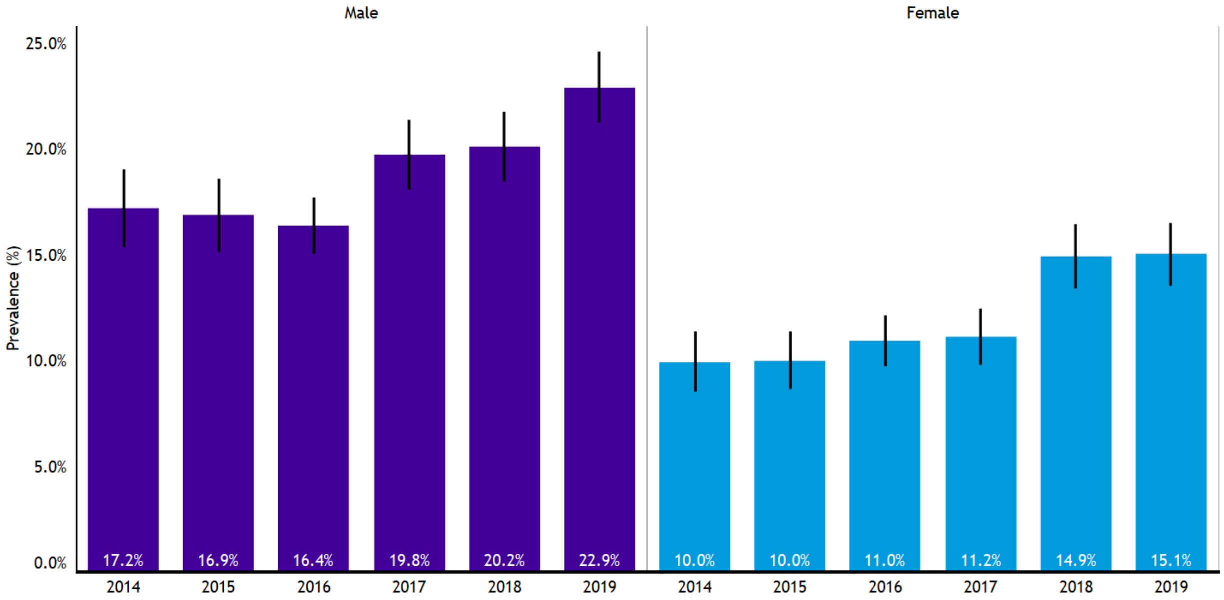


Figure Notes:
Demographic stratifications with less than 50 respondents are suppressed and displayed missing

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

Figure 23. Past 30-day adult marijuana use, by age group, 2014–2019: BRFSS

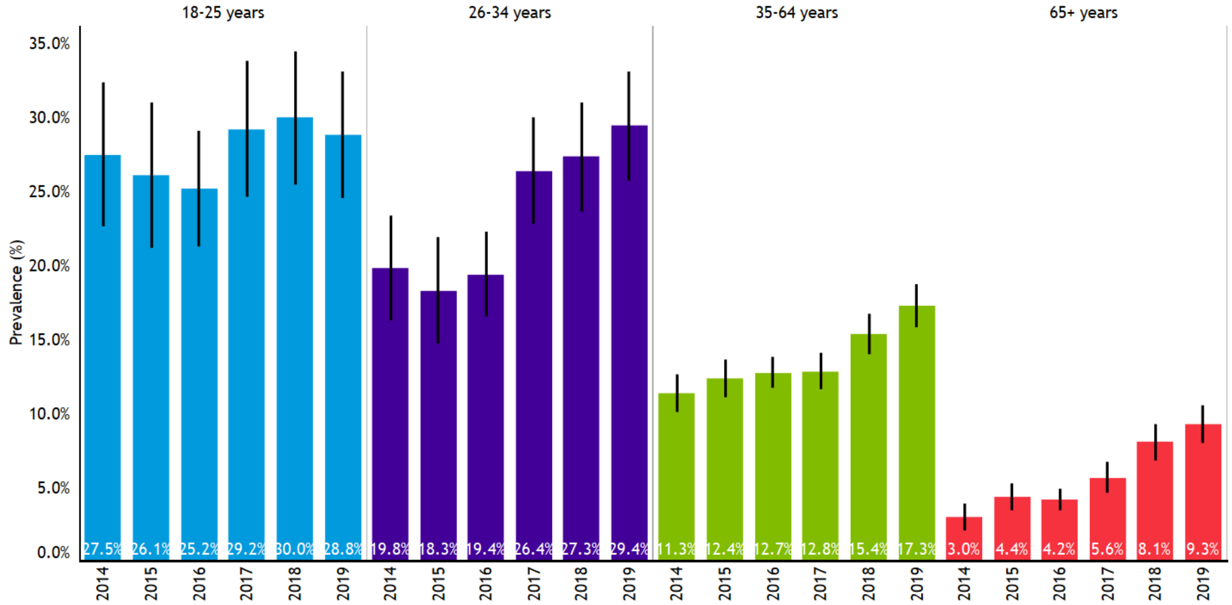
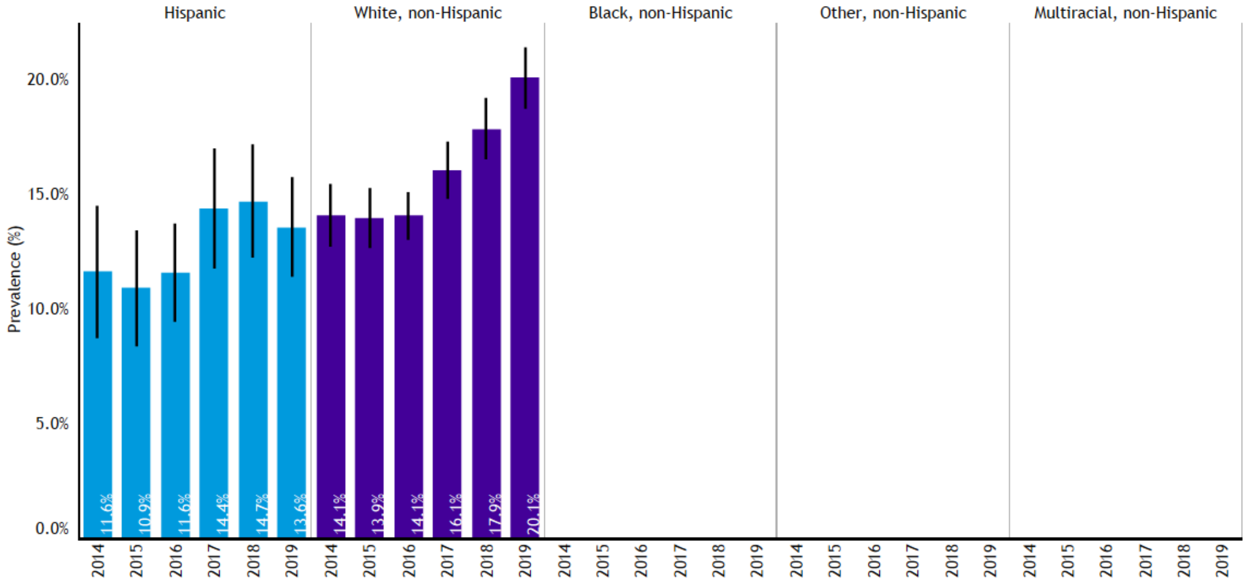


Figure Notes:
Demographic stratifications with less than 50 respondents are suppressed and displayed missing

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

Figure 24. Past 30-day adult marijuana use, by race/ethnicity, 2014–2019: BRFSS



Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.
Note: Demographic stratifications with less than 50 respondents are suppressed and displayed missing.

Figure 25. Past 30-day adult marijuana use, by sexual orientation, 2014–2019: BRFSS

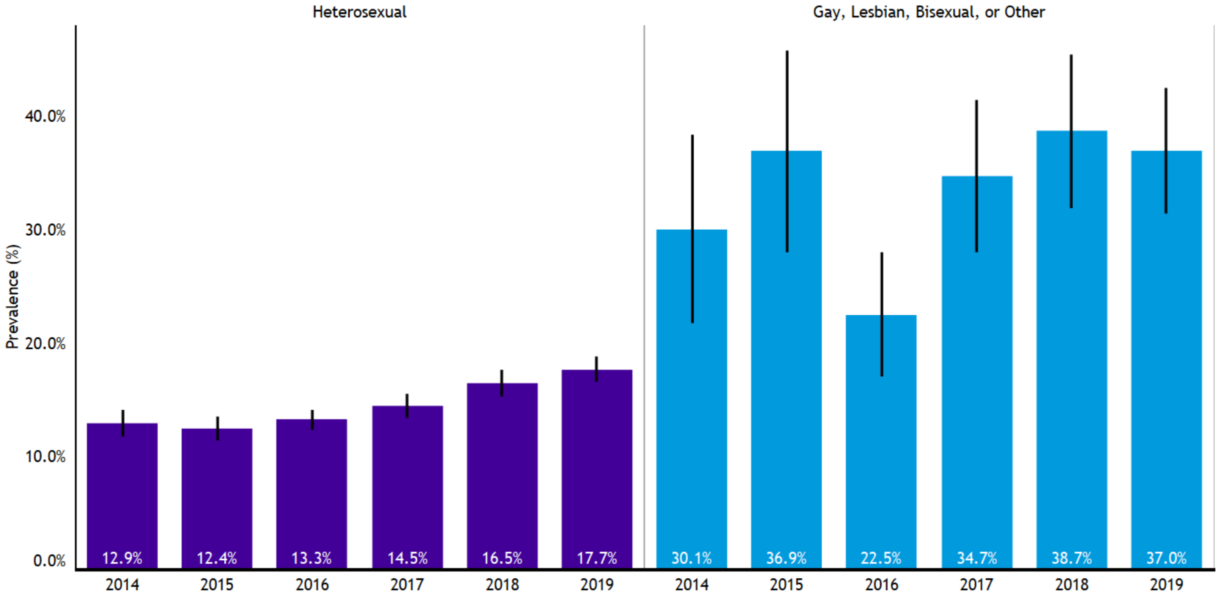


Figure Notes:
Demographic stratifications with less than 50 respondents are suppressed and displayed missing

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

The most common frequency of marijuana use in 2019 (Figure 26) was daily/near daily (48.2%), followed by weekly (31.6%), and monthly (20.2%). The percentage reporting daily/near daily use has remained stable while the percentage reporting weekly use increased significantly from 2018 (26.2%) to 2019 (31.6%).

The most common methods of adult marijuana use (Figure 27) are smoking (76.1%), eating/drinking (43.0%), vaporizing (32.0%), dabbing (19.6%), and some other method (11.7%).

Figure 26. Frequency of adult marijuana use, 2014-2019: BRFSS

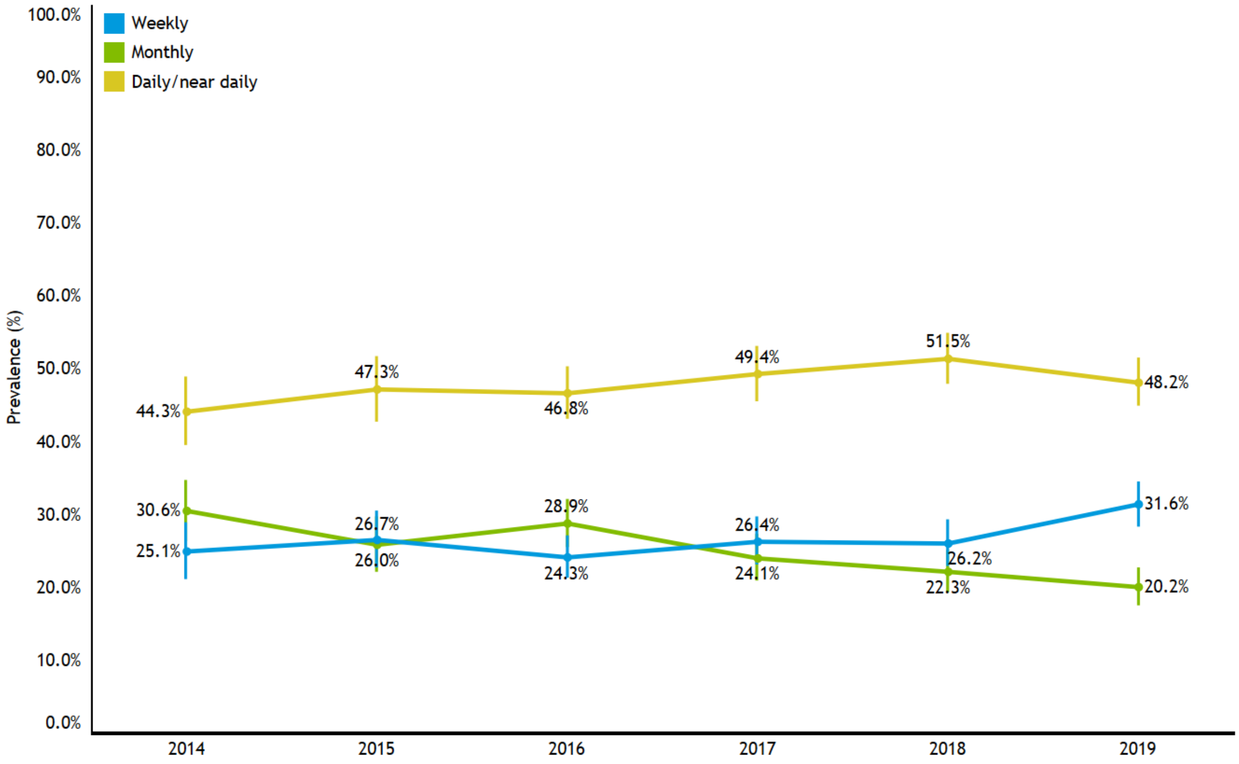


Figure Notes:
Denominator includes respondents that answered past 30 day use and missing, don't know, and refused answers are removed in prevalence calculation

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

Figure 27. Method of marijuana use, 2015-2019: BRFSS

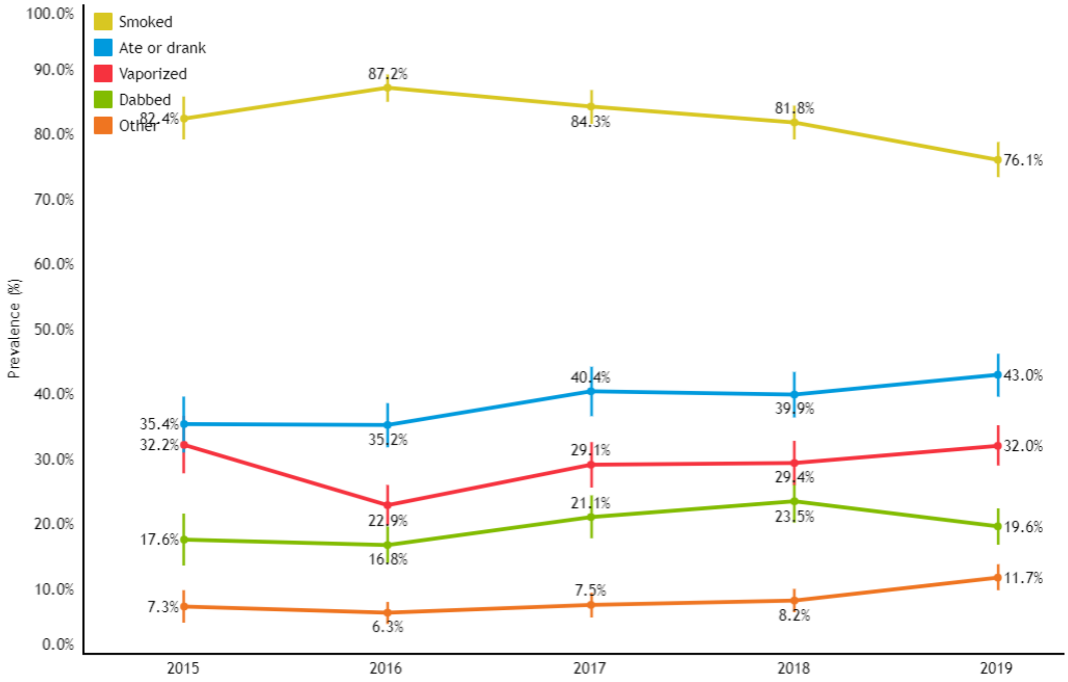
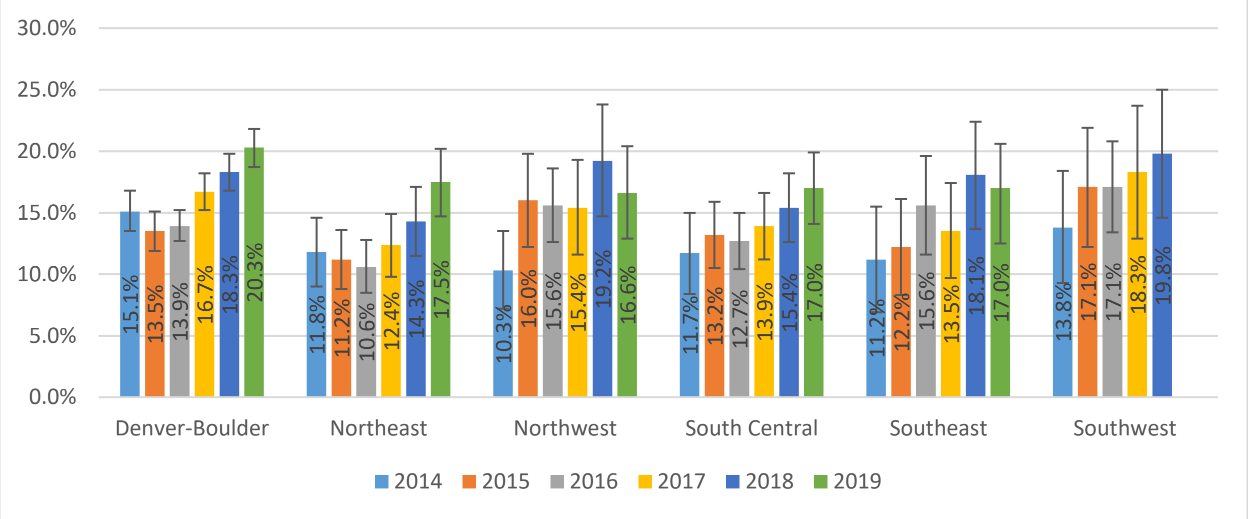


Figure Notes:
Denominator includes respondents that answered past 30 day use and missing, don't know, and refused answers are removed in prevalence calculation

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

The geographic BRFSS marijuana use estimates for Colorado are presented in two ways. Annual data were grouped into six regions (Figure 28), while county-level data for 2014 through 2018 were only available as a 5-year average (Figure 29). The trends within each region from 2014 through 2019 are presented in Figure 27. In 2019, the region with the lowest rate was the Northwest (16.6%) while the highest usage rates were in the Denver-Boulder region (20.3%) (Figure 27). There were no statistically significant differences between the regions.

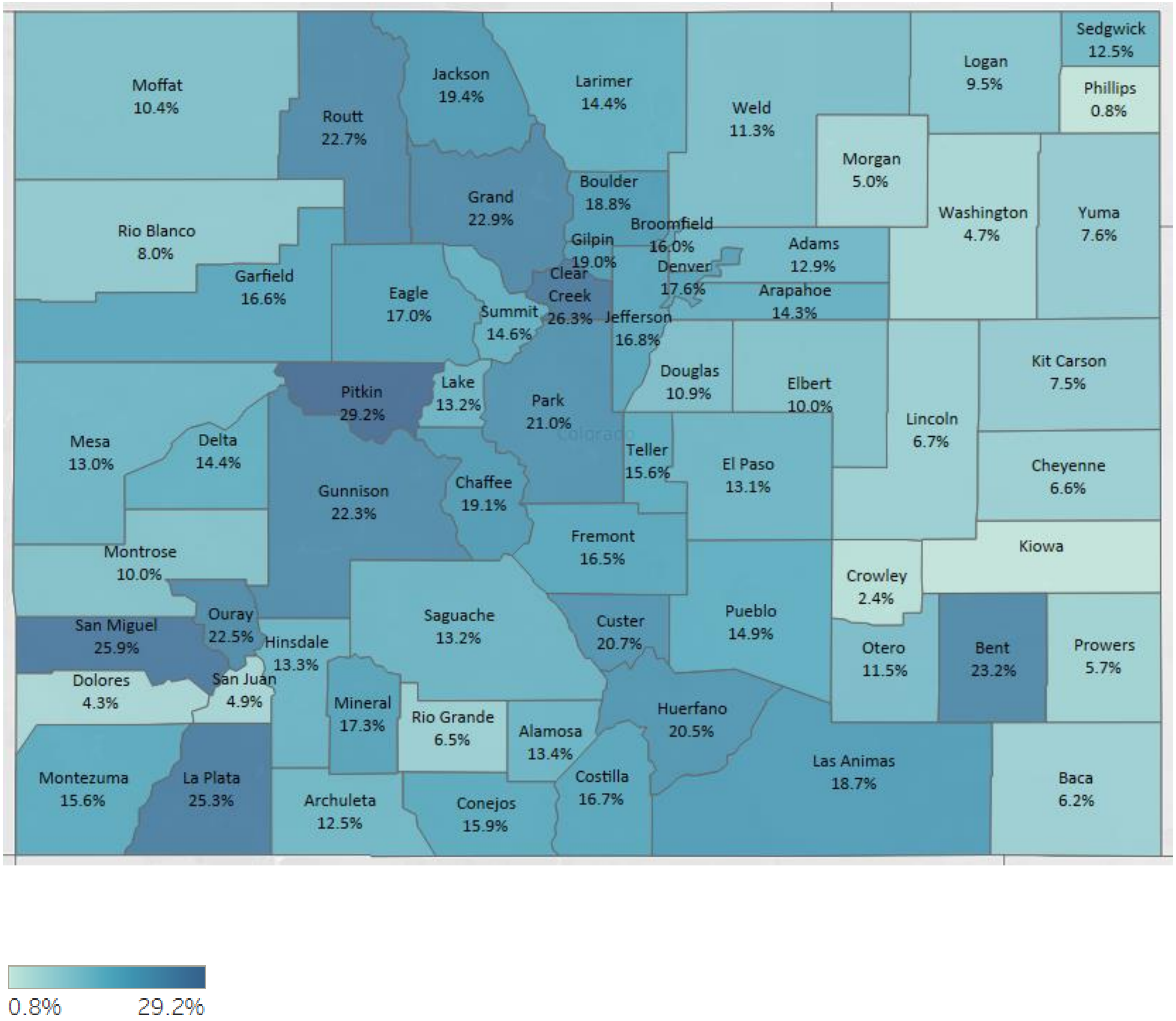
Figure 28. Past 30-day adult marijuana use by region, 2014–2019: BRFSS



Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment.
Note: Estimates were not calculated for the Southwest region in 2019 due to small sample size.

County-level estimates of past 30-day marijuana use are presented in Figure 29. Due to the relatively small number of responses in each county, the results are combined for the five-year period from 2014 to 2018. The counties with the three highest past 30-day marijuana use were Pitkin (29.2%), Clear Creek (26.3%), and San Miguel (25.9%). The counties with the lowest past 30-day marijuana use were Philips (0.8%), Crowley (2.4%), and Delores (4.3%).

Figure 29. Past 30-day adult marijuana use by county, 2014–2018 (combined): BRFSS


Moffat 10.4%
Routt 22.7%
Jackson 19.4%
Larimer 14.4%
Weld 11.3%
Logan 9.5%
Sedgwick 12.5%
Phillips 0.8%
Morgan 5.0%
Rio Blanco 8.0%
Grand 22.9%
Boulder 18.8%
Broomfield 16.0%
Gilpin 19.0%
Adams 12.9%
Washington 4.7%
Yuma 7.6%
Garfield 16.6%
Eagle 17.0%
Summit 14.6%
Clear Creek 26.3%
Denver 17.6%
Arapahoe 14.3%
Jefferson 16.8%
Douglas 10.9%
Elbert 10.0%
Kit Carson 7.5%
Pitkin 29.2%
Lake 13.2%
Park 21.0%
Lincoln 6.7%
Mesa 13.0%
Delta 14.4%
Teller 15.6%
El Paso 13.1%
Cheyenne 6.6%
Gunnison 22.3%
Chaffee 19.1%
Montrose 10.0%
Fremont 16.5%
Kiowa
Crowley 2.4%
Ouray 22.5%
San Miguel 25.9%
Saguache 13.2%
Custer 20.7%
Pueblo 14.9%
Hinsdale 13.3%
Otero 11.5%
Bent 23.2%
Prowers 5.7%
Dolores 4.3%
San Juan 4.9%
Mineral 17.3%
Rio Grande 6.5%
Alamosa 13.4%
Huerfano 20.5%
Las Animas 18.7%
Montezuma 15.6%
La Plata 25.3%
Archuleta 12.5%
Conejos 15.9%
Costilla 16.7%
Baca 6.2%
0.8%
29.2%

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

National Survey on Drug Use and Health

The Substance Abuse and Mental Health Services Administration (SAMHSA) conducts the annual National Survey on Drug Use and Health (NSDUH).[50] NSDUH is the primary source of information on the prevalence, patterns, and consequences of alcohol, tobacco, and illegal drug use and abuse and mental disorders in the U.S. civilian, noninstitutionalized population, age 12 and older. The survey generates estimates at the national, state, and sub-state levels. NSDUH is state-based, with an independent, multistage area probability sample within each state and the District of Columbia. SAMHSA produces state-level estimates from a two-year rolling average. This means that each year actually represents two years of data. The two-year prevalence rates for Colorado residents 18 and older were based on weighted estimates from 1,200 to 1,400 survey respondents.[51]

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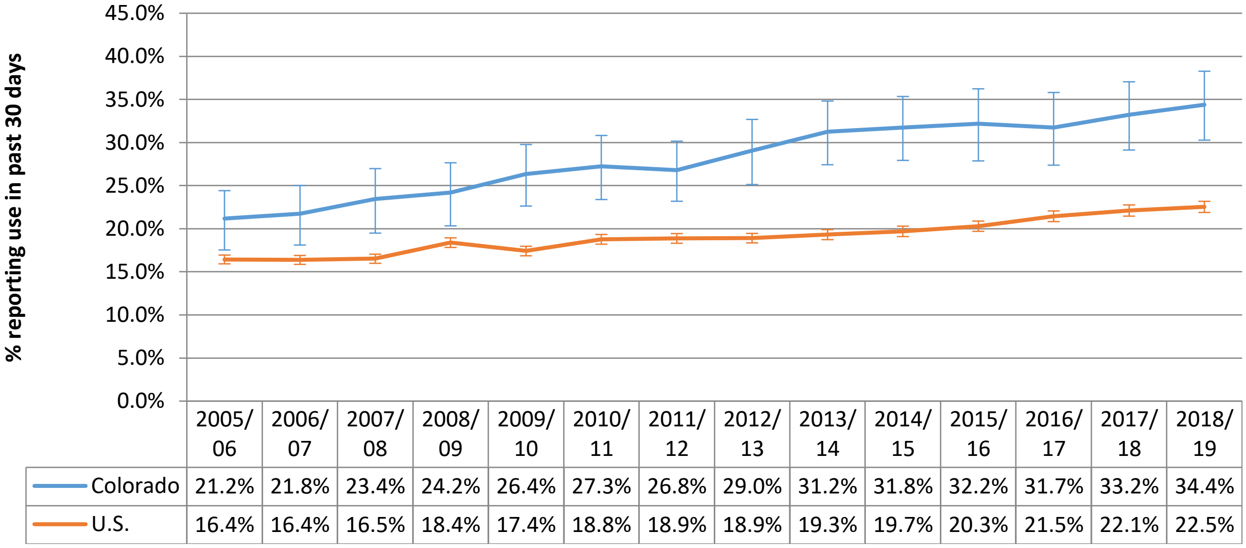
[50] Descriptions of NSDUH derived from information available at https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health

Young Adult Trends (18- to 25-Year-Olds)

Past 30-day marijuana use increased significantly for young adults (18- to 25-year-olds), from 21.2% in 2005/06 to 31.2% in 2013/14 but stabilized since legalization, with 34.4% reporting use in 2018/19 (Figure 30). Figure 31 shows the prevalence of past 30-day marijuana use by state, which indicates that young adult use in Colorado was significantly higher than in most other states.[52] The increase in marijuana use contrasts with a decline in tobacco use (down from 45.9% to 26.2%). Use of other illicit drugs was stable at around 9% during this same period (Figure 31). Alcohol use did not change appreciably, with usage rates at approximately 63% to 70% during this period (Figure 32).

Figure 30. Past 30-day marijuana use, 18- to 25-year-olds, 2005/06 – 2018/19: NSDUH



	2005/ 06	2006/ 07	2007/ 08	2008/ 09	2009/ 10	2010/ 11	2011/ 12	2012/ 13	2013/ 14	2014/ 15	2015/ 16	2016/ 17	2017/ 18	2018/ 19
Colorado	21.2%	21.8%	23.4%	24.2%	26.4%	27.3%	26.8%	29.0%	31.2%	31.8%	32.2%	31.7%	33.2%	34.4%
U.S.	16.4%	16.4%	16.5%	18.4%	17.4%	18.8%	18.9%	18.9%	19.3%	19.7%	20.3%	21.5%	22.1%	22.5%

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, available at https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health

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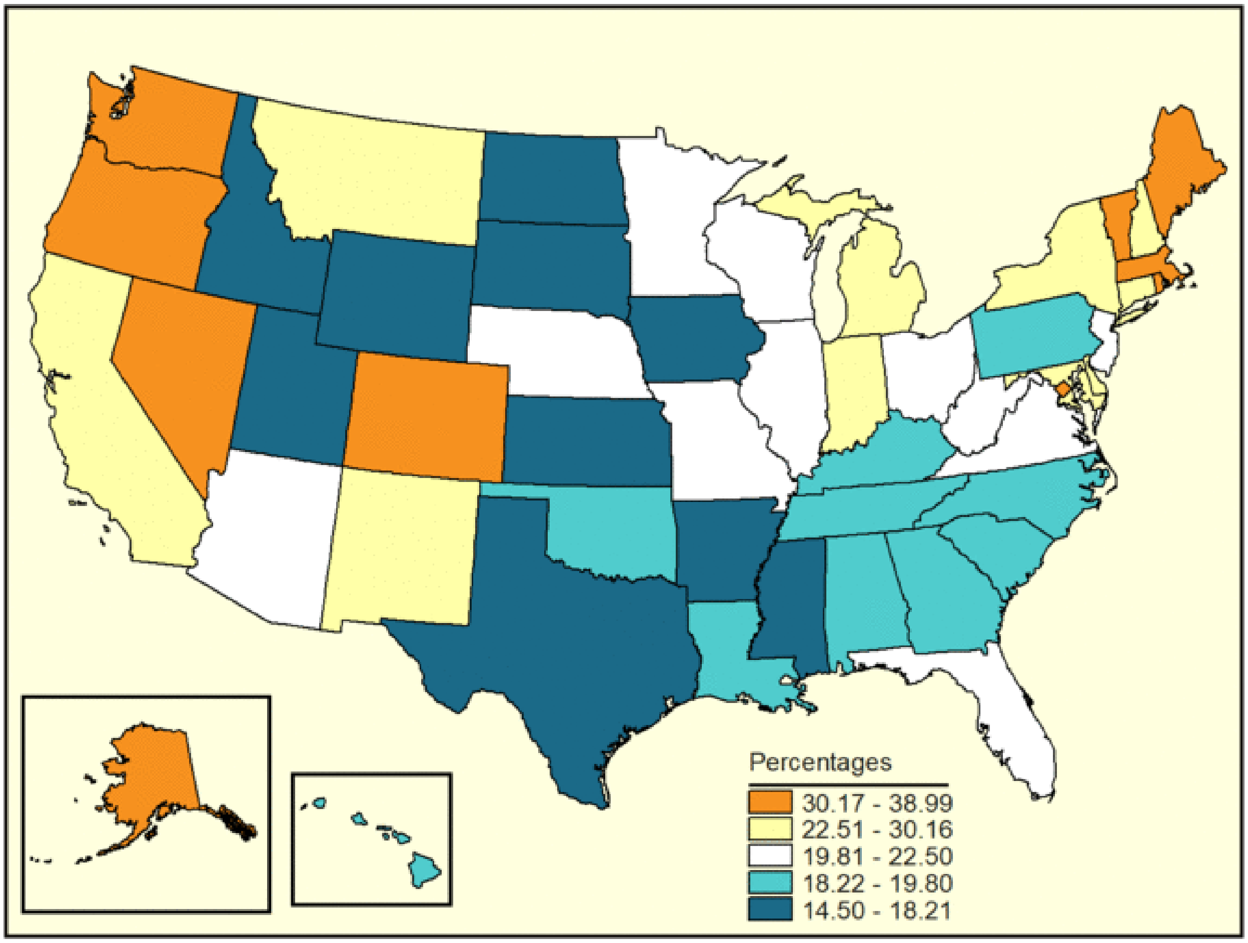
[51] The exact number of survey respondents varies by year but has varied between 1,200 and 1,400 for the period 2005/06 to 2018/19. See the Substance Abuse and Mental Health Services Administration, 2015-2016 National Survey on Drug Use and Health: Guide to State Tables and Summary of Small Area Estimation Methodology, Table C-10, available at https://www.samhsa.gov/data/report/2018-2019-nsduh-guide-state-tables-and-summary-sae-methodology

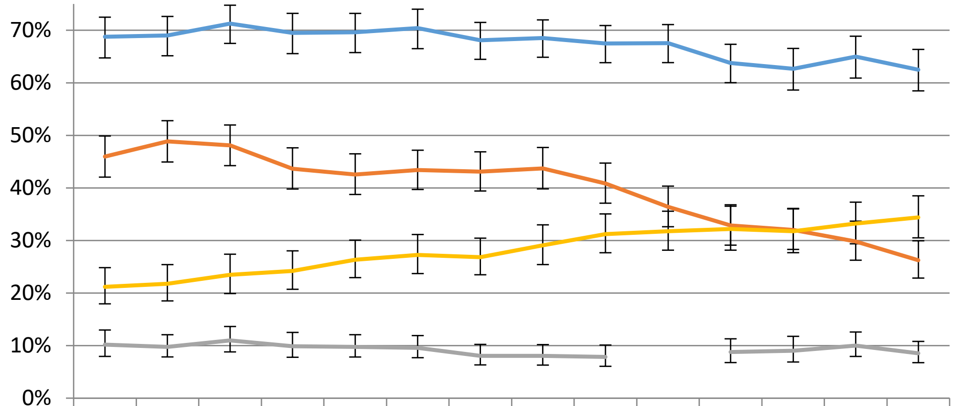
[52] See the Substance Abuse and Mental Health Services Administration, 2018-2019 National Survey on Drug Use and Health: P-value Tables for a detailed statistical comparison of states, https://www.samhsa.gov/data/report/comparison-2017-2018-and-2018-2019-nsduh-population-percentages-50-states-and-district

Figure 31. Past 30-day marijuana use, 18- to 25-year-olds, by state, 2018/2019


Percentages
30.17 - 38.99
22.51 - 30.16
19.81 - 22.50
18.22 - 19.80
14.50 - 18.21

Source: Substance Abuse and Mental Health Services Administration (2020), National Survey on Drug Use and Health, *2018-19 National Survey on Drug Use and Health National Maps of Prevalence Estimates, by State.* Available at https://www.samhsa.gov/data/report/2018-2019-nsduh-national-maps-prevalence-estimates-state

Figure 32. Past 30-day substance use, 18- to 25-year-olds, 2005/06–2018/19: NSDUH

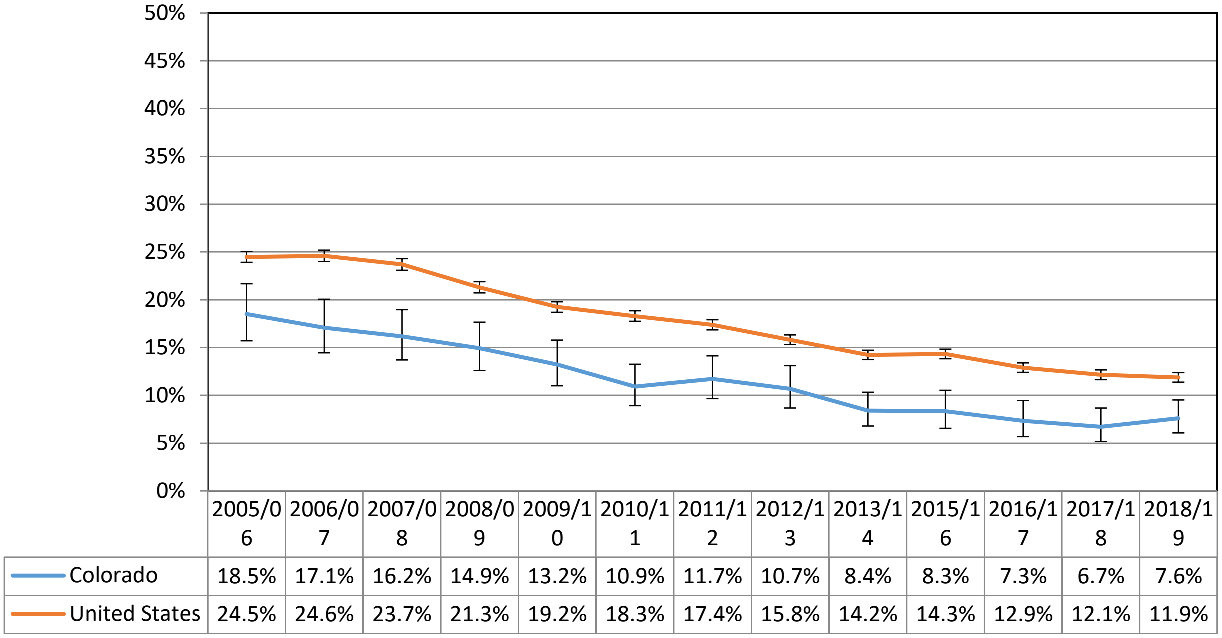


	2005 /06	2006 /07	2007 /08	2008 /09	2009 /10	2010 /11	2011 /12	2012 /13	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18	2018 /19
Any alcohol	68.7%	69.0%	71.3%	69.5%	69.6%	70.4%	68.1%	68.5%	67.5%	67.6%	63.8%	62.7%	65.0%	62.5%
Any tobacco	45.9%	48.9%	48.1%	43.7%	42.6%	43.4%	43.1%	43.7%	40.9%	36.4%	32.8%	32.0%	29.8%	26.2%
Illicit drugs, non-marijuana	10.2%	9.8%	11.0%	9.9%	9.8%	9.6%	8.1%	8.0%	7.8%		8.8%	9.0%	10.0%	8.6%
Marijuana	21.2%	21.8%	23.4%	24.2%	26.4%	27.3%	26.8%	29.0%	31.2%	31.8%	32.2%	31.7%	33.2%	34.4%

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, available at https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health
Note: NSDUH did not produce an estimate for illicit drugs other than marijuana in 2014/15.

The perception of great risk from once-per-month marijuana use decreased significantly in young adults in Colorado, from 18.5% to 7.6% in the period from 2005/06 to 2018/19 (Figure 33). The national average also went down significantly, from 24.5% to 11.9%. The perception of risk among Colorado residents has been lower than the national average and both have decreased over time. The gap between the nation's perception of risk and Colorado's has remained relatively stable at between 4% and 6%. The perception of great risk for smoking a pack of cigarettes a day has remained stable while perceived risk for regular binge drinking increased from 26.1% in 2013/14 to 36.7% in 2018/19. Both of these are considered a higher risk than once-per-month marijuana use (Figure 34).

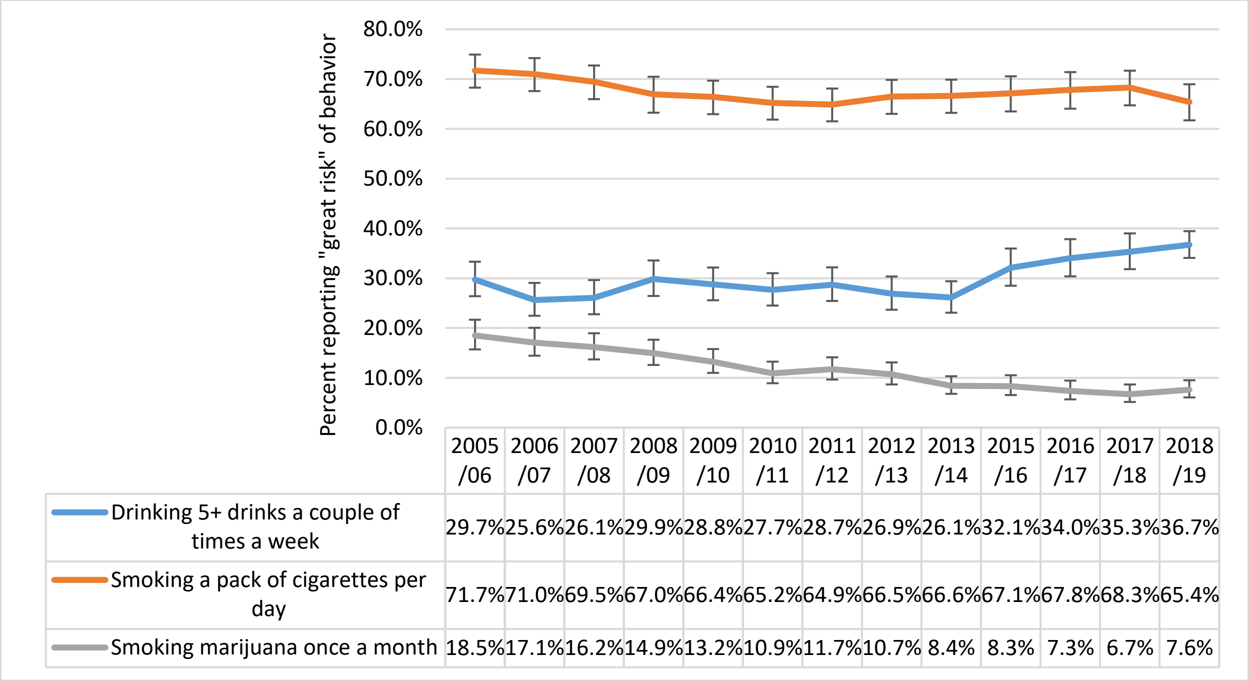
Figure 33. Perception of great risk for using marijuana once a month, 18- to 25-year-olds, 2005/06 – 2018/19: NSDUH



	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2015/16	2016/17	2017/18	2018/19
Colorado	18.5%	17.1%	16.2%	14.9%	13.2%	10.9%	11.7%	10.7%	8.4%	8.3%	7.3%	6.7%	7.6%
United States	24.5%	24.6%	23.7%	21.3%	19.2%	18.3%	17.4%	15.8%	14.2%	14.3%	12.9%	12.1%	11.9%

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, at https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health

Figure 34. Perception of great risk for using various substances, 18- to 25-year-olds, 2005/06–2018/19: NSDUH



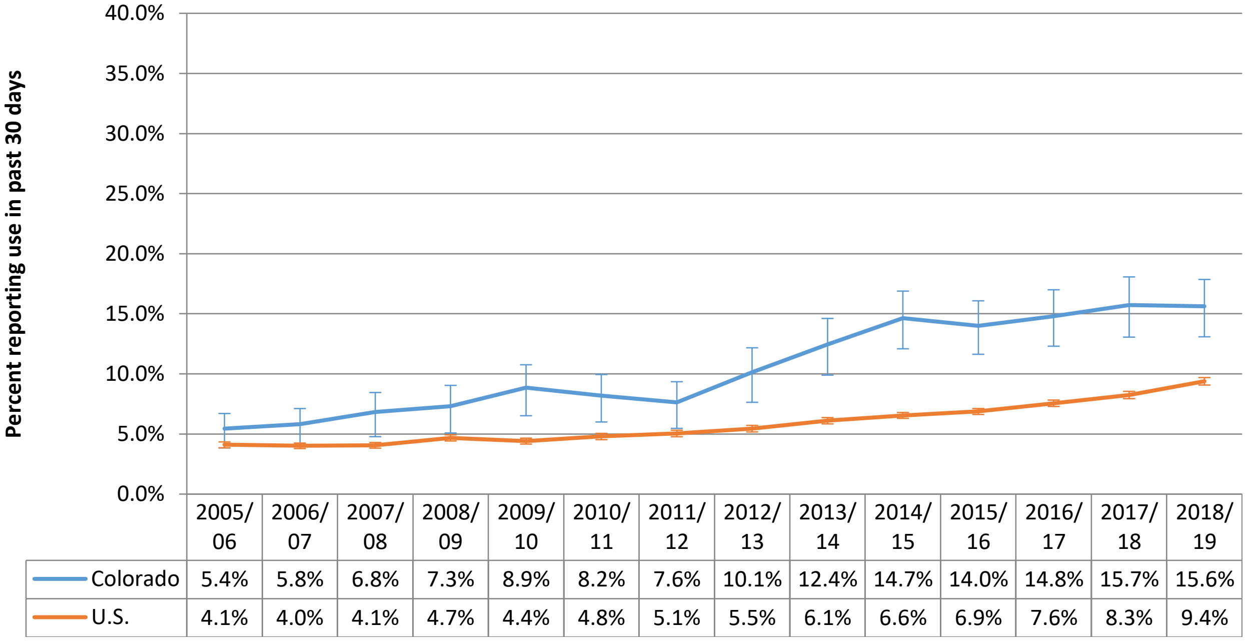
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2015/16	2016/17	2017/18	2018/19
Drinking 5+ drinks a couple of times a week	29.7%	25.6%	26.1%	29.9%	28.8%	27.7%	28.7%	26.9%	26.1%	32.1%	34.0%	35.3%	36.7%
Smoking a pack of cigarettes per day	71.7%	71.0%	69.5%	67.0%	66.4%	65.2%	64.9%	66.5%	66.6%	67.1%	67.8%	68.3%	65.4%
Smoking marijuana once a month	18.5%	17.1%	16.2%	14.9%	13.2%	10.9%	11.7%	10.7%	8.4%	8.3%	7.3%	6.7%	7.6%

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, available at https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health

Adult Trends (26 Years or Older)

Reported past 30-day marijuana use by adults in Colorado increased considerably from 5.4% in 2005/06 to 15.6% in 2018/19 (Figure 35). The prevalence of past 30-day marijuana use in has not changed significantly since 2014/15. When compared to national figures on past 30-day marijuana use, Colorado showed a consistently higher prevalence of recent marijuana use. Adult use also increased significantly at the national level, but the gap between the two rates widened from about a 1% difference in 2005/06 to a more than 6% difference in 2018/19. A map comparing the past 30-day use of those 26 years of age and older by state can be seen in Figure 36. Colorado had a higher prevalence of past 30-day use among adults compared to most other states. The prevalence trends for alcohol, cigarette, and other illicit drug use showed no appreciable changes over this same period (Figure 37). The prevalence of past 30-day marijuana use (15.6%) was significantly lower than alcohol use (65.3%) or tobacco use (21.7%).

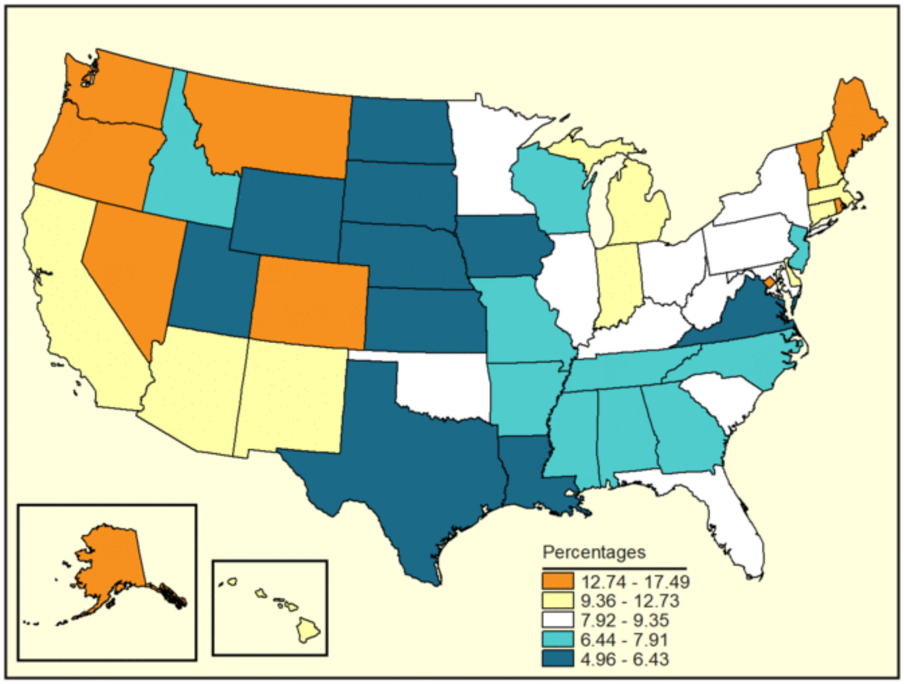
Figure 35. Past 30-day marijuana use, 26 years or older, 2005/06 – 2018/19: NSDUH



	2005/ 06	2006/ 07	2007/ 08	2008/ 09	2009/ 10	2010/ 11	2011/ 12	2012/ 13	2013/ 14	2014/ 15	2015/ 16	2016/ 17	2017/ 18	2018/ 19
Colorado	5.4%	5.8%	6.8%	7.3%	8.9%	8.2%	7.6%	10.1%	12.4%	14.7%	14.0%	14.8%	15.7%	15.6%
U.S.	4.1%	4.0%	4.1%	4.7%	4.4%	4.8%	5.1%	5.5%	6.1%	6.6%	6.9%	7.6%	8.3%	9.4%

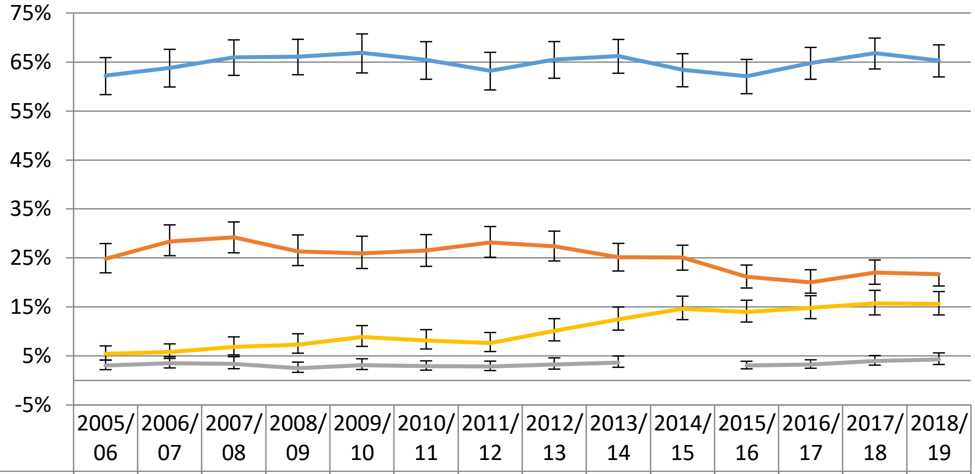
Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, available at https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health

Figure 36. Past 30-day marijuana use, 26 years or older, by state, 2018/19: NSDUH



Source: Substance Abuse and Mental Health Services Administration (2020), National Survey on Drug Use and Health, *2018-19 National Survey on Drug Use and Health National Maps of Prevalence Estimates, by State.* Available at https://www.samhsa.gov/data/report/2018-2019-nsduh-national-maps-prevalence-estimates-state

Figure 37. Past 30-day substance use, 26 years or older, 2005/06 – 2018/19: NSDUH



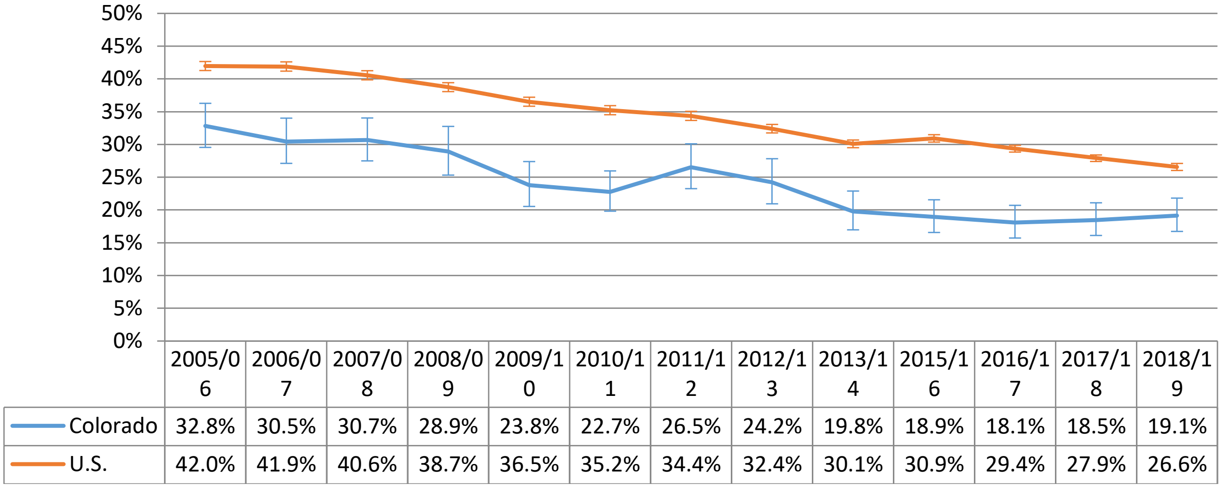
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Any alcohol	62.2%	63.8%	66.0%	66.1%	66.9%	65.4%	63.2%	65.5%	66.2%	63.4%	62.1%	64.8%	66.8%	65.3%
Any tobacco	24.8%	28.4%	29.2%	26.4%	25.9%	26.5%	28.2%	27.4%	25.2%	25.1%	21.2%	20.0%	22.0%	21.7%
Illicit drugs, non-marijuana	3.0%	3.5%	3.4%	2.5%	3.2%	2.9%	2.8%	3.3%	3.7%		3.1%	3.3%	4.0%	4.3%
Marijuana	5.4%	5.8%	6.8%	7.3%	8.9%	8.2%	7.6%	10.1%	12.4%	14.7%	14.0%	14.8%	15.7%	15.6%

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, available at https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health

Note: NSDUH did not produce an estimate for illicit drugs other than marijuana in 2014/15.

The perceived risk by adults from using marijuana once a month showed a significant decrease in Colorado, from 32.8% in 2005/06 to 19.1% in 2018/19 (Figure 38). The perception of great risk at the national level also decreased significantly, from 42.0% in 2005/06 to 26.6% in 2018/19. The gap between the nation's perception of risk and Colorado's has remained relatively stable over time. The perception of great risk for smoking a pack of cigarettes a day or regular binge drinking remained stable (Figure 39).

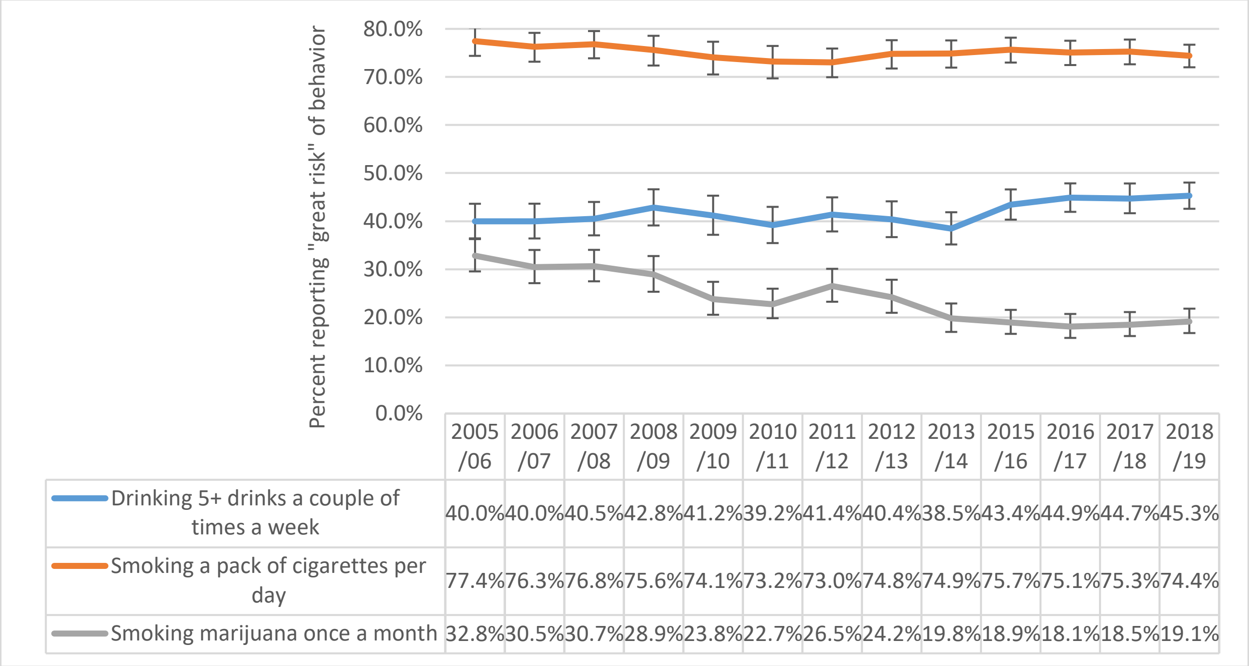
Figure 38. Perception of great risk for using marijuana once a month, 26 years or older, 2005/06 – 2018/19: NSDUH



	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2015/16	2016/17	2017/18	2018/19
Colorado	32.8%	30.5%	30.7%	28.9%	23.8%	22.7%	26.5%	24.2%	19.8%	18.9%	18.1%	18.5%	19.1%
U.S.	42.0%	41.9%	40.6%	38.7%	36.5%	35.2%	34.4%	32.4%	30.1%	30.9%	29.4%	27.9%	26.6%

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, available at https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health

Figure 39. Perception of great risk for using various substances, 26 years or older, 2005/06 – 2018/19: NSDUH



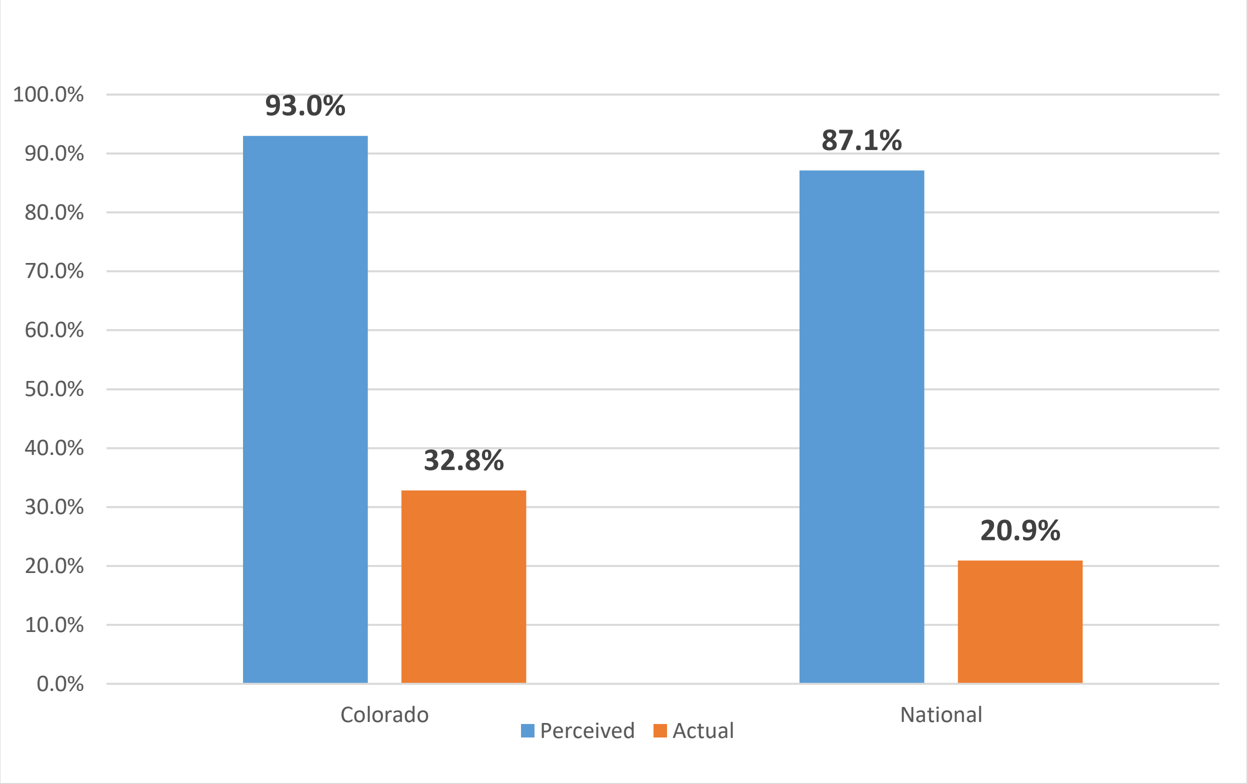
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2015/16	2016/17	2017/18	2018/19
Drinking 5+ drinks a couple of times a week	40.0%	40.0%	40.5%	42.8%	41.2%	39.2%	41.4%	40.4%	38.5%	43.4%	44.9%	44.7%	45.3%
Smoking a pack of cigarettes per day	77.4%	76.3%	76.8%	75.6%	74.1%	73.2%	73.0%	74.8%	74.9%	75.7%	75.1%	75.3%	74.4%
Smoking marijuana once a month	32.8%	30.5%	30.7%	28.9%	23.8%	22.7%	26.5%	24.2%	19.8%	18.9%	18.1%	18.5%	19.1%

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, available at https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health

National College Health Assessment

The National College Health Assessment is an annual survey of universities and colleges that aims to collect data on physical and mental health, behavioral risk factors, sexual behavior, and drug use. Figure 40 presents reported 30-day marijuana use by Colorado college students compared to their perception of use by other students. While 93.0% of college students believed other students were current marijuana users, only 32.8% reported use in the past 30 days. Current marijuana use by Colorado college students was 12% higher than the national average.

Figure 40. Reported past 30-day marijuana use compared to perceived use by college students, Colorado and Nation, 2018



Source: Coalition of Colorado Campus Alcohol and Drug Educators (2020), National College Health Assessment survey. Available at https://naspa.org/cade

Hospitalizations and Emergency Department Visits

CDPHE analyzed data provided by the Colorado Hospital Association (CHA) and categorized hospitalizations and emergency department visits with discharges containing a marijuana-related billing code. The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) discharge diagnosis codes were used to determine possible marijuana involvement from January 2000-September 2015. The revised International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) discharge diagnosis coding system was used from October 2015 and onward. The transition from ICD-9 to ICD-10 classification system increased the number of available marijuana codes. Due to changes in coding systems, variable structures, and policies at CHA, 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 events in the ICD-10-CM coding system. All ICD-10-CM codes are specific to cannabis and include cannabis poisonings, use, abuse, and dependence. Inclusion of at least one marijuana related ICD-9/10-CM code in the up to 30 listed billing codes.

The findings presented in Figure 41 reflect three different eras of legalization in Colorado. The era of legal non-commercial medical marijuana (2003—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. Since the transition to ICD-10 codes, there have been no significant changes in the hospitalization rates.

Figure 41. Rates of hospitalizations with a marijuana-related billing code per 100,000 hospitalizations, 2003-2019

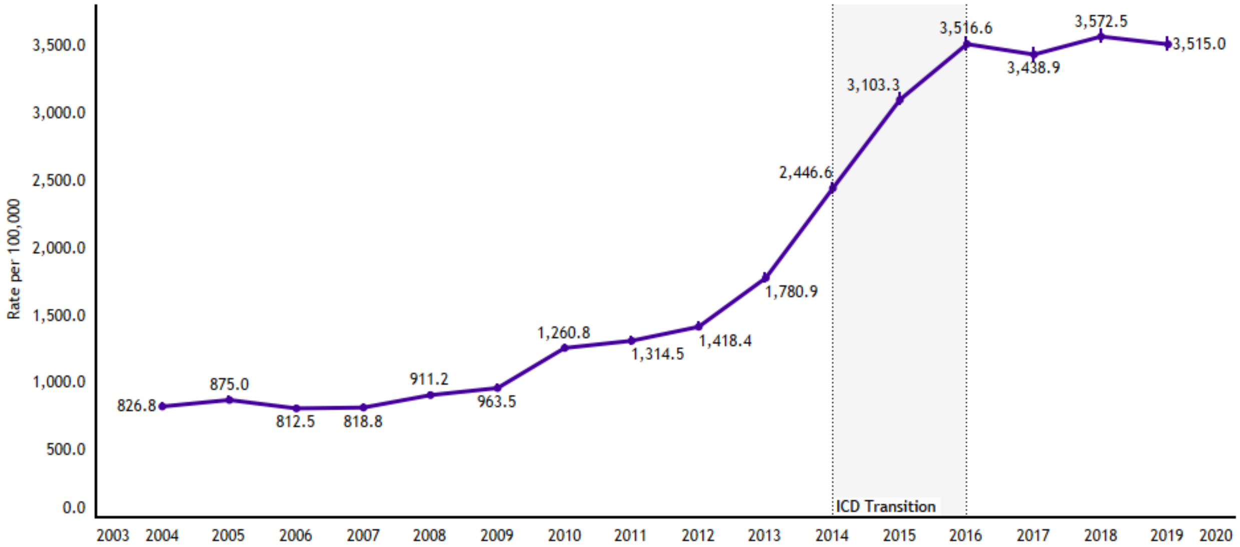


Figure Notes: The dotted lines indicate the transition from ICD-9 to ICD-10 in October 2015. Use caution when interpreting rates between 2014 to 2016. See the marijuana glossary to understand more about billing code changes.

Source: Data provided by Colorado Hospital Association with analysis provided by Colorado Department of Public Health and Environment, Marijuana Health Monitoring Program. Available at https://marijuanahealthinfo.colorado.gov/health-data/colorado-hospital-association-cha-data

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 changes in coding schemes.

The data on Emergency Department (ED) visits are limited due to changes in reporting methods from the period prior to 2010 (Figure 42). There was a significant rate increase during the era of medical commercialization, from 617.7 in 2011 to 1039.5 in 2014. In the period after the transition to ICD-10-CM there was an initial increase which reversed in 2019.

Figure 42. Rates of emergency department visits with a marijuana-related billing code per 100,000 emergency department visits, 2010-2019

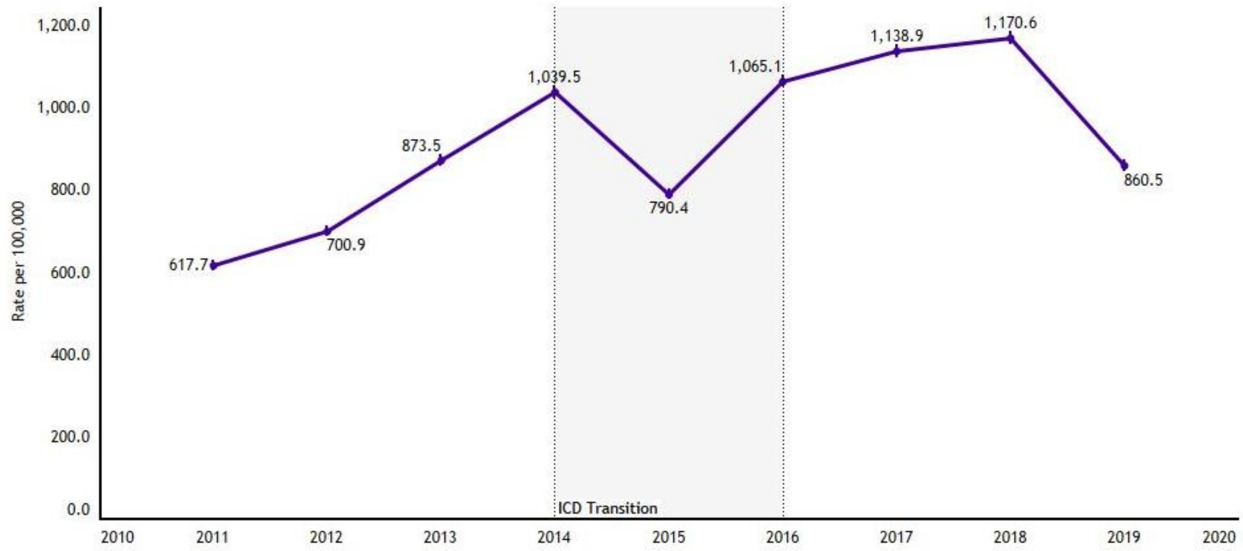


Figure Notes: The dotted lines indicate the transition from ICD-9 to ICD-10 in October 2015. Use caution when interpreting rates between 2014 to 2016. See the marijuana glossary to understand more about billing code changes.

Source: Data provided by Colorado Hospital Association with analysis provided by Colorado Department of Public Health and Environment, Marijuana Health Monitoring Program. Available at https://marijuanahealthinfo.colorado.gov/health-data/colorado-hospital-association-cha-data

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 Center (RMPDC) provided data on marijuana[53] 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 43), with 106 calls in 2012 and 223 in 2014. These increases stabilized during 2014-2017. The initial increases occurred across all age groups, with the biggest jumps occurring in the 5-year-old and younger age group (15 in 2012 to 103 in 2019), and the 30 and older group (29 in 2012 to 51 in 2019). The total increases were most notable in two years: 2010 (+55 from 2009) and 2014 (+96 from 2013). The number of exposures remained consistent from 2014 (n=223) to 2017 (n=222) but increased significantly by 2019 (n=276).

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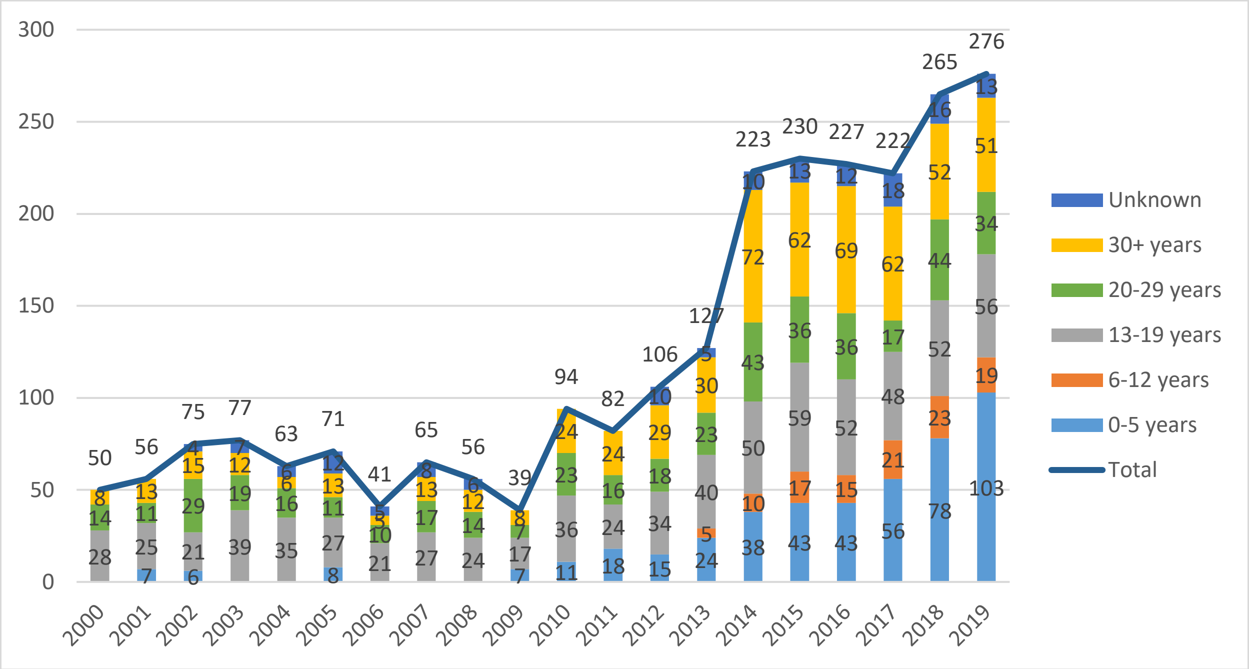
[53] Beginning in 2018 CBD only was added as an exposure code.

Figure 43. Human marijuana exposures reported to Rocky Mountain Poison and Drug Center, by age group, 2000–2019



Source: Colorado Department of Public Health and Environment (2020), available at https://marijuanahealthinfo.colorado.gov/poison-center-data
Note: Human marijuana exposures reported to RMPDC were determined by the presence of the generic code "Marijuana-0083000" from the National Poison Data System.

The RMPDC began collecting additional data about marijuana exposures in mid-2014. CDPHE revised this reporting in 2017 and only data from 2017 through 2019 are available. Table 29 presents the types of marijuana exposures by type of marijuana and age group. Overall, there have not been any discernible changes in the distribution of types of reported exposures since 2017.

Table 29. Human marijuana exposures reported to Rocky Mountain Poison and Drug Center, by age group and marijuana type, 2017-2019

Age group & Type	Number of cases			Percent of cases		
	2017	2018	2019	2017	2018	2019
0-5 years						
Total	55	78	102	100%	100%	100%
Plant	11	7	15	20%	9%	15%
Edible	36	46	56	65%	59%	55%
Concentrated Extract	*	*	10	*	*	10%
Electronic Device/Liquid		*	*		*	*
Cannabidiol (CBD)		*	8		*	8%
Other	6	12	11	11%	15%	11%
6-12 years						
Total	21	22	19	100%	100%	100%
Plant	9	*	*	43%	*	*
Electronic Device/Liquid						
Concentrated Extract	*	*		*	*	0%
Edible	9	17	11	43%	77%	58%
Cannabidiol (CBD)		*	*	0%	*	*
Other	*		*	*	0%	*
13-19 years						
Total	48	53	56	100%	100%	100%
Plant	14	27	21	29%	51%	38%
Edible	16	16	17	33%	30%	30%
Concentrated Extract	8	*	9	17%	*	16%
Electronic Device/Liquid	*	*	*	*	*	*
Cannabidiol (CBD)				0%	0%	0%
Other	9	*	7	19%	*	13%
20-29 years						
Total	17	46	34	100%	100%	100%
Plant	6	15	17	35%	33%	50%
Edible	*	14	11	*	30%	32%
Concentrated Extract	*	7	1	*	15%	3%
Electronic Device/Liquid		*	*	0%	*	*
Cannabidiol (CBD)		*		0%	*	0%
Other	6	6	*	35%	13%	*
30+ years						
Total	63	54	51	100%	100%	100%
Plant	22	22	11	35%	41%	22%
Edible	27	17	21	43%	31%	41%
Concentrated Extract	6	*	*	10%	*	*
Electronic Device/Liquid	*		*	*	0%	*
Cannabidiol (CBD)	5	5	11	8%	9%	22%
Other	*	8	5	*	15%	10%

Age group & Type	Number of cases			Percent of cases		
	2017	2018	2019	2017	2018	2019
Unknown Age						
Total	18	16	13	100%	100%	100%
Plant	9	7	5	50%	44%	38%
Edible	7	*	5	39%	*	38%
Concentrated Extract	*		*	*	0%	*
Electronic Device/Liquid		*	*	0%	*	*
Cannabidiol (CBD)		*		0%	*	0%
Other	*	*		*	*	0%
Overall						
Total	222	269	275	100%	100%	100%
Plant	71	79	70	32%	29%	25%
Edible	90	97	110	41%	36%	40%
Concentrated Extract	20	23	23	9%	9%	8%
Electronic Device/Liquid	11	23	21	5%	9%	8%
Cannabidiol (CBD)	5	15	22	2%	6%	8%
Other	25	32	29	11%	12%	11%

Source: Colorado Department of Public Health & Environment (2020), available at https://marijuanahealthinfo.colorado.gov/poison-center-data
Note: Human marijuana exposures reported to RMPDC were determined by the presence of the generic code "Marijuana-0083000" from the National Poison Data System.
A * indicates that there were fewer than five cases and must be suppressed.

Treatment Trends

The Colorado Department of Human Services, Office of Behavioral Health (OBH), is required to collect and report substance use treatment data from licensed providers as a requirement of SAMHSA (Substance Abuse and Mental Health Service Administration) funding. The data are entered into OBH'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.

Treatment admission rates (per 100,000 population) and number of admissions with marijuana as the primary substance of use, broken out by age, are detailed in Figures 44 and 45. [54, 55] (For purposes of comparability across age groups, rates are presented.) The overall treatment admission rate for those reporting marijuana as the primary substance used has decreased, from 222 in 2012 to 182 in 2019. The treatment admission rate decreased 41% for those under 18, from 458 in 2012 to 270 admissions per 100,000 population in that age group in 2019 (Figure 44). The admission rate also decreased 34% for

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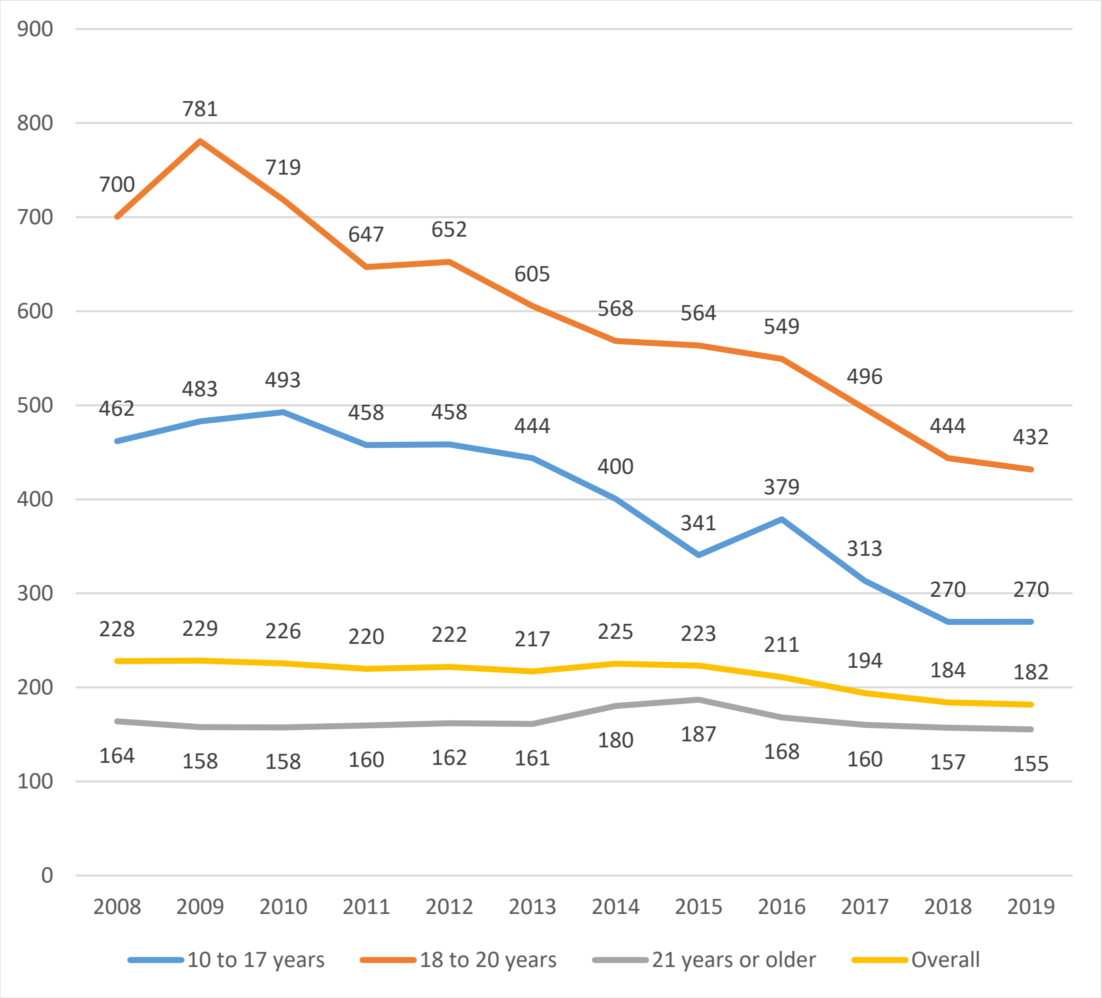
[54] The 2016 versions of this report calculated treatment rates based on whether the patient reported marijuana as *any* of their top three drugs of abuse. After consultation with the Office of Behavioral Health, we changed our focus to only those patients reporting marijuana as their *primary* drug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

[55] 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, 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.

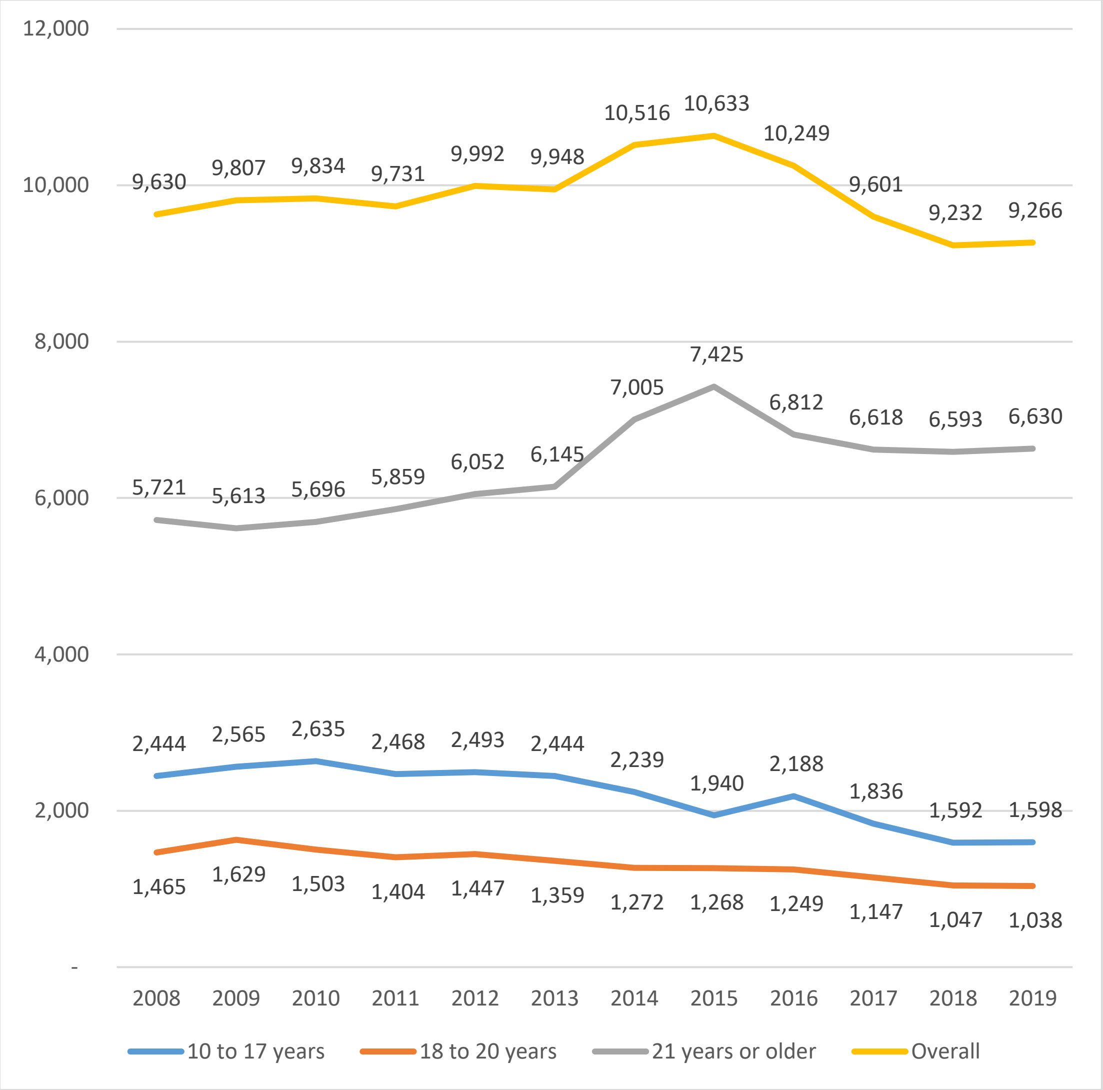
those in the 18–20 age group, from 652 admissions per 100,000 in 2012 to 432 in 2019. Patients 21 or over initially showed a slight increase in treatment rates, but the rates then declined, eventually down four percent from 162 per 100,000 in 2012 to 155 in 2019.

Figure 44. Treatment admission rate (per 100,000 population in each age group) for those reporting marijuana as primary substance of use, by age group, 2008–2019



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

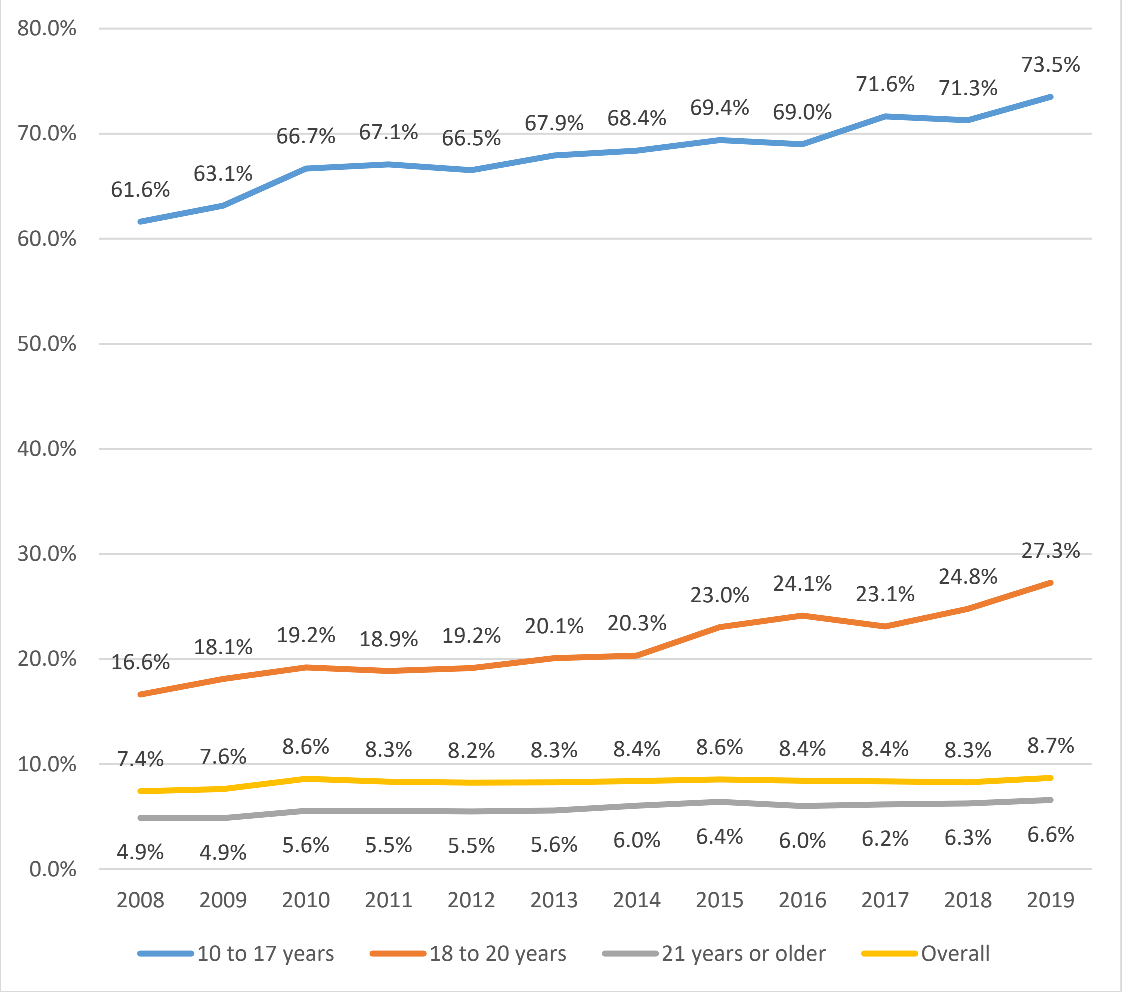
Figure 45. Number of treatment admissions reporting marijuana as primary substance of use, by age group, 2008–2019



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

Marijuana was reported as the primary substance of use by 73.5% of youth under the age of 18 who were admitted for treatment in 2019 (Figure 46). This contrasts with 27.3% of 18- to 20-year-olds and 6.6% of adults 21 years or older. The percent reporting marijuana as their primary substance of use increased for both those under 18 and those 18- to 20-years old from 2012 to 2019.

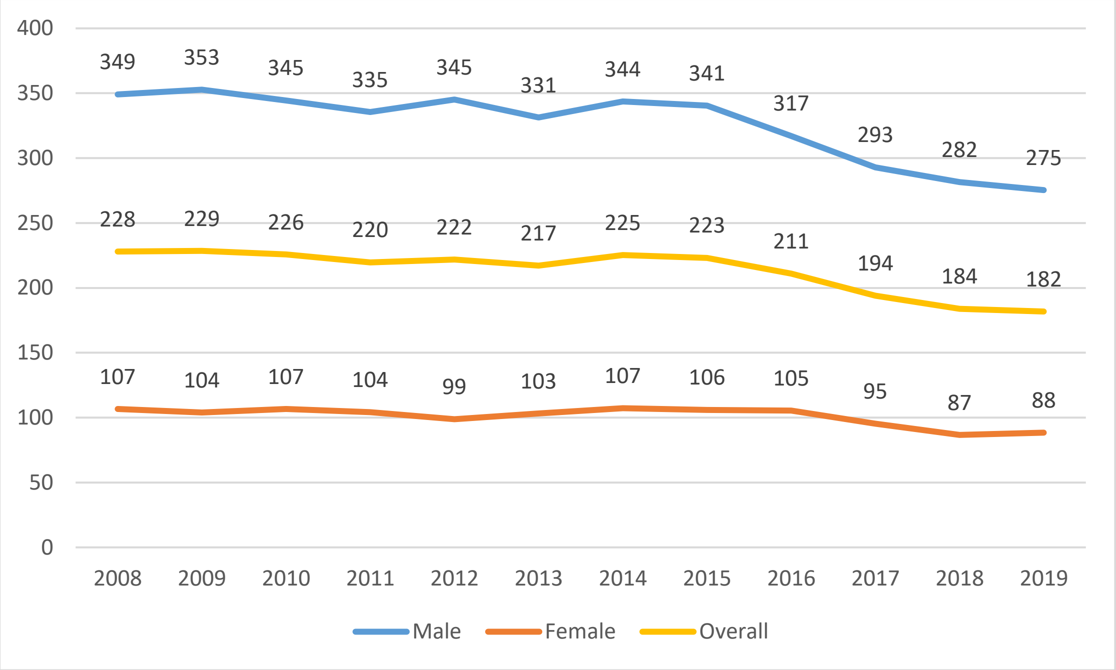
Figure 46. Percent of treatment admissions with marijuana reported as the primary substance of use, by age group, 2008–2019



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

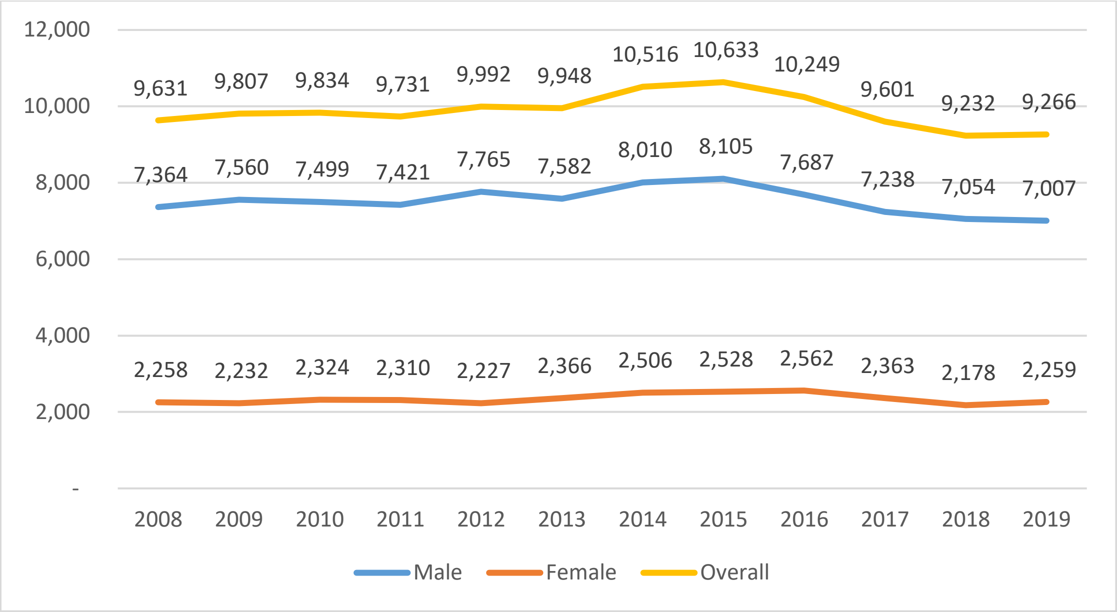
Treatment admission rates (per 100,000 population) and number of admissions with marijuana as the primary substance of use, broken out by gender, are detailed in Figures 47 and 48. (For purposes of comparability across gender, rates are presented.) The overall treatment admission rate for marijuana decreased 18% between 2012 and 2019, from 222 to 182, respectively. The treatment admission rate decreased 20% for males, from 345 in 2012 to 275 admissions per 100,000 population in 2019 (Figure 47). The admission rate decreased 11% for females, from 99 admissions per 100,000 in 2012 to 88 in 2019.

Figure 47. Treatment admission rate (per 100,000 population in each age group) for those reporting marijuana as primary substance of use, by gender, 2008–2019



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

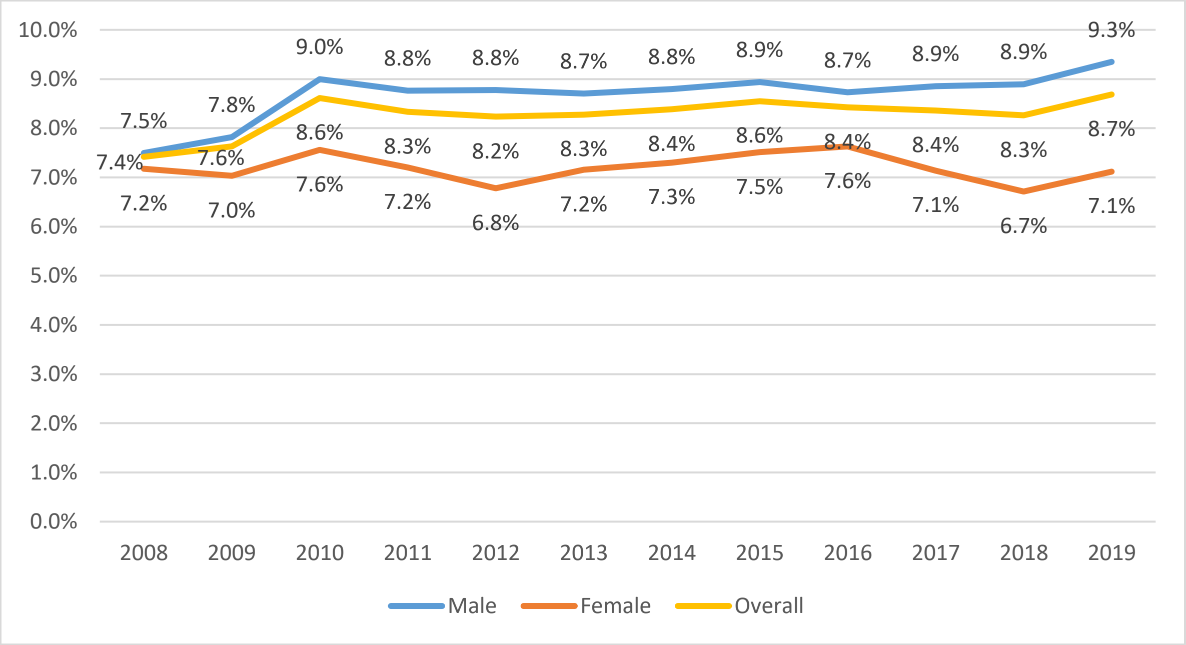
Figure 48. Number of treatment admissions reporting marijuana as primary substance of use, by gender, 2008–2019



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

Marijuana was reported as the primary substance of use by 8.7% of all treatment admissions and 9.3% of males admitted for treatment in 2019 (Figure 49). This contrasts with 7.1% of females in 2019.

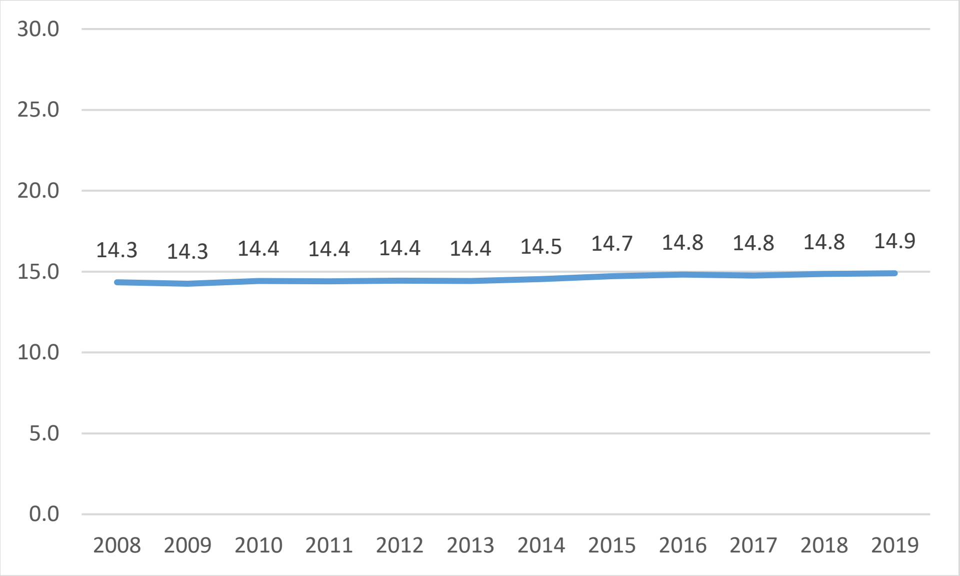
Figure 49. Percent of treatment admissions with marijuana reported as the primary substance of use, by gender, 2008–2019



Source: Colorado Department of Human Services, Office of Behavioral Health, 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 remained stable at 14.5–15.0 years (Figure 50) during the period 2008–2019.

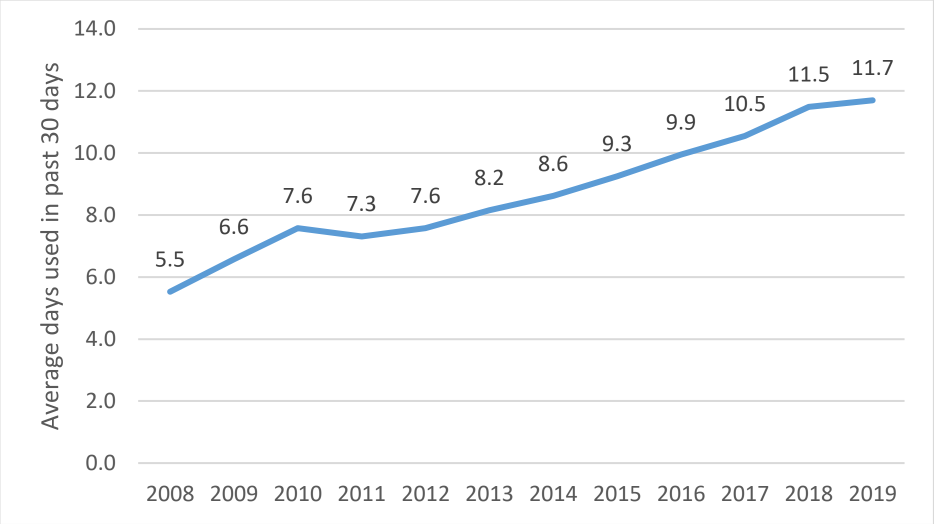
Figure 50. Age at first use of marijuana, 2008–2019



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

The DACODS collects information on frequency of substance use in the 30 days prior to treatment (Figure 51). The average frequency of past 30-day marijuana use in 2012 was 7.6 days, which increased to 11.7 days by 2019.

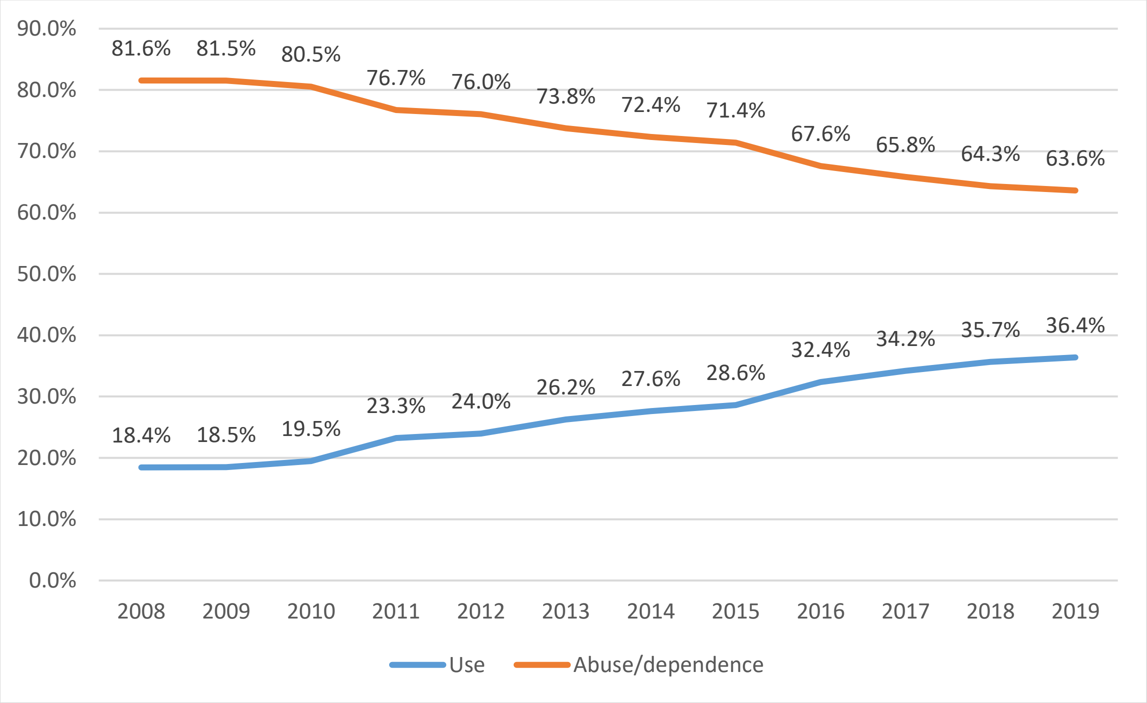
Figure 51. Average number of days marijuana used past 30-days among clients reporting marijuana as primary substance of use, 2008–2019



Source: Colorado Department of Human Services, Office of Behavioral Health, 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 52. The clinical impression of 'use' increased from 24.0% of admissions in 2012 to 36.4% in 2019. The percentage reporting 'abuse or dependence' dropped from 76.0% in 2012 to 63.6% in 2019.

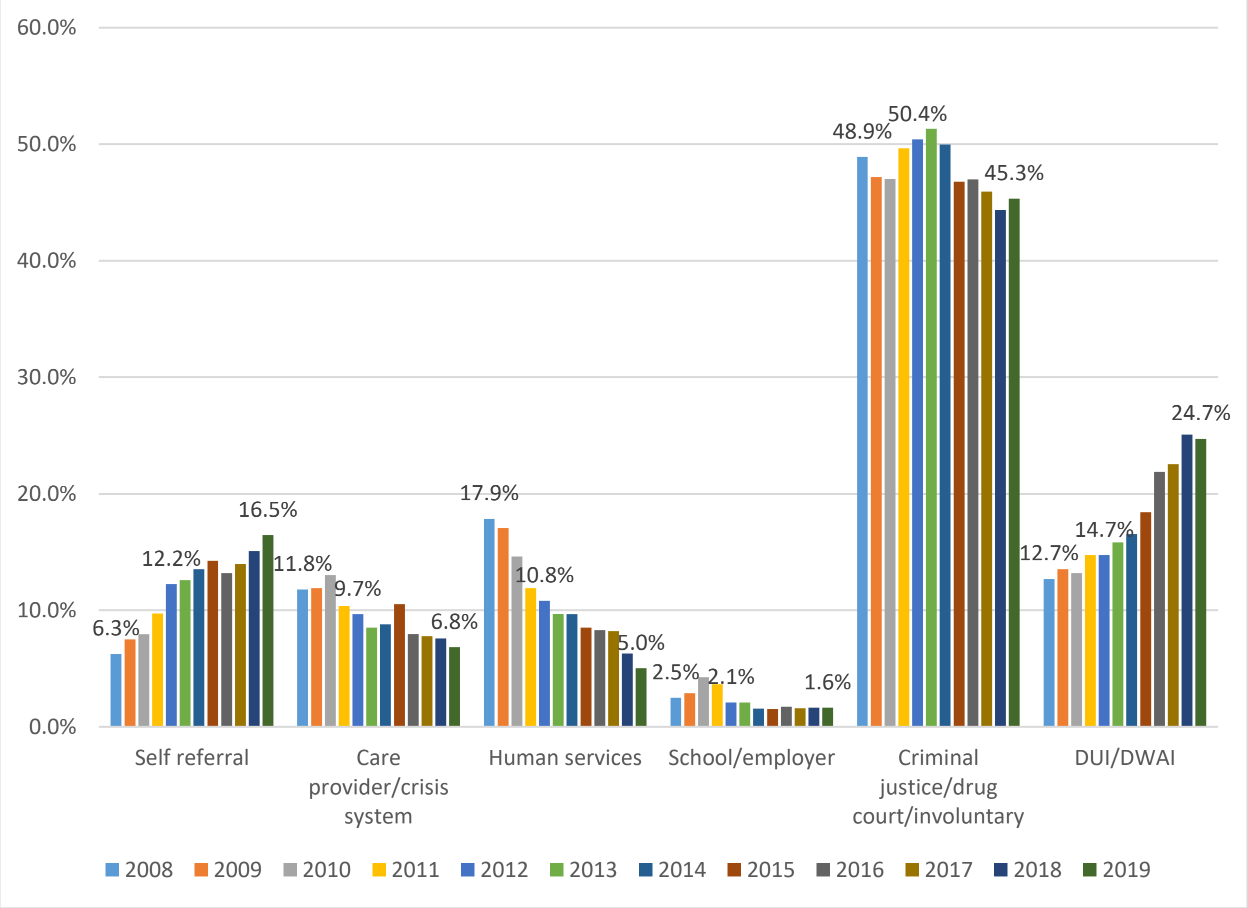
Figure 52. Clinical impression of the severity of marijuana use, abuse, or dependence, 2008–2019



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

Information on the referral source is presented in Figures 53. Referrals from the criminal justice system were the most common for the period 2008–2019, with 45.3% being referred by the criminal justice system/drug court and 24.7% referred for DUI treatment following a conviction. In this time period, self-referrals for marijuana treatment increased from 6.3% in 2008 to 16.5% in 2019 while referrals from other sources declined.

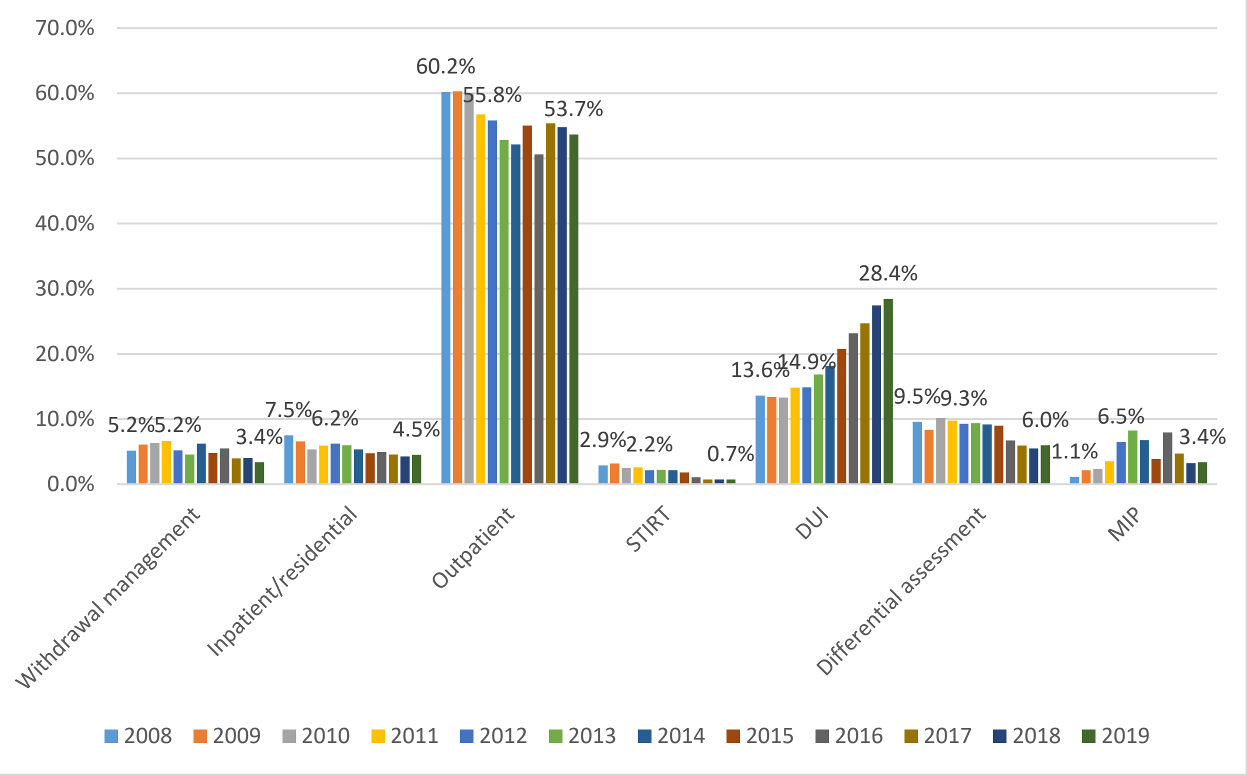
Figure 53. Referral sources for marijuana treatment, 2008–2019



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

The most common admission category across was outpatient treatment (Figure 54), with 53.7% of admissions occurring in this category. The second most common category was for DUI, where there has been a significant increase over the past five years, from 14.9% of admissions in 2012 to 28.4% in 2019.

Figure 54. Treatment modality for marijuana treatment admissions, 2008-–2019

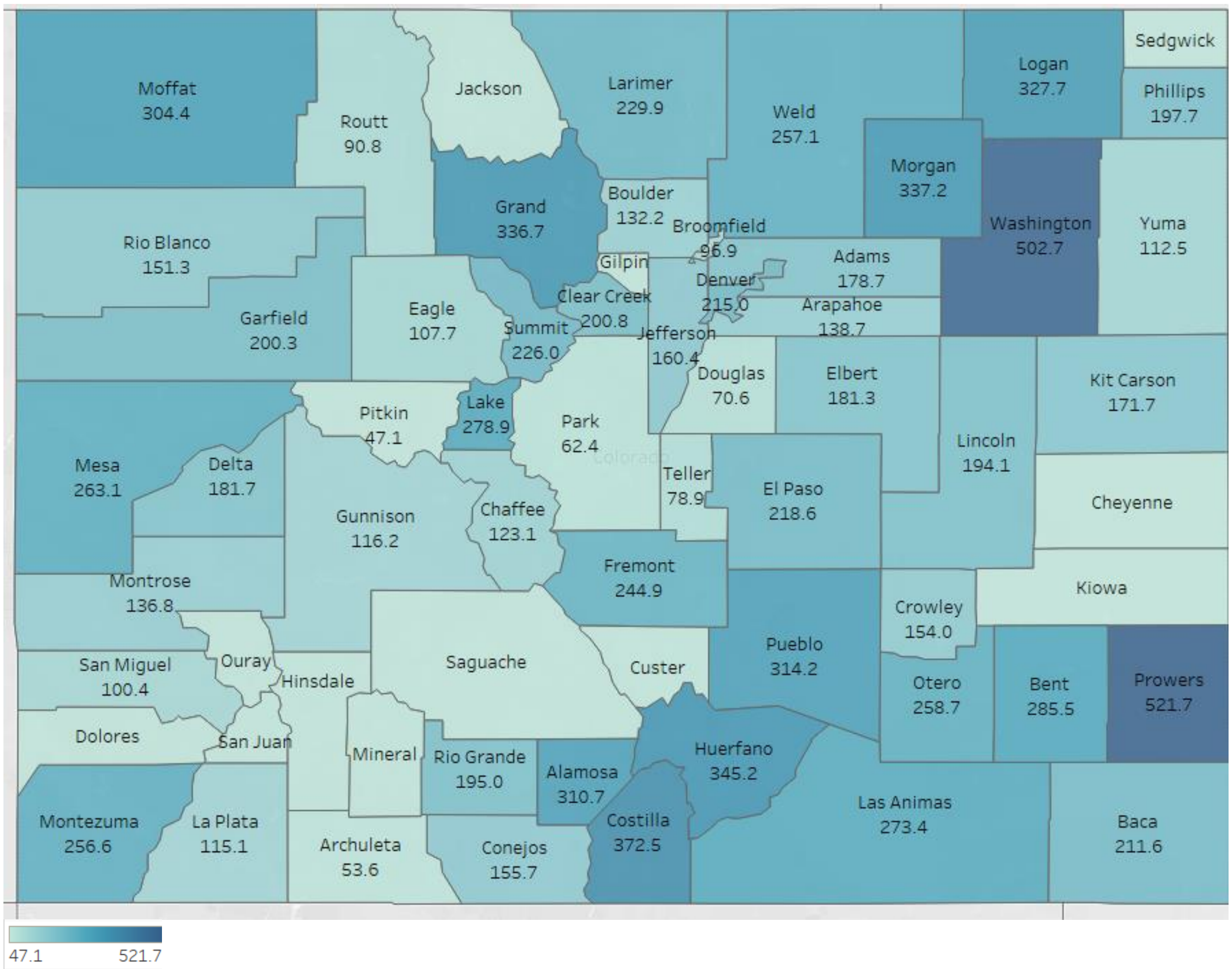


Source: Colorado Department of Human Services, Office of Behavioral Health, Drug/Alcohol Coordinated Data System. Analyzed by the Division of Criminal Justice.

Note: STIRT is Strategic Intensive Remediation Treatment.

A geographic breakdown of treatment admissions in the period 2015-2019 per 100,000 population of those ages 10 and over is presented in Figure 55. The county rates presented in Figure 55 aggregate five years of data in order to maintain client confidentiality in smaller counties . Counties with the highest treatment rates include Prowers (521.7), Washington, (502.7), and Costilla (372.5). Of the larger counties, Pueblo had the highest rate (314.2), followed by Mesa (263.1), and Weld (257.1).

Figure 55. Treatment rates (per 100,000 population ages 10 and over) for marijuana as substance of use, by county, 2015-2019


Moffat
304.4
Routt
90.8
Jackson
Larimer
229.9
Weld
257.1
Logan
327.7
Sedgwick
Phillips
197.7
Morgan
337.2
Grand
336.7
Boulder
132.2
Broomfield
96.9
Washington
502.7
Yuma
112.5
Rio Blanco
151.3
Gilpin
Adams
178.7
Denver
215.0
Clear Creek
200.8
Arapahoe
138.7
Garfield
200.3
Eagle
107.7
Summit
226.0
Jefferson
160.4
Douglas
70.6
Elbert
181.3
Kit Carson
171.7
Lake
278.9
Pitkin
47.1
Park
62.4
Lincoln
194.1
Mesa
263.1
Delta
181.7
Teller
78.9
El Paso
218.6
Cheyenne
Chaffee
123.1
Gunnison
116.2
Fremont
244.9
Kiowa
Montrose
136.8
Crowley
154.0
Saguache
Custer
Pueblo
314.2
San Miguel
100.4
Ouray
Hinsdale
Otero
258.7
Bent
285.5
Prowers
521.7
Dolores
San Juan
Mineral
Rio Grande
195.0
Alamosa
310.7
Huerfano
345.2
Montezuma
256.6
La Plata
115.1
Archuleta
53.6
Conejos
155.7
Costilla
372.5
Las Animas
273.4
Baca
211.6
47.1
521.7

Source: Colorado Department of Human Services, Office of Behavioral Health, 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 30. The overall age-adjusted rate has remained relatively stable since 2012. The prevalence of positive marijuana tests increased from 11.8% in 2012 to 23.3% in 2018. There was no clear trend in the percent 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 30. Suicides in Colorado, by age-adjusted rate and select toxicology results, 2006-2018

Year	N suicides	Overall crude rate	Overall age-adjusted rate	N with toxicology available	N marijuana present	% marijuana present	N alcohol present	% alcohol present	N opiates present	% opiates present
2006	711	15.0	14.8	585	44	7.5%	206	35.2%	57	9.7%
2007	807	16.7	16.5	767	70	9.1%	273	35.6%	123	16.0%
2008	799	16.2	15.9	776	58	7.5%	275	35.4%	110	14.2%
2009	919	18.3	18.2	706	50	7.1%	247	35.0%	100	14.2%
2010	850	16.9	16.4	818	70	8.6%	268	32.8%	111	13.6%
2011	884	17.3	16.9	805	62	7.7%	282	35.0%	109	13.5%
2012	1,021	19.7	19.0	729	86	11.8%	242	33.2%	126	17.3%
2013	996	18.9	18.3	764	105	13.7%	260	34.0%	137	17.9%
2014	1,063	19.9	19.5	817	122	14.9%	328	40.1%	176	21.5%
2015	1,066	19.6	19.0	817	156	19.1%	298	36.5%	153	18.7%
2016	1,140	20.5	19.9	860	189	22.0%	312	36.3%	163	19.0%
2017	1,145	20.4	19.7	888	201	22.6%	331	37.3%	184	20.7%
2018	1,246	21.9	21.2	937	218	23.3%	380	40.6%	142	15.2%

Source: Colorado Department of Public Health and Environment, Colorado Violent Death Reporting System. Available at https://www.colorado.gov/pacific/cdphe/colorado-violent-death-reporting-system

Note: Data obtained from Colorado suicide data dashboard. For additional information on data definitions please visit *Colorado Suicide Data Dashboard: Data Definitions and Functionality*. Available at https://drive.google.com/file/d/1tzPZoZH3UFJ6nafbx3pak7bEA8CL1KkR/view

The 2018 data is the most recent available from CDPHE due to a lag in reporting and creating publicly available datasets.

In sum, the impacts of marijuana legalization on public health in Colorado are still being assessed. The BRFSS survey of marijuana use show that among young adults' (18–25), past 30-day use increased from young adult use has not changed significantly since 2014. Past 30-day use among adults ages 26 and older increased from 19.8% in 2014 to 29.4% in 2019. Past 30-day use by adults 65 or older is tripled, from 3.0% in 2014 to 9.3% in 2019. Since 2000, rates of hospitalizations and emergency department visits possibly related to marijuana increased, as have the number of calls to poison control. The next section provides information on the impact of marijuana legalization on youth.

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,[56] 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 2019 HKCS surveyed more than 53,000 high and middle school students. The National Survey on Drug Use and Health (NSDUH) is administered annually to those ages 12 and older by the federal Substance Abuse and Mental Health Services Administration. SAMHSA produces state-level estimates from a two-year rolling sample. The two-year prevalence rates for Colorado residents 12 to 17 years old were based on weighted estimates from between 500 to 650 survey respondents.

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.[57] 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 Department of Human Services, Division of Child Welfare does not collect specific information on whether drug use or abuse is a contributing factor for at-risk families. Nevertheless, a few data elements may be informative. The CDPHE's Colorado Behavioral Risk Factor Surveillance System *(*BRFSS*)* is a group of health-related telephone surveys that collect data from residents regarding their health-related risk behaviors, chronic health conditions, and use of preventive services. The Child Health Survey is a component of the BRFSS that asks parents, with children ages 1-14, about various behaviors, including parental marijuana usage and marijuana storage in the home. Questions about marijuana were first added in 2014. 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.

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[56] Senate Bill 2013-283, which mandated this report, included drug-endangered children in the list of topics to study.

[57] 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.

Youth Use

Survey Data

Healthy Kids Colorado Survey

The CDPHE's Healthy Kids Colorado Survey (HKCS) collects health information biennially (every odd year) from thousands of Colorado public school high school and middle school students.[58] Surveys are completed by students from a random sample of selected schools and randomly selected classrooms within those schools. Results are weighted to represent student enrollment in all Colorado public high schools (2005, 2009, 2011, 2013, 2015, 2017, 2019) and public middle schools (2013, 2015, 2017, 2019). The HKCS and other sample-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 53,520 randomly selected students from 195 randomly selected schools participated in the 2019 HKCS. The sample includes 46,537 students in 166 public high schools and 6,983 students in 29 public middle schools (Table 31).

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[58] 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 can be found here https://www.cdc.gov/healthyyouth/data/yrbs/results.htm

Table 31. Sample information for Healthy Kids Colorado Survey (HKCS)

	High school	Middle school[a]
Year	N Responses	N Responses
2005	1,498	--
2009	1,511	--
2011	1,523	--
2013	25,197	14,187
2015	15,970	997
2017	47,146	6,704
2019	46,537	6,983

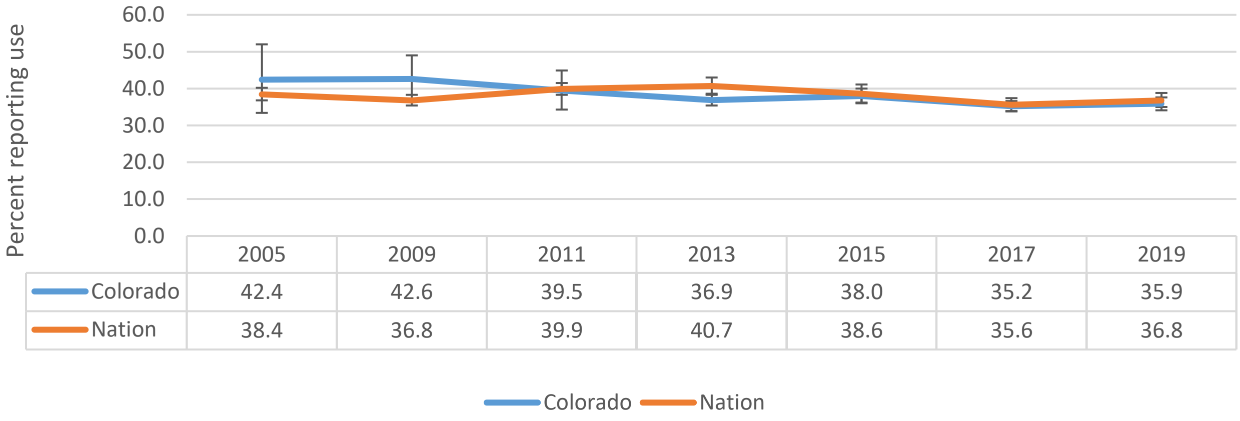
Source: Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey Technical Documentation.

[a] The middle school survey was not conducted prior to 2013.

Note: The response rate from the 2007 survey was too low to allow for accurate weighting of the results and these data are not presented.

The proportion of Colorado high school students reporting using marijuana ever in their lifetime remained statistically unchanged between 2005 and 2019 (Figure 56). Further, Figure 56 shows there was no statistically significant difference between Colorado student responses compared to national data.

Figure 56. High school students' lifetime marijuana use, Colorado and Nation, 2005–2019: HKCS

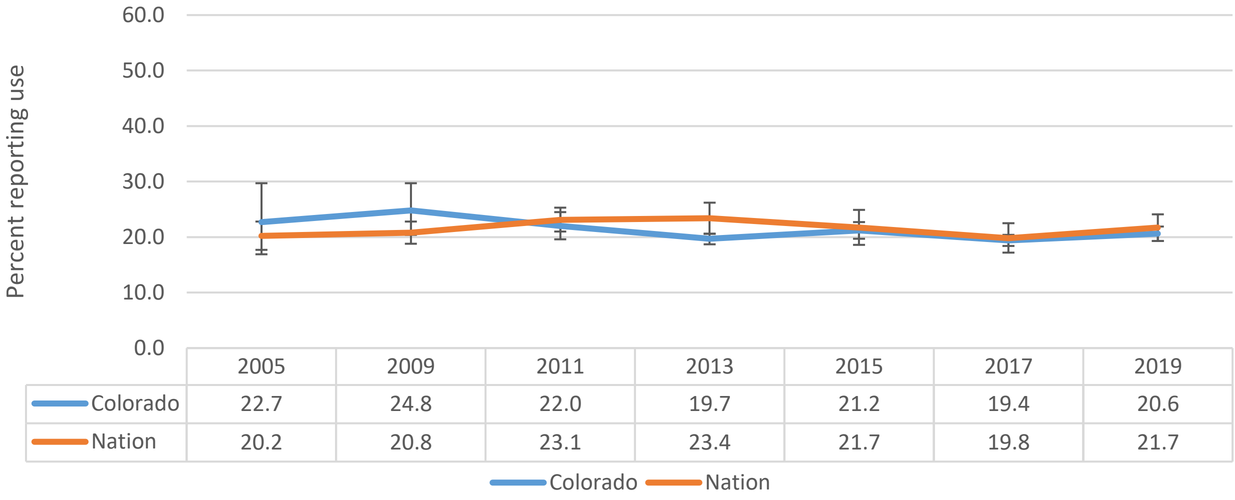


	2005	2009	2011	2013	2015	2017	2019
Colorado	42.4	42.6	39.5	36.9	38.0	35.2	35.9
Nation	38.4	36.8	39.9	40.7	38.6	35.6	36.8

Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2020). Healthy Kids Colorado Survey; Centers for Disease Control and Prevention (2020). Youth Risk Behavior Surveillance System, at https://www.cdc.gov/healthyyouth/data/yrbs/index.htm

The percentage of high school students reporting past 30-day use also remained stable, with no significant changes between 2005 and 2019 (Figure 57).

Figure 57. High school students' past 30-days marijuana use, Colorado and Nation, 2005–2019: HKCS

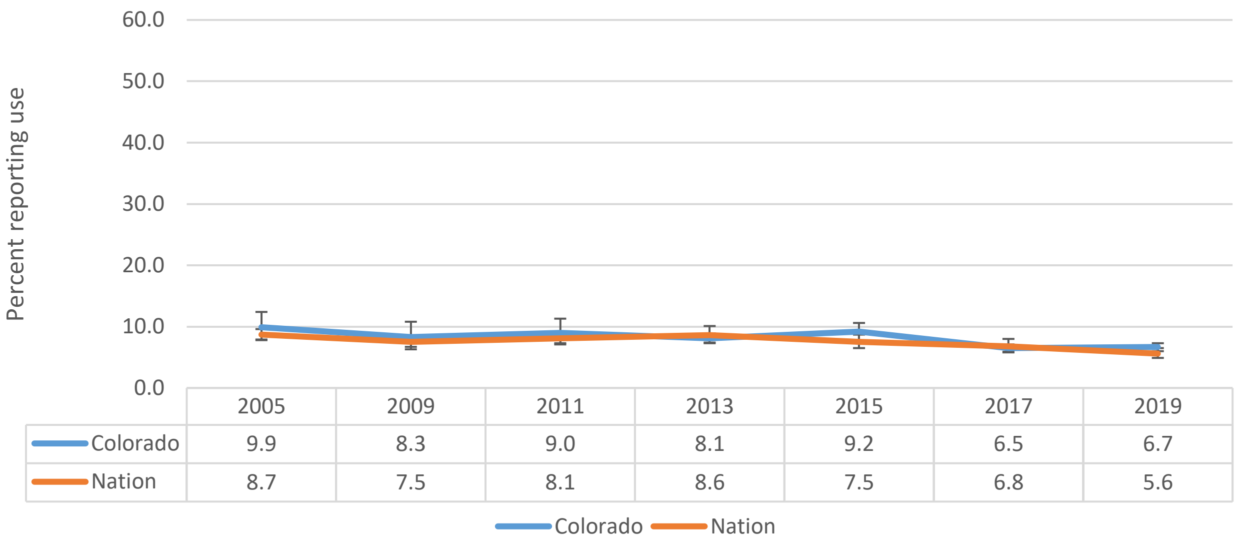


	2005	2009	2011	2013	2015	2017	2019
Colorado	22.7	24.8	22.0	19.7	21.2	19.4	20.6
Nation	20.2	20.8	23.1	23.4	21.7	19.8	21.7

Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2020). Healthy Kids Colorado Survey; Centers for Disease Control and Prevention (2020). Youth Risk Behavior Surveillance System, at https://www.cdc.gov/healthyyouth/data/yrbs/index.htm

The proportion of students trying marijuana before the age of 13 went down significantly in Colorado, from 9.2% in 2015 to 6.7% in 2019 (Figure 58). These findings were not statistically different from the national data.

Figure 58. High school students' marijuana use before 13 years old, Colorado and Nation, 2005–2019: HKCS

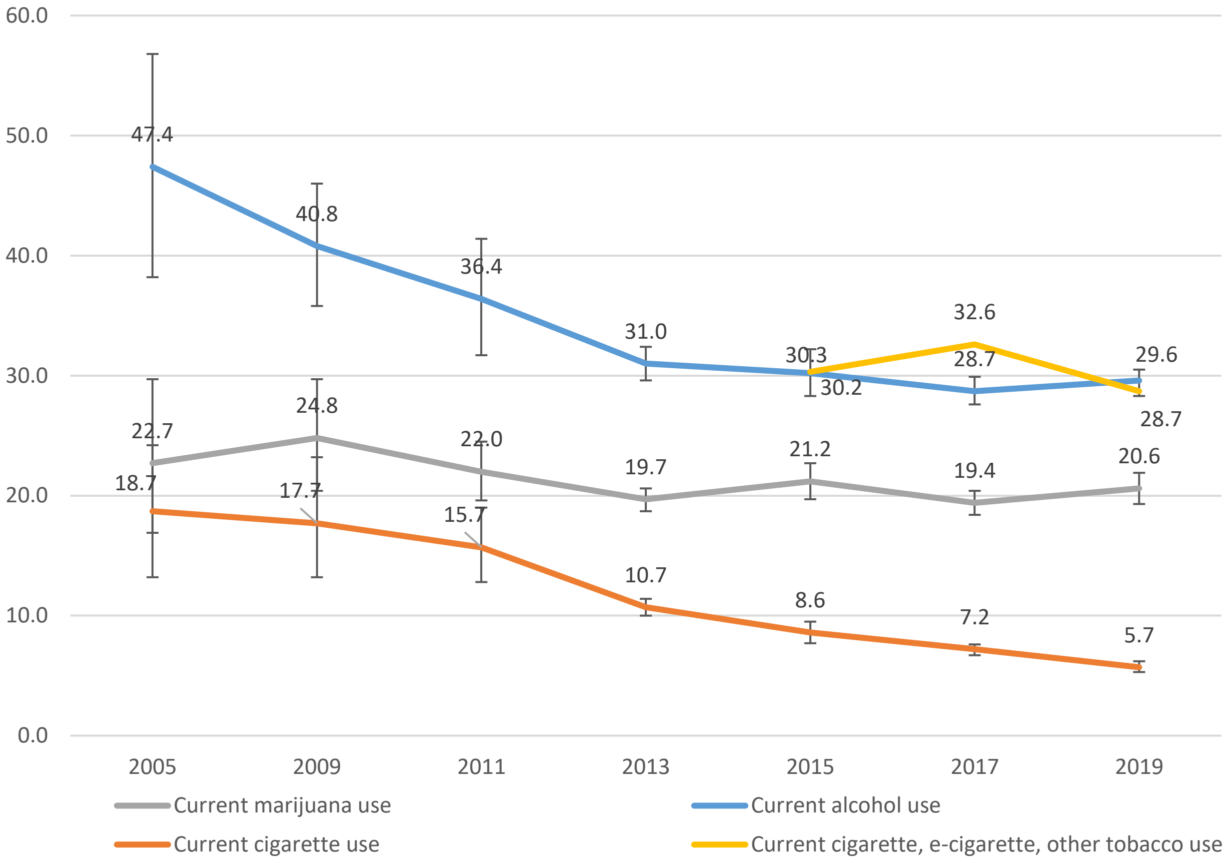


	2005	2009	2011	2013	2015	2017	2019
Colorado	9.9	8.3	9.0	8.1	9.2	6.5	6.7
Nation	8.7	7.5	8.1	8.6	7.5	6.8	5.6

Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2020). Healthy Kids Colorado Survey; Centers for Disease Control and Prevention (2020). Youth Risk Behavior Surveillance System, at https://www.cdc.gov/healthyyouth/data/yrbs/index.htm

Prevalence trends for the three most commonly used substances by high school students are presented in Figure 59. The prevalence of marijuana use has not changed significantly in the past six survey administrations. Alcohol and cigarette use trended downward, with the largest reduction linked to current alcohol use, down from 47.4% in 2005 to 29.6% in 2019. Although youth's cigarette smoking was at an all-time low, 25.9% of youth report using nicotine through vapor products including e-cigarettes. Data on e-cigarettes was added to the 2015 administration of HKCS.

Figure 59. High school students' past 30-day substance use, 2005–2019: HKCS



Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2020). Healthy Kids Colorado Survey; Centers for Disease Control and Prevention (2020). Youth Risk Behavior Surveillance System, at https://www.cdc.gov/healthyyouth/data/yrbs/index.htm

The demographic characteristics of students reporting past 30-day marijuana use in 2019 are presented in Table 32. The percentage of males (21.0%) and females (20.0%) that report past 30-day use does not show any difference. The age of the student was associated with marijuana use, with 15.5% of those 15 or younger reporting use in the past 30-days, compared to 24.4% of 16- to 17-year olds, and 27.5% of those 18 or older.

In 2019, the prevalence of past 30-day marijuana use was significantly higher among Hispanic (23.2%), American Indian/Alaskan Native (26.7%), Native Hawaiian/Pacific Islander (29.4%), and Multiple races (24.8%) compared to White (19.4%) high school students. In 2019, the prevalence of past 30-day marijuana use remained significantly lower among Asian high school students (9.7%) compared to all other race/ethnicities.

Those reporting their sexual orientation as gay/lesbian/bisexual were likely to report past 30-day marijuana use (29.7%) than heterosexual (19.5%) or unsure (20.4%) youth.

Table 32. High school students' past 30-day marijuana use, by demographic characteristics, 2019

Demographic category	Percent	95% CI
Total	20.6	(19.3-21.9)
Gender		
Male	21.0	(19.6-22.4)
Female	20.0	(18.6-21.5)
Age		
15 or younger	15.5	(14.4-16.5)
16 or 17	24.4	(22.9-26)
18 or older	27.5	(25.2-29.9)
Grade		
9th	13.3	(12.1-14.6)
10th	18.6	(17.3-19.9)
11th	24.3	(22.4-26.1)
12th	26.9	(25.0-28.8)
Race/ethnicity		
American Indian or Alaska Native, non-Hispanic	26.7	(23.2-30.2)
Asian, non-Hispanic	9.7	(8.2-11.2)
Black or African American, non-Hispanic	20.2	(16.5-23.8)
Hispanic Only or Hispanic White	23.2	(21.9-24.6)
Native Hawaiian or Other Pacific Islander, non-Hispanic	29.4	(22.2-36.6)
White, non-Hispanic	19.4	(18.0-20.9)
Multiple Race or Hispanic Other Race	24.8	(21.6-27.9)
Sexual orientation		
Heterosexual	19.5	(18.2-20.8)
Gay, Lesbian, or Bisexual	29.7	(27.6-31.8)
Unsure	20.4	(18.2-22.6)

Source: Colorado Department of Public Health and Environment (2020). Healthy Kids Colorado Survey, at https://marijuanahealthinfo.colorado.gov/health-data/healthy-kids-colorado-survey-hkcs-data

The overall and demographic breakdown of middle school students' past 30-day marijuana use is presented in Table 33. Similar to the high school outcomes, older students are more likely to report using marijuana in the past 30 days than younger students.

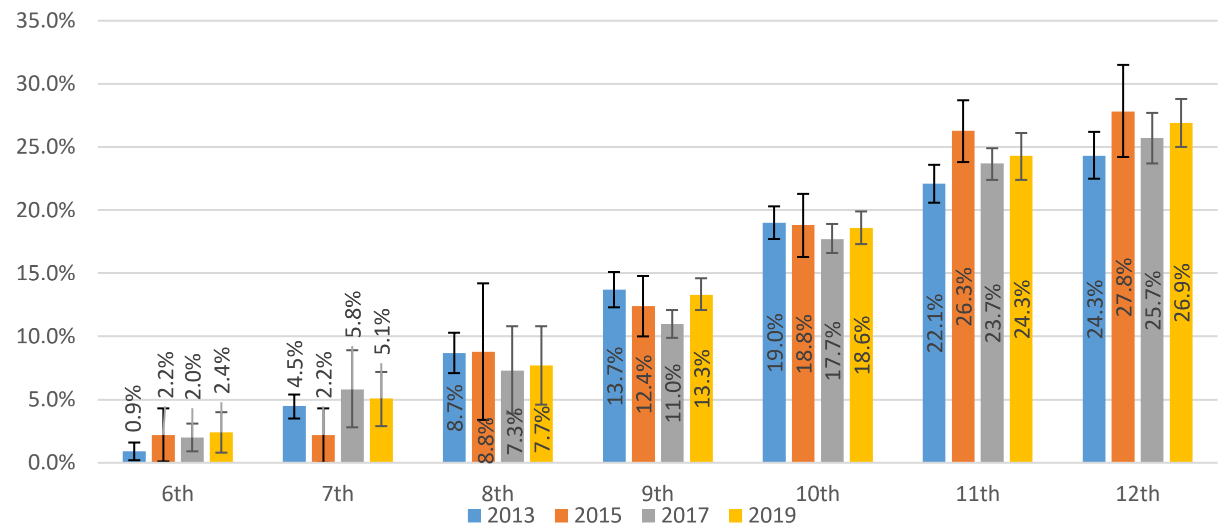
Table 33. Middle school students' past 30-day marijuana use, by demographic characteristics, 2019

Demographic category	Percentage	95% CI
Total	5.2	(3.2 - 7.2)
Sex		
Female	5.4	(3.2 - 7.6)
Male	5.1	(3.1 - 7.1)
Age		
11 or younger	1.8	(0.5 - 3.1)
12 or 13	5.6	(3.6 - 7.5)
14 or older	11.8	(6.6 - 17.0)
Grade		
6th	2.4	(0.8 - 4.0)
7th	5.1	(2.9 - 7.2)
8th	7.7	(4.6 - 10.8)
Race/Ethnicity		
American Indian or Alaska Native*	6.3	(1.7 - 10.9)
Asian*	1.9	(0.0 - 4.4)
Black or African American*	5.5	(1.0 - 10.1)
Native Hawaiian or Other Pacific Islander*	--	--
White*	2.6	(1.5 - 3.7)
Hispanic Only or Hispanic White	10.0	(7.0 - 13.1)
Multiple Race	4.8	(1.4 - 8.3)

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

The trend of past 30-day marijuana use by grade level is presented in Figure 60. No significant changes occurred within any grade between 2013 and 2019.

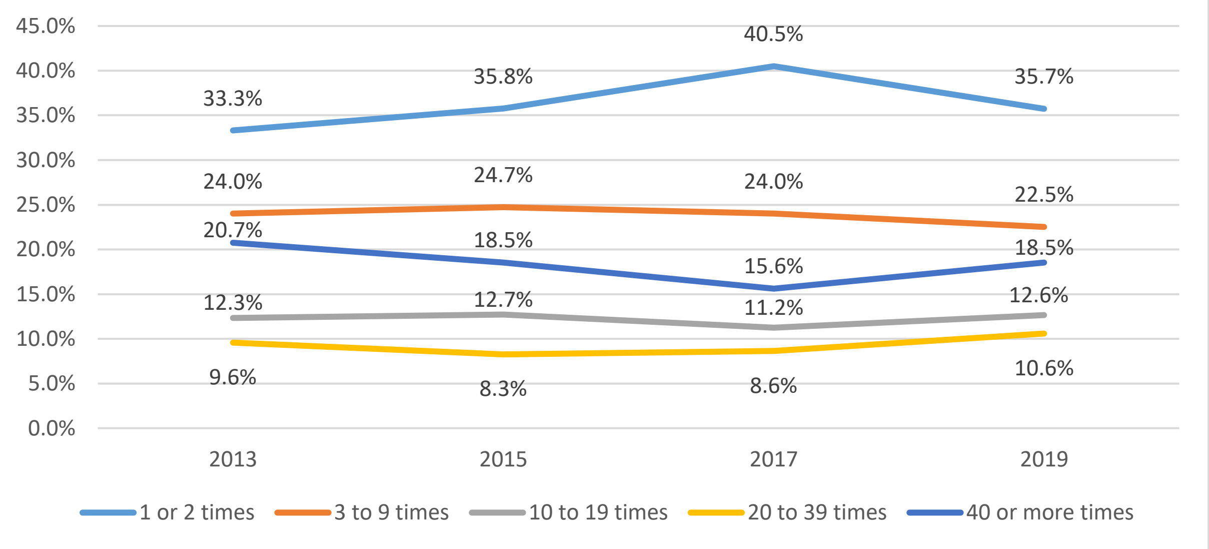
Figure 60. High school and middle school students' past 30-day marijuana use, by grade level, 2013-2019: HKCS



Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2018). Healthy Kids Colorado Survey, at https://www.colorado.gov/pacific/cdphe/healthy-kids-colorado-survey-data-tables-and-reports and https://cdphe.colorado.gov/hkcs

The frequency of marijuana use among high school students reported using marijuana in the past 30-days is presented in Figure 61. In 2019, among all high school students, 35.7% reported using one to two times, 22.5% reported using three to nine times, 12.6% reported using 10 to 19 times, 10.6% reported using 20 to 39 times, and 18.5% reported using 40 or more times.

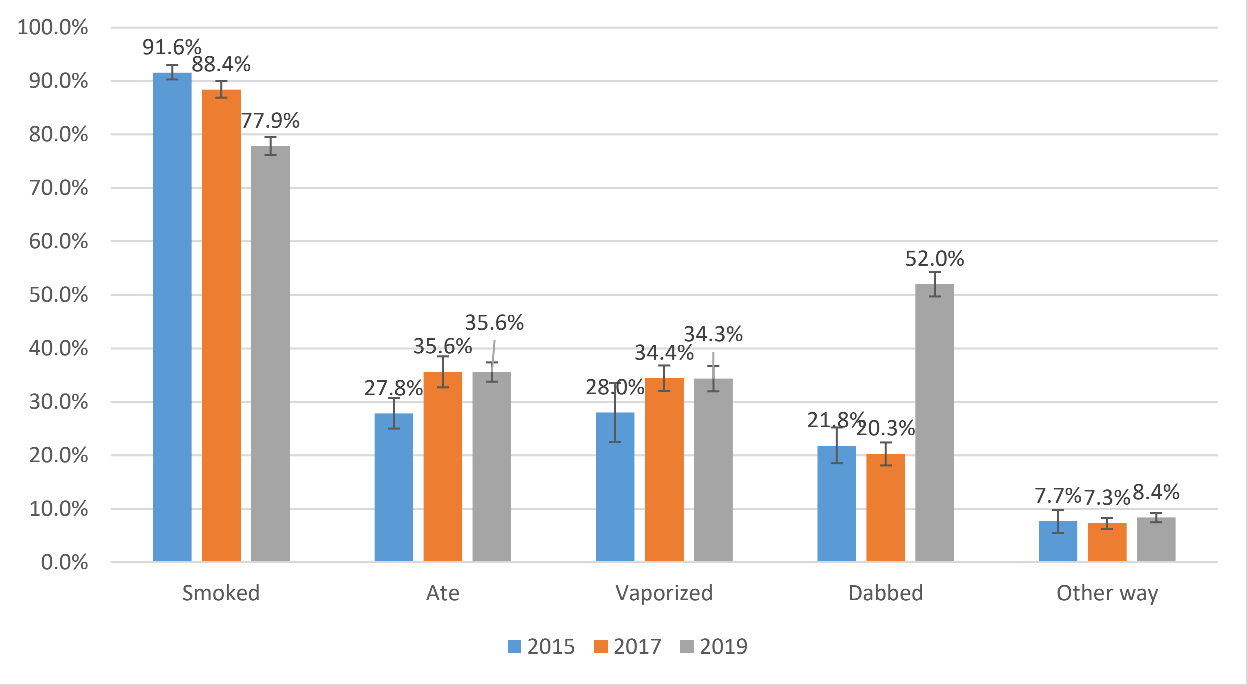
Figure 61. High school students' marijuana use frequency in past 30 days, among students who report past 30-day marijuana use, 2013–2019: HKCS



Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2020). Healthy Kids Colorado Survey, at https://www.colorado.gov/pacific/cdphe/healthy-kids-colorado-survey-hkcs-monitoring-trends-youth-marijuana-use

The most common method of marijuana use (Figure 62), reported by high school students who used marijuana in the past 30-days, was smoking (77.9%), followed by dabbing[59] (52.0%), and eating (35.6%). The percent of high school students reporting dabbing marijuana in the past 30-days increased significantly from 2017 (20.3%) to 2019 (52.0%). In contrast, the percent reporting smoking decreased significantly from 2017 (88.4%) to 2019 (77.9%).

Figure 62. High school students' reported methods of marijuana use (among students that reported marijuana use in the past 30 days), by type of use, 2015–2019: HKCS



Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2020). Healthy Kids Colorado Survey, at https://www.colorado.gov/pacific/cdphe/healthy-kids-colorado-survey-hkcs-monitoring-trends-youth-marijuana-use.
Note: Student can report more than one method of use.

Alcohol was the most common substance high school students reported using at any point in their lives at 55%, followed by e-cigarettes at 46%, and marijuana at 36% (Figure 63).

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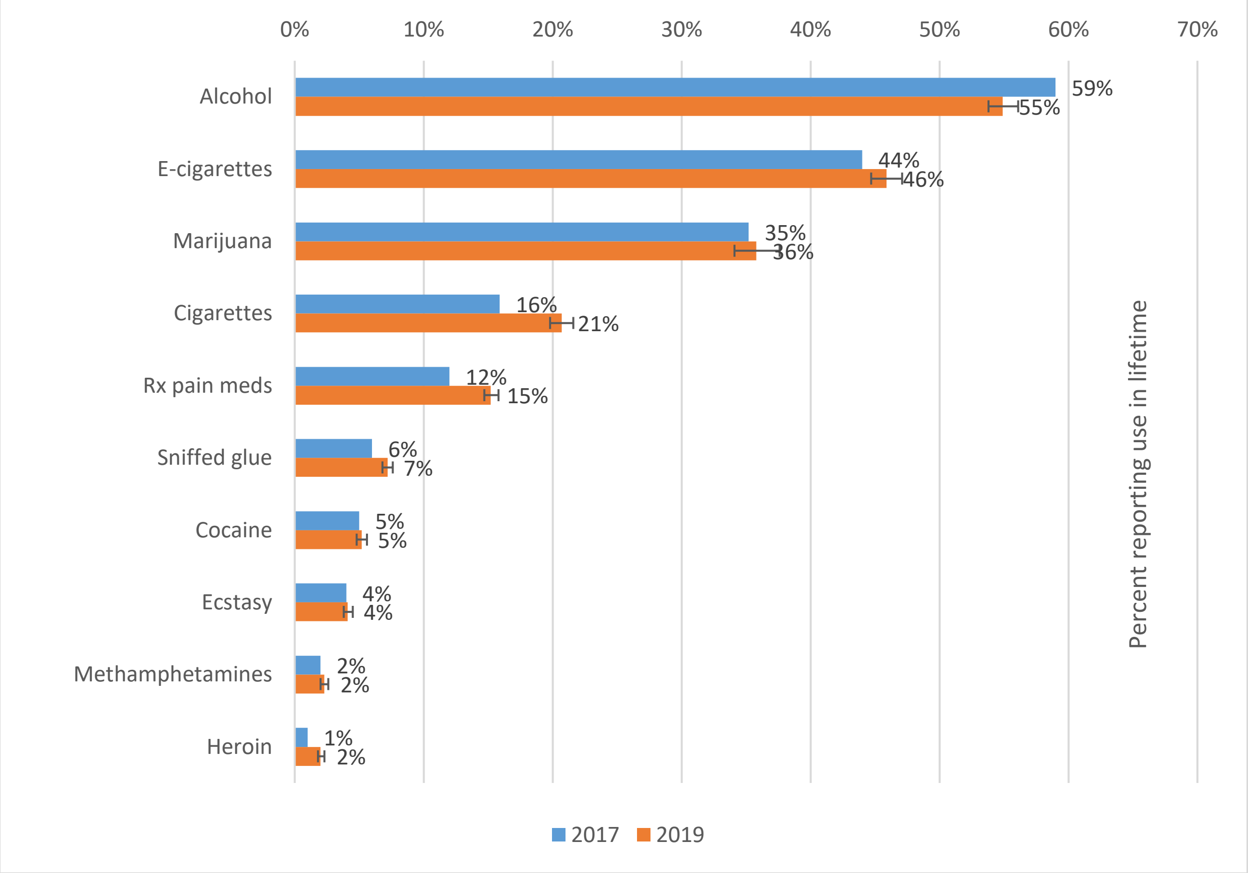
[59] Dabbing is a method of use in which a high THC concentrate (25%-90% THC) is placed on a small metal "nail," heated up to a very high temperature, and then inhaled through a glass device known as a "dab rig." For a more complete description of concentrates and dabbing, see https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5679763/; https://ajp.psychiatryonline.org/doi/full/10.1176/appi.ajp-rj.2016.110604; https://www.theatlantic.com/national/archive/2013/05/amateurs-guide-dabs/315221/.

Figure **63**. High school students' reported use in lifetime of various substances, by substance type, 2017 & 2019: HKCS



Source: Colorado Department of Public Health and Environment (2018), *Data Brief: Colorado Youth Marijuana Use 2017* and Colorado Department of Public Health and Environment (2020), Healthy Kids Colorado Survey, https://cdphe.colorado.gov/healthy-kids-colorado-survey-data-tables-and-reports.
Note: E-cigarette use does not include marijuana products.

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 many HSRs have large confidence intervals for their estimates due to small sample sizes and the results should be interpreted with caution (See Figure 63 for a statewide map of the HSRs.)

Health Statistics Region 7 (Pueblo County) reported the highest rate of high school students using marijuana in the past 30 days for the last four survey administrations, with 27.0% reporting use in 2019, 26.8% in 2017, 30.1% in 2015, and 32.1% in 2013 (Table 34 and Figure 65). Note, however, that the proportion reporting 30-day use in Region 7 declined between 2013 and 2019. Also reporting high rates of use were students in Region 20 (Denver) at 25.5% in 2019 (note large confidence interval for Region 20) and Region 10 (Delta, Gunnison, Hinsdale, Montrose, Ouray, and San Miguel Counties) at 24.7% in 2019. The areas with the lowest usage in 2019 included Region 3 (Douglas County) at 13.3%, Region 1

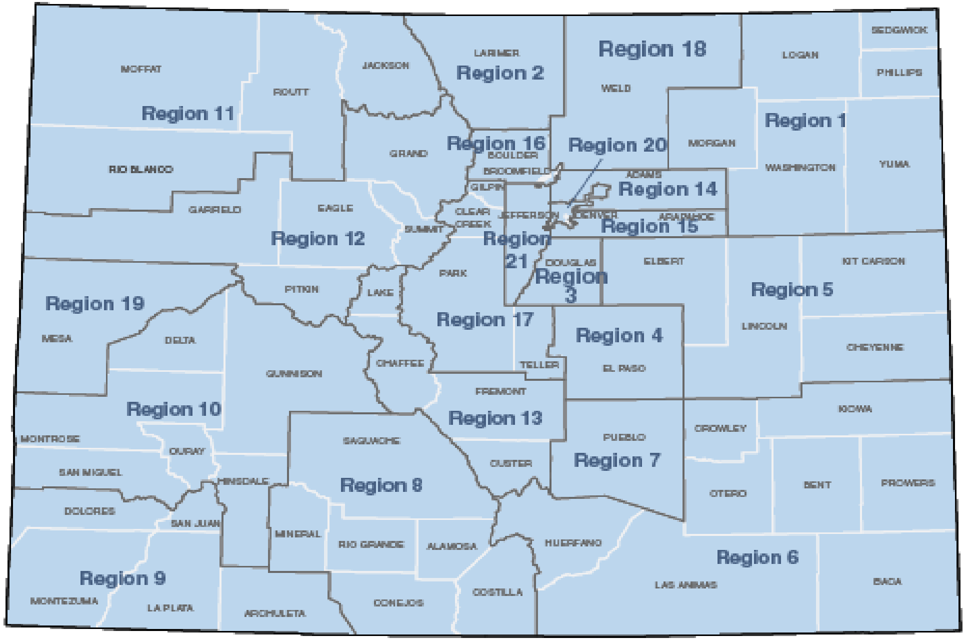
(Logan, Morgan, Philips, Sedgwick, Washington, and Yuma Counties) at 15.8%, and Region 2 (Larimer) at 17.4%.

Table 34. High school students' reporting marijuana use in the past 30-days, by health statistics region, 2013-2019: HKCS

	2013		2015		2017		2019	
Health Statistics Region	30-day use	95% CI	30-day use	95% CI	30-day use	95% CI	30-day use	95% CI
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)
HSR 1	--	--	11.8	(4.8-18.8)	16.3	(12.9-19.6)	15.8	(14.2-17.3)
HSR 2	16.9	(14.0-19.8)	17.6	(12.6-22.5)	19.6	(18.3-20.9)	17.4	(13.6-21.3)
HSR 3	13.2	(11.7-14.7)	--	--	13.5	(12.1-14.8)	13.3	(12.5-14)
HSR 4	14.8	(10.4-19.2)	--	--	22.2	(19.5-24.8)	21.5	(15.8-27.1)
HSR 5	9.4	(6.0-12.9)	9.7	(1.9-17.4)	16.2	(11.6-20.8)	--	--
HSR 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)
HSR 7	32.1	(25.7-38.4)	30.1	(27.1-33.2)	26.8	(24.1-29.5)	27.0	(23.9-30.1)
HSR 8	23.1	(18.1-28.0)	19.7	(17.0-22.4)	19.6	(17.5-21.7)	22.5	(20-25.1)
HSR 9	24.6	(20.9-28.3)	26.2	(24.7-27.7)	24.9	(23.0-26.8)	24.7	(23.5-25.8)
HSR 10	26.7	(22.3-31.0)	17.5	(12.7-22.2)	25.3	(22.0-28.6)	22.1	(18.9-25.3)
HSR 11	14.3	(7.3-21.2)	19.7	(18.0-21.4)	19.5	(18.9-20.2)	18.2	(16.9-19.5)
HSR 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)
HSR 13	22.9	(21.2-24.7)	23.5	(21.9-25.1)	22.1	(18.9-25.2)	18.7	(13.7-23.6)
HSR 14	22.8	(19.7-25.9)	20.6	(14.3-27.0)	--	--	18.0	(14.9-21)
HSR 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)
HSR 16	20.3	(18.3-22.3)	24.1	(20.2-28.0)	22.2	(18.9-25.4)	22.6	(19.1-26.1)
HSR 17	25.1	(21.9-28.3)	20.8	(19.3-22.3)	22.1	(17.9-26.3)	21.4	(18-24.8)
HSR 18	18.6	(15.4-21.9)	--	--	18	(16.1-19.9)	20.9	(19-22.8)
HSR 19	17.2	(13.0-21.3)	21.2	(19.0-23.3)	19.7	(17.2-22.2)	19.1	(17-21.2)
HSR 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)
HSR 21	--	--	--	--	--	--	19.5	(16.8-22.2)

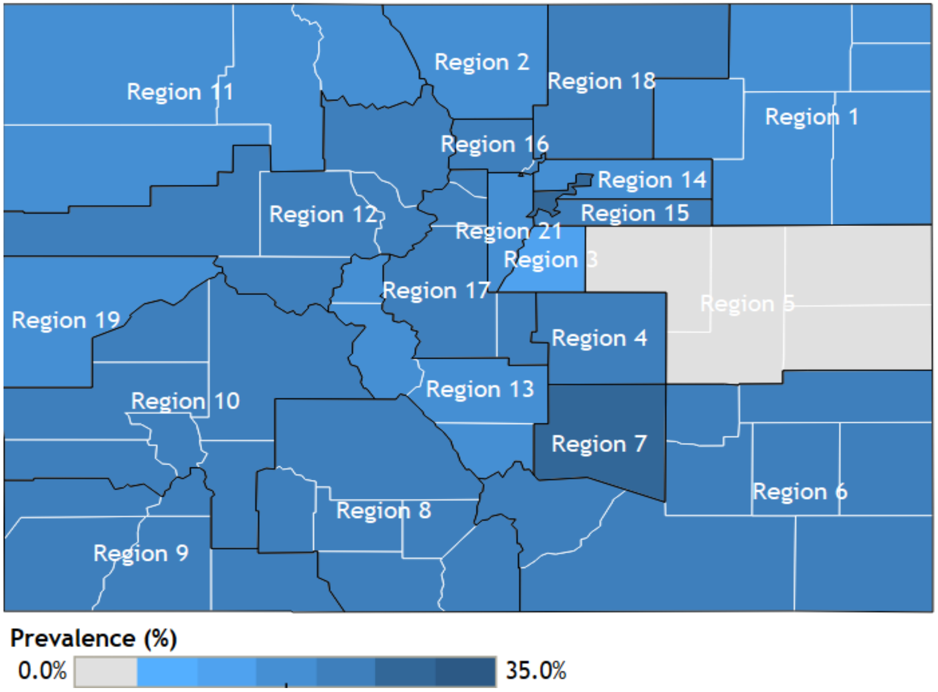
Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2020). Healthy Kids Colorado Survey, at
https://www.colorado.gov/pacific/cdphe/healthy-kids-colorado-survey-hkcs-monitoring-trends-youth-marijuana-use

Figure 64. Colorado Department of Public Health and Environment Health Statistics Regions


MOFFAT
JACKSON
LARIMER
Region 2
Region 18
LOGAN
SEDGWICK
PHILLIPS
ROUTT
WELD
Region 11
Region 1
Region 16
BOULDER
Region 20
MORGAN
GRAND
RIO BLANCO
BROOMFIELD
ADAMS
WASHINGTON
YUMA
GILPIN
Region 14
GARFIELD
EAGLE
CLEAR CREEK
JEFFERSON
DENVER
ARAPAHOE
Region 15
SUMMIT
Region 12
Region 21
DOUGLAS
ELBERT
KIT CARSON
Region 3
PARK
PITKIN
LAKE
Region 19
Region 5
Region 17
Region 4
LINCOLN
MESA
DELTA
CHAFFEE
TELLER
EL PASO
CHEYENNE
GUNNISON
FREMONT
Region 10
KIOWA
Region 13
MONTROSE
OURAY
SAGUACHE
PUEBLO
CROWLEY
SAN MIGUEL
HINSDALE
CUSTER
Region 7
Region 8
BENT
PROWERS
OTERO
DOLORES
SAN JUAN
MINERAL
RIO GRANDE
ALAMOSA
HUERFANO
Region 6
Region 9
LAS ANIMAS
BACA
MONTEZUMA
LA PLATA
ARCHULETA
CONEJOS
COSTILLA

Source: Colorado Department of Public Health and Environment.

Figure 65. High school students' reporting marijuana use in the past 30-days, by health statistics region, 2019: HKCS

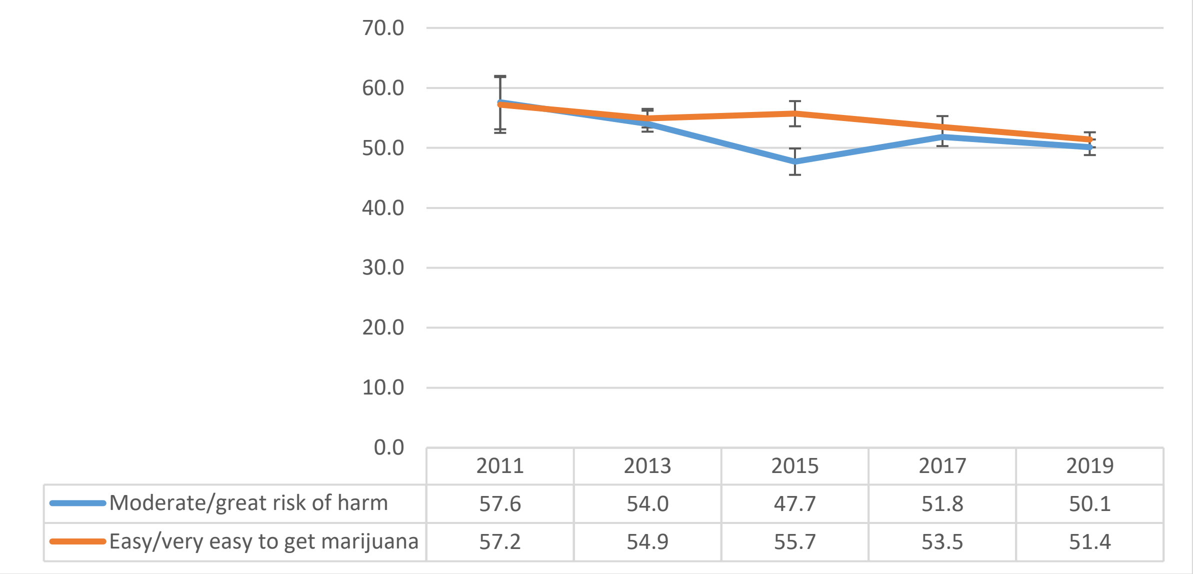

Region 2
Region 18
Region 11
Region 1
Region 16
Region 14
Region 12
Region 15
Region 21
Region 3
Region 17
Region 5
Region 19
Region 4
Region 13
Region 10
Region 7
Region 6
Region 8
Region 9
Prevalence (%)
0.0%
35.0%

Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment (2020). Healthy Kids Colorado Survey, at https://www.colorado.gov/pacific/cdphe/healthy-kids-colorado-survey-hkcs-monitoring-trends-youth-marijuana-use

The HKCS asks about various student opinions and behaviors concerning marijuana (Figures 66-74). The perception of moderate/great risk of using marijuana regularly[60] was reported by 50.1% of high school students in 2019, with no significant change between 2017 and 2019 (Figure 66). The perception of risk decreases with age, from 79.7% of 6th graders reporting a perception of moderate/great risk compared to 41.7% of 12th graders (Figure 67). The percent of high school students reporting that it would be easy/very easy to obtain marijuana in 2019 (51.4%) did not change significantly from 2017 (53.5%) (Figure 65).

The perception of how easy it would be to obtain marijuana changes as students age, with 10.1% of 6th grade students reporting that it would be sort of/very easy to get marijuana, and 63.8% of 12th grade students expressing this belief in 2019 (Figure 68). Student perceptions about the wrongness of marijuana use also vary by age, with 94.4% of 6th grade students believing use is wrong/very wrong, and 47.0% of 12th grade students expressing this opinion in 2019.

Figure 66. High school students' perception of harm risk and ease of access of marijuana, 2011-2019: HKCS



	2011	2013	2015	2017	2019
Moderate/great risk of harm	57.6	54.0	47.7	51.8	50.1
Easy/very easy to get marijuana	57.2	54.9	55.7	53.5	51.4

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, at https://www.colorado.gov/pacific/cdphe/healthy-kids-colorado-survey-data-tables-and-reports

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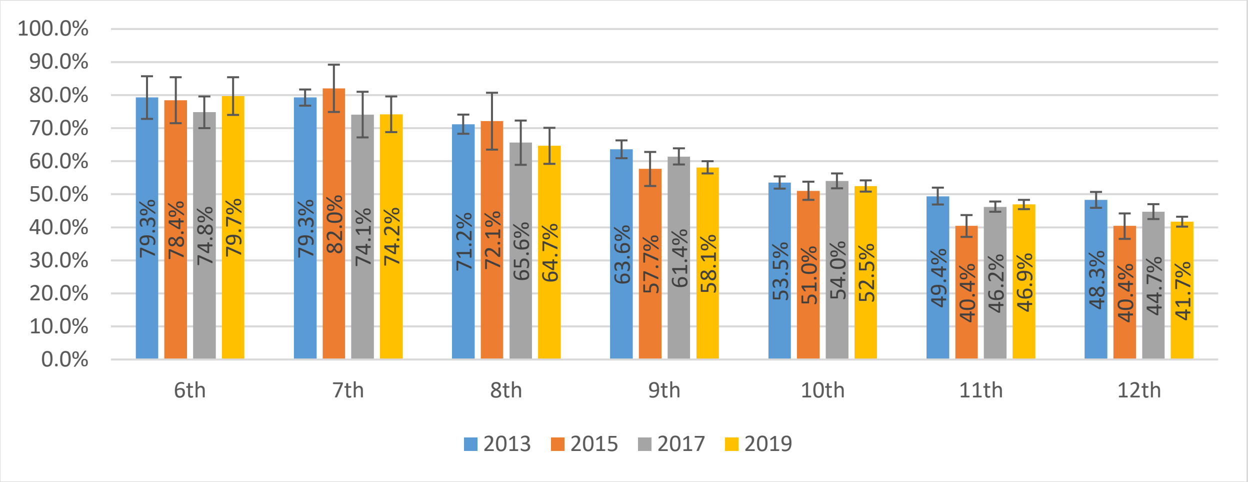
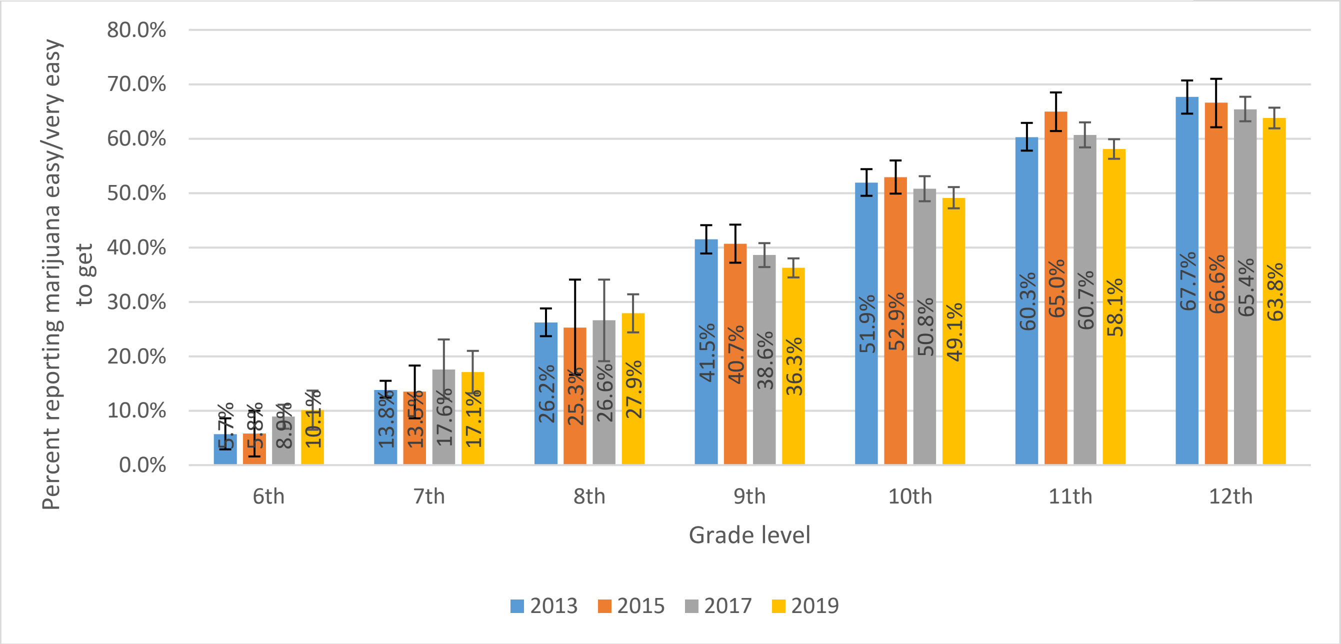
[60] The frequency implied by the term "use marijuana regularly" is not explicitly defined in the survey. This is also a different measure of risk perception from that used in the NSDUH, which asks about perceived risk for using once a month.

Figure 67. Students' opinion regarding moderate/great risk of regular marijuana use, by grade level, 2013–2019: HKCS



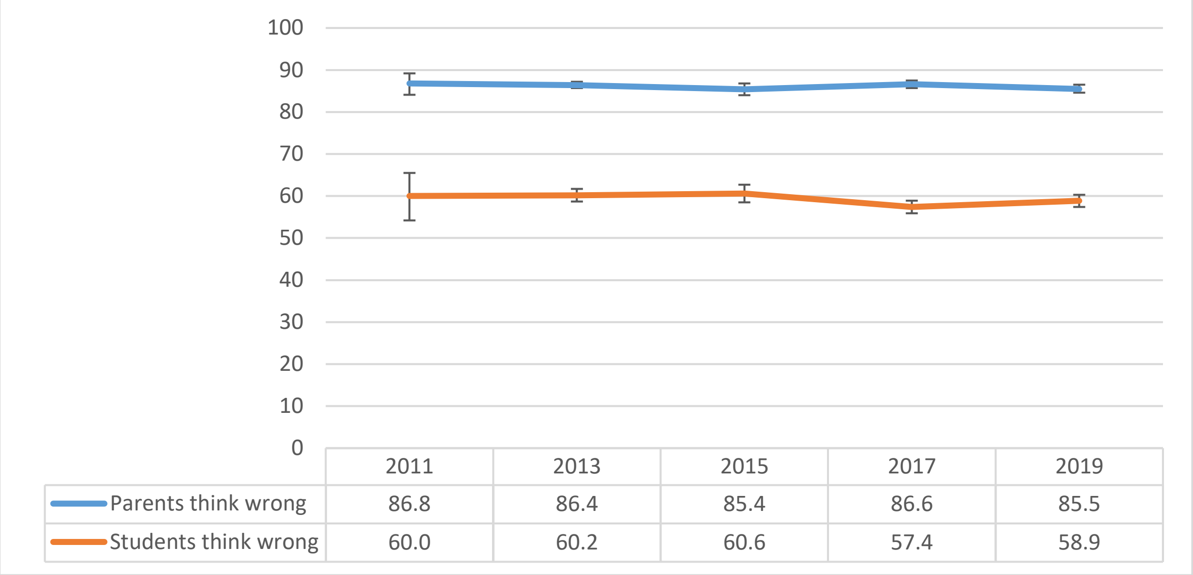
Source: Colorado Department of Public Health and Environment (2020), Healthy Kids Colorado Survey, at https://www.colorado.gov/pacific/cdphe/healthy-kids-colorado-survey-data-tables-and-reports.

Figure 68. Students' opinion regarding marijuana being easy/very easy to get, by grade level, 2013–2019: HKCS



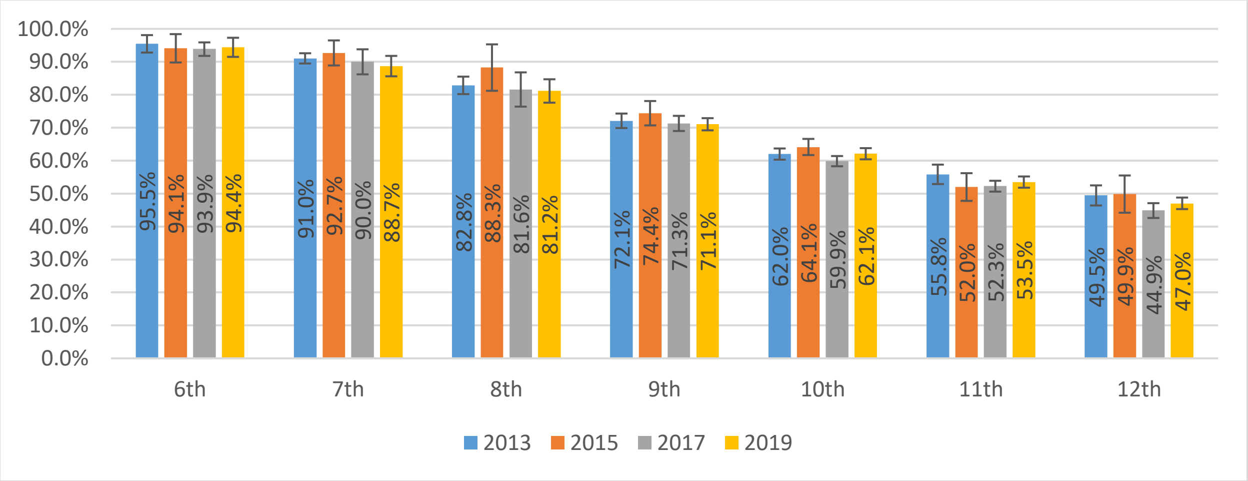
Source: Colorado Department of Public Health and Environment (2020), Healthy Kids Colorado Survey, at https://www.colorado.gov/pacific/cdphe/healthy-kids-colorado-survey-data-tables-and-reports.

Figure 69. High school students' perception of parents' and their own belief that marijuana use by someone their age is wrong, 2011-2019: HKCS



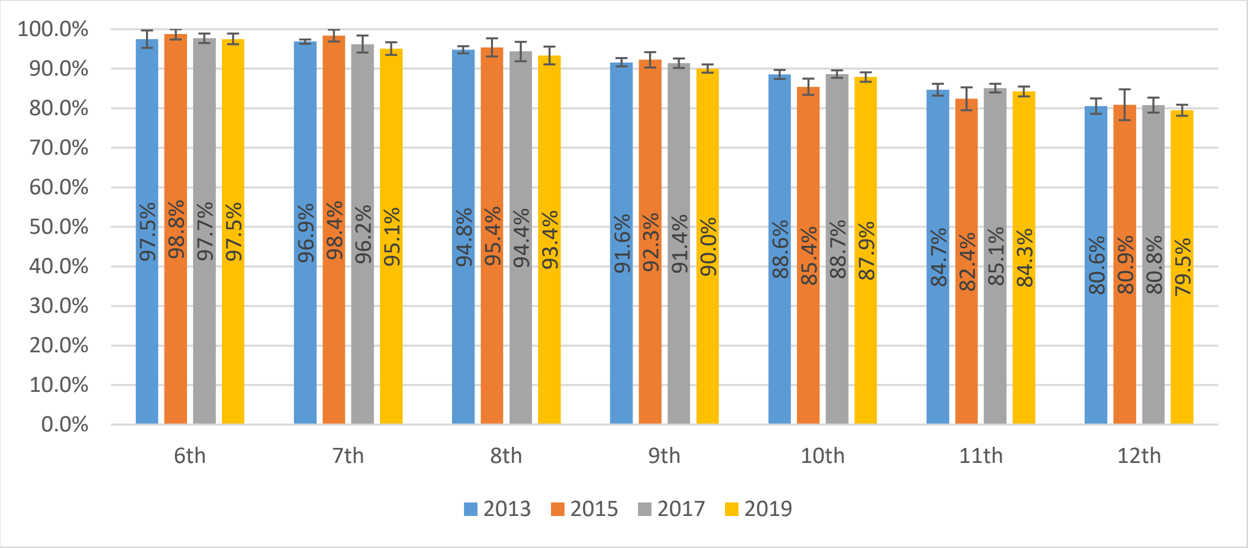
Source: Colorado Department of Public Health and Environment (2020), Healthy Kids Colorado Survey, at https://www.colorado.gov/pacific/cdphe/healthy-kids-colorado-survey-data-tables-and-reports.

Figure 70. Students' opinion regarding whether marijuana use is wrong, by grade level, 2013–2019: 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.

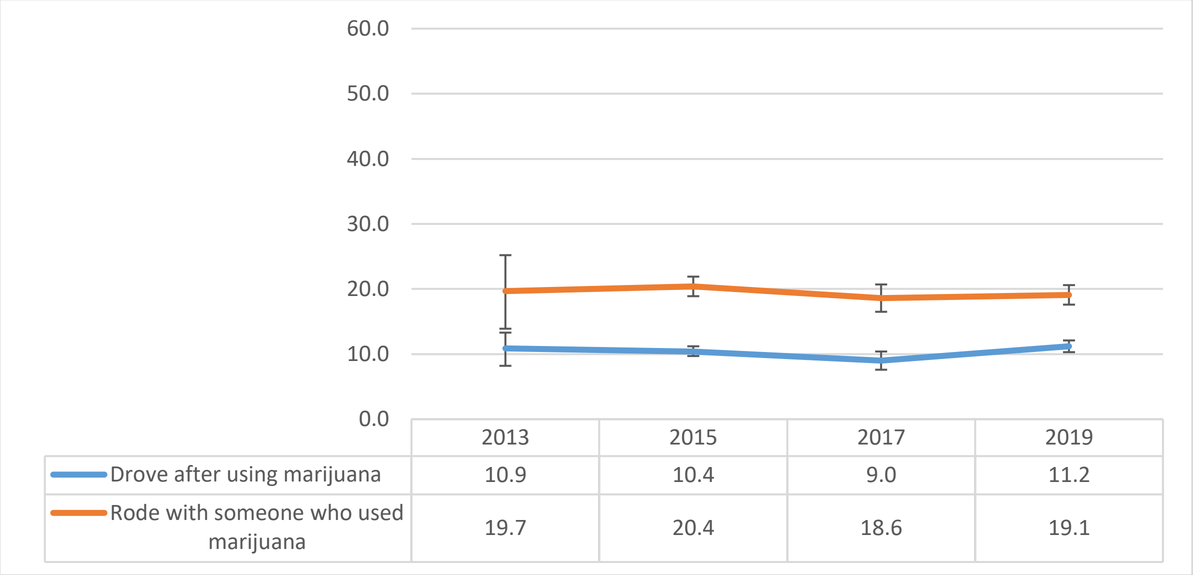
Figure 71. Students' opinion regarding whether parents believe marijuana use is wrong, by grade level, 2013–2019: HKCS



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.

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 (Figure 73). In 2019, nearly one in five (19.2%) reported riding with someone who had been using marijuana and about one in 10 (11.2%) of students who drove reported driving while using marijuana in the past 30 days. Grade-level trends for the driving questions are presented in Figures 74 and 75.

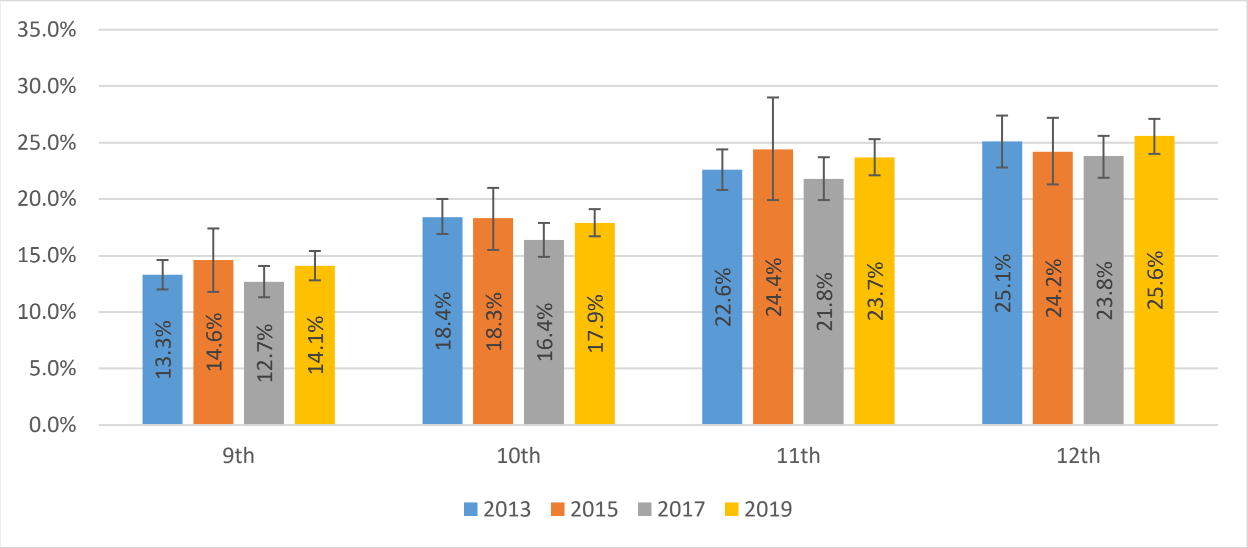
Figure 72. Driving after using or riding with someone who has used marijuana, 2013-2019



	2013	2015	2017	2019
Drove after using marijuana	10.9	10.4	9.0	11.2
Rode with someone who used marijuana	19.7	20.4	18.6	19.1

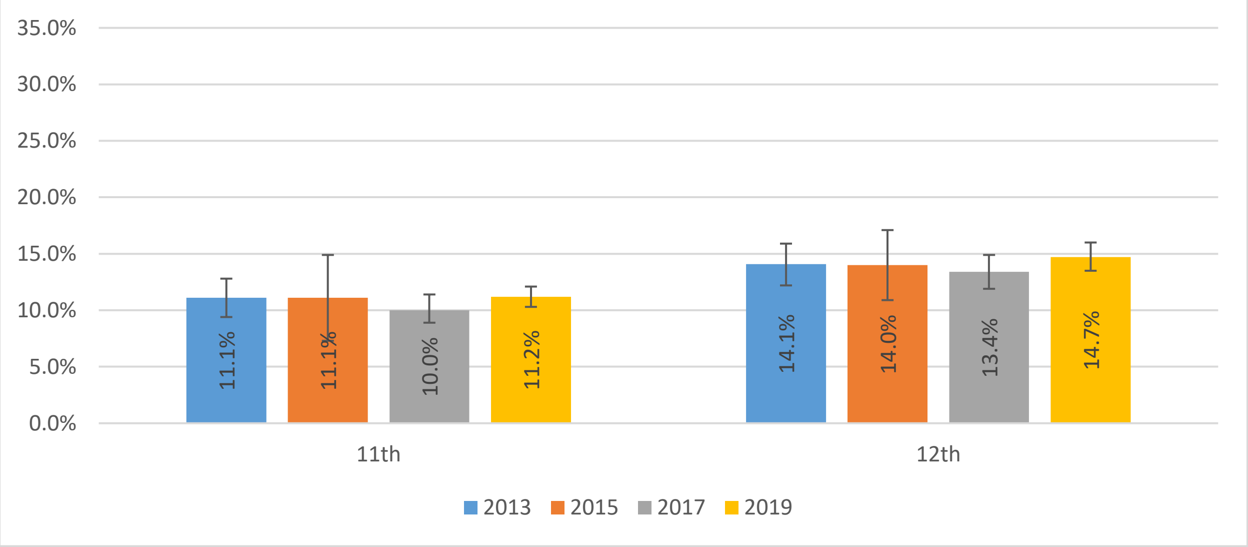
Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment, Healthy Kids Colorado Survey.

Figure 73. Students reporting riding in a car driven by someone who had been using marijuana, by grade level, 2013–2019: 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 74. Students reporting driving a vehicle when they had been using marijuana, by grade level, 2013–2019: 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

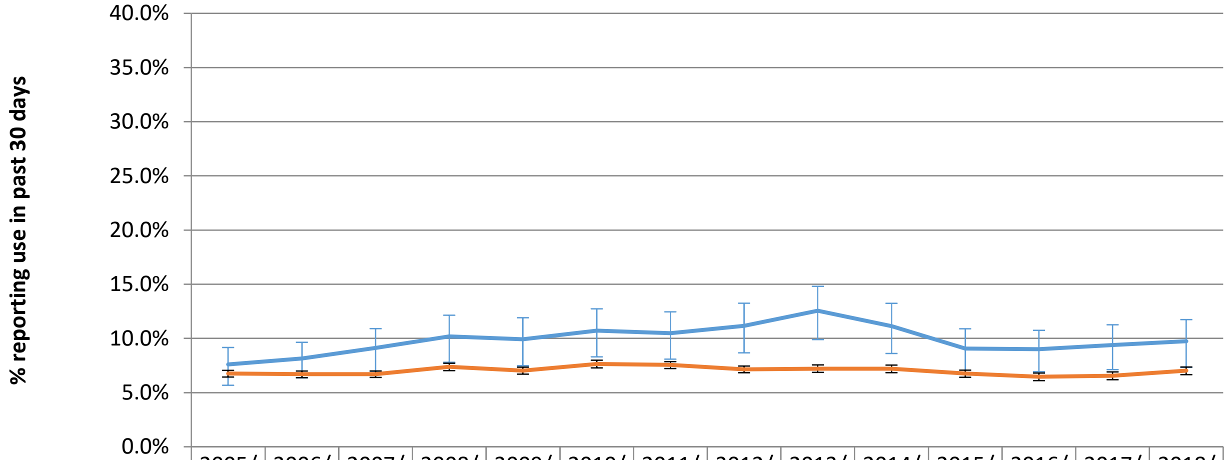
National Survey on Drug Use and Health

The federal Substance Abuse and Mental Health Services Administration (SAMHSA) conducts the annual National Survey on Drug Use and Health (NSDUH).[61] The NSDUH is the primary source of information on the prevalence, patterns, and consequences of alcohol, tobacco, and illegal drug use and abuse, and mental disorders in the U.S. civilian, noninstitutionalized population, age 12 and older. The survey generates estimates at the national, state, and sub-state levels. The NSDUH is state-based, with an independent, multistage area probability sample within each state and the District of Columbia.

SAMHSA produces state-level estimates from a two-year rolling sample. This means that each year presented in this report actually represents two years of data. The two-year usage prevalence rates for Colorado residents 12 to 17 years old are based on weighted estimates from between 500 to 650 survey respondents.

The proportion of Colorado youth reporting marijuana use in the past 30 days was significantly higher than the national average for the entire period from 2008/2009 through 2018/2019 (Figure 76).[62] The 2018/2019 30-day marijuana use percentage in Colorado (9.8%) was lower than the 2012/2013 estimate (11.2%) and was equal to the 2009/2010 estimate. A map with state-level estimates of 30-day usage is presented in Figure 77 and indicates that Colorado was in the top 20% of states for youth marijuana usage.

Figure 75. Past 30-day marijuana use, 12–17 year-olds, 2005/06 – 2018/19: NSDUH



	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Colorado	7.6%	8.1%	9.1%	10.2%	9.9%	10.7%	10.5%	11.2%	12.6%	11.1%	9.1%	9.0%	9.4%	9.8%
U.S.	6.7%	6.7%	6.7%	7.4%	7.0%	7.6%	7.5%	7.1%	7.2%	7.2%	6.8%	6.5%	6.6%	7.0%

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, at https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health

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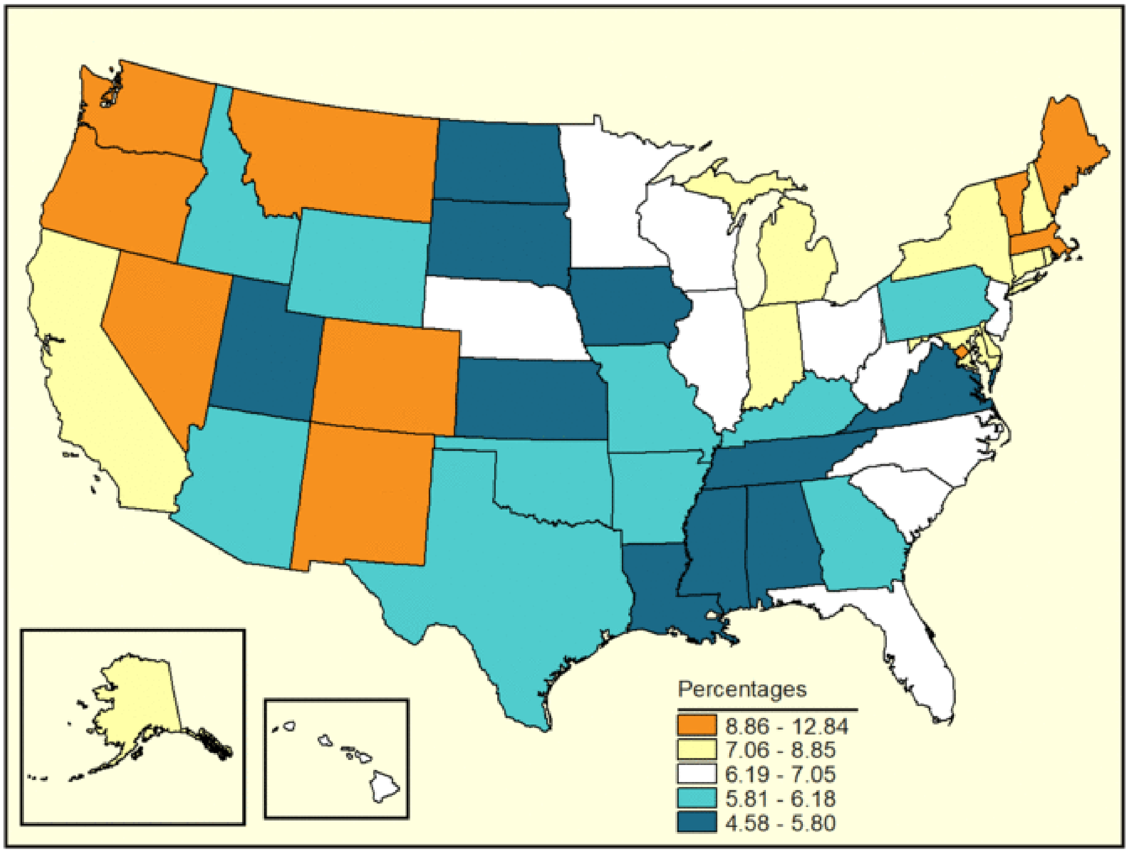
[61] Descriptions of the NSDUH are derived from information available at http://www.samhsa.gov/data/population-data-nsduh/reports.

[62] SAMHSA produces *p*-value tables that compare different geographic areas. *P*-values below .05 are considered statistically significant.

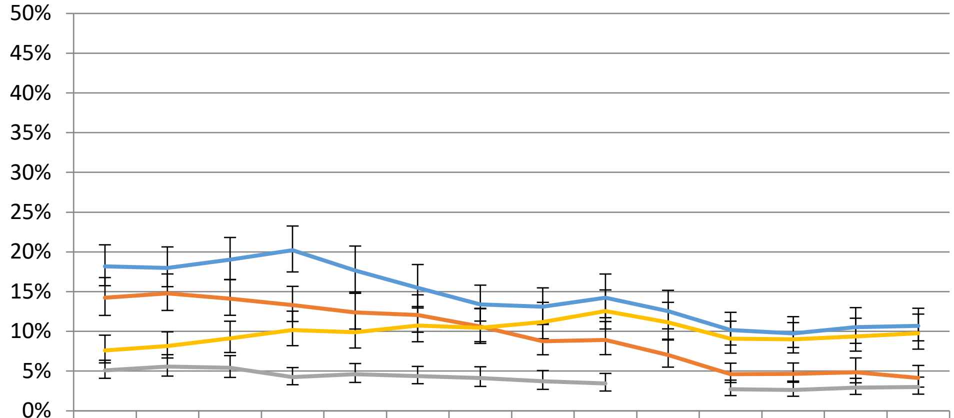
Figure 76. Past 30-day marijuana use, 12- to 17-year-olds, by state, 2018/19



Source: Substance Abuse and Mental Health Services Administration (2020), National Survey on Drug Use and Health, *2018-19 National Survey on Drug Use and Health National Maps of Prevalence Estimates, by State.* Available at https://www.samhsa.gov/data/report/2018-2019-nsduh-national-maps-prevalence-estimates-state

Overall substance use among teens was decreasing, with reductions in alcohol, cigarette, marijuana, and illicit drug use other than marijuana over the past eight years (Figure 78).

Figure 77. Past 30-day substance use in Colorado, 12–17 year olds, 2005/06 – 2018/19: NSDUH

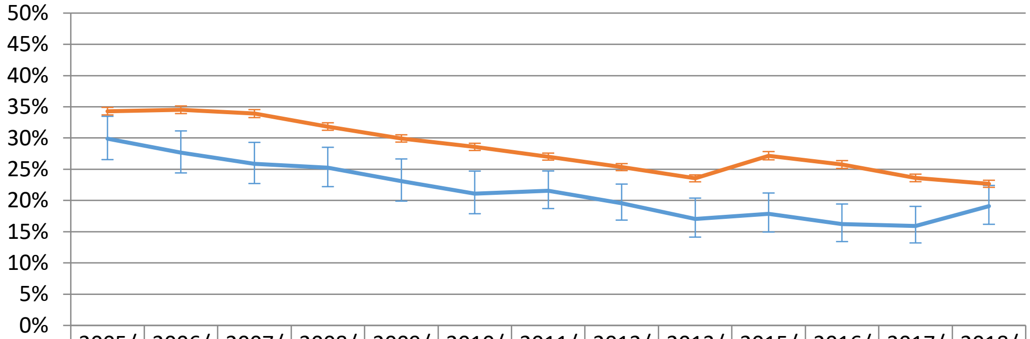


	2005 /06	2006 /07	2007 /08	2008 /09	2009 /10	2010 /11	2011 /12	2012 /13	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18	2018 /19
Any alcohol	18.2%	18.0%	19.0%	20.2%	17.7%	15.5%	13.4%	13.1%	14.3%	12.6%	10.2%	9.7%	10.5%	10.7%
Any tobacco	14.2%	14.8%	14.1%	13.3%	12.4%	12.1%	10.6%	8.8%	8.9%	7.0%	4.6%	4.7%	4.9%	4.1%
Illicit drugs, non-marijuana	5.1%	5.6%	5.4%	4.2%	4.6%	4.4%	4.1%	3.7%	3.4%		2.7%	2.6%	2.9%	3.0%
Marijuana	7.6%	8.1%	9.1%	10.2%	9.9%	10.7%	10.5%	11.2%	12.6%	11.1%	9.1%	9.0%	9.4%	9.8%

Note: There were no state-level estimates for use of illicit drugs other than marijuana in 2014/2015.
Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, at https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health

Colorado youths' perceptions of great risk for using marijuana once per month have been consistently lower than the national average (Figure 79). Both the Colorado and national trends have shown declines in perception of risk. The perception of great risk from using marijuana once a month among Colorado youth declined from 29.9% in 2005/2006 to 19.1% in 2018/2019. The perception of great risk in Colorado has been consistently lower than the national figure, but the gap between the two remained relatively consistent, at five to six percentage points.

Figure 78. Perception of great risk for using marijuana once a month, 12– to 17-year olds, 2005/06 – 2018/19: NSDUH

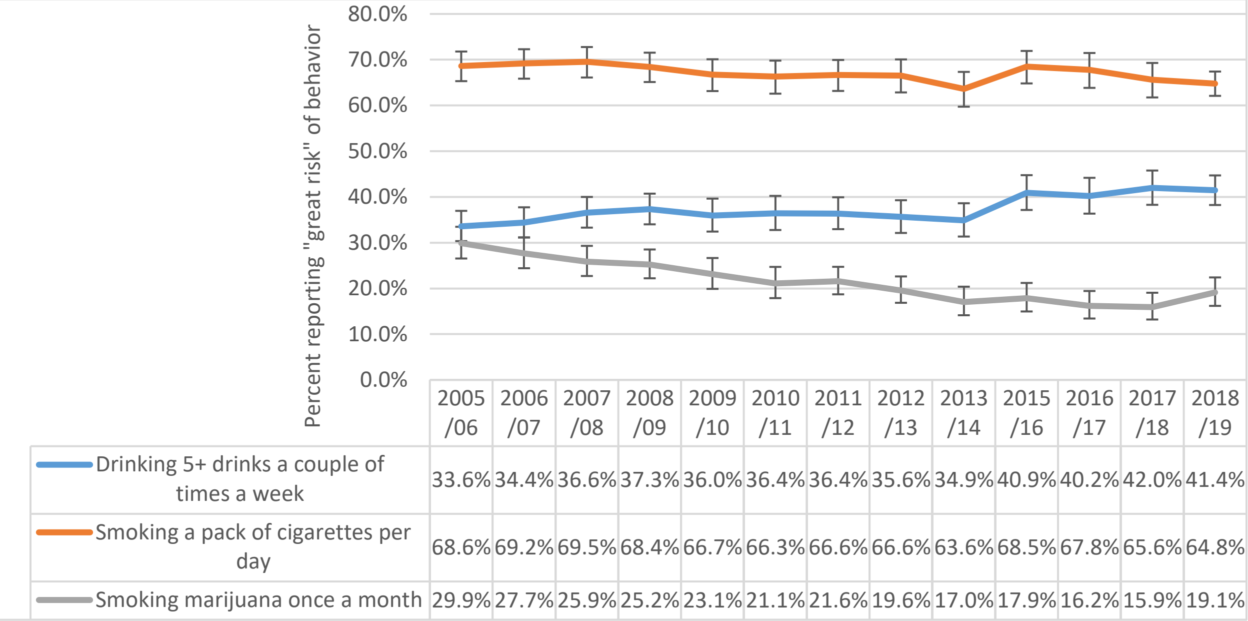


	2005/ 06	2006/ 07	2007/ 08	2008/ 09	2009/ 10	2010/ 11	2011/ 12	2012/ 13	2013/ 14	2015/ 16	2016/ 17	2017/ 18	2018/ 19
Colorado	29.9%	27.7%	25.9%	25.2%	23.1%	21.1%	21.6%	19.6%	17.0%	17.9%	16.2%	15.9%	19.1%
U.S.	34.3%	34.5%	33.9%	31.8%	29.9%	28.6%	27.0%	25.3%	23.5%	27.2%	25.8%	23.6%	22.7%

Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, at https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health

As shown in Figure 80, the reduced perception of risk for marijuana use once-per-month contrasts with very little change in the perception of great risk for regular cigarette smoking (one pack per day) or binge drinking (five or more drinks a couple times a week). However, the difference in the frequency of the behavior in question should be noted and taken into consideration when interpreting this disparity.

Figure 79. Perception of great risk for using various substances, 12- to 17-year olds, 2005/2006–2018/2019: NSDUH



	2005 /06	2006 /07	2007 /08	2008 /09	2009 /10	2010 /11	2011 /12	2012 /13	2013 /14	2015 /16	2016 /17	2017 /18	2018 /19
Drinking 5+ drinks a couple of times a week	33.6%	34.4%	36.6%	37.3%	36.0%	36.4%	36.4%	35.6%	34.9%	40.9%	40.2%	42.0%	41.4%
Smoking a pack of cigarettes per day	68.6%	69.2%	69.5%	68.4%	66.7%	66.3%	66.6%	66.6%	63.6%	68.5%	67.8%	65.6%	64.8%
Smoking marijuana once a month	29.9%	27.7%	25.9%	25.2%	23.1%	21.1%	21.6%	19.6%	17.0%	17.9%	16.2%	15.9%	19.1%

Note: There were no state-level estimates in 2014/2015.
Source: Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health, at https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health

Summary of Survey Data

The 2019 HKCS results indicated no change in high school students' past 30-day use of marijuana from 2017. The 2019 HKCS found that, among current marijuana users, dabbing marijuana concentrate increased between 2017 and 2019.

Criminal Justice Involvement

Arrest Trends

The total number of juvenile marijuana arrests decreased from 3,265 in 2012 to 2,064 in 2019 (-37%) (Table 35). The juvenile marijuana arrest rate decreased 42%, from 599 per 100,000 population 10–17 years old in 2012 to 349 in 2019 (Table 36). The demographic characteristics behind this change show consistent trends based on gender and race/ethnicity. The number of females arrested in 2019 (638) was down 11% from the 2012 total (719) but when controlling for the increase in the population, the rate reduced 18% (Tables 35 and 36). This compares with the decrease in the number (-44%) and rate (-48%) of male juvenile arrests between 2012 and 2019 (Tables 35 and 36).

The number (-45%) and rate (-47%) of White juveniles arrested decreased during this period. The rate and number of arrests for the largest minority populations also decreased: the number (-14%) and rate (-26%) of Hispanic juvenile arrests decreased, and the number (-35%) and rate (-41%) of Black juvenile arrests also decreased (Tables 35 and 36). The arrest rate for Black juveniles (429 per 100,000) was 22% above that of Whites (352 per 100,000) and 18% higher than the Hispanic rate (364 per 100,000)

Finally, the most common type of juvenile marijuana arrest was possession, which made up 83% of these arrests in 2019 (Table 35).

Table 35. Juvenile marijuana arrests, by demographics and crime type, 2012–2019

	Number of marijuana arrests							
	2012	2013	2014	2015	2016	2017	2018	2019
10 to 17 years old								
Total	3,265	3,122	3,379	3,019	2,648	2,701	2,573	2,064
Race								
White	2,214	2,018	2,011	1,835	1,631	1,721	1,578	1,220
Hispanic	786	803	992	886	755	749	759	674
Black	211	262	324	266	224	184	195	138
Other	54	39	52	32	38	47	41	32
Gender								
Male	2,546	2,389	2,494	2,227	1,910	1,944	1,720	1,426
Female	719	733	885	792	738	757	853	638
Drug crime type								
Sales	41	44	52	30	39	40	24	11
Smuggling	2	1	0	0	0	0	1	0
Possession	2856	2710	3091	2788	2461	2442	2255	1709
Production	5	4	3	2	4	4	4	1
Unspecified	361	363	233	199	144	215	289	343

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

Table 36. Juvenile marijuana arrest rates (per 100,000 population), by demographics and crime type, 2012–2019

	Marijuana arrest rate (per 100,000 population)							
	2012	2013	2014	2015	2016	2017	2018	2019
10 to 17 years old								
Total	599	565	602	528	456	461	436	349
Race								
White	667	605	597	539	474	498	456	352
Hispanic	489	486	585	507	422	412	411	364
Black	727	889	1081	867	716	581	608	429
Other	230	161	209	124	144	174	148	116
Gender								
Male	913	846	871	763	644	649	570	472
Female	270	271	322	283	260	264	295	221

	Marijuana arrest rate (per 100,000 population)							
	2012	2013	2014	2015	2016	2017	2018	2019
Drug crime type								
Sales	8	8	9	5	7	7	4	2
Smuggling	0	0	0	0	0	0	0	0
Possession	524	491	551	488	424	417	382	289
Production	1	1	1	0	1	1	1	0
Unspecified	66	66	42	35	25	37	49	58

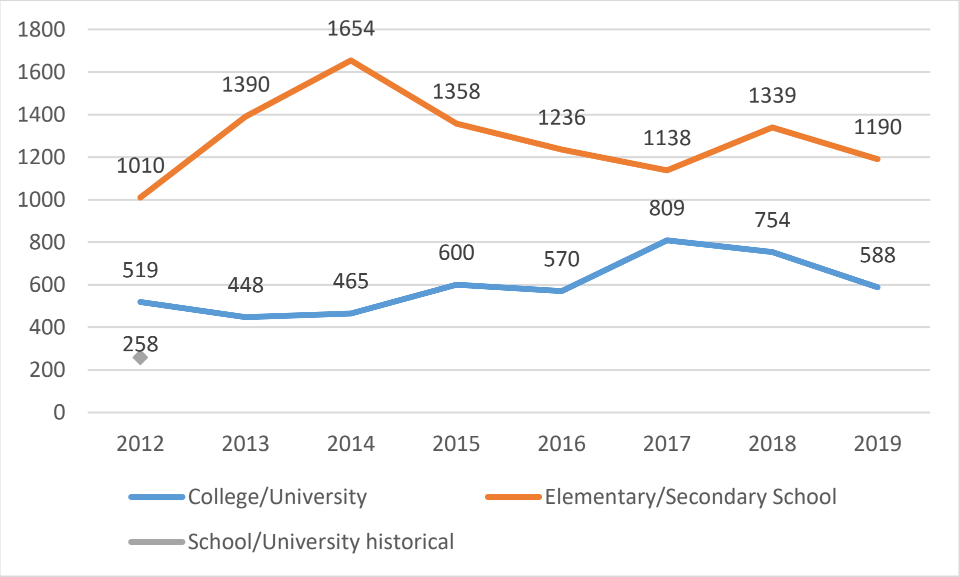
Source: Colorado Bureau of Investigation, National Incident-Based Reporting System; Colorado State Office of Demography.
Note: The rates for total arrests and rates by drug crime type were calculated based on the population 10-17 years old. The rates for race/ethnicity and gender were calculated on the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

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; the 2019 total (1,190) was 18% above 2012 (Figure 81). The number of offenses reported on college and university campuses was relatively stable from 2012 through 2016, jumped significantly in 2017, and by 2019 was 13% above the 2012 total.

Figure 80. Marijuana offenses in Colorado schools, 2012–2019



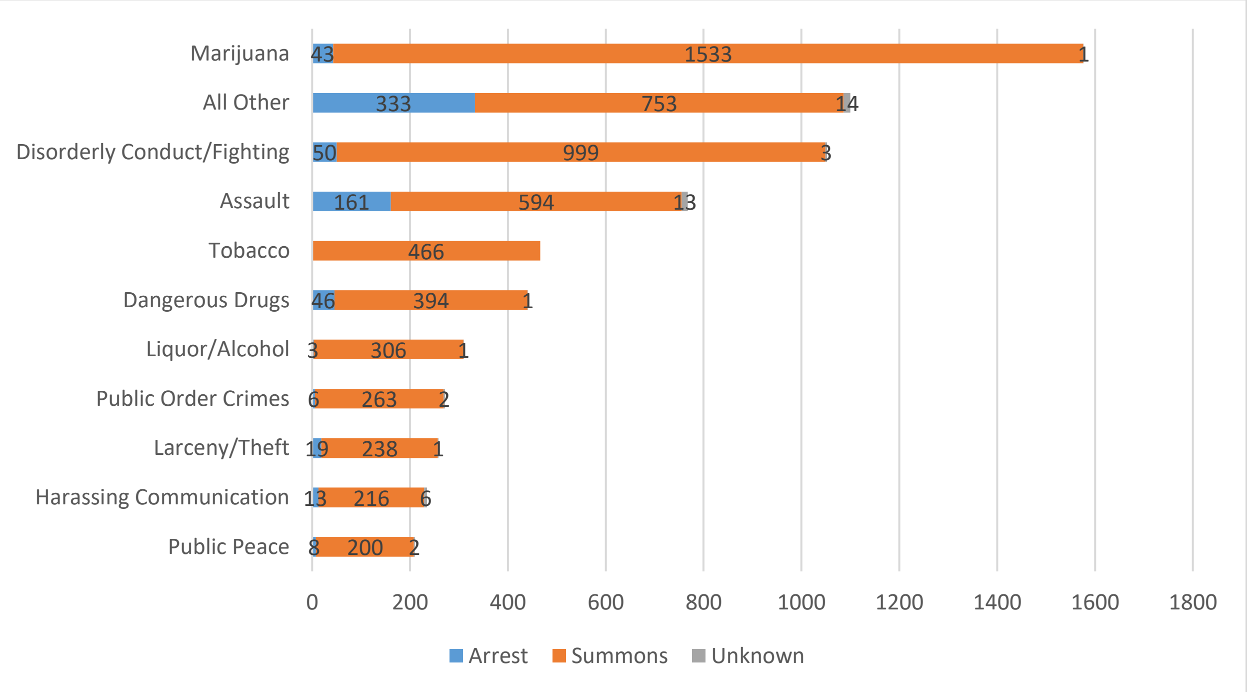
Source: Colorado Bureau of Investigation, National Incident-Based Reporting System.
Note: Prior to 2012 school/university was a single location code. There were 258 offenses in 2012 using this more generic location code.

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.[63]

Figure 82 presents the most common reasons for law enforcement contact among those agencies that reported to DCJ, with marijuana at the top of the list. The 1,577 contacts for marijuana account for 24% of all contacts reported in 2018-2019 (6,688). The vast majority of these contacts resulted in a summons (97%) rather than an arrest (3%).

Figure 81. Law enforcement contacts with students, by contact reason and type, 2019



Source. Colorado Division of Criminal Justice (2020). Law Enforcement Contacts with Students, Academic Year 2018-19. See https://ors.colorado.gov/ors-studentcontacts-1819

Figure 83 shows the type of law enforcement contact by race/ethnicity. In 2019, there were 829 law enforcement contacts with White students (53%), 584 with Hispanic students (37%), 50 with Black students (3%), and 114 with students of other races (7%). These proportions are almost identical to the racial/ethnic distribution in Colorado schools overall.

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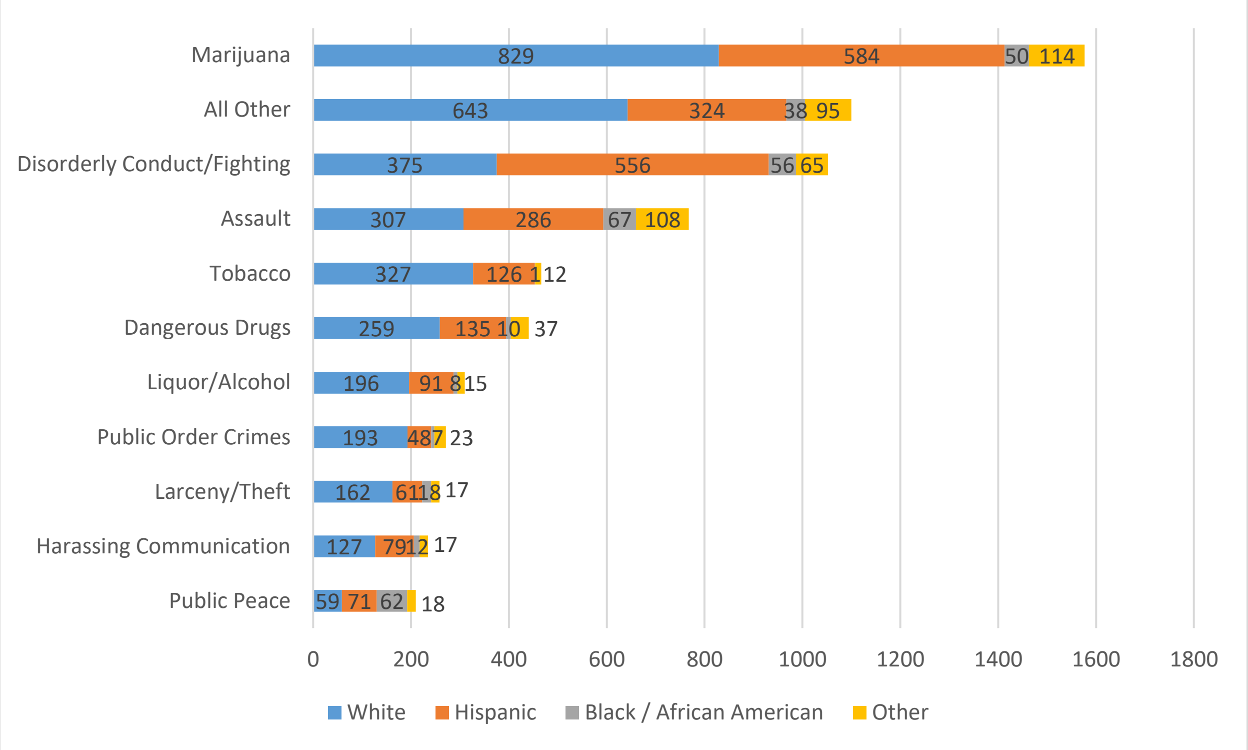
[63] For additional information please visit https://www.colorado.gov/pacific/dcj-ors/StudentContact_SD

Figure 82. Law enforcement contacts with students, by contact reason and race/ethnicity, 2019



Source. Colorado Division of Criminal Justice (2020). Law Enforcement Contacts with Students, Academic Year 2018-19. See https://ors.colorado.gov/ors-studentcontacts-1819

School Discipline Data Trends

Many educators, law enforcement officials, school counselors, and others who work with juveniles are 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.[64]

The Colorado Department of Education reports disciplinary data on suspensions, expulsions, and law enforcement referrals for each school year.[65] 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.

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[64] Ramey, D. (2016). The influence of early school punishment and therapy/medication on social control experiences during young adulthood, *Criminology*, *Online Early publication*, available at http://onlinelibrary.wiley.com/doi/10.1111/1745-9125.12095/abstract

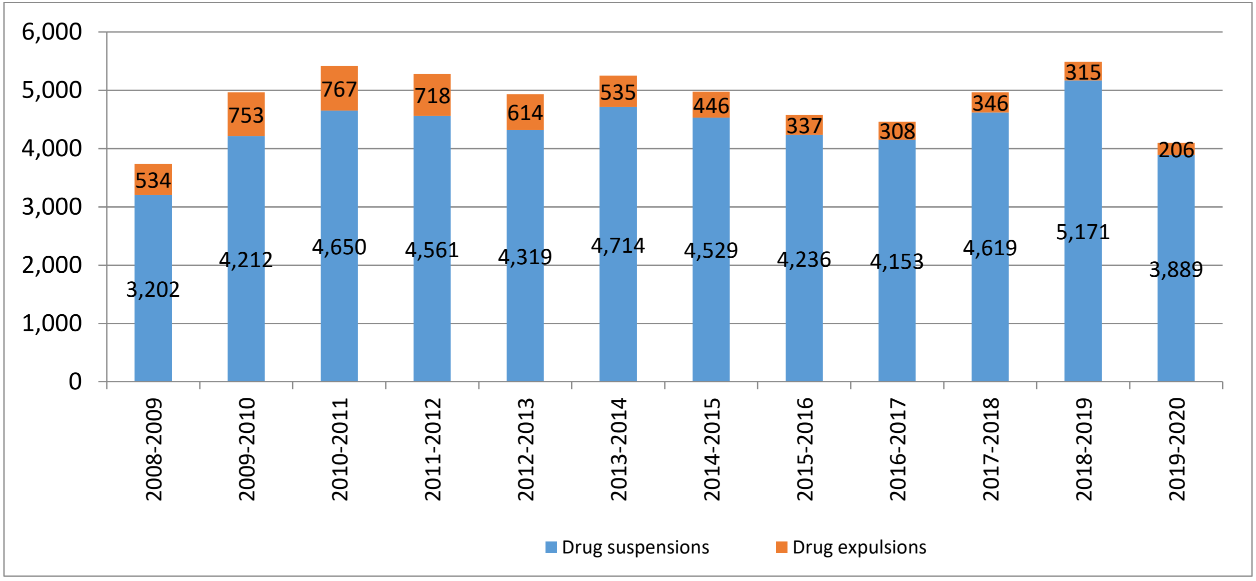
[65] Colorado Department of Education, Suspension and expulsion statistics, available at http://www.cde.state.co.us/cdereval/suspend-expelcurrent

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."[66] *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 2019-2020, that number increased to 913,223.[67] 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 84). 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.

Figure 83. Number of drug suspensions and expulsions in Colorado public schools, 2008–2020



Source: Colorado Department of Education, at http://www.cde.state.co.us/cdereval/suspend-expelcurrent

The drug suspension rate (per 100,000 pupils) has remained relatively stable since the 2010-2011 school year (Figure 85). 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).

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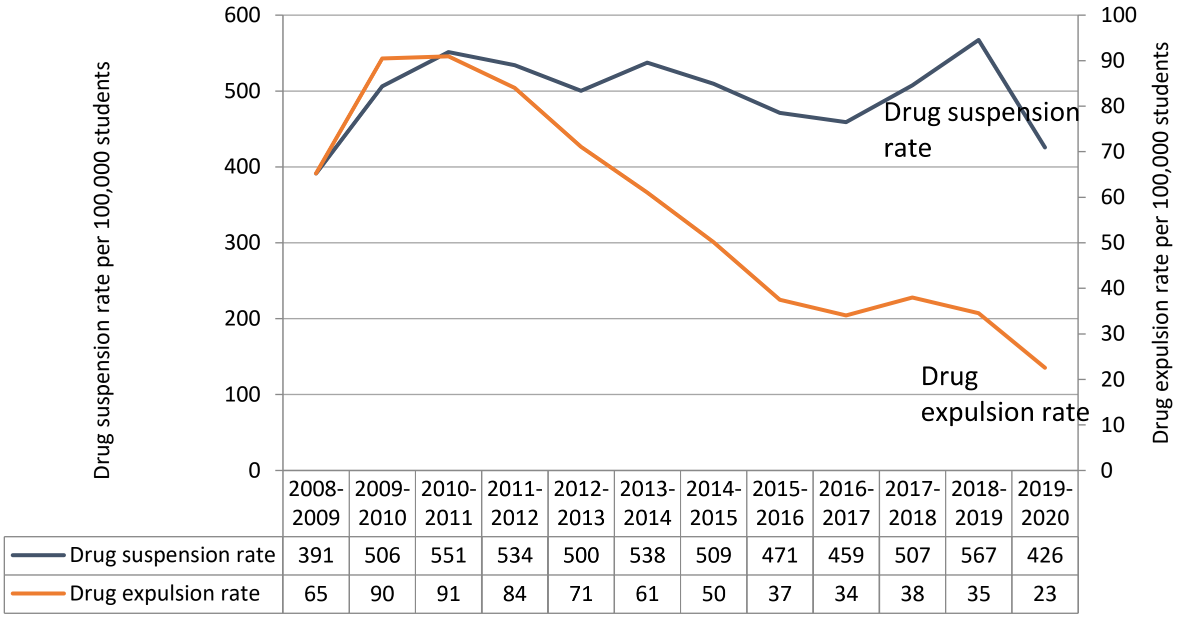
[66] Colorado School Safety Resource Center, Discipline in Schools, available at https://cssrc.colorado.gov/discipline-in-schools.
[67] Colorado Department of Education, pupil membership, available at http://www.cde.state.co.us/cdereval/pupilcurrent

Figure 84. Drug suspension and expulsion rates (per 100,000 students), 2008–2020



	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Drug suspension rate	391	506	551	534	500	538	509	471	459	507	567	426
Drug expulsion rate	65	90	91	84	71	61	50	37	34	38	35	23

Source: Colorado Department of Education, at http://www.cde.state.co.us/cdereval/suspend-expelcurrent

The 2016-2017 school year was the first full year of reporting marijuana separately from other drugs as a disciplinary reason. Figure 86 presents information on disciplinary incidents for both marijuana and other drugs. In 2019-2020, marijuana accounted for about 70% of all drug suspensions, 59% of drug expulsions, and 77% of law enforcement referrals for drugs (Figure 86).

In the context of all disciplinary incidents, marijuana accounted for 5% of all suspensions, was related to 30% of all expulsions, and 34% of all law enforcement referrals in the 2019-20 school year (Figure 87).

Figure 85. Disciplinary incidents for drugs in Colorado schools, 2016–2020

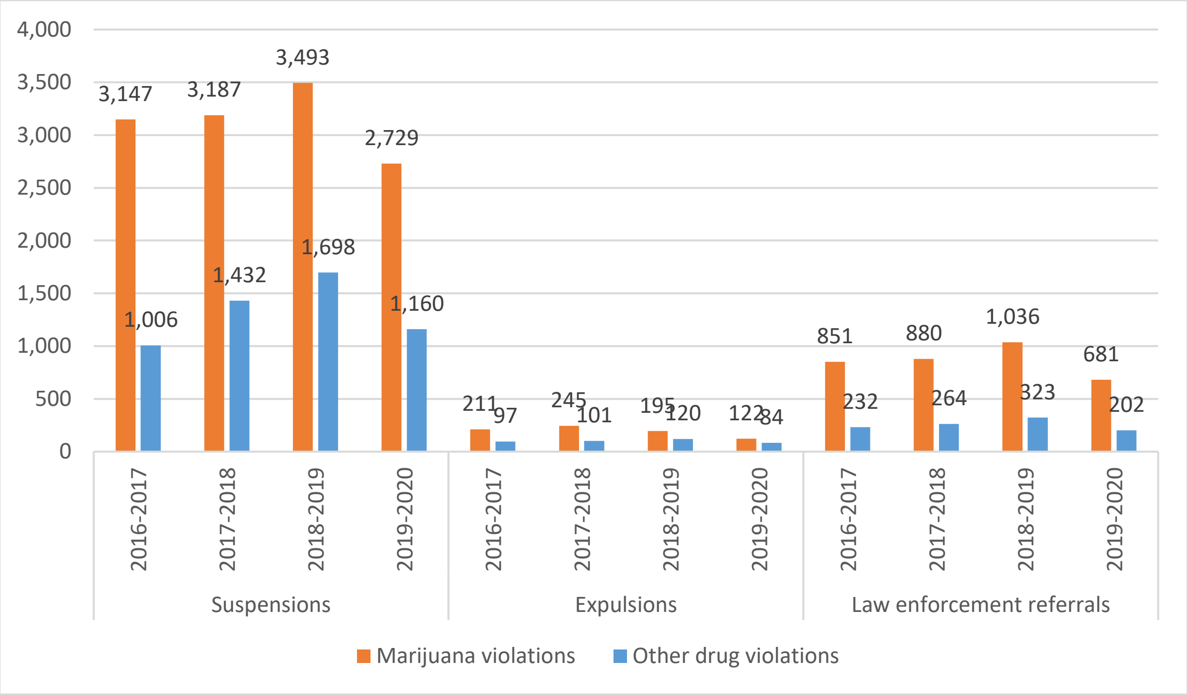
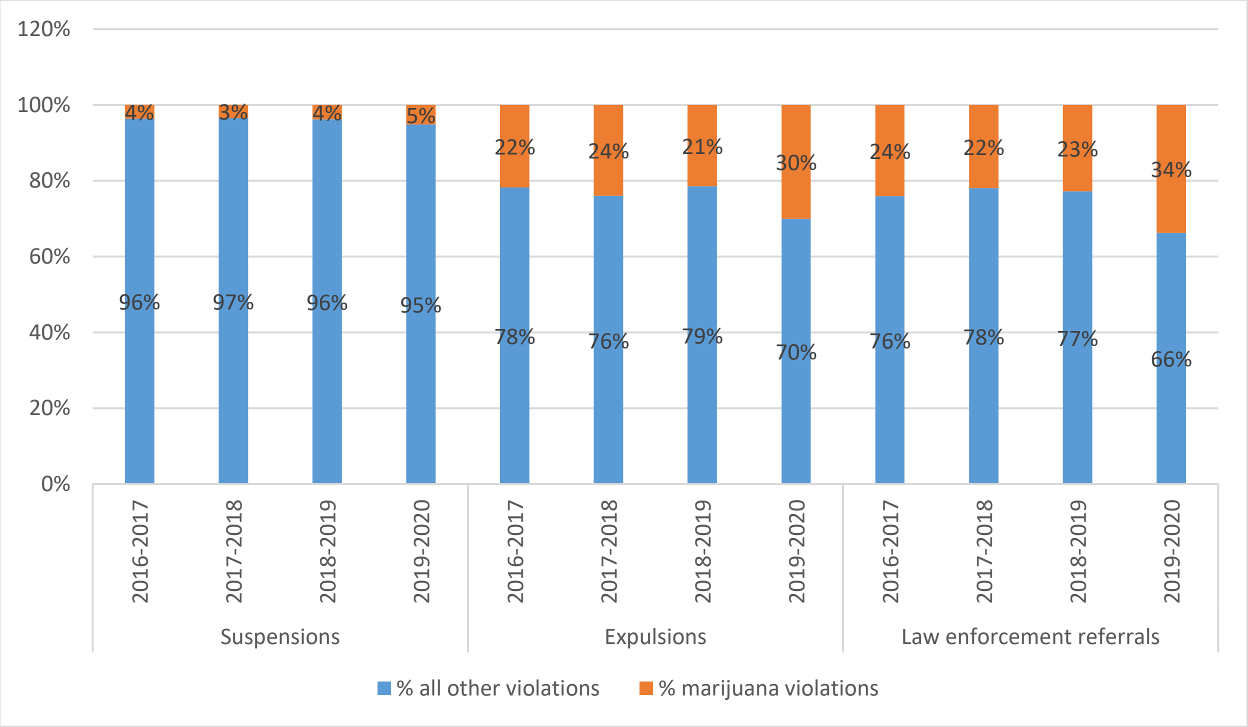


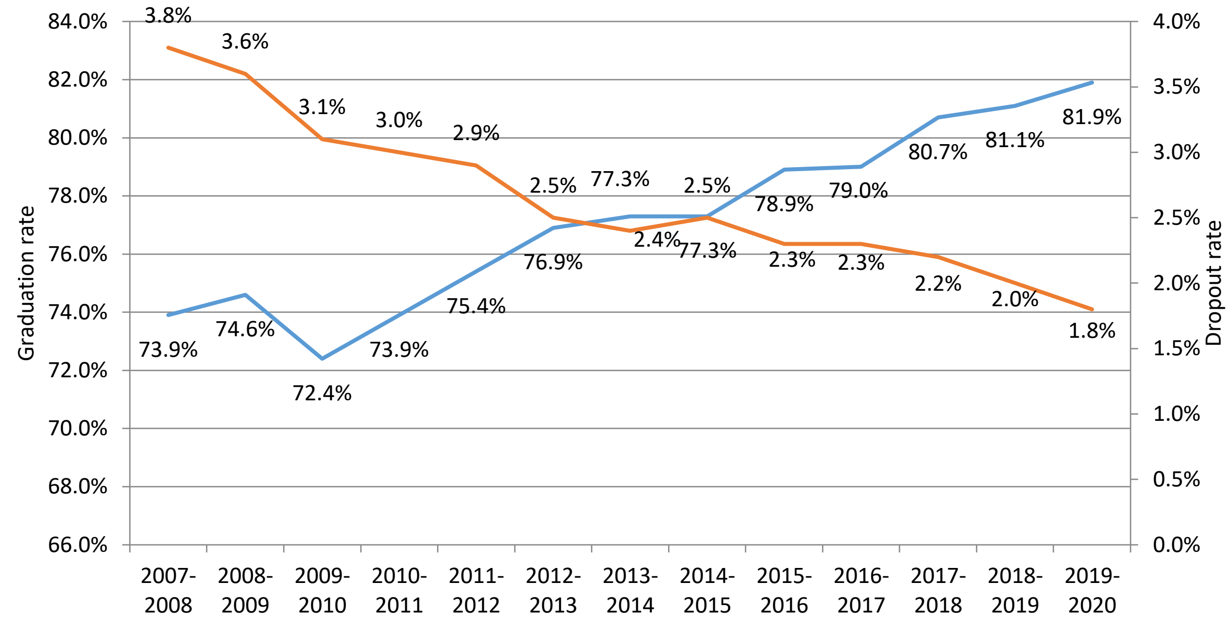
Figure 86. Percent of disciplinary incidents for marijuana compared to other reasons, 2016–2020



Source: Colorado Department of Education, at http://www.cde.state.co.us/cdereval/suspend-expelcurrent

There was a concern that school dropouts would increase and graduation rates would decrease after legalization. This is not reflected in the data presented in Figure 88.

Figure 87. Colorado graduation and dropout rates, 2007–2020



Source: Colorado Department of Education, http://www.cde.state.co.us/cdereval

In sum, since legalization, reported disciplinary incidents due to drugs have not increased. 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.

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 37 presents information on the percentage of juvenile probationers who tested positive for THC. 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 23% from 2012 to 2019. The percentage of 15- to 17-year-olds testing positive one or 2 times was also stable, at around 25%, while those testing positive 3 or more times increased from 23% to 31%. 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 37. Juvenile probationer test results for THC, 2012–2019

		Percent of probationers testing positive for THC							
Age Group	Times tested positive	2012	2013	2014	2015	2016	2017	2018	2019
10 to 14 years old	N probationers with test results	652	492	520	493	453	388	349	354
	0 times	66%	60%	54%	58%	51%	56%	52%	53%
	1-2 times	19%	20%	25%	22%	29%	20%	23%	23%
	3 or more times	16%	20%	20%	20%	20%	23%	24%	23%
15 to 17 years old	N probationers with test results	3,377	2,599	2,776	2,643	2,523	2,324	2,219	2,121
	0 times	50%	51%	48%	47%	46%	44%	44%	44%
	1-2 times	27%	24%	25%	25%	26%	26%	25%	25%
	3 or more times	23%	25%	27%	28%	28%	30%	31%	31%

Source: Colorado Division of Probation Services.

Note: The number of active juvenile clients decreased from 5,156 in Fiscal Year 2012 to 3,152 in Fiscal Year 2019.

The percentage of total tests with positive results for THC is presented in Table 38. For 10- to 14-year-olds, the percentage of tests that were positive for THC increased from 31% in 2012 to 39% in 2014, where it remained in 2019. The 15- to 17-year-old group showed similar results, with 28% of tests positive in 2012, increasing to 41% in 2019.

Table 38. Percent of juvenile probationer drug test results for THC that are positive, 2012–2019

Age Group	Times	2012	2013	2014	2015	2016	2017	2018	2019
10 to 14 years	N tests	2,542	2,002	2,223	2,340	2,207	1,893	1,873	1,876
	% positive	31%	35%	39%	37%	38%	39%	39%	38%
15 to 17 years	N tests	23,094	17,241	20,183	18,737	18,707	16,394	16,044	15,040
	% positive	28%	31%	33%	34%	35%	39%	40%	41%

Source: Colorado Division of Probation Services.

Note: The number of active juvenile clients decreased from 5,156 in fiscal year 2012 to 3,152 in fiscal year 2019.

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.

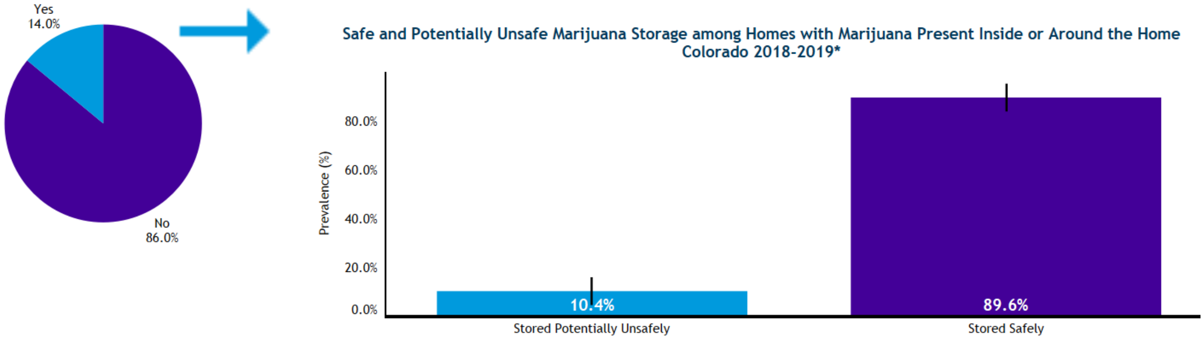
In an attempt to address the General Assembly's concern about drug-endangered children, two sources of information are used to study the issue. First, a statewide survey of parents about their marijuana use and product storage at home (CDPHE's Child Health Survey) is examined below. This is followed by data Pregnancy Risk Assessment Monitoring System.

Child Health Survey

The Child Health Survey[68] (CHS) is an adjunct to the annual Behavioral Risk Factor Surveillance Survey (BRFSS) conducted by CDPHE. Once respondents complete the BRFSS, the interviewer asks if they have a child between the ages of the ages of one and 14, and asks about their willingness to complete the Child Health Survey. The CHS asks questions on a variety of topics, including the child's physical activity, nutrition, access to health and dental care, behavioral health, school health, sun safety, injury, among others. Questions regarding parental marijuana use, storage, and consumption methods were added to the CHS in 2014. The methodology for the survey changed in 2018 so prior years of data are no longer presented by CDPHE.

Of homes with children ages one to 14 who participated in the 2018/2019 BRFSS and the Child Health Survey, 14.0% reported storing marijuana in homes where children live and 89.6% report storing the marijuana safely (Figure 89).

Figure 88. Child Health Survey outcomes regarding marijuana in homes with children, 2018–2019



Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment, Child Health Survey: Monitoring trends in marijuana use, at https://marijuanahealthinfo.colorado.gov/health-data/child-health-survey-chs-data

Parental Treatment and Use Trends

Pregnancy Risk Assessment Monitoring System

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. The PRAMS uses 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. Beginning in 2014, CDPHE added specific marijuana questions to PRAMS, including use prior to pregnancy, use during pregnancy, and use while breastfeeding.

In 2019, most women were not using marijuana before, during, or in conjunction with breastfeeding (Figure 90). The proportion of women reporting use before pregnancy in 2019 (18.7%), during pregnancy (8.2%), postpartum (8.5%), or postpartum and currently breastfeeding (4.7%) was not significantly different from the 2017 or 2018 survey results.

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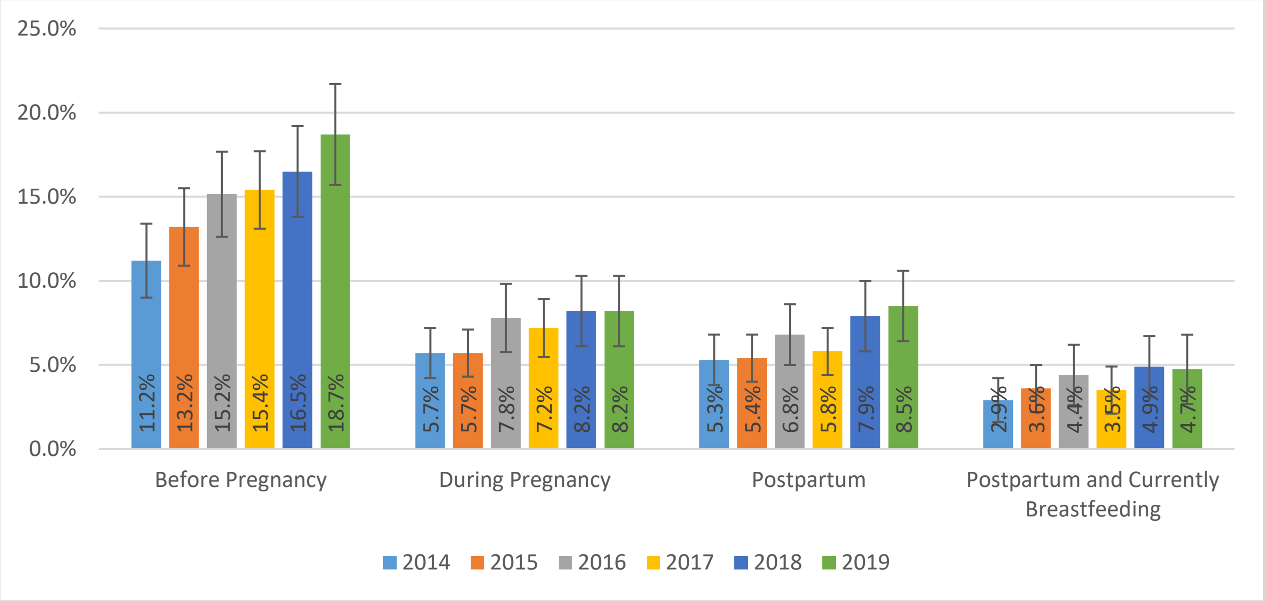
[68] Additional information about the Child Health Survey is available at https://cdphe.colorado.gov/center-for-health-and-environmental-data/survey-research/behavioral-risk-factor-surveillance-system

Figure 89. Marijuana use before pregnancy, during pregnancy, postpartum, and postpartum breastfeeding, 2014–2019



Source: Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment, Marijuana use during pregnancy and breastfeeding in Colorado, at https://marijuanahealthinfo.colorado.gov/health-data/pregnancy-risk-assessment-monitoring-system-prams-data

In sum, this section focused on the impact of marijuana legalization on youth. Survey data reflect that the proportion of students using marijuana in their lifetime remained stable between 2005 and 2019, and lifetime use rates (at 35.9% in Colorado in 2019, according to HKCS) was not different from the national cohort. The proportion of Colorado students reporting past 30-day use remained statistically unchanged between 2005 and 2019 (at 20.6% in 2019, according to HKCS) and again was not different from the national cohort. Additionally, marijuana was the most common reason for law enforcement contact with students in 2019, but it is noteworthy that graduation rates continued to increase through the 2019-2020 academic year and dropout rates have remained stable since 2012-2013. The proportion of juveniles on probation who tested positive for THC increased between 2012 and 2019 but it is unknown how this affected revocation rates. Finally, a relatively small percentage of households reported storing marijuana in a home where children live (14.0%) and most (89.6%) store it safely away from children. The use of marijuana before pregnancy (18.7%), during pregnancy (8.2%), or in conjunction with breastfeeding (4.7%) has not changed significantly in the past two years.

SECTION FIVE
ADDITIONAL INFORMATION

Licensing and Revenue

Marijuana Enforcement Division

The Marijuana Enforcement Division[69] (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 reflected in Table 39, 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). The number of licensed premises has fallen slightly, down to 2,709 in 2019. This contraction occurred in the medical market while the retail market has maintained a stable number of licenses in the period 2016 to 2019.[70]

As of 2019, 108 jurisdictions allow for marijuana licenses to be issued within their borders (Table 40). There are 79 cities and 29 counties that allow marijuana businesses to operate. The most common type of license allowed is medical/retail (83), followed by medical only (13), and retail only (11). There is one county that does not allow any sales but only cultivation, production, and testing of retail marijuana.

The geographic distribution of license types is presented in Figures 91-99. 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 that represent differing policies regarding allowed business types in their jurisdictions.

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[69] Additional information on the MED can be obtained at https://sbg.colorado.gov/marijuanaenforcement

[70] Labs test for potency of products, homogeneity of THC throughout a product, solvents, and microbial contamination.

Table 39. Licensed marijuana premises, by license type, 2014-19

	2014	2015	2016	2017	2018	2019
Total licensed premises	2,249	2,592	2,934	3,051	2,973	2,709
Medical	1,416	1,469	1,584	1,531	1,396	1,147
Centers	505	516	528	506	473	442
Cultivations	748	751	788	759	673	469
Product manufacturers	163	202	524	254	239	219
Testing facilities	0	0	14	12	11	12
Operator	0	0	0	5	6	0
Transporter	0	0	0	8	8	5
Retail	833	1,123	1,350	1,520	1,577	1,562
Stores	322	424	459	509	549	572
Cultivations	397	514	633	720	735	684
Product manufacturers	98	168	244	279	282	288
Testing facilities	16	17	14	12	11	13
Operator	0	0	0	6	9	0
Transporter	0	0	0	10	10	5

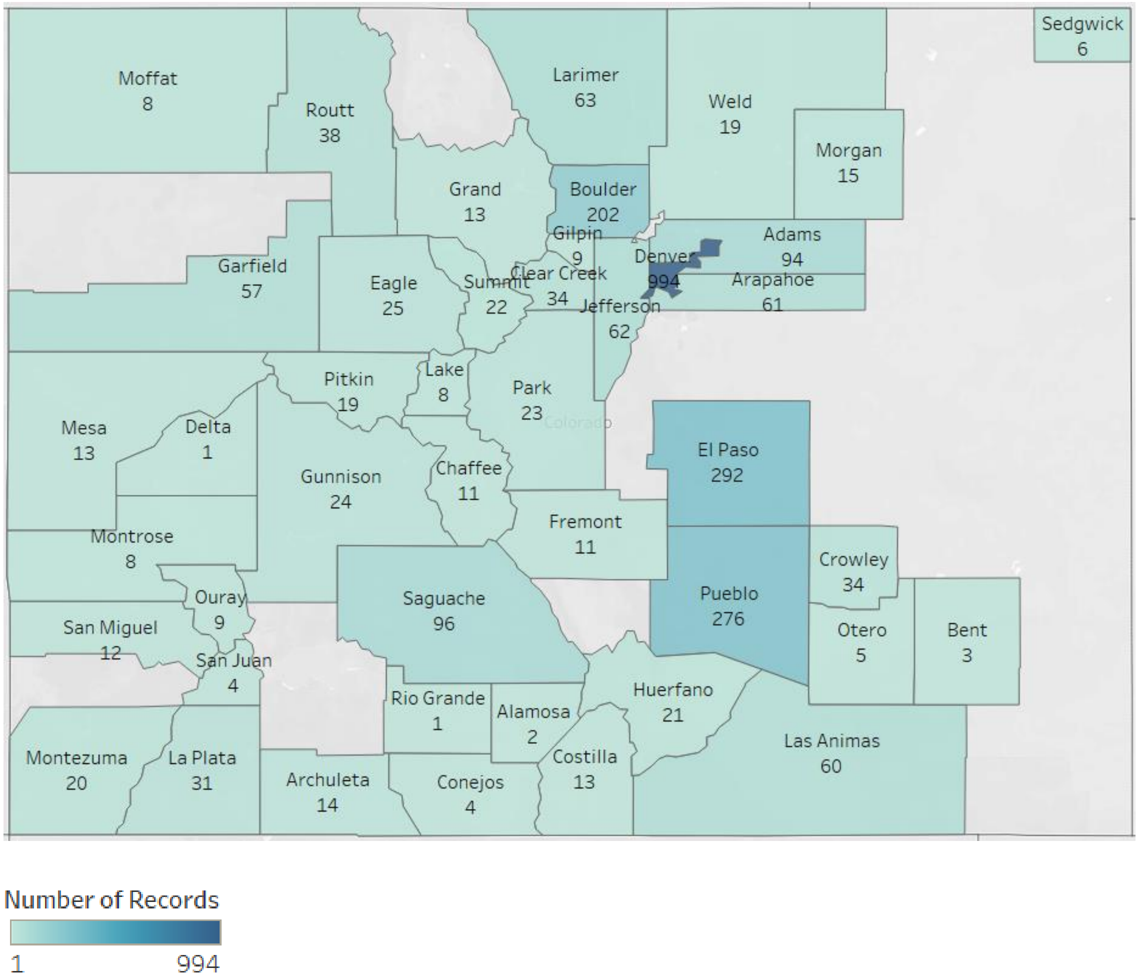
Source: Colorado Department of Revenue, Marijuana Enforcement Division, *2014 Annual Update; 2015 Annual Update*; *2016 MED Annual Update; 2017 MED Annual; 2018 MED Annual Update*; *2019 MED Annual Update*. At https://www.colorado.gov/pacific/enforcement/med-updates
Note: For additional information on the different marijuana business license types and archived lists please visit: https://sbg.colorado.gov/med-licensee-information

Table 40. Marijuana license types allowed, by jurisdiction type, 2019

	Jurisdiction type		
Type of business allowed	City	County	Total
Medical/Retail	63	20	83
Medical Only	8	5	13
Retail Only	8	3	11
Retail Cultivation/Production/Testing	0	1	1
Total	79	29	108

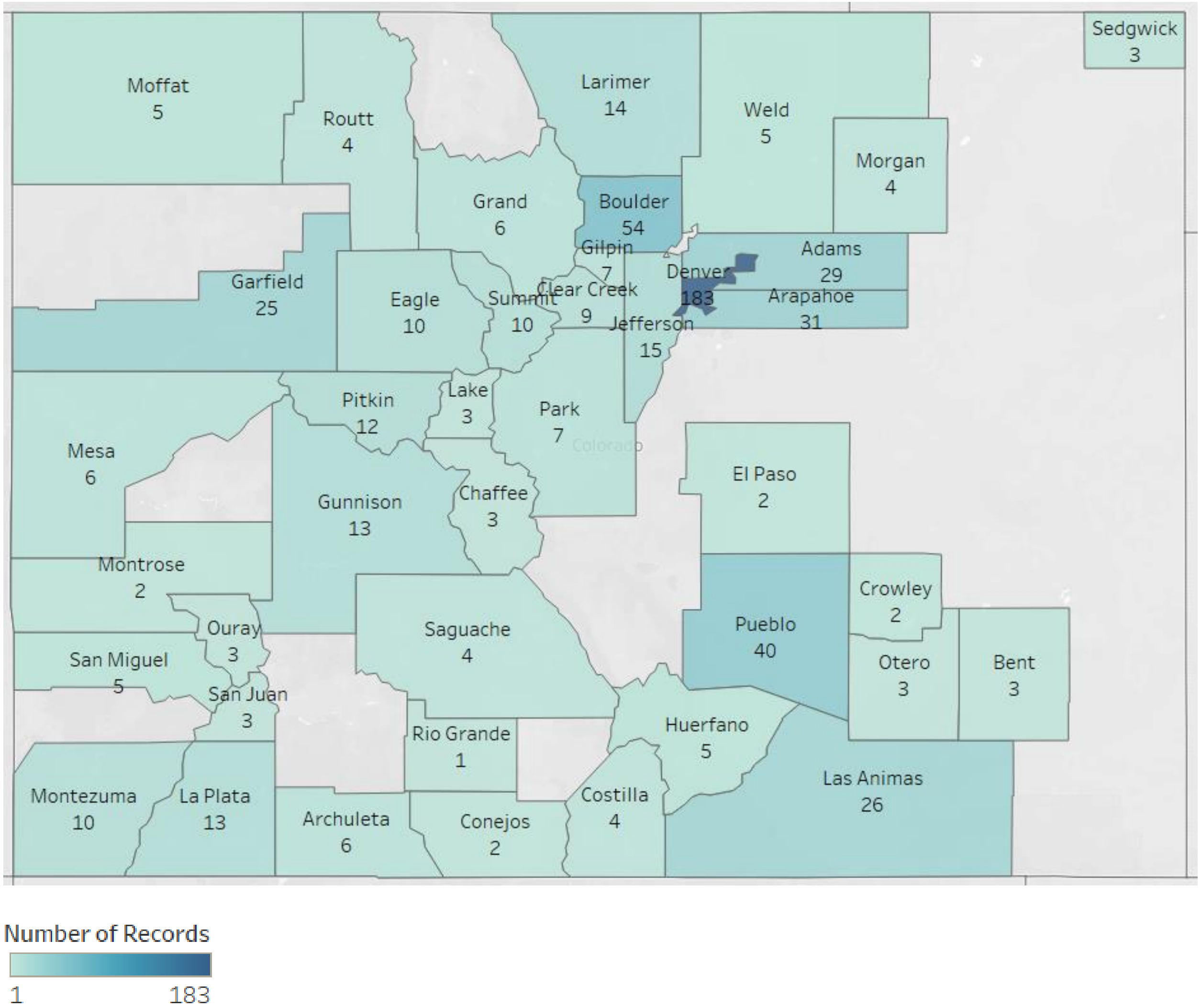
Source: Colorado Department of Revenue, Marijuana Enforcement Division, *Local Authority Status List 01102019*, at https://drive.google.com/file/d/1GcdE3drg3xf74ix48ZsSME2s0rEw2-go/view

Figure 90. Marijuana licensees, by county, June 2020


Moffat
8
Routt
38
Larimer
63
Weld
19
Sedgwick
6
Morgan
15
Grand
13
Boulder
202
Gilpin
9
Adams
94
Denver
994
Garfield
57
Eagle
25
Summit
22
Clear Creek
34
Arapahoe
61
Jefferson
62
Pitkin
19
Lake
8
Park
23
Colorado
Mesa
13
Delta
1
El Paso
292
Gunnison
24
Chaffee
11
Fremont
11
Montrose
8
Crowley
34
Ouray
9
Saguache
96
Pueblo
276
San Miguel
12
Otero
5
Bent
3
San Juan
4
Rio Grande
1
Alamosa
2
Huerfano
21
Las Animas
60
Montezuma
20
La Plata
31
Archuleta
14
Conejos
4
Costilla
13
Number of Records
1
994

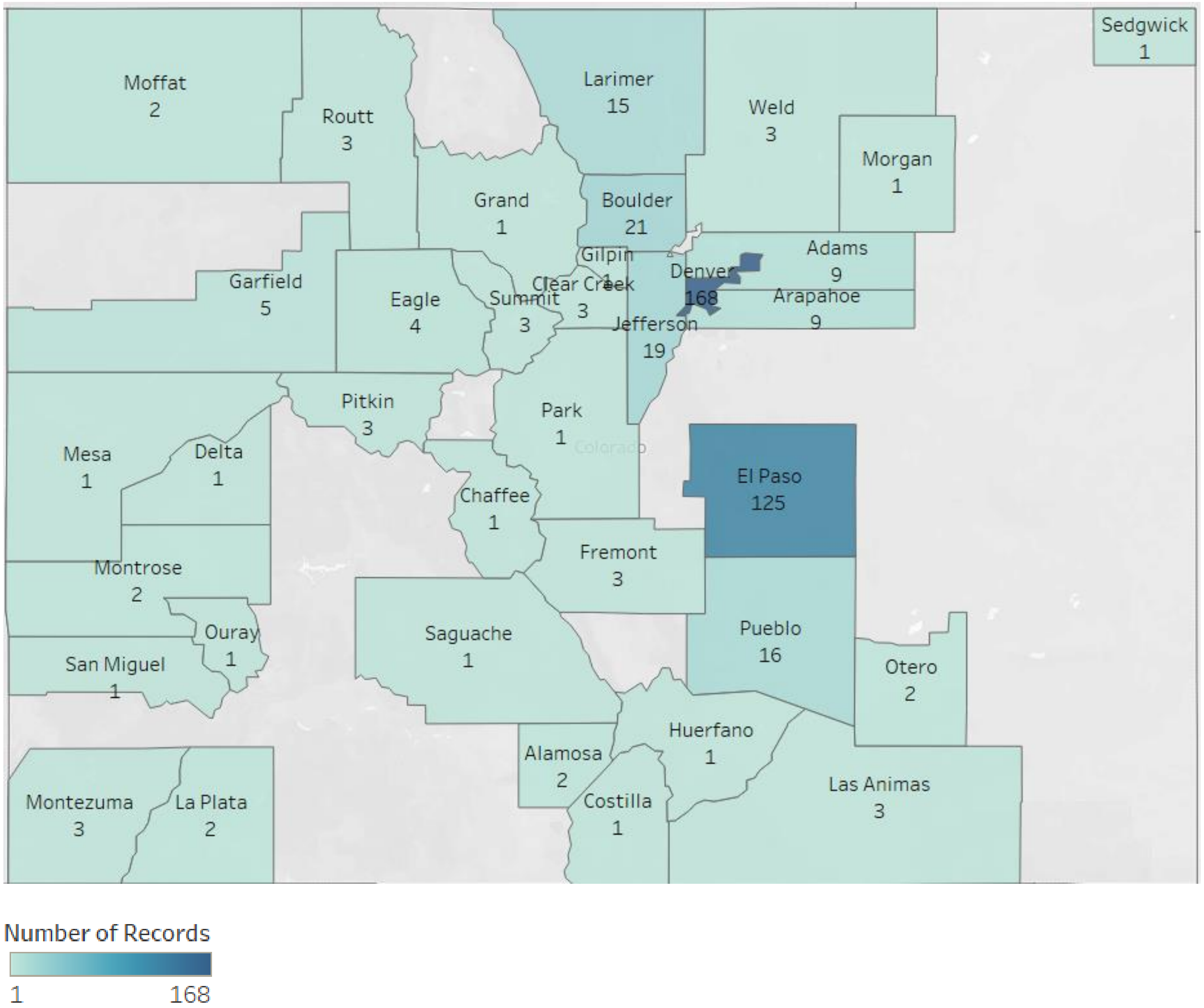
Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities, at https://sbg.colorado.gov/med-licensee-information

Figure 91. Retail store licensees, by county, June 2020


Sedgwick 3
Moffat 5
Routt 4
Larimer 14
Weld 5
Morgan 4
Grand 6
Boulder 54
Gilpin 7
Adams 29
Denver 183
Arapahoe 31
Garfield 25
Eagle 10
Summit 10
Clear Creek 9
Jefferson 15
Pitkin 12
Lake 3
Park 7
Colorado
Mesa 6
Gunnison 13
Chaffee 3
El Paso 2
Montrose 2
Crowley 2
Pueblo 40
Ouray 3
Saguache 4
San Miguel 5
Otero 3
Bent 3
San Juan 3
Huerfano 5
Rio Grande 1
Las Animas 26
Montezuma 10
La Plata 13
Archuleta 6
Conejos 2
Costilla 4
Number of Records
1
183

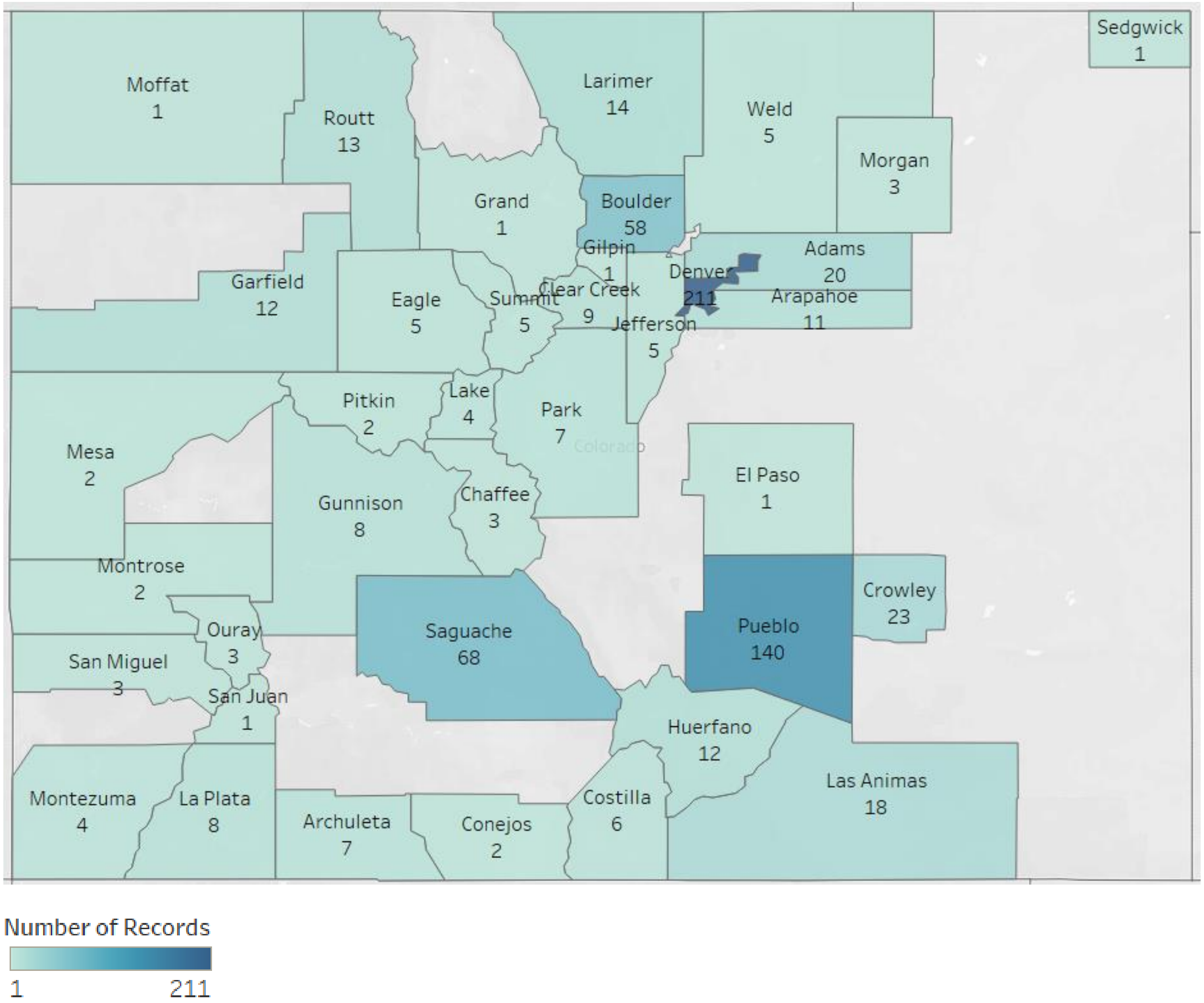
Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities, at https://sbg.colorado.gov/med-licensee-information

Figure 92. Medical center licensees, by county, June 2020


Sedgwick 1
Moffat 2
Routt 3
Larimer 15
Weld 3
Morgan 1
Grand 1
Boulder 21
Gilpin 1
Adams 9
Denver 168
Arapahoe 9
Clear Creek 3
Garfield 5
Eagle 4
Summit 3
Jefferson 19
Pitkin 3
Park 1
Mesa 1
Delta 1
El Paso 125
Chaffee 1
Fremont 3
Montrose 2
Ouray 1
Saguache 1
Pueblo 16
San Miguel 1
Otero 2
Huerfano 1
Alamosa 2
Las Animas 3
Montezuma 3
La Plata 2
Costilla 1
Number of Records
1
168

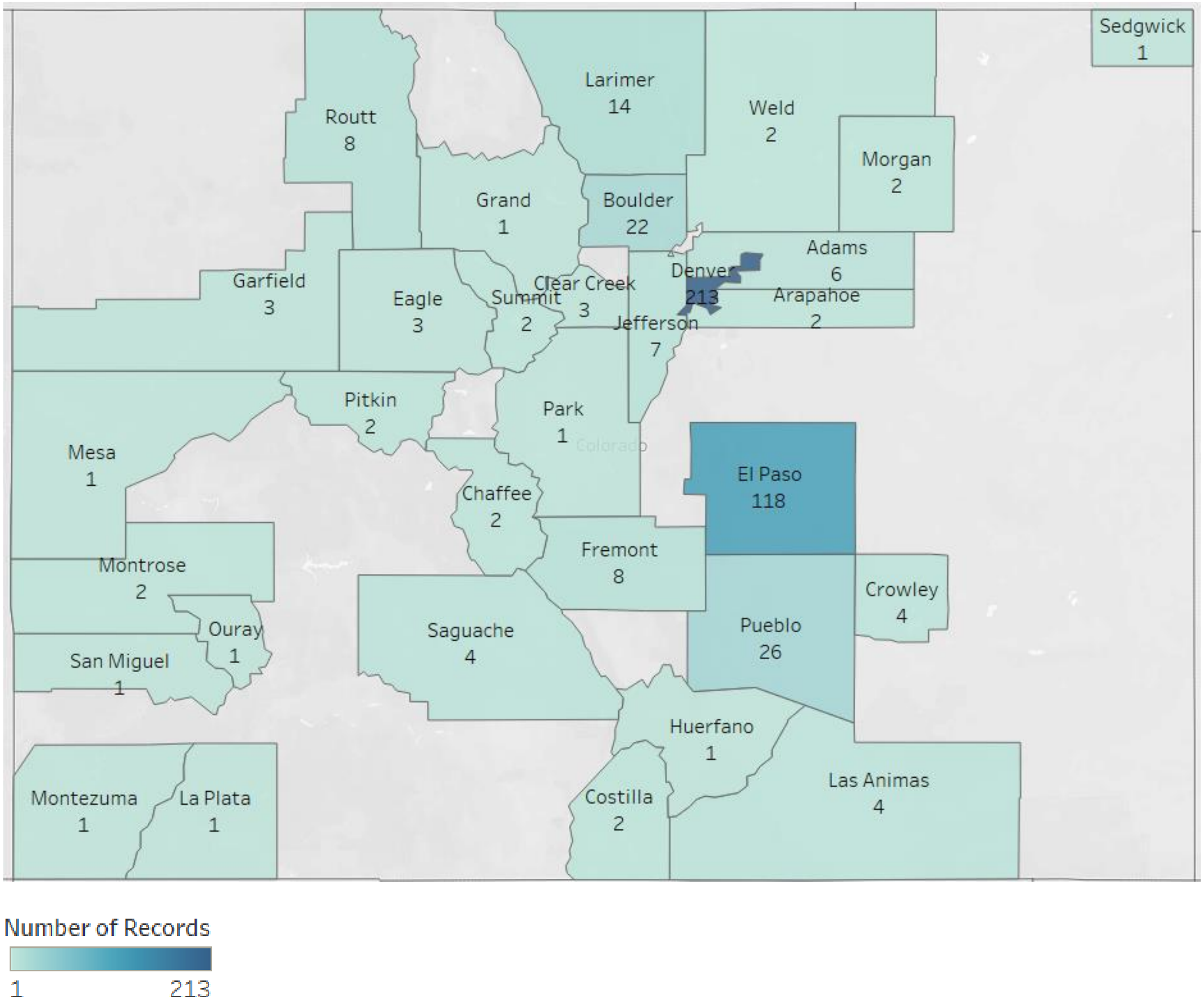
Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities, at https://sbg.colorado.gov/med-licensee-information

Figure 93. Retail cultivation licensees, by county, June 2020


Sedgwick
1
Moffat
1
Routt
13
Larimer
14
Weld
5
Morgan
3
Grand
1
Boulder
58
Gilpin
1
Denver
211
Adams
20
Garfield
12
Eagle
5
Summit
5
Clear Creek
9
Arapahoe
11
Jefferson
5
Pitkin
2
Lake
4
Park
7
Colorado
Mesa
2
El Paso
1
Gunnison
8
Chaffee
3
Montrose
2
Crowley
23
Ouray
3
Saguache
68
Pueblo
140
San Miguel
3
San Juan
1
Huerfano
12
Las Animas
18
Montezuma
4
La Plata
8
Costilla
6
Archuleta
7
Conejos
2
Number of Records
1
211

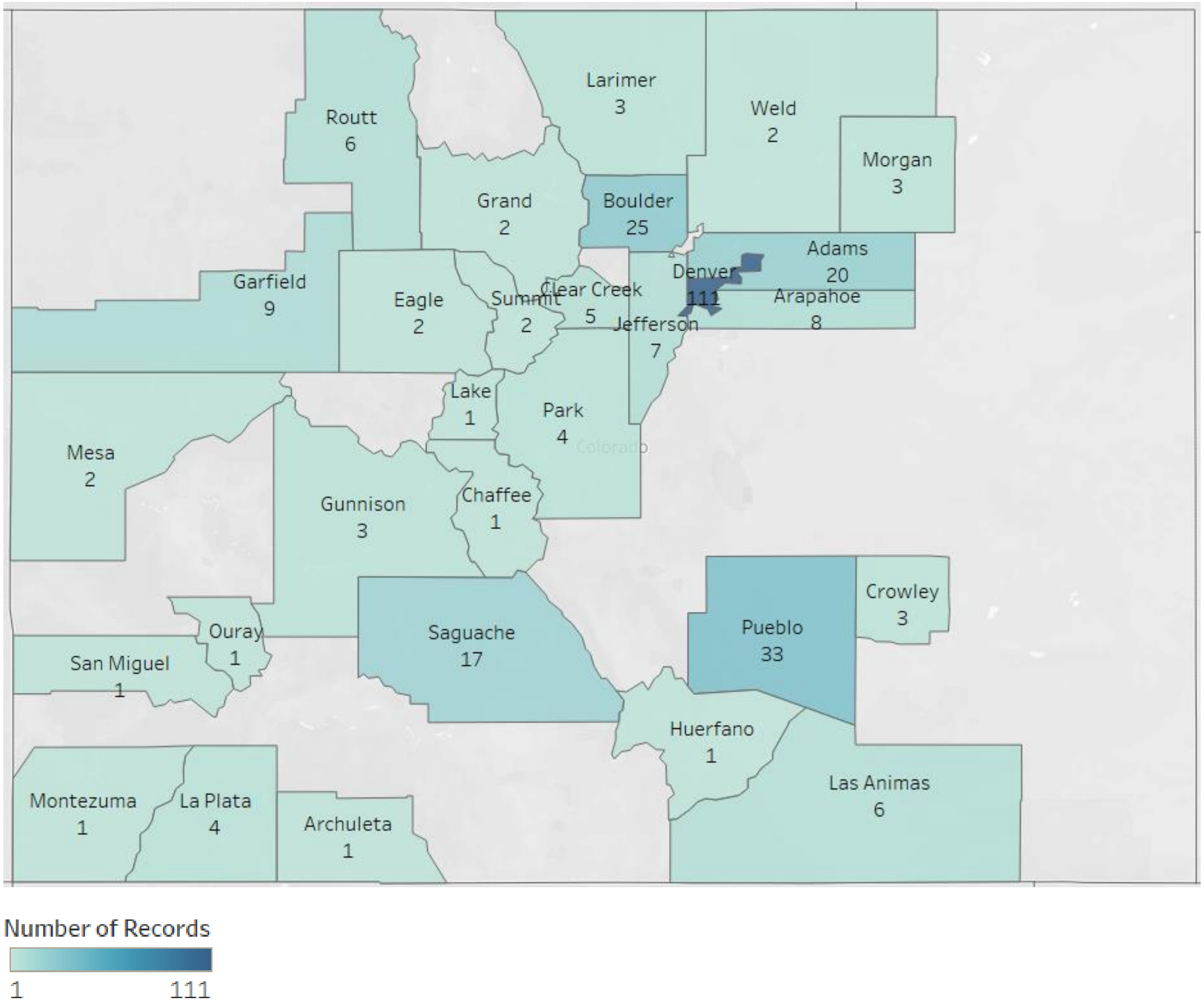
Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities, at https://sbg.colorado.gov/med-licensee-information

Figure 94. Medical cultivation licensees, by county, June 2020


Sedgwick
1
Larimer
14
Weld
2
Routt
8
Morgan
2
Grand
1
Boulder
22
Adams
6
Denver
213
Garfield
3
Eagle
3
Clear Creek
3
Summit
2
Arapahoe
2
Jefferson
7
Pitkin
2
Park
1
Colorado
Mesa
1
El Paso
118
Chaffee
2
Fremont
8
Montrose
2
Crowley
4
Ouray
1
Saguache
4
Pueblo
26
San Miguel
1
Huerfano
1
Las Animas
4
Montezuma
1
La Plata
1
Costilla
2
Number of Records
1
213

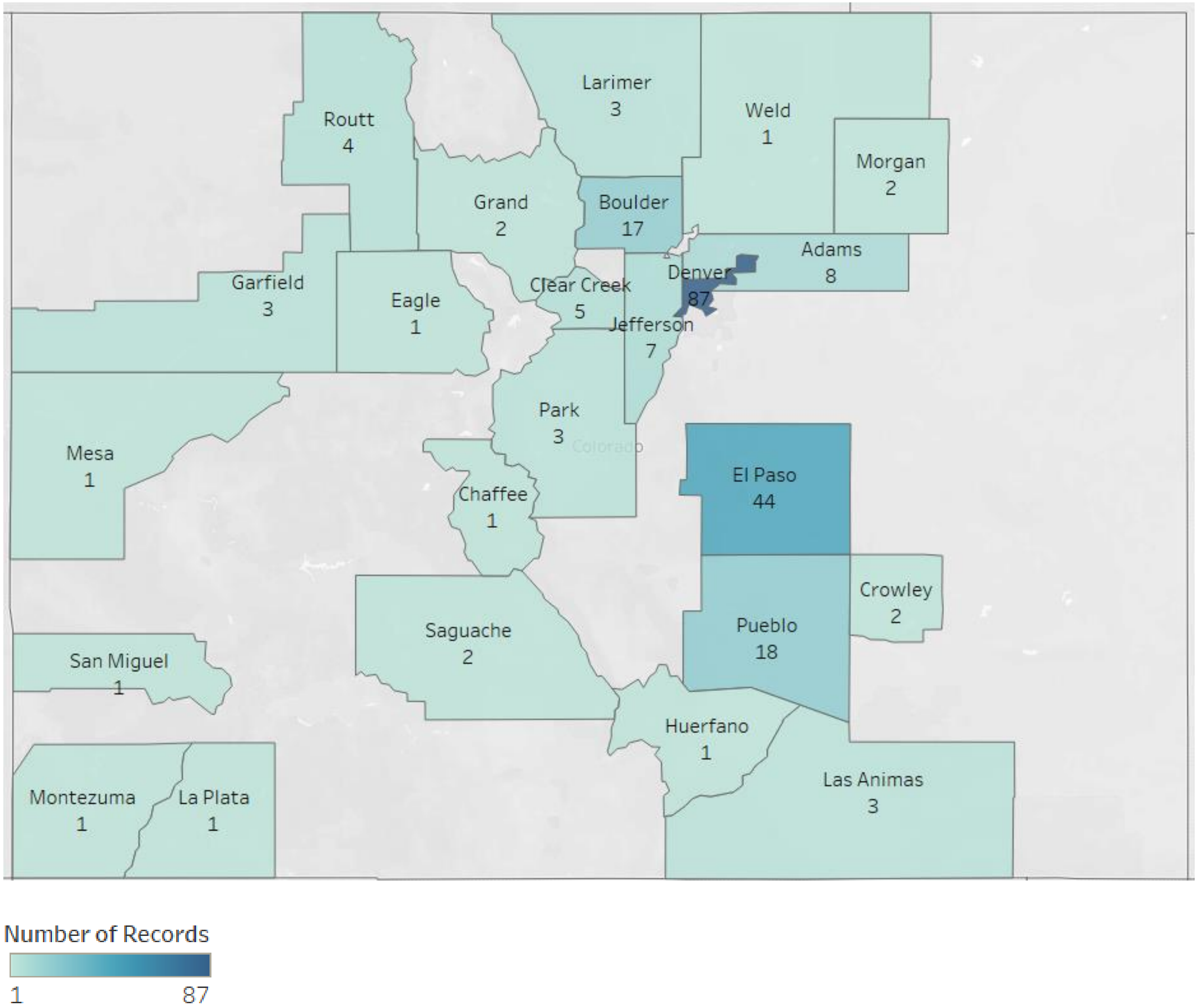
Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities, at https://sbg.colorado.gov/med-licensee-information

Figure 95. Retail product manufacture licenses, by county, June 2020


Larimer
3
Weld
2
Routt
6
Morgan
3
Grand
2
Boulder
25
Adams
20
Denver
111
Garfield
9
Eagle
2
Summit
2
Clear Creek
5
Arapahoe
8
Jefferson
7
Lake
1
Park
4
Colorado
Mesa
2
Gunnison
3
Chaffee
1
Crowley
3
Ouray
1
Saguache
17
Pueblo
33
San Miguel
1
Huerfano
1
Las Animas
6
Montezuma
1
La Plata
4
Archuleta
1
Number of Records
1
111

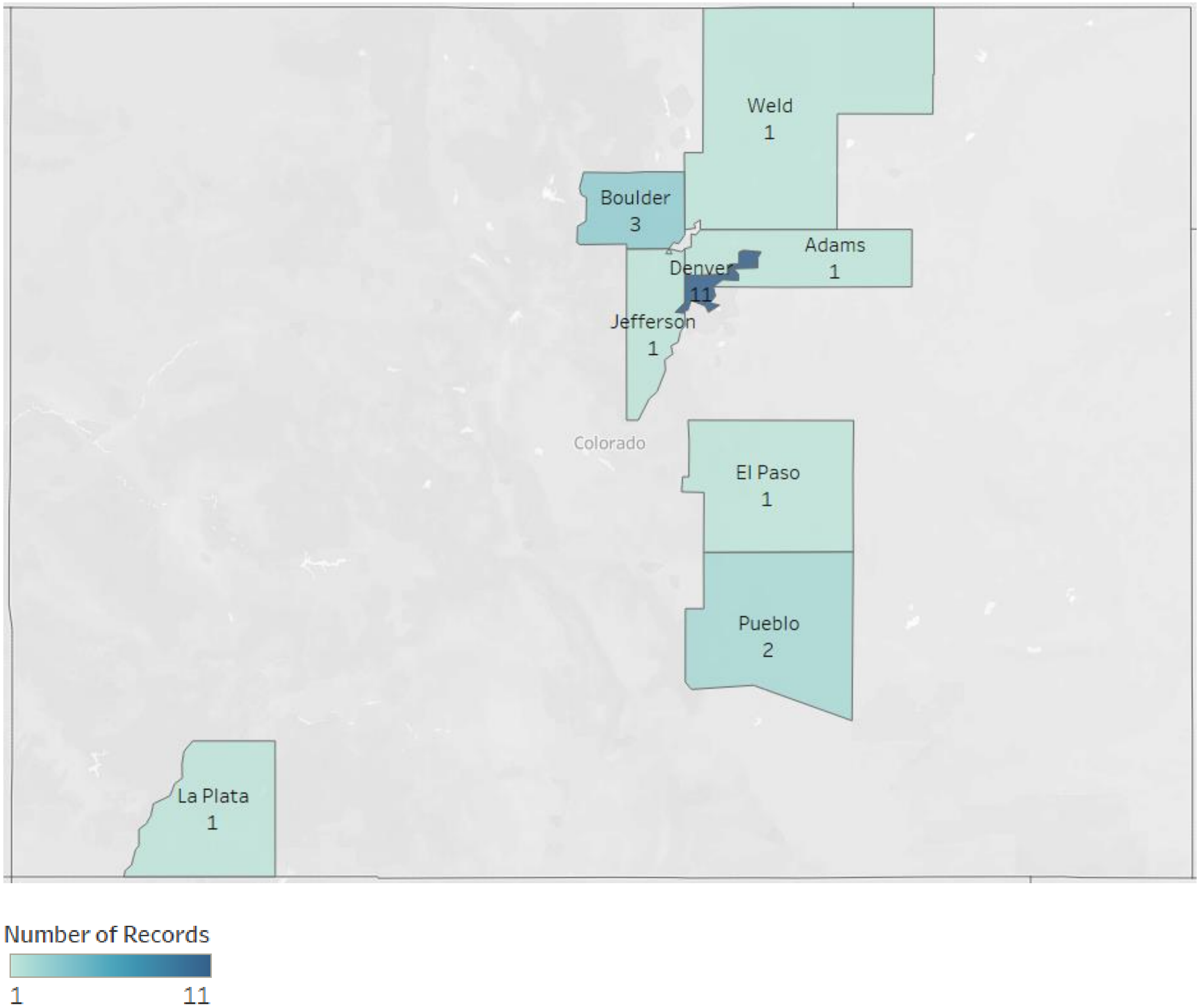
Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities, at https://sbg.colorado.gov/med-licensee-information

Figure 96. Medical product manufacture licenses, by county, June 2020


Larimer
3
Weld
1
Routt
4
Morgan
2
Grand
2
Boulder
17
Adams
8
Garfield
3
Eagle
1
Clear Creek
5
Denver
87
Jefferson
7
Park
3
Colorado
Mesa
1
El Paso
44
Chaffee
1
Crowley
2
Pueblo
18
Saguache
2
San Miguel
1
Huerfano
1
Las Animas
3
Montezuma
1
La Plata
1
Number of Records
1
87

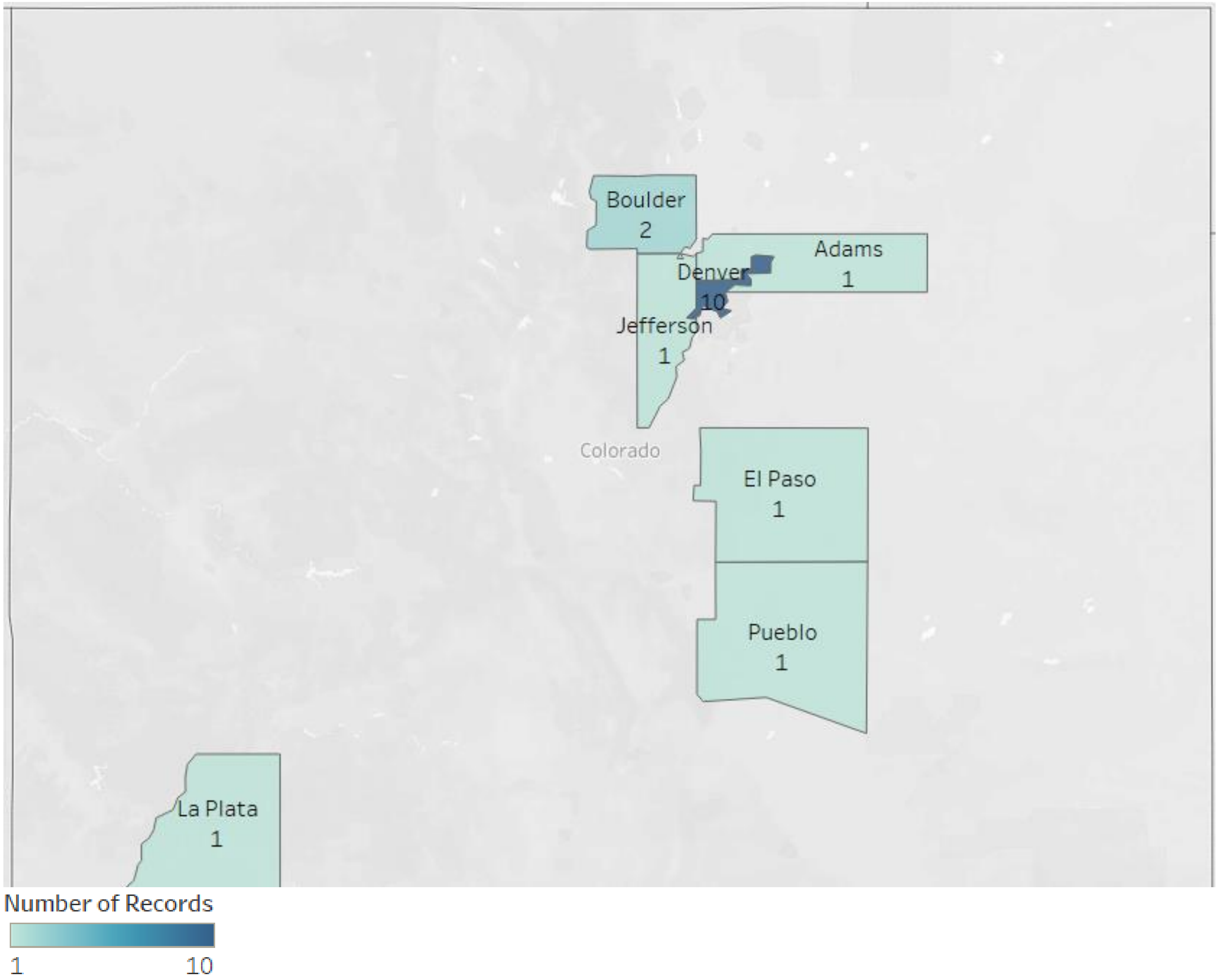
Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities, at https://sbg.colorado.gov/med-licensee-information

Figure 97. Other retail licensees, by county, June 2020


Weld
1
Boulder
3
Adams
1
Denver
11
Jefferson
1
Colorado
El Paso
1
Pueblo
2
La Plata
1
Number of Records
1
11

Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities, at https://sbg.colorado.gov/med-licensee-information

Figure 98. Other medical licensees, by county, June 2020



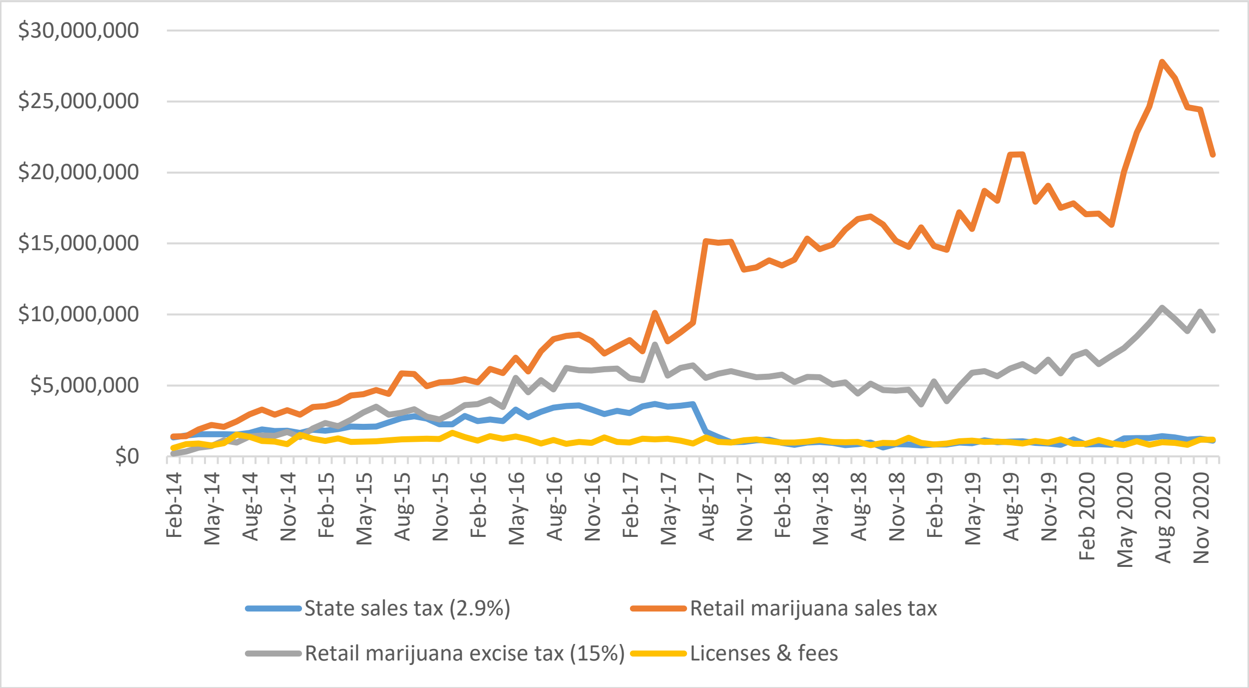
Source: Colorado Department of Revenue, Marijuana Enforcement Division, MED Licensed Facilities, at https://sbg.colorado.gov/med-licensee-information

Tax Revenue and Sales

The total revenue from taxes, licenses, and fees increased 473% from calendar year 2014 to 2020, going from $67,594,325 up to $387,480,111 (Figure 100 and Table 41). The revenue increase was driven by the sales taxes, excise taxes, licenses, and fees for retail marijuana. In calendar year 2020, total sales and excise taxes from retail marijuana accounted for $363 million, or 94% of all marijuana revenue. On average, Colorado collected $32 million per month in taxes, licenses, and fees from all marijuana sources in 2020 (Table 41).

The excise tax revenue collected to fund the Public School Capital Construction Assistance Fund reached about $84 million in calendar year 2020, with an additional $36 million sent to the Public School Fund. Between 2014 and 2020 marijuana excise taxes have contributed $487 million dollars directly to school construction or other public school needs (Figure 101).

Figure 99. Monthly taxes and fees, by type, 2014-2020



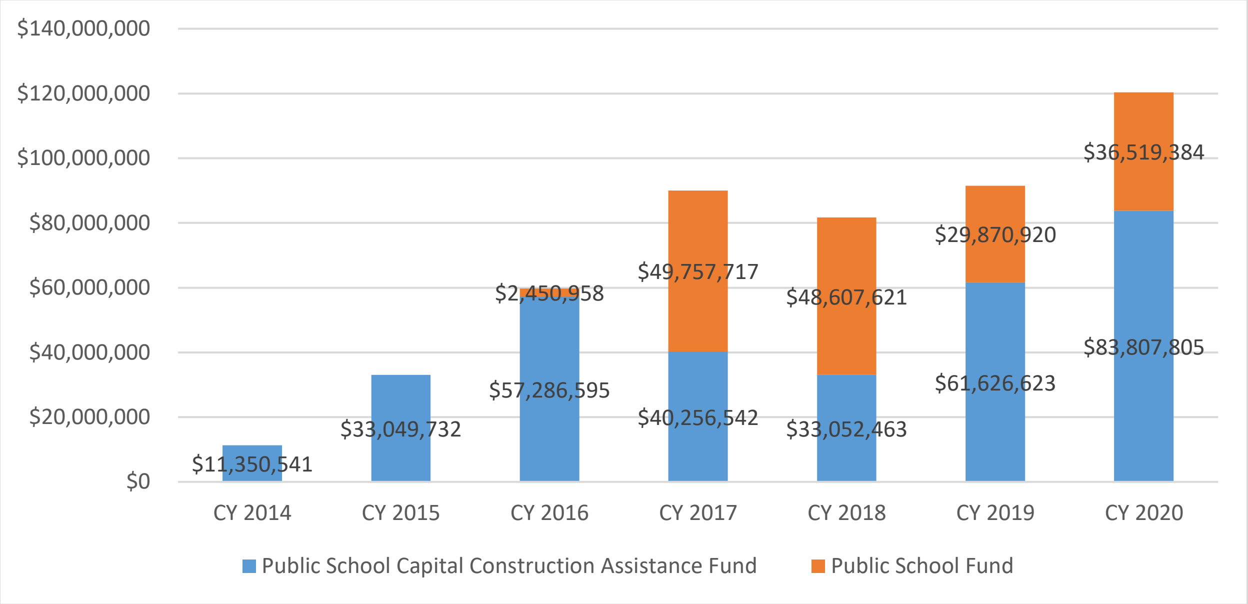
Source: Marijuana Enforcement Division (2020). Marijuana Tax Data, at https://cdor.colorado.gov/data-and-reports/marijuana-data/marijuana-tax-reports

Table 41. Annual and average monthly taxes, licenses, and fees, 2014-2020

	Annual total collections			Average monthly collections		
Calendar Year	Taxes	License & Fees	Taxes & Fees	Taxes	License & Fees	Taxes & Fees
2014	$56,102,639	$11,491,688	$67,594,325	$5,100,240	$1,044,699	$6,144,939
2015	$116,003,360	$14,407,811	$130,411,174	$9,666,947	$1,200,651	$10,867,598
2016	$179,619,617	$13,985,195	$193,604,811	$14,968,301	$1,165,433	$16,133,734
2017	$234,014,747	$13,353,727	$247,368,474	$19,501,229	$1,112,811	$20,614,040
2018	$254,295,129	$12,234,510	$266,529,637	$21,191,261	$1,019,542	$22,210,803
2019	$290,389,957	$12,068,468	$302,458,427	$24,199,163	$1,005,706	$25,204,869
2020	$375,885,988	$11,594,122	$387,480,111	$31,323,832	$966,177	$32,290,009

Source: Colorado Department of Revenue, Marijuana Enforcement Division (2020). Marijuana Tax Data, at https://cdor.colorado.gov/data-and-reports/marijuana-data/marijuana-tax-reports

Figure 100. Transfer of marijuana excise and retail taxes to school construction fund and general public school fund, 2014-2020



Source: Colorado Department of Revenue, Marijuana Enforcement Division (2021). Marijuana Tax Reports, at https://cdor.colorado.gov/data-and-reports/marijuana-data/marijuana-tax-reports
Note: Amendment 64 calls for the transfer of the first $40 million in retail marijuana excise taxes to the Public School Capital Construction Assistance Fund (BEST) every year and anything additional be transferred to the general public school fund for the rest of the fiscal year. In 2018 a law was passed that allowed for more taxes to be transferred to the BEST fund.

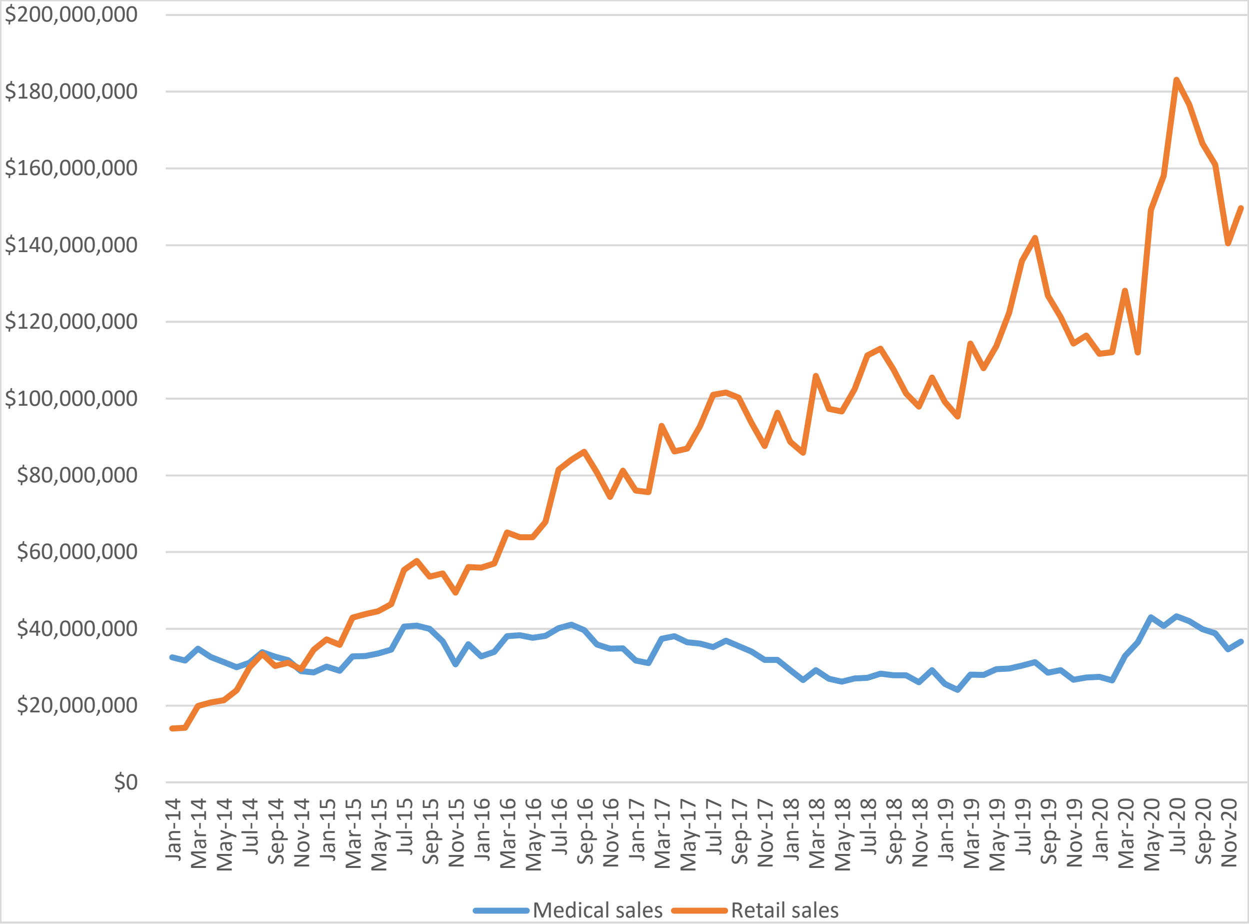
The sales of retail marijuana products have increased 155%, from $683 million in 2014 to $1.75 billion in 2020 (Table 42). In 2020, an average of $145 million per month in retail marijuana products were sold (Table 41 & Figure 101). The sales of medical marijuana products rebounded in 2020 from a three-year decline, accounting for $442 million in sales (Table 43). The average monthly sales of medical marijuana products stands at $37 million in 2020 (Table 42 and Figure 102).

Table 42. Annual and average monthly sales of marijuana products, 2014-2020

Calendar Year	Annual total sales			Average monthly sales		
	Medical	Retail	Total	Medical	Retail	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

Source: Colorado Department of Revenue, Marijuana Enforcement Division (2021). Marijuana Sales Reports, at https://www.colorado.gov/pacific/revenue/colorado-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 101. Monthly marijuana sales, by type, 2014-2020



Source: Colorado Department of Revenue, Marijuana Enforcement Division (2020). Marijuana Sales Reports at https://cdor.colorado.gov/data-and-reports/marijuana-data/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.

The number of cultivated medical marijuana plants fluctuated between 2014 and 2019, and in December 2019 319,374 plants were under cultivation (Table 43). The number of plants in the retail market increased each year, up from 216,802 in 2014 to 758,539 in 2019 (+250%). Recent trends indicate more sales of edibles and concentrates than marijuana bud or flower. Sales of units of retail edibles increased by 74% from 2016 to 2019, sales of concentrates increased 236%, and sales of retail flower/bud increased by 32% (Table 43).

Table 43. Plants cultivated and annual sales totals, by type of marijuana product, 2014-2019

	2014	2015	2016	2017	2018	2019
Plants cultivated (monthly average in December)						
Medical	302,793	327,960	350,206	305,063	253,894	319,374
Retail	216,802	346,921	525,225	669,044	722,532	758,539
Usable marijuana harvested[1]						
Medical (lbs)	--	--	--	386,689	383,518	381,600
Retail (lbs)	--	--	--	612,333	801,258	997,764
Annual Sales						
Medical bud/flower (lbs)	109,578	144,537	159,998	172,994	147,863	118,373
Retail bud/flower (lbs)	38,660	106,932	175,642	238,149	288,292	232,056
Medical infused edibles (units)	1,964,917	2,261,875	2,117,838	1,851,098	1,842,325	1,699,841
Retail infused edibles (units)	2,850,733	5,280,297	7,250,936	9,295,329	10,927,543	12,613,520
Medical infused non-edibles (units)	411,099	485,362	292,401	210,823	179,586	144,123
Retail infused non-edibles (units)	359,412	801,215	761,764	843,646	1,027,993	993,226
Medical concentrate (lbs)[2]	--	--	10,037	14,092	14,652	15,603
Retail concentrate (lbs)[2]	--	--	7,611	13,798	19,315	24,626

Source: Colorado Department of Revenue, Marijuana Enforcement Division. *2014 Annual Update; 2015 Annual Update; 2016 MED Annual Update; 2017 MED Annual Update; 2018 MED Annual Update; 2019 MED Annual Update*, at https://www.colorado.gov/pacific/enforcement/med-updates

[1] Includes bud/flower, shake/trim, and wet whole plants.

[2] Sales amounts for concentrates was not reported prior to 2016.

Medical Marijuana Cardholders

Colorado Department of Public Health and Environment Process

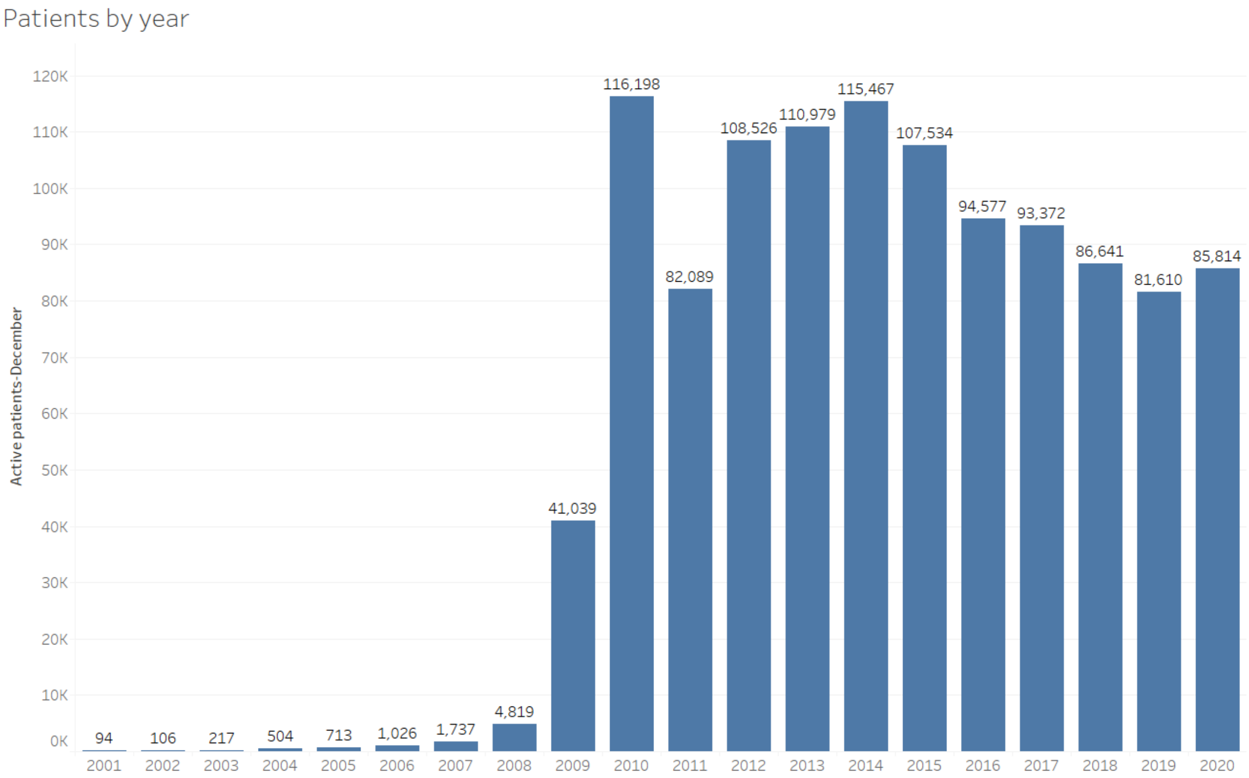
The Medical Marijuana Registry is administered by the Colorado Department of Public Health and Environment (CDPHE) pursuant to CRS 25-1.5-106. To apply for a medical marijuana registry card, a person must be a Colorado resident with a valid Social Security number, be receiving treatment for a qualifying debilitating medical condition, and be examined 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. If the applicant is a minor, additional requirements apply, including a signed parental consent form, two separate physician recommendations, and a copy of the minor's state-issued birth certificate.

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.[71] Cardholders also have the choice of designating a private person as caregiver.

Trend Data

The number of medical marijuana cardholders began to increase in 2009, after the commercialization of the caregiver market was allowed (Figure 103). 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).

Figure 102. Number of medical marijuana cardholders, 2001-2020



Sum of Active patients-December for each Year. The marks are labeled by sum of Active patients-December.

Source: Medical Marijuana Registry, Colorado Department of Public Health and Environment (2020). Medical marijuana statistics and data, at https://www.colorado.gov/pacific/cdphe/medical-marijuana-statistics-and-data

Table 44 shows characteristics of registered cardholders in December 2020. The average age of a cardholder was 43 years old. The majority were male (60.9%) and with an average age of 41, while the average age of female cardholders (39.1%) was 44. Approximately half of all cardholders were over 40 (48.2%). The three most common conditions reported were severe pain (89.5%), muscle spasms (35.7%), and severe nausea (20.3%). A cardholder can report more than one debilitating condition.

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[71] 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.

El Paso County had the most cardholders (24,553), followed by Denver (11,120), and Jefferson (8,117) Counties (Figure 104).

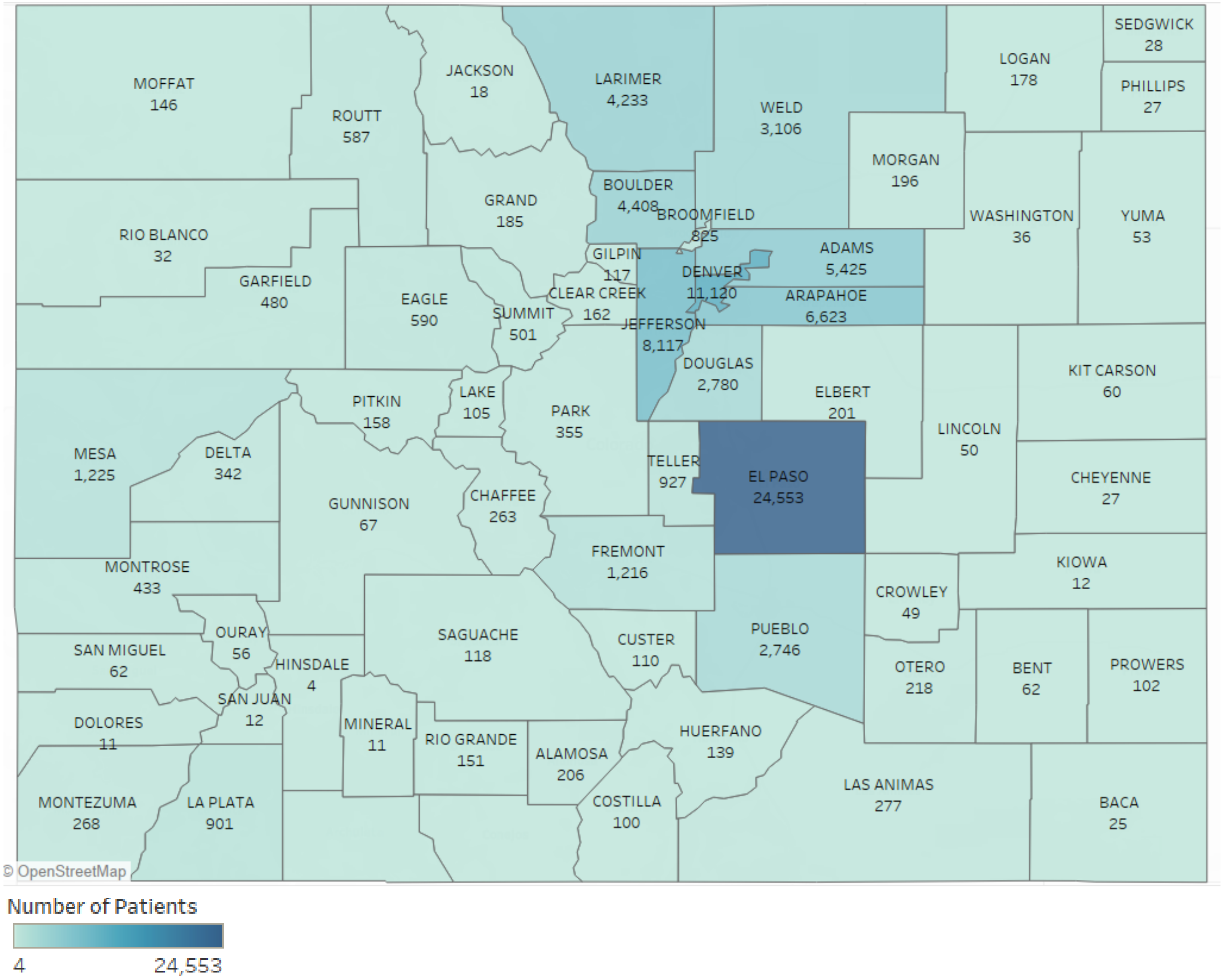
Table 44. Medical marijuana cardholder characteristics, December 2020

Patient characteristics	N	%
Total	85,814	100.0%
Gender		
Male	52,226	60.9%
Female	33,562	39.1%
Age group		
0-10	129	0.2%
11-17	143	0.2%
18-20	3,925	4.6%
21-30	19,576	22.8%
31-40	20,709	24.1%
41-50	14,401	16.8%
51-60	11,470	13.4%
61-70	11,680	13.6%
71 and Older	3,781	4.4%
Reported condition[a]		
Cachexia	1,340	1.6%
Cancer	4,010	4.7%
Glaucoma	1,064	1.2%
HIV/AIDS	0	0.0%
Muscle Spasms	30,630	35.7%
Seizures	3,006	3.5%
Severe Nausea	17,418	20.3%
Severe Pain	76,807	89.5%
Post-Traumatic Stress Disorder (PTSD)	11,688	13.6%
Autism Spectrum Disorder	435	0.5%
Recommending Marijuana in Lieu of an Opioid	9,012	10.5%

Source: Medical Marijuana Registry, Colorado Department of Public Health and Environment, Medical marijuana statistics and data, at https://cdphe.colorado.gov/medical-marijuana-registry-data.

[a] Does not sum to 100% because patients may report more than one debilitating medical condition.

Figure 103. Medical marijuana cardholders, by county, December 2020


SEDGWICK 28
MOFFAT 146
JACKSON 18
LARIMER 4,233
LOGAN 178
PHILLIPS 27
ROUTT 587
WELD 3,106
MORGAN 196
BOULDER 4,408
GRAND 185
BROOMFIELD 825
RIO BLANCO 32
WASHINGTON 36
YUMA 53
GILPIN 117
ADAMS 5,425
GARFIELD 480
DENVER 11,120
EAGLE 590
CLEAR CREEK 162
ARAPAHOE 6,623
SUMMIT 501
JEFFERSON 8,117
KIT CARSON 60
DOUGLAS 2,780
PITKIN 158
LAKE 105
ELBERT 201
PARK 355
MESA 1,225
DELTA 342
LINCOLN 50
TELLER 927
EL PASO 24,553
CHAFFEE 263
CHEYENNE 27
GUNNISON 67
FREMONT 1,216
MONTROSE 433
KIOWA 12
CROWLEY 49
OURAY 56
PUEBLO 2,746
SAGUACHE 118
SAN MIGUEL 62
CUSTER 110
HINSDALE 4
OTERO 218
BENT 62
PROWERS 102
SAN JUAN 12
DOLORES 11
MINERAL 11
HUERFANO 139
RIO GRANDE 151
ALAMOSA 206
LAS ANIMAS 277
MONTEZUMA 268
LA PLATA 901
COSTILLA 100
BACA 25
© OpenStreetMap
Number of Patients
4
24,553

Source: Colorado Department of Public Health and Environment (2021). Medical marijuana statistics and data, at https://cdphe.colorado.gov/medical-marijuana-registry-data

Overall Crime in Colorado

Property offense rates remained relatively stable from 2012 to 2019, but the violent crime rate increased 26% from 2012 to 2019 (Table 45).

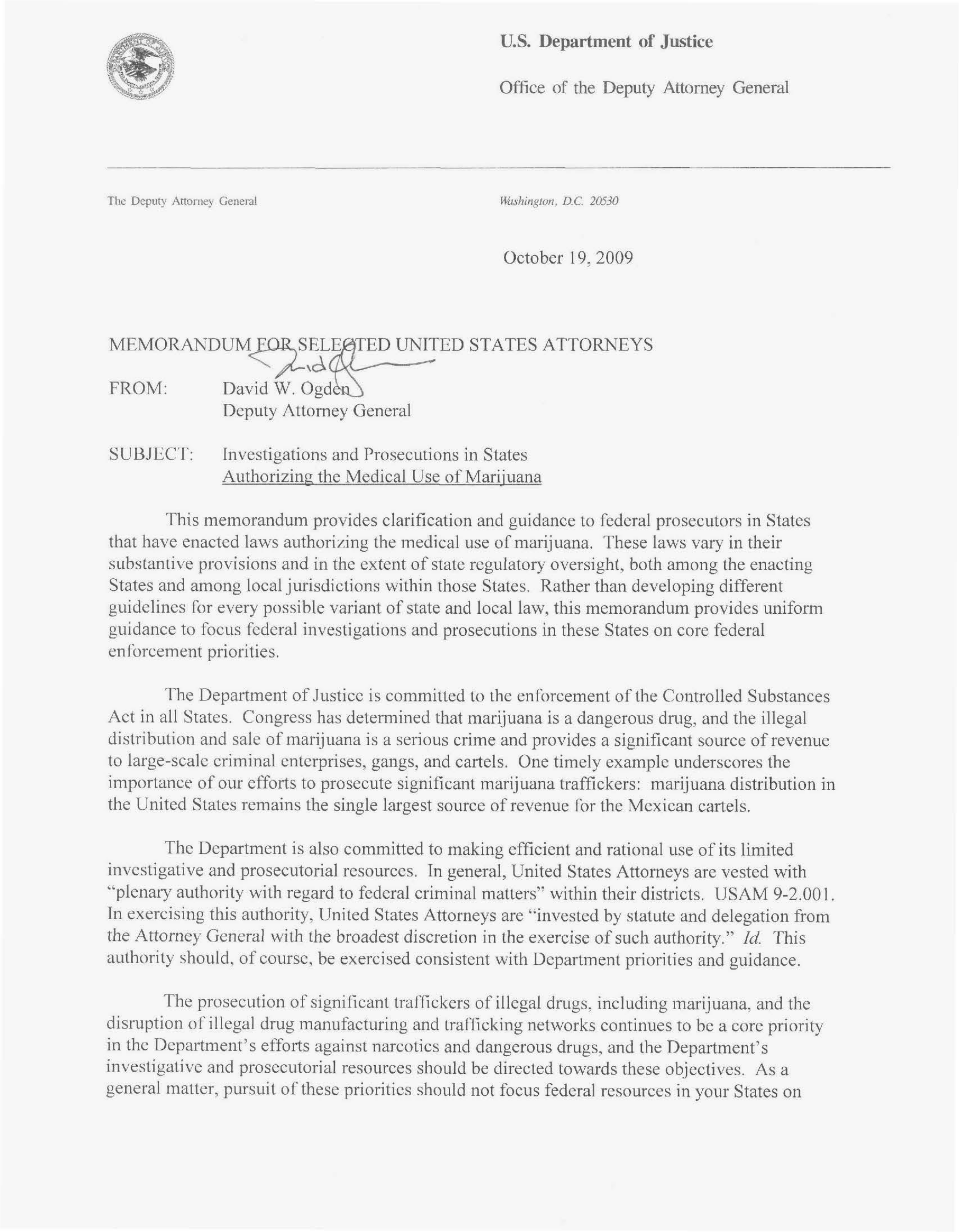
Table 45. Offenses and offense rates in Colorado, by offense type, 2008–2019

	Number of total offenses		Offense rate, per 100,000 population	
Year	Property	Violent	Property	Violent
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

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, as analyzed by Colorado Division of Criminal Justice. See: Crime Statistics, at https://ors.colorado.gov/ors-crimestats

In sum, the information presented in this section shows that licenses for retail and medical marijuana stores were concentrated in Denver, El Paso and Boulder Counties. Overall, 40% of all licensed businesses were located in Denver County. Revenue from taxes, licenses and fees totaled $387 million in 2020; retail establishments accounted for 94% of all marijuana revenue. In addition, in December 2020, there were 85,814 medical marijuana card holders, down 26% from 2010; 90% of card holders reported severe pain as the debilitating condition. Finally, across the state, crime decreased from 2012 to 2014 but increased in subsequent years.

APPENDIX A
OGDEN MEMORANDUM



U.S. Department of Justice

Office of the Deputy Attorney General

The Deputy Attorney General
Washington, D.C. 20530

October 19, 2009

MEMORANDUM FOR SELECTED UNITED STATES ATTORNEYS

FROM: David W. Ogden
Deputy Attorney General

SUBJECT: Investigations and Prosecutions in States
Authorizing the Medical Use of Marijuana

This memorandum provides clarification and guidance to federal prosecutors in States that have enacted laws authorizing the medical use of marijuana. These laws vary in their substantive provisions and in the extent of state regulatory oversight, both among the enacting States and among local jurisdictions within those States. Rather than developing different guidelines for every possible variant of state and local law, this memorandum provides uniform guidance to focus federal investigations and prosecutions in these States on core federal enforcement priorities.

The Department of Justice is committed to the enforcement of the Controlled Substances Act in all States. Congress has determined that marijuana is a dangerous drug, and the illegal distribution and sale of marijuana is a serious crime and provides a significant source of revenue to large-scale criminal enterprises, gangs, and cartels. One timely example underscores the importance of our efforts to prosecute significant marijuana traffickers: marijuana distribution in the United States remains the single largest source of revenue for the Mexican cartels.

The Department is also committed to making efficient and rational use of its limited investigative and prosecutorial resources. In general, United States Attorneys are vested with "plenary authority with regard to federal criminal matters" within their districts. USAM 9-2.001. In exercising this authority, United States Attorneys are "invested by statute and delegation from the Attorney General with the broadest discretion in the exercise of such authority." *Id.* This authority should, of course, be exercised consistent with Department priorities and guidance.

The prosecution of significant traffickers of illegal drugs, including marijuana, and the disruption of illegal drug manufacturing and trafficking networks continues to be a core priority in the Department's efforts against narcotics and dangerous drugs, and the Department's investigative and prosecutorial resources should be directed towards these objectives. As a general matter, pursuit of these priorities 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. For example, prosecution of individuals with cancer or other serious illnesses who use marijuana as part of a recommended treatment regimen consistent with applicable state law, or those caregivers in clear and unambiguous compliance with existing state law who provide such individuals with marijuana, is unlikely to be an efficient use of limited federal resources. On the other hand, prosecution of commercial enterprises that unlawfully market and sell marijuana for profit continues to be an enforcement priority of the Department. To be sure, claims of compliance with state or local law may mask operations inconsistent with the terms, conditions, or purposes of those laws, and federal law enforcement should not be deterred by such assertions when otherwise pursuing the Department's core enforcement priorities.

Typically, when any of the following characteristics is present, the conduct will not be in clear and unambiguous compliance with applicable state law and may indicate illegal drug trafficking activity of potential federal interest:

- unlawful possession or unlawful use of firearms;
- violence;
- sales to minors;
- financial and marketing activities inconsistent with the terms, conditions, or purposes of state law, including evidence of money laundering activity and/or financial gains or excessive amounts of cash inconsistent with purported compliance with state or local law;
- amounts of marijuana inconsistent with purported compliance with state or local law;
- illegal possession or sale of other controlled substances; or
- ties to other criminal enterprises.

Of course, no State can authorize violations of federal law, and the list of factors above is not intended to describe exhaustively when a federal prosecution may be warranted. Accordingly, in prosecutions under the Controlled Substances Act, federal prosecutors are not expected to charge, prove, or otherwise establish any state law violations. Indeed, this memorandum does not alter in any way the Department's authority to enforce federal law, including laws prohibiting the manufacture, production, distribution, possession, or use of marijuana on federal property. This guidance regarding resource allocation does not "legalize" marijuana or provide a legal defense to a violation of federal law, nor is it intended to create any privileges, benefits, or rights, substantive or procedural, enforceable by any individual, party or witness in any administrative, civil, or criminal matter. Nor does clear and unambiguous compliance with state law or the absence of one or all of the above factors create a legal defense to a violation of the Controlled Substances Act. Rather, this memorandum is intended solely as a guide to the exercise of investigative and prosecutorial discretion.

Finally, nothing herein precludes investigation or prosecution where there is a reasonable basis to believe that compliance with state law is being invoked as a pretext for the production or distribution of marijuana for purposes not authorized by state law. Nor does this guidance preclude investigation or prosecution, even when there is clear and unambiguous compliance with existing state law, in particular circumstances where investigation or prosecution otherwise serves important federal interests.

Your offices should continue to review marijuana cases for prosecution on a case-by-case basis, consistent with the guidance on resource allocation and federal priorities set forth herein, the consideration of requests for federal assistance from state and local law enforcement authorities, and the Principles of Federal Prosecution.

cc: All United States Attorneys

Lanny A. Breuer
Assistant Attorney General
Criminal Division

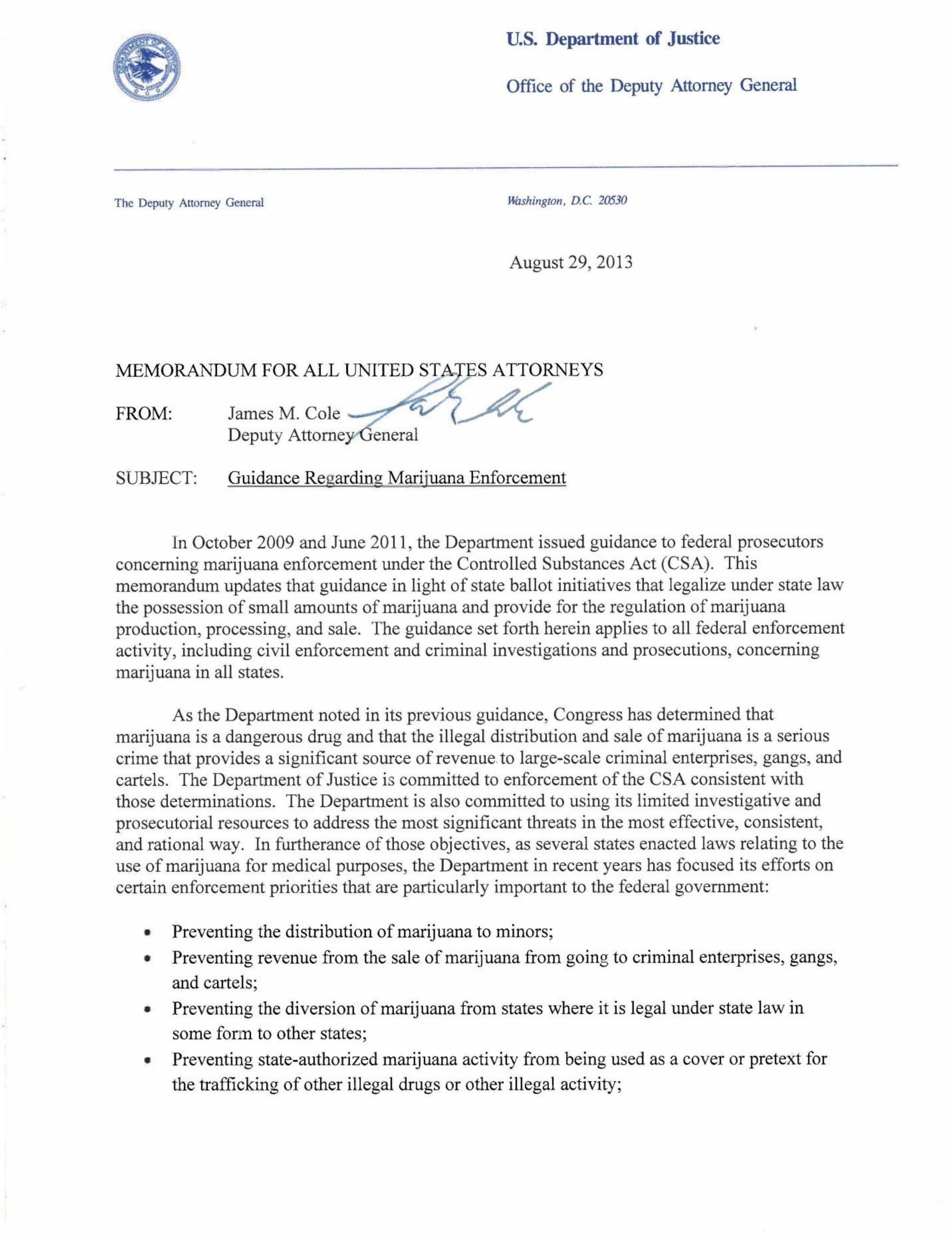
B. Todd Jones
United States Attorney
District of Minnesota
Chair, Attorney General's Advisory Committee

Michele M. Leonhart
Acting Administrator
Drug Enforcement Administration

H. Marshall Jarrett
Director
Executive Office for United States Attorneys

Kevin L. Perkins
Assistant Director
Criminal Investigative Division
Federal Bureau of Investigation

APPENDIX B
COLE MEMORANDUM



U.S. Department of Justice

Office of the Deputy Attorney General

The Deputy Attorney General

Washington, D.C. 20530

August 29, 2013

MEMORANDUM FOR ALL UNITED STATES ATTORNEYS

FROM: James M. Cole
Deputy Attorney General

SUBJECT: Guidance Regarding Marijuana Enforcement

In October 2009 and June 2011, the Department issued guidance to federal prosecutors concerning marijuana enforcement under the Controlled Substances Act (CSA). This memorandum updates that guidance in light of state ballot initiatives that legalize under state law the possession of small amounts of marijuana and provide for the regulation of marijuana production, processing, and sale. The guidance set forth herein applies to all federal enforcement activity, including civil enforcement and criminal investigations and prosecutions, concerning marijuana in all states.

As the Department noted in its previous guidance, Congress has determined that marijuana is a dangerous drug and that the illegal distribution and sale of marijuana is a serious crime that provides a significant source of revenue to large-scale criminal enterprises, gangs, and cartels. The Department of Justice is committed to enforcement of the CSA consistent with those determinations. The Department is also committed to using its limited investigative and prosecutorial resources to address the most significant threats in the most effective, consistent, and rational way. In furtherance of those objectives, as several states enacted laws relating to the use of marijuana for medical purposes, the Department in recent years has focused its efforts on certain enforcement priorities that are particularly important to the federal government:

- Preventing the distribution of marijuana to minors;
- Preventing revenue from the sale of marijuana from going to criminal enterprises, gangs, and cartels;
- Preventing the diversion of marijuana from states where it is legal under state law in some form to other states;
- Preventing state-authorized marijuana activity from being used as a cover or pretext for the trafficking of other illegal drugs or other illegal activity;

- Preventing violence and the use of firearms in the cultivation and distribution of marijuana;
- Preventing drugged driving and the exacerbation of other adverse public health consequences associated with marijuana use;
- Preventing the growing of marijuana on public lands and the attendant public safety and environmental dangers posed by marijuana production on public lands; and
- Preventing marijuana possession or use on federal property.

These priorities will continue to guide the Department's enforcement of the CSA against marijuana-related conduct. Thus, this memorandum serves as guidance to Department attorneys and law enforcement to focus their enforcement resources and efforts, including prosecution, on persons or organizations whose conduct interferes with any one or more of these priorities, regardless of state law.[1]

Outside of these enforcement priorities, the federal government has traditionally relied on states and local law enforcement agencies to address marijuana activity through enforcement of their own narcotics laws. For example, the Department of Justice has not historically devoted resources to prosecuting individuals whose conduct is limited to possession of small amounts of marijuana for personal use on private property. Instead, the Department has left such lower-level or localized activity to state and local authorities and has stepped in to enforce the CSA only when the use, possession, cultivation, or distribution of marijuana has threatened to cause one of the harms identified above.

The enactment of state laws that endeavor to authorize marijuana production, distribution, and possession by establishing a regulatory scheme for these purposes affects this traditional joint federal-state approach to narcotics enforcement. The Department's guidance in this memorandum rests on its expectation that states and local governments that have enacted laws authorizing marijuana-related conduct will implement strong and effective regulatory and enforcement systems that will address the threat those state laws could pose to public safety, public health, and other law enforcement interests. A system adequate to that task must not only contain robust controls and procedures on paper; it must also be effective in practice. Jurisdictions that have implemented systems that provide for regulation of marijuana activity must provide the necessary resources and demonstrate the willingness to enforce their laws and regulations in a manner that ensures they do not undermine federal enforcement priorities.

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[1] These enforcement priorities are listed in general terms; each encompasses a variety of conduct that may merit civil or criminal enforcement of the CSA. By way of example only, the Department's interest in preventing the distribution of marijuana to minors would call for enforcement not just when an individual or entity sells or transfers marijuana to a minor, but also when marijuana trafficking takes place near an area associated with minors; when marijuana or marijuana-infused products are marketed in a manner to appeal to minors; or when marijuana is being diverted, directly or indirectly, and purposefully or otherwise, to minors.

In jurisdictions that have enacted laws legalizing marijuana in some form and that have also implemented strong and effective regulatory and enforcement systems to control the cultivation, distribution, sale, and possession of marijuana, conduct in compliance with those laws and regulations is less likely to threaten the federal priorities set forth above. Indeed, a robust system may affirmatively address those priorities by, for example, implementing effective measures to prevent diversion of marijuana outside of the regulated system and to other states, prohibiting access to marijuana by minors, and replacing an illicit marijuana trade that funds criminal enterprises with a tightly regulated market in which revenues are tracked and accounted for. In those circumstances, consistent with the traditional allocation of federal-state efforts in this area, enforcement of state law by state and local law enforcement and regulatory bodies should remain the primary means of addressing marijuana-related activity. If state enforcement efforts are not sufficiently robust to protect against the harms set forth above, the federal government may seek to challenge the regulatory structure itself in addition to continuing to bring individual enforcement actions, including criminal prosecutions, focused on those harms.

The Department's previous memoranda specifically addressed the exercise of prosecutorial discretion in states with laws authorizing marijuana cultivation and distribution for medical use. In those contexts, the Department advised that it likely was not an efficient use of federal resources to focus enforcement efforts on seriously ill individuals, or on their individual caregivers. In doing so, the previous guidance drew a distinction between the seriously ill and their caregivers, on the one hand, and large-scale, for-profit commercial enterprises, on the other, and advised that the latter continued to be appropriate targets for federal enforcement and prosecution. In drawing this distinction, the Department relied on the common-sense judgment that the size of a marijuana operation was a reasonable proxy for assessing whether marijuana trafficking implicates the federal enforcement priorities set forth above.

As explained above, however, both the existence of a strong and effective state regulatory system, and an operation's compliance with such a system, may allay the threat that an operation's size poses to federal enforcement interests. Accordingly, in exercising prosecutorial discretion, prosecutors should not consider the size or commercial nature of a marijuana operation alone as a proxy for assessing whether marijuana trafficking implicates the Department's enforcement priorities listed above. Rather, prosecutors should continue to review marijuana cases on a case-by-case basis and weigh all available information and evidence, including, but not limited to, whether the operation is demonstrably in compliance with a strong and effective state regulatory system. A marijuana operation's large scale or for-profit nature may be a relevant consideration for assessing the extent to which it undermines a particular federal enforcement priority. The primary question in all cases – and in all jurisdictions – should be whether the conduct at issue implicates one or more of the enforcement priorities listed above.

As with the Department's previous statements on this subject, this memorandum is intended solely as a guide to the exercise of investigative and prosecutorial discretion. This memorandum does not alter in any way the Department's authority to enforce federal law, including federal laws relating to marijuana, regardless of state law. Neither the guidance herein nor any state or local law provides a legal defense to a violation of federal law, including any civil or criminal violation of the CSA. Even in jurisdictions with strong and effective regulatory systems, evidence that particular conduct threatens federal priorities will subject that person or entity to federal enforcement action, based on the circumstances. This memorandum is not intended to, does not, and may not be relied upon to create any rights, substantive or procedural, enforceable at law by any party in any matter civil or criminal. It applies prospectively to the exercise of prosecutorial discretion in future cases and does not provide defendants or subjects of enforcement action with a basis for reconsideration of any pending civil action or criminal prosecution. Finally, nothing herein precludes investigation or prosecution, even in the absence of any one of the factors listed above, in particular circumstances where investigation and prosecution otherwise serves an important federal interest.

cc: Mythili Raman
Acting Assistant Attorney General, Criminal Division

Loretta E. Lynch
United States Attorney
Eastern District of New York
Chair, Attorney General's Advisory Committee

Michele M. Leonhart
Administrator
Drug Enforcement Administration

H. Marshall Jarrett
Director
Executive Office for United States Attorneys

Ronald T. Hosko
Assistant Director
Criminal Investigative Division
Federal Bureau of Investigation

APPENDIX C
MARIJUANA ARRESTS

Appendix C, Table 1. Marijuana arrests, by county, 2012-2019

County	2012	2013	2014	2015	2016	2017	2018	2019
Adams	2,415	1,026	878	812	747	841	759	469
Alamosa	2	6	12	22	15	23	28	22
Arapahoe	1,478	702	819	711	692	592	517	324
Archuleta	17	3	6	19	12	6	12	14
Baca	17	8	1	1	2	-	-	2
Bent	-	1	-	1	-	-	-	1
Boulder	724	439	364	410	481	695	614	392
Broomfield	299	133	132	93	121	116	122	116
Chaffee	47	14	17	13	20	10	17	2
Cheyenne	2	1	-	-	-	-	-	-
Clear Creek	45	8	7	10	2	1	5	2
Conejos	2	-	-	-	-	-	-	-
Costilla	-	-	1	-	-	-	-	-
Crowley	-	-	-	1	-	4	7	5
Custer	1	1	3	4	2	2	6	11
Delta	16	16	9	3	24	22	32	24
Denver	186	472	852	1,139	624	284	334	160
Dolores	-	1	1	-	-	4	2	1
Douglas	537	333	218	258	273	414	300	286
Eagle	290	138	100	124	100	90	80	45
El Paso	868	539	611	509	562	479	542	459
Elbert	17	19	17	7	4	13	7	11
Fremont	45	12	5	12	9	28	15	12
Garfield	168	50	44	83	76	128	131	128
Gilpin	100	7	4	6	3	7	15	13
Grand	14	2	4	-	3	-	-	-
Gunnison	37	29	32	49	33	44	54	37
Hinsdale	-	-	-	-	2	-	-	1
Huerfano	13	-	4	6	9	1	4	7
Jackson	-	-	-	-	-	-	-	-
Jefferson	1,554	805	970	897	886	903	683	370
Kiowa	1	3	-	-	-	-	-	-
Kit Carson	19	14	4	17	13	16	4	4
La Plata	55	53	81	65	69	80	59	11
Lake	27	3	3	-	2	1	-	1
Larimer	927	479	463	432	529	471	467	476
Las Animas	7	5	1	1	-	4	12	6
Lincoln	1	-	-	1	1	7	2	-
Logan	41	3	29	34	17	12	31	8
Mesa	664	433	456	411	347	460	333	264
Mineral	-	-	-	-	-	-	-	-
Moffat	104	22	20	29	47	30	19	10
Montezuma	74	6	14	6	10	10	15	28
Montrose	134	51	46	39	33	28	36	30
Morgan	52	19	34	12	18	24	19	10
Otero	22	3	6	14	5	8	3	5
Ouray	-	-	4	-	-	-	-	-
Park	10	1	4	2	3	-	5	2
Phillips	2	1	-	1	2	1	6	3
Pitkin	7	-	10	7	4	3	1	1
Prowers	91	34	38	3	7	2	19	9
Pueblo	27	26	26	22	47	38	40	49

Rio Blanco	26	4	18	11	3	2	1	1
Rio Grande	28	5	2	11	6	8	19	12
Routt	92	36	61	47	47	46	42	36
Saguache	11	-	2	2	-	11	-	-
San Juan	-	1	-	-	-	-	-	-
San Miguel	-	-	-	-	4	-	2	3
Sedgwick	1	3	1	-	-	-	-	-
Summit	65	5	6	22	20	6	10	1
Teller	56	47	34	25	32	25	63	32
Washington	20	2	1	1	2	-	-	-
Weld	505	338	330	271	270	230	267	215
Yuma	2	4	-	-	-	-	1	6
Unspecified county	1,260	271	323	322	262	253	208	153
Total	13,225	6,637	7,128	6,998	6,502	6,483	5,970	4,290

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.

Appendix C, Table 2. Marijuana arrest rate (per 100,000 county population), by county, 2012-2019

County	2012	2013	2014	2015	2016	2017	2018	2019
Adams	626	260	216	195	176	195	173	105
Alamosa	15	45	90	163	110	167	201	157
Arapahoe	288	134	153	130	125	105	91	56
Archuleta	156	27	54	170	104	50	97	110
Baca	516	248	32	32	65	-	-	64
Bent	-	19	-	19	-	-	-	19
Boulder	267	159	130	143	166	238	208	132
Broomfield	589	255	246	164	207	192	197	184
Chaffee	284	84	101	77	115	56	93	11
Cheyenne	124	62	-	-	-	-	-	-
Clear Creek	547	98	85	119	23	11	57	23
Conejos	29	-	-	-	-	-	-	-
Costilla	-	-	31	-	-	-	-	-
Crowley	-	-	-	19	-	74	127	89
Custer	25	25	74	97	47	44	131	234
Delta	59	59	34	11	88	80	115	85
Denver	34	83	146	190	102	46	53	25
Dolores	-	56	58	-	-	218	108	54
Douglas	212	127	80	92	95	139	98	91
Eagle	643	301	215	263	208	186	164	92
El Paso	156	95	107	87	94	79	87	73
Elbert	82	90	78	31	18	56	30	46
Fremont	105	28	12	28	21	64	34	28
Garfield	348	103	90	167	150	250	252	244
Gilpin	2,050	141	77	115	56	128	270	228
Grand	110	16	31	-	22	-	-	-
Gunnison	268	207	225	338	223	290	349	234
Hinsdale	-	-	-	-	282	-	-	132
Huerfano	218	-	68	103	150	17	64	112
Jackson	-	-	-	-	-	-	-	-
Jefferson	321	164	195	178	174	176	132	71
Kiowa	79	241	-	-	-	-	-	-
Kit Carson	268	194	57	237	194	256	64	64
La Plata	118	112	168	133	139	160	116	22
Lake	437	48	48	-	30	15	-	14
Larimer	338	171	162	146	176	154	150	150
Las Animas	53	39	8	8	-	31	92	46
Lincoln	21	-	-	20	20	143	40	-
Logan	209	15	147	172	86	61	158	41
Mesa	516	337	354	317	264	345	246	193
Mineral	-	-	-	-	-	-	-	-
Moffat	926	196	181	262	416	266	167	87
Montezuma	332	27	63	27	44	44	65	121
Montrose	376	143	129	109	91	76	96	79
Morgan	217	79	143	50	75	100	78	40
Otero	137	19	38	88	32	50	19	31
Ouray	-	-	96	-	-	-	-	-
Park	69	7	27	13	19	-	29	12
Phillips	52	26	-	27	54	27	161	80
Pitkin	44	-	61	42	24	18	6	6
Prowers	865	325	369	29	69	20	184	86

Pueblo	19	19	18	15	32	26	27	33
Rio Blanco	447	69	317	197	54	36	18	18
Rio Grande	274	50	20	112	61	81	194	122
Routt	445	171	284	216	213	204	184	156
Saguache	200	-	37	37	-	188	-	-
San Juan	-	158	-	-	-	-	-	-
San Miguel	-	-	-	-	56	-	27	41
Sedgwick	47	144	48	-	-	-	-	-
Summit	255	19	22	80	71	21	35	3
Teller	265	222	160	118	146	111	275	138
Washington	497	49	25	24	48	-	-	-
Weld	226	148	141	111	107	88	99	77
Yuma	23	47	-	-	-	-	12	70
Total	293	145	153	147	134	131	119	84

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

Note: There is no rate for ‘unspecified county’ because it is not possible to assign a population value.

Appendix C, Table 3. Marijuana arrests, by county and drug crime type, 2012-2019

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

Appendix C, Table 3. Marijuana arrests, by county and drug crime type, 2012-2019

County	Type	2012	2013	2014	2015	2016	2017	2018	2019
Bent	Possession		1		1				1
	Total		1		1				1
Boulder	Sell	8	1	17	5	11	4	10	6
	Smuggle	-	-	-	-	-	1	-	-
	Possession	668	379	303	347	409	610	556	355
	Producing	1	1	-	7	2	2	8	2
	Unspecified	47	58	44	51	59	78	40	29
	Total	724	439	364	410	481	695	614	392
Broomfield	Sell	7	8	-	2	1	-	-	2
	Possession	290	123	130	75	108	108	108	99
	Producing	-	-	2	-	1	-	-	-
	Unspecified	2	2	-	16	11	8	14	15
	Total	299	133	132	93	121	116	122	116
Chaffee	Sell	2	-	-	1	-	2	-	-
	Smuggle	-	-	-	-	-	-	1	-
	Possession	45	14	17	9	18	8	16	2
	Unspecified	-	-	-	3	2	-	-	-
	Total	47	14	17	13	20	10	17	2
Cheyenne	Possession	2	1						
	Total	2	1						
Clear Creek	Sell	1	-	-	-	-	-	-	-
	Possession	40	7	6	10	2	1	4	2
	Producing	1	-	-	-	-	-	-	-
	Unspecified	3	1	1	-	-	-	1	-
	Total	45	8	7	10	2	1	5	2
Conejos	Possession	2							
	Total	2							
Costilla	Sell			1					
	Total			1					
Crowley	Sell				-		1	1	-
	Possession				1		2	1	2
	Producing				-		-	5	3
	Unspecified				-		1	-	-
	Total				1		4	7	5
Custer	Possession	1	1	-	-	-	1	1	2
	Producing	-	-	2	1	1	-	-	-
	Unspecified	-	-	1	3	1	1	5	9
	Total	1	1	3	4	2	2	6	11
Delta	Possession	15	12	8	2	22	15	18	13
	Producing	-	-	1	-	-	-	8	6
	Unspecified	1	4	-	1	2	7	6	5
	Total	16	16	9	3	24	22	32	24

Appendix C, Table 3. Marijuana arrests, by county and drug crime type, 2012-2019

County	Type	2012	2013	2014	2015	2016	2017	2018	2019
Denver	Sell	93	71	71	58	74	98	76	46
	Possession	58	371	750	1,049	496	115	176	64
	Producing	15	6	14	16	42	56	70	43
	Unspecified	20	24	17	16	12	15	12	7
	Total	186	472	852	1,139	624	284	334	160
Dolores	Sell		-	-			1	-	-
	Possession		1	1			-	-	-
	Producing		-	-			-	2	1
	Unspecified		-	-			3	-	-
	Total		1	1			4	2	1
Douglas	Sell	4	1	2	1	6	1	2	3
	Possession	524	274	214	256	257	381	280	263
	Producing	-	-	-	-	2	9	4	-
	Unspecified	9	58	2	1	8	23	14	20
	Total	537	333	218	258	273	414	300	286
Eagle	Sell	7	3	-	1	1	1	1	1
	Possession	243	75	63	103	80	83	74	42
	Producing	2	1	-	1	-	-	-	-
	Unspecified	38	59	37	19	19	6	5	2
	Total	290	138	100	124	100	90	80	45
El Paso	Sell	32	23	28	24	32	29	49	32
	Smuggle	4	1	-	1	-	-	-	-
	Possession	670	427	493	455	499	411	455	396
	Producing	20	4	2	3	3	7	37	25
	Unspecified	142	84	88	26	28	32	1	6
	Total	868	539	611	509	562	479	542	459
Elbert	Sell	-	-	1	-	-	2	-	1
	Possession	17	19	16	6	4	10	7	7
	Producing	-	-	-	1	-	1	-	2
	Unspecified	-	-	-	-	-	-	-	1
	Total	17	19	17	7	4	13	7	11
Fremont	Sell	1	-	-	2	-	-	-	-
	Possession	31	11	4	3	1	-	-	1
	Producing	-	-	1	1	2	1	-	-
	Unspecified	13	1	-	6	6	27	15	11
	Total	45	12	5	12	9	28	15	12
Garfield	Sell	1	2	3	-	1	-	1	-
	Possession	154	42	31	75	53	82	95	67
	Unspecified	13	6	10	8	22	46	35	61
	Total	168	50	44	83	76	128	131	128

Appendix C, Table 3. Marijuana arrests, by county and drug crime type, 2012-2019

County	Type	2012	2013	2014	2015	2016	2017	2018	2019
Gilpin	Smuggle	1	-	-	-	-	-	-	-
	Possession	95	5	4	5	2	5	10	12
	Producing	2	2	-	1	-	-	-	-
	Unspecified	2	-	-	-	1	2	5	1
	Total	100	7	4	6	3	7	15	13
Grand	Sell	1	-	-		-			
	Possession	13	2	4		2			
	Unspecified	-	-	-		1			
	Total	14	2	4		3			
Gunnison	Sell	-	-	2	-	-	4	-	1
	Possession	37	24	26	47	29	31	47	34
	Producing	-	2	1	2	-	1	1	-
	Unspecified	-	3	3	-	4	8	6	2
	Total	37	29	32	49	33	44	54	37
Hinsdale	Possession					2			1
	Total					2			1
Huerfano	Possession	13		2	5	3	-	4	6
	Producing	-		2	1	6	1	-	-
	Unspecified	-		-	-	-	-	-	1
	Total	13		4	6	9	1	4	7
Jefferson	Sell	9	7	11	7	8	8	6	3
	Possession	1,330	660	856	802	817	827	603	301
	Producing	6	4	9	15	11	8	10	-
	Unspecified	209	134	94	73	50	60	64	66
	Total	1,554	805	970	897	886	903	683	370
Kiowa	Possession	1	3						
	Total	1	3						
Kit Carson	Sell	1	3	-	-	2	1	1	-
	Possession	18	11	4	16	10	11	3	1
	Producing	-	-	-	-	-	3	-	3
	Unspecified	-	-	-	1	1	1	-	-
	Total	19	14	4	17	13	16	4	4
La Plata	Possession	54	53	81	40	54	41	27	7
	Unspecified	1	-	-	25	15	39	32	4
	Total	55	53	81	65	69	80	59	11
Lake	Sell	1	1	-		-	-		-
	Possession	23	2	1		1	1		1
	Producing	3	-	1		-	-		-
	Unspecified	-	-	1		1	-		-
	Total	27	3	3		2	1		1

Appendix C, Table 3. Marijuana arrests, by county and drug crime type, 2012-2019

County	Type	2012	2013	2014	2015	2016	2017	2018	2019
Larimer	Sell	10	11	15	9	17	7	6	4
	Smuggle	-	-	-	-	1	-	-	-
	Possession	521	282	281	302	383	355	354	376
	Producing	5	1	5	7	12	13	11	5
	Unspecified	391	185	162	114	116	96	96	91
	Total	927	479	463	432	529	471	467	476
Las Animas	Sell	-	3	-	-		-	-	-
	Possession	7	2	1	-		4	12	6
	Unspecified	-	-	-	1		-	-	-
	Total	7	5	1	1		4	12	6
Lincoln	Smuggle	-			1	1	-	-	
	Possession	1			-	-	-	1	
	Producing	-			-	-	7	-	
	Unspecified	-			-	-	-	1	
	Total	1			1	1	7	2	
Logan	Sell	1	1	-	-	-	-	4	2
	Possession	39	2	28	34	17	9	25	5
	Producing	-	-	-	-	-	1	-	-
	Unspecified	1	-	1	-	-	2	2	1
	Total	41	3	29	34	17	12	31	8
Mesa	Sell	14	20	17	11	20	42	22	16
	Smuggle	-	1	-	-	-	-	-	1
	Possession	577	327	350	292	247	257	192	118
	Producing	3	4	3	10	11	11	10	3
	Unspecified	70	81	86	98	69	150	109	126
	Total	664	433	456	411	347	460	333	264
Moffat	Sell	3	-	1	-	2	1	-	-
	Possession	95	22	19	29	45	29	19	9
	Producing	4	-	-	-	-	-	-	-
	Unspecified	2	-	-	-	-	-	-	1
	Total	104	22	20	29	47	30	19	10
Montezuma	Sell	-	-	1	-	-	1	-	4
	Possession	60	6	11	6	10	7	9	12
	Producing	-	-	-	-	-	-	-	1
	Unspecified	14	-	2	-	-	2	6	11
	Total	74	6	14	6	10	10	15	28
Montrose	Sell	1	1	-	-	1	-	-	-
	Possession	131	49	45	37	31	28	31	30
	Producing	1	-	-	1	-	-	3	-
	Unspecified	1	1	1	1	1	-	2	-
	Total	134	51	46	39	33	28	36	30

Appendix C, Table 3. Marijuana arrests, by county and drug crime type, 2012-2019

County	Type	2012	2013	2014	2015	2016	2017	2018	2019
Morgan	Sell	1	1	-	-	-	1	-	-
	Possession	50	18	32	9	17	22	18	10
	Producing	-	-	-	-	1	-	-	-
	Unspecified	1	-	2	3	-	1	1	-
	Total	52	19	34	12	18	24	19	10
Otero	Sell	-	-	1	-	-	-	-	-
	Smuggle	-	-	-	-	-	1	-	1
	Possession	15	3	5	14	4	6	3	4
	Producing	1	-	-	-	1	1	-	-
	Unspecified	6	-	-	-	-	-	-	-
	Total	22	3	6	14	5	8	3	5
Ouray	Possession			4					
	Total			4					
Park	Sell	1	-	-	-	1		-	-
	Possession	7	1	4	-	-		5	1
	Producing	1	-	-	2	2		-	1
	Unspecified	1	-	-	-	-		-	-
	Total	10	1	4	2	3		5	2
Phillips	Possession	2	1		1	2	1	6	3
	Total	2	1		1	2	1	6	3
Pitkin	Sell	-		-	2	-	-	-	-
	Possession	7		9	5	4	3	1	1
	Unspecified	-		1	-	-	-	-	-
	Total	7		10	7	4	3	1	1
Prowers	Sell	-	2	2	1	1	-	1	-
	Smuggle	-	-	-	-	1	-	-	-
	Possession	90	30	35	2	3	2	18	9
	Producing	-	-	-	-	2	-	-	-
	Unspecified	1	2	1	-	-	-	-	-
	Total	91	34	38	3	7	2	19	9
Pueblo	Sell	-	1	-	-	1	-	-	-
	Possession	11	9	14	18	40	34	35	38
	Producing	-	-	-	-	-	-	-	8
	Unspecified	16	16	12	4	6	4	5	3
	Total	27	26	26	22	47	38	40	49
Rio Blanco	Possession	26	4	18	11	3	2	1	1
	Total	26	4	18	11	3	2	1	1
Rio Grande	Sell	-	1	-	1	-	-	-	-
	Smuggle	-	1	-	-	-	-	-	-
	Possession	27	3	2	10	6	8	15	11
	Producing	-	-	-	-	-	-	2	1
	Unspecified	1	-	-	-	-	-	2	-
	Total	28	5	2	11	6	8	19	12

Appendix C, Table 3. Marijuana arrests, by county and drug crime type, 2012-2019

County	Type	2012	2013	2014	2015	2016	2017	2018	2019
Routt	Sell	1	-	-	1	-	-	-	-
	Possession	88	26	46	35	46	43	40	32
	Producing	-	-	-	3	-	-	-	-
	Unspecified	3	10	15	8	1	3	2	4
	Total	92	36	61	47	47	46	42	36
Saguache	Possession	11		2	2		4		
	Unspecified	-		-	-		7		
	Total	11		2	2		11		
San Juan	Sell		1						
	Total		1						
San Miguel	Possession					-		2	3
	Producing					4		-	-
	Total					4		2	3
Sedgwick	Possession	1	3	-					
	Producing	-	-	1					
	Total	1	3	1					
Summit	Possession	63	5	2	14	12	5	5	-
	Unspecified	2	-	4	8	8	1	5	1
	Total	65	5	6	22	20	6	10	1
Teller	Sell	-	-	2	3	5	4	2	1
	Possession	52	45	26	18	26	20	37	20
	Producing	1	-	-	-	1	-	14	3
	Unspecified	3	2	6	4	-	1	10	8
	Total	56	47	34	25	32	25	63	32
Washington	Possession	20	2	-	1	2			
	Unspecified	-	-	1	-	-			
	Total	20	2	1	1	2			
Weld	Sell	11	16	11	4	7	16	22	1
	Smuggle	-	-	-	-	1	1	3	-
	Possession	485	313	316	257	244	201	223	197
	Producing	7	4	2	6	3	9	11	8
	Unspecified	2	5	1	4	15	3	8	9
	Total	505	338	330	271	270	230	267	215
Yuma	Possession	2	4					1	-
	Producing	-	-					-	6
	Total	2	4					1	6
Unspecified county	Sell	22	10	6	11	5	9	4	1
	Smuggle	1	2	-	2	1	-	-	-
	Possession	1,140	238	289	303	246	239	202	136
	Producing	2	-	2	2	-	1	-	1
	Unspecified	95	21	26	4	10	4	2	15
	Total	1,260	271	323	322	262	253	208	153

Appendix C, Table 3. Marijuana arrests, by county and drug crime type, 2012-2019

County	Type	2012	2013	2014	2015	2016	2017	2018	2019
Total	Sell	301	224	229	174	221	249	232	133
	Smuggle	6	5	-	4	8	3	13	4
	Possession	11,360	5,404	5,962	5,974	5,416	5,113	4,683	3,265
	Producing	179	111	176	192	256	274	258	185
	Unspecified	1,379	893	761	654	601	844	784	703
	Total	13,225	6,637	7,128	6,998	6,502	6,483	5,970	4,290

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.

Appendix C, Table 4. Marijuana arrests, by agency, 2012–2019

Agency	2012	2013	2014	2015	2016	2017	2018	2019
Acet (All Crimes Enforcement Team)	-	-	-	-	-	1	1	1
Adams County SO	753	289	169	175	119	119	101	40
Adams State College	-	6	12	17	14	9	17	15
Aims Community College PD	2	-	-	-	-	-	-	-
Alamosa County SO	2	-	-	-	-	-	-	-
Alamosa PD	-	-	-	5	1	14	11	7
Arapahoe Community College	1	1	1	1	1	-	-	1
Arapahoe County SO	77	39	50	23	39	58	37	10
Archuleta County SO	1	-	-	1	4	4	1	6
Arvada PD	486	235	264	293	220	219	173	149
Aspen PD	7	-	10	3	-	2	1	-
Ault PD	2	-	4	3	3	-	-	1
Auraria Department of Public Safety	5	-	-	7	6	7	1	1
Aurora PD	729	397	510	430	451	362	291	220
Avon PD	60	7	25	22	7	21	7	9
Baca County SO	4	3	-	1	-	-	-	1
Basalt PD	7	4	1	3	-	-	-	-
Bayfield PD	-	-	-	3	3	3	7	1
Bent County SO	-	1	-	1	-	-	-	1
Berthoud PD	5	5	-	-	-	-	-	-
Black Hawk PD	69	-	1	2	-	2	1	-
Boulder County SO	-	-	-	51	58	72	55	55
Boulder PD	142	80	77	46	38	19	22	7
Bow Mar PD	-	-	-	-	-	1	-	-
Breckenridge PD	1	-	4	16	13	4	5	1
Brighton PD	210	125	169	186	136	183	108	63
Broomfield PD	299	133	132	93	121	116	122	116
Brush PD	10	2	-	2	7	4	4	-
Buena Vista PD	1	2	2	11	6	6	10	1
Burlington PD	8	6	1	3	7	5	3	-
Campo PD	13	5	-	-	-	-	-	-
Canon City PD	26	8	4	6	-	23	14	8
Carbondale PD	-	1	-	-	7	8	15	13
Castle Rock PD	114	63	38	67	64	107	64	29
Cedaredge PD	-	-	-	1	-	-	-	-
Centennial PD	78	32	34	15	30	20	39	7
Center PD	4	-	1	2	-	11	-	-
Central City PD	-	4	2	-	-	-	-	-
Chaffee County SO	19	3	3	2	7	2	5	-
Cherry Hills Village PD	-	4	-	3	-	-	-	-

Appendix C, Table 4. Marijuana arrests, by agency, 2012–2019

Agency	2012	2013	2014	2015	2016	2017	2018	2019
Cheyenne County SO	2	1	-	-	-	-	-	-
Clear Creek County SO	32	5	6	7	2	1	2	-
Colorado Bureau of Investigation	-	-	-	-	-	-	-	11
Colorado Mental Health Institute - Pueblo	-	-	1	-	-	1	-	-
Colorado School of Mines Department of Public Safety	7	6	7	2	8	18	8	1
Colorado Springs PD	433	251	322	356	461	318	348	300
Colorado State Patrol	1,260	271	323	320	262	252	207	152
Colorado State University Department of Public Safety - Fort Collins	83	60	43	42	71	46	33	16
Commerce City PD	201	149	104	79	64	55	96	61
Conejos County SO	2	-	-	-	-	-	-	-
Cortez PD	8	1	3	1	1	6	9	15
Costilla County SO	-	-	1	-	-	-	-	-
Craig PD	86	21	18	21	35	24	14	9
Crested Butte PD	2	4	5	4	6	10	12	3
Cripple Creek PD	14	8	5	5	3	2	9	11
Crowley County SO	-	-	-	1	-	4	7	5
Custer County SO	1	1	3	4	2	2	6	11
Dacono PD	4	-	1	-	1	4	3	6
De Beque PD	-	5	-	-	-	-	-	-
Del Norte PD	9	-	-	5	1	1	-	-
Delta County SO	-	2	-	-	4	-	6	1
Delta PD	14	11	4	1	18	19	23	12
Delta/Montrose Drug Task Force	1	-	1	-	-	-	-	8
Denver PD	173	472	851	1,130	618	277	332	148
Dillion PD	-	-	-	1	1	1	-	-
Division of Gaming Enforcement - Central City	-	1	-	-	-	-	-	-
Dolores County SO	-	1	1	-	-	4	2	1
Douglas County SO	234	164	121	119	148	214	167	191
Durango PD	22	9	7	36	31	57	45	6
Eagle County SO	87	58	31	19	30	7	21	22
Eagle PD	17	3	7	4	8	21	20	4
Eaton PD	2	5	-	1	2	4	1	1
Edgewater PD	6	5	-	10	8	29	11	14
El Paso County SO	154	124	116	25	35	42	104	94
Elbert County SO	8	2	1	7	4	13	3	3

Appendix C, Table 4. Marijuana arrests, by agency, 2012–2019

Agency	2012	2013	2014	2015	2016	2017	2018	2019
Elizabeth PD	9	17	16	-	-	-	4	6
Empire PD	2	2	-	-	-	-	-	-
Englewood PD	252	94	96	102	85	84	70	54
Erie PD	26	22	43	23	37	22	46	31
Estes Park PD	18	2	4	2	5	2	-	-
Evans PD	59	33	28	18	8	17	20	25
Fairplay PD	-	-	-	-	-	-	1	-
Federal Heights PD	83	14	4	20	27	30	25	20
Firestone PD	7	15	8	13	19	14	4	9
Florence PD	12	3	-	-	2	-	-	-
Fort Collins PD	285	180	201	181	253	225	204	177
Fort Lewis College PD	33	42	67	26	34	20	6	4
Fort Lupton PD	47	3	10	11	3	5	16	-
Fort Morgan PD	34	17	27	8	10	20	15	10
Fountain PD	153	92	72	62	32	96	78	53
Fowler PD	1	-	-	-	4	1	-	-
Fraser/Winter Park PD	-	-	-	-	1	-	-	-
Frederick PD	17	8	16	16	10	13	2	-
Fremont County SO	7	1	1	6	7	5	1	4
Frisco PD	15	-	-	-	-	-	1	-
Fruita PD	27	41	38	29	15	10	21	37
Garden City PD	1	1	3	1	2	-	-	-
Garfield County SO	15	9	4	14	19	38	37	14
Georgetown PD	-	1	-	2	-	-	-	-
Gilpin County SO	31	2	1	4	3	5	14	13
Glendale PD	7	2	-	3	2	-	1	-
Glenwood Springs PD	139	29	28	33	25	25	19	59
Golden PD	78	41	50	43	29	37	15	28
Granby PD	14	2	4	-	2	-	-	-
Grand Junction PD	527	319	317	301	287	354	232	157
Greeley PD	250	177	141	107	94	81	99	62
Greenwood Village PD	131	49	31	52	31	25	19	9
Gunnison PD	32	24	16	42	25	28	41	29
Gunnison County SO	-	1	3	1	-	5	1	5
Gypsum PD	-	-	3	14	3	3	3	1
Haxtun PD	-	-	4	-	-	2	-	-
Hinsdale County SO	-	-	-	-	2	-	-	1
Holyoke PD	2	1	-	1	2	-	4	3
Hotchkiss PD	1	1	4	1	2	3	3	3
Hudson PD	2	-	4	-	-	-	-	-
Huerfano County SO	1	-	1	1	6	1	4	7
Hugo Marshals Office	-	-	-	1	1	-	-	-

Appendix C, Table 4. Marijuana arrests, by agency, 2012–2019

Agency	2012	2013	2014	2015	2016	2017	2018	2019
Idaho Springs PD	11	-	1	1	-	-	3	2
Ignacio PD	-	-	-	-	-	-	1	-
Jefferson County SO	431	222	204	219	201	220	186	119
Johnstown PD	9	1	-	-	8	15	20	19
Keenesburg PD	-	1	-	2	-	-	-	-
Kersey PD	-	6	2	4	-	1	-	-
Kiowa County SO	1	3	-	-	-	-	-	-
Kit Carson County SO	11	8	3	14	6	11	1	4
La Junta PD	20	3	6	14	1	6	3	3
La Plata County SO	-	2	7	-	1	-	-	-
Lafayette PD	125	26	36	15	32	26	26	31
Lake County SO	10	-	1	-	-	1	-	-
Lakeside PD	13	-	1	3	1	2	-	1
Lakewood PD	411	233	348	254	360	316	243	44
Lamar PD	71	28	28	2	-	2	18	8
Larimer County SO	255	78	74	56	58	59	86	27
Las Animas County SO	-	-	-	-	-	-	-	3
LaSalle PD	4	-	-	-	-	-	-	-
Leadville PD	17	3	2	-	2	-	-	1
Lincoln County SO	1	-	-	-	-	7	2	-
Littleton PD	167	62	65	51	40	32	39	16
Lochbuie PD	-	2	1	8	-	1	-	-
Log Lane Village PD	-	-	-	1	-	-	-	-
Logan County SO	37	2	13	5	6	5	22	6
Lone Tree PD	93	13	5	17	12	23	24	28
Longmont PD	77	50	79	83	82	60	56	33
Louisville PD	-	1	10	11	28	42	18	11
Loveland PD	281	154	140	151	136	139	142	253
Mancos PD	-	-	-	1	-	1	-	-
Manitou Springs PD	67	43	68	53	24	4	-	-
Mead PD	3	8	12	13	16	4	-	13
Meeker PD	4	-	1	-	-	-	-	-
Mesa County SO	110	68	89	72	40	75	69	64
Milliken PD	-	3	10	5	7	8	4	2
Minturn PD	1	-	-	-	-	-	-	-
Moffat County SO	18	1	2	8	12	6	5	1
Monte Vista PD	19	3	2	6	5	7	17	9
Montezuma County SO	66	5	11	4	9	3	6	13
Montrose County SO	25	13	11	6	11	3	3	3
Montrose PD	109	38	35	33	22	25	33	27
Monument PD	17	5	1	2	5	11	-	-
Morgan County SO	8	-	7	1	1	-	-	-

Appendix C, Table 4. Marijuana arrests, by agency, 2012–2019

Agency	2012	2013	2014	2015	2016	2017	2018	2019
Morrison PD	2	-	-	-	-	-	-	-
Mountain View PD	1	-	1	-	1	3	4	1
Mountain Village PD	-	-	-	-	-	-	1	-
Mt Crested Butte PD	3	-	8	2	2	1	-	-
Nederland PD	-	-	-	-	1	-	3	1
New Castle PD	-	-	-	-	-	-	1	6
Northglenn PD	219	103	110	91	76	67	74	35
Oak Creek PD	-	-	-	-	-	1	1	4
Otero County SO	1	-	-	-	-	1	-	2
Ouray PD	-	-	4	-	-	-	-	-
Pagosa Springs PD	16	3	6	18	8	2	11	8
Palisade PD	-	-	12	9	5	21	11	6
Palmer Lake Marshal	1	-	-	-	-	-	-	-
Paonia PD	-	2	-	-	-	-	-	-
Parachute PD	13	2	10	25	14	8	11	-
Park County SO	10	1	4	2	3	-	4	2
Parker PD	96	93	54	55	49	70	45	38
Phillips County SO	-	-	-	-	-	1	2	-
Pikes Peak Community College PD	5	-	1	-	1	-	1	-
Pitkin County SO	-	-	-	4	4	1	-	1
Platteville PD	-	-	-	-	1	-	3	-
Prowers County SO	20	6	10	1	7	-	1	1
Pueblo County SO	1	21	19	21	43	36	36	41
Pueblo PD	26	5	6	1	4	1	4	8
Rangely PD	4	3	17	8	3	1	1	1
Red Rocks PD	11	-	3	3	2	1	2	-
Rifle PD	-	9	2	10	10	44	36	29
Rio Blanco County SO	18	1	-	3	-	1	-	-
Rio Grande County SO	-	2	-	-	-	-	2	3
Routt County SO	10	-	1	6	1	2	2	1
Saguache County SO	7	-	1	-	-	-	-	-
Salida PD	27	9	12	-	7	2	2	1
San Juan County SO	-	1	-	-	-	-	-	-
San Miguel County SO	-	-	-	-	4	-	-	1
Sedgwick County SO	1	3	1	-	-	-	-	-
Severance PD	2	-	1	-	3	2	2	4
Sheridan PD	36	22	32	31	13	10	21	7
Silt PD	1	-	-	1	1	5	12	7
Silverthorne PD	6	-	1	3	5	1	1	-
Simla PD	-	-	-	-	-	-	-	2
Southwest Drug Task Force	-	-	-	2	-	-	-	-

Appendix C, Table 4. Marijuana arrests, by agency, 2012–2019

Agency	2012	2013	2014	2015	2016	2017	2018	2019
Springfield PD	-	-	1	-	2	-	-	1
Steamboat Springs PD	82	36	56	41	46	41	39	31
Sterling PD	4	1	16	29	11	7	9	2
Summit County SO	43	5	1	2	1	-	3	-
Teller County SO	18	2	6	5	1	2	26	7
Telluride PD	-	-	-	-	-	-	1	2
Thornton PD	440	171	160	144	202	272	238	164
Tinmath PD	-	-	1	-	6	-	2	3
Trinidad PD	7	5	1	1	-	4	12	3
University of Colorado PD - Boulder	380	282	162	204	242	476	434	254
University of Colorado PD - Colorado Springs	38	24	31	11	4	8	11	12
University of Colorado PD - Denver/Anschutz Medical Campus	8	-	1	2	-	-	1	-
University of Northern Colorado Department of Public Safety - Greeley	-	13	16	16	22	9	19	25
Vail PD	118	66	33	62	52	38	29	9
Walsenburg PD	12	-	3	5	3	-	-	-
Washington County SO	20	2	1	1	2	-	-	-
Weld County SO	39	21	26	27	33	26	26	17
Westminster PD	509	175	162	117	123	115	117	86
Wheat Ridge PD	108	63	92	70	56	58	41	13
Windsor PD	29	19	4	3	1	4	2	-
Woodland Park PD	24	37	23	15	28	21	28	14
Wray PD	-	-	-	-	-	-	-	1
Yuma County SO	2	-	-	-	-	-	-	5
Yuma PD	-	4	-	-	-	-	1	-
Total	13,225	6,637	7,128	6,998	6,502	6,483	5,970	4,290

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

Appendix C, Table 5. Marijuana arrests in Denver, 2012–2017

Arrests	2012	2013	2014	2015	2016	2017
Total (Individual)*	1,605	903	474	526	499	302
Gender						
Male	1,319	743	390	434	400	239
Female	286	160	84	91	98	62
Unknown/Not Listed	0	0	0	1	1	1
Age						
Under 18	378	396	312	302	302	119
18-20	287	93	56	82	56	30
21 and older	939	414	106	142	140	152
Unknown/Not Listed	1	0	0	0	1	1
Race/ethnicity						
White (non-Hispanic)	835	385	129	160	104	137
African-American	469	219	130	133	118	47
Hispanic	272	277	195	201	237	99
Asian / Pacific Islander	14	6	4	15	16	17
Native American	13	11	5	3	2	0
Other/Unknown/Not Listed	2	5	11	14	22	2
Type of crime **						
Possession	1,587	667	397	431	389	336
Production/cultivation	1	6	9	55	61	107
Sales	10	46	71	97	99	108
Smuggling	0	0	0	0	0	0
Unspecified/Other	8	184	0	0	0	0

Source: Denver Police Department Data Analysis Unit.

* Does not include warrant arrests for marijuana charges or Civil or Administrative Citations for certain marijuana violations after 2014

** Count of Charge Types, not individual arrests. Type of Crimes may not sum to total arrests as one individual may be charged with multiple crimes.

APPENDIX D
OFFENSES REPORTED, BY LOCATION

Appendix D, Table 6, Location of marijuana offenses, by year

	2012	2013	2014	2015	2016	2017	2018	2019
Total	12,794	5,988	6,529	6,535	6,228	6,171	5,875	4,681
Abandoned/Condemned Structure	3	1	2	3	0	2	1	0
Air/Bus/Train Terminal	31	53	68	51	40	37	29	20
Amusement Park	4	3	1	2	2	1	3	1
Arena/Stadium/Fairgrounds/Coliseum	17	11	8	10	11	9	9	8
Auto Dealership New/Used	1	0	0	1	1	0	1	1
Bank/Savings and Loan	5	1	1	0	2	1	1	2
Bar/Nightclub	75	22	13	17	11	11	13	2
Camp/Campground	4	0	1	4	1	3	4	2
Church/Synagogue/Temple/Mosque	4	8	6	12	8	6	7	4
Commercial/Office Building	43	34	33	39	43	54	45	55
Community Center	0	4	5	3	6	6	8	5
Construction Site	5	0	1	1	1	1	2	0
Convenience Store	48	27	23	29	25	24	27	26
Cyberspace	0	0	0	0	0	0	3	1
Daycare Facility	0	0	1	0	0	0	1	0
Department/Discount Store	112	66	60	62	60	85	68	52
Dock/Wharf/Freight/Modal Terminal	5	4	11	11	13	10	42	103
Drug Store/Doctors Office/Hospital	24	8	7	7	13	18	12	7
Farm Facility	0	3	0	0	0	1	1	0
Field/Woods	151	122	72	72	49	46	50	35
Gambling Facility/Casino/Race Track	14	2	1	1	0	3	0	3
Government/Public Building	84	44	38	46	35	54	49	45
Grocery/Supermarket	48	21	24	23	16	11	14	11
Highway/Road/Alley/Street/Sidewalk	6,796	2,226	2,194	2,221	2,051	1,930	1,629	1,202
Hotel/Motel/Etc.	151	38	29	31	42	35	42	28
Industrial Site	1	0	3	3	3	2	4	1
Jail/Prison/Penitentiary/Corrections	49	27	30	29	30	31	31	32
Lake/Waterway/Beach	10	4	4	5	3	4	5	1
Liquor Store	8	1	0	1	2	2	4	0
Military Installation	2	0	0	0	0	0	1	0
Other/Unknown	513	191	236	226	250	208	188	82
Park/Playground	227	198	369	472	345	323	241	172
Parking/Drop Lot/Garage	955	388	427	416	452	384	346	245
Rental Storage Facility	9	6	1	2	9	6	4	4
Residence/Home	[illegible]	564	668	679	796	825	797	638
Rest Area	2	1	1	1	1	2	2	1

Restaurant	46	18	21	28	26	27	31	22
School – College/University	519	448	465	600	570	809	754	588
School – Elementary/Secondary	1,010	1,390	1,654	1,358	1,236	1,137	1,337	1,183
School/College(Historical Only)	258	0	0	0	0	1	2	7
Service/Gas Station	15	8	7	9	4	8	16	10
Shelter – Mission/Homeless	1	1	0	4	2	3	1	5
Shopping Mall	19	15	9	11	10	7	7	5
Specialty Store	50	30	35	44	58	43	42	72
Tribal Lands	0	0	0	1	1	1	1	0

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

APPENDIX E
COURT FILINGS

Appendix E, Table 7. Marijuana court filings, by gender, 2008–2019

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
10-17 years old												
Total cases	1,755	1,616	1,640	1,544	1,624	1,492	1,532	1,766	1,497	1,610	1,660	1,407
Total charges	1,913	1,906	1,947	1,771	1,869	1,762	1,950	2,440	2,128	2,298	2,464	1,992
Charge law class												
Felony	224	254	195	151	145	132	34	27	35	23	20	28
Misdemeanor	122	110	108	85	78	116	229	168	116	193	148	119
Petty offense	1,567	1,542	1,644	1,535	1,646	1,512	1,650	2,211	1,954	2,065	2,270	1,812
Traffic	-	-	-	-	-	2	36	34	23	17	26	33
Unknown	-	-	-	-	-	-	1	-	-	-	-	-
Charge category												
Conspiracy	9	13	17	17	14	5	8	4	6	10	1	10
Manufacture	10	8	10	10	3	7	-	6	3	1	1	-
Distribution	64	100	67	79	72	84	89	53	33	72	34	32
Possession with intent	110	107	86	49	45	62	47	46	63	50	48	40
Possession	1,643	1,571	1,649	1,564	1,653	1,518	1,185	468	212	213	138	98
Public consumption	77	108	117	54	82	84	79	32	11	21	5	6
Possession under 21	-	-	-	-	-	-	506	1,797	1,777	1,908	2,211	1,772
Other	-	1	1	-	-	-	-	-	-	6	-	1
Possession-consumption in vehicle	-	-	-	-	-	2	36	34	23	17	26	33
18-20 years old												
Total cases	3,093	2,785	2,451	2,456	2,381	1,491	1,578	1,613	1,622	1,706	1,556	1,146
Total charges	3,150	3,195	2,833	2,751	2,660	1,724	1,951	2,203	2,259	2,467	2,224	1,619
Charge law class												
Felony	506	544	397	245	229	164	65	97	68	103	92	64
Misdemeanor	298	268	244	219	200	169	184	115	108	129	101	51
Petty offense	2,346	2,382	2,192	2,286	2,231	1,374	1,494	1,802	1,933	2,073	1,880	1,343
Traffic	-	-	-	-	-	17	207	189	150	162	150	160
Unknown	-	1	-	1	-	-	1	-	-	-	1	1
Charge category												

Appendix E, Table 7. Marijuana court filings, by gender, 2008–2019

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Conspiracy	17	36	45	24	11	8	5	14	12	15	11	6
Manufacture	49	51	29	32	33	11	9	6	5	15	11	2
Distribution	108	131	99	76	85	60	62	58	39	39	34	22
Possession with intent	231	231	153	92	87	72	38	51	44	63	60	40
Possession	2,717	2,714	2,468	2,457	2,386	1,476	1,262	480	266	260	156	96
Public consumption	22	31	32	67	54	74	94	47	23	23	24	14
Possession under 21	-	-	-	1	-	3	273	1,357	1,718	1,884	1,775	1,278
Other	6	2	7	2	4	3	1	1	2	6	3	1
Possession-consumption in vehicle	-	-	-	-	-	17	207	189	150	162	150	160
21 years or older												
Total cases	6,887	6,489	6,003	5,778	5,903	1,051	1,505	1,552	1,792	2,003	1,998	1,928
Total charges	7,958	7,822	7,333	7,083	7,202	1,720	1,975	2,389	2,983	3,475	3,108	2,655
Charge law class												
Felony	1,808	1,755	1,780	1,588	1,540	939	660	1,155	1,668	2,130	1,701	1,319
Misdemeanor	836	842	774	706	722	356	331	360	458	405	378	246
Petty offense	5,313	5,222	4,777	4,789	4,937	350	197	214	196	249	197	154
Traffic	-	-	-	-	-	75	786	658	660	691	828	935
Unknown	1	2	1	-	3	-	1	2	1	-	4	1
Charge category												
Conspiracy	74	100	132	177	151	113	61	102	162	234	91	96
Manufacture	317	334	495	501	498	165	149	343	616	711	673	606
Distribution	313	276	347	327	338	314	188	251	352	385	262	168
Possession with intent	596	613	494	449	394	245	223	404	535	708	650	450
Possession	6,615	6,455	5,792	5,546	5,721	702	411	458	479	525	466	310
Public consumption	27	40	55	79	82	101	153	142	140	197	115	69
Possession under 21	-	-	-	-	-	-	3	25	31	17	14	17
Other	16	4	18	4	18	5	-	4	7	7	5	3
Possession-consumption in vehicle	-	-	-	-	-	75	787	660	661	691	832	936

Source: Colorado State Judicial Branch. Analyzed by the Division of Criminal Justice.
Note: The Denver County Court, which handles misdemeanors and petty offenses in the City and County of Denver, does not report filings to the State Judicial Branch so this information is not available here.

Appendix E, Table 8. Marijuana court filings, by gender, 2008–2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Female										
Total cases	1965	1792	1726	1719	1787	706	859	1013	960	1129
Total charges	3020	2294	1896	1873	1936	803	989	1303	1285	1519
Charge law class										
Felony	269	285	247	199	192	126	60	174	210	293
Misdemeanor	199	191	180	155	135	88	96	82	116	108
Petty offense	2552	1816	1469	1519	1609	560	635	875	793	947
Traffic	0	0	0	0	0	29	198	172	166	171
Charge category										
Conspiracy	10	29	20	17	16	22	8	16	31	35
Manufacture	53	60	59	61	62	30	16	59	65	89
Distribution	48	59	50	54	44	43	39	54	65	72
Possession with intent	88	82	76	54	55	27	26	57	76	106
Possession	1786	1715	1662	1640	1708	614	484	241	154	161
Public consumption	28	33	26	46	49	37	58	40	27	50
Possession under 21	0	0	0	0	0	0	160	664	700	835
Other	1007	316	3	1	1	1	0	0	0	0
Possession-consumption in vehicle	0	0	0	0	1	29	198	172	167	171
Male										
Total cases	9748	9085	8348	8048	8114	3315	3724	3888	3933	4125
Total charges	15099	11898	9580	9216	9276	4001	4482	5181	5576	5868
Charge law class										
Felony	1957	1957	1845	1580	1502	953	630	986	1423	1645
Misdemeanor	999	968	873	785	790	502	591	490	479	474
Petty offense	12142	8968	6860	6848	6981	2481	2468	3010	3018	3072
Traffic	0	0	0	0	0	65	790	693	655	677
Unknown	1	3	1	1	3	0	3	2	1	0
Charge category										
Conspiracy	85	113	156	191	152	97	63	90	146	195
Manufacture	264	270	404	395	403	129	125	260	495	545
Distribution	389	381	400	374	391	351	261	263	281	311
Possession with intent	731	740	566	488	408	301	258	407	529	623
Possession	8829	8679	7885	7615	7748	2847	2165	1047	728	674
Public consumption	80	119	149	148	156	203	253	172	138	180
Possession under 21	0	0	0	0	0	3	565	2244	2600	2652
Other	4721	1596	20	4	9	4	1	2	3	4

Appendix E, Table 8. Marijuana court filings, by gender, 2008–2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Possession-consumption in vehicle	0	0	0	1	9	66	791	696	656	684

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

Note: The Denver County Court, which handles misdemeanors and petty offenses in the City and County of Denver, does not report filings to the State Judicial Branch so these data are not available here. Felony filings from Denver District Court are included in these data.

APPENDIX F
CERTIFIED DRUG RECOGNITION EXPERTS, BY AGENCY

Appendix F, Table 9. 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

Appendix F, Table 9. Certified drug recognition experts, by agency, 2020

Agency	N certified
Golden Police Department	1
Grand Junction Police Department	1
Greeley Police Department	3
Gunnison County Sherriff’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 G

MARIJUANA BUSINESS LICENSEES, BY COUNTY

Appendix G, Table 10. Number of licensed medical premises, by premise type and county, 2020

County	Medical Store	Medical Cultivation	Medical MIP	Medical delivery	Medical operator	Medical R&D	Medical testing	Medical transporter	Medical total
Adams	8	11	5		1		1	-	26
Alamosa	2	2						-	4
Arapahoe	7	13	3					-	23
Archuleta								-	-
Bent	1	1						-	2
Boulder	20	42	19	6			1	-	88
Chaffee	1	3	1					-	5
Clear Creek	2	5	4					-	11
Conejos								-	-
Costilla	1	3						-	4
Crowley		6	2					-	8
Delta	1	1						-	2
Denver	161	364	83		4	1	5	5	623
Douglas					2			-	2
Eagle	5	8	1					-	14
El Paso	124	242	43					1	410
Fremont	3	11						-	14
Garfield	5	8	3					-	16
Gilpin	1	1						-	2
Grand	1	2	2					-	5
Gunnison								-	-
Huerfano	1	2	1					-	4
Jefferson	24	31	7				1	-	63
La Plata	2	3	1				1	-	7
Lake								-	-
Larimer	15	28	2					-	45
Las Animas	3	7	3					-	13
Mesa	1	3	1					-	5
Moffat	3	3						-	6
Montezuma	3	4						-	7
Montrose	2	4						-	6
Morgan	1	3	2					-	6
Otero	2	2						-	4
Ouray	1	2						-	3
Park	1	2	4					-	7
Pitkin	1	2						-	3
Pueblo	16	45	20				1	-	82
Rio Grande								-	-
Routt	3	9	4					-	16
Saguache	1	7	2					-	10
San Juan								-	-
San Miguel	1	2	1					-	4
Sedgwick	1	2						-	3
Summit	3	5						-	8
Weld	3	5	2					-	10
Total	431	894	216	6	7	1	10	6	1,571

Source: Colorado Department of Revenue, Marijuana Enforcement Division. MED Licensee Information, at https://sbg.colorado.gov/med-licensed-facilities

Appendix G, Table 11. Number of licensed retail premises, by premise type and county, 2020

County	Retail store	Retail cultivation	Retail MIP	Retail operator	Retail testing	Retail transporter	Hospitality Business	Retail total
Adams	26	9	11	1	1	-		48
Alamosa						-		-
Arapahoe	32	22	17			-		71
Archuleta	6	7	1			-		14
Bent	5					-		5
Boulder	53	57	26		1	2		139
Chaffee	3	3	1			-		7
Clear Creek	10	9	5			-		24
Conejos	3	2				-		5
Costilla	4	6				-		10
Crowley	2	33	4			-		39
Delta						-		-
Denver	186	210	111	4	5	7	1	524
Douglas				2		-		2
Eagle	10	5	1			-		16
El Paso	2	1				1	2	6
Fremont						-		-
Garfield	24	13	10			-		47
Gilpin	7	1				-		8
Grand	6	1	2			-		9
Gunnison	15	8	3			-		26
Huerfano	5	12	2			1		20
Jefferson	17	5	7		1	-		30
La Plata	13	5	3		1	-		22
Lake	3	4	1			-		8
Larimer	14	15	4			-		33
Las Animas	26	18	7			-		51
Mesa	6	3	2			-		11
Moffat	9	1				-		10
Montezuma	10	6	1			-		17
Montrose	3	2		1		-		6
Morgan	4	3	2			-		9
Otero	3					-		3
Ouray	3	3				-		6
Park	7	7	5			-		19
Pitkin	10	1				-		11
Pueblo	40	138	33	1	1	-		213
Rio Grande	1					-		1
Routt	5	12	6			-		23
Saguache	4	71	16			-		91
San Juan	3	4	1			-		8
San Miguel	5	3	1			-		9
Sedgwick	3	1				-		4
Summit	10	5	2			-		17
Weld	5	5	3			1		14
Total	603	711	288	9	10	12	3	1,636

Source: Colorado Department of Revenue, Marijuana Enforcement Division. MED Licensee Information, at https://sbg.colorado.gov/med-licensed-facilities